Philosophy of science and research paradigm for business research in the transformative age of automation, digitalization, hyperconnectivity, obligations, globalization and sustainability

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Abstract

Purpose – This article aims to explain the role of philosophical anchors and research paradigms in business research, and how they can be extrapolated in the transformative era of automation, digitalization, hyperconnectivity, obligations, globalization and sustainability (ADHOGS) in the midst of disruption, volatility, uncertainty, complexity and ambiguity (DVUCA).

Design/methodology/approach – This article entails a general review based on the 3Es of exposure, expertise and experience, delving into the ontological, epistemological, methodological, axiological and rhetorical aspects of the major research paradigms—i.e. positivism, post-positivism, constructivism, interpretivism and pragmatism—and their interplay with the emergent trends shaping business research.

Findings – This article underscores the multifaceted nature of business research in the modern day, with an increasing need for blending, or shifting between, research paradigms to address the complex issues arising from automation, digitalization, hyperconnectivity, obligations, globalization and sustainability (ADHOGS). This article also highlights the nuanced interplay between research paradigms and theoretical perspectives, demonstrating the rich, diverse potential of business research inquiries.

Research limitations/implications – While this article provides a broad overview of the interplay between research paradigms and emerging trends, future research could explore each of these interplays in greater detail, conducting empirical studies or utilizing specific case studies.

Practical implications – Researchers and practitioners should be open to adopting, combining or switching between different paradigms according to the demands of their research questions, context and trends shaping the business landscape, thereby underscoring the need for methodological flexibility and reflexivity in business research.

Social implications – The shift toward embracing digital transformations and integrating sustainability in business research holds significant implications, driving socially responsible and sustainable business practices at the micro-level, and by extension, industrial revolution and sustainable development at the macro-level.

Originality/value – This article offers a holistic and contextualized view of the philosophy of science and research paradigms for business research, bridging the gap between philosophical foundations and contemporary research trends.

Keywords Philosophy of science, Research paradigm, Epistemology, Ontology, Methodology, Axiology, Rhetoric, Positivism, Post-positivism, Constructivism, Interpretivism, Pragmatism, Automation, Digitalization,

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1. Introduction

The advent of automation, digitalization, hyperconnectivity, globalization, increasing obligations and a renewed emphasis on sustainability (ADHOGS) in a transformative era with disruptions, volatilities, uncertainties, complexities and ambiguities (DVUCA) is precipitating a seismic shift in the landscape of business and business research.

Automation, characterized by the implementation of technology for task execution sans human intervention, manifests in the widespread adoption of blockchain in trading, robotics in manufacturing and servicing, as well as artificial intelligence, deep learning and machine learning in data-driven business decision making and processing (Goodell *et al.*, 2021; Kraus *et al.*, 2023; Kumar *et al.*, 2023; Lim, 2023b; Sahoo *et al.*, 2023). Digitalization, which signifies the incorporation of digital technology across all business domains, is evidenced by the extensive transition to paperless operations, the adoption of cloud-based storage and the ascendancy of e-commerce (Bamel *et al.*, 2022; Ciasullo and Lim, 2022; Kumar *et al.*, 2021; Lim, 2021a). Hyperconnectivity, symbolizing the intricate network of individuals, organizations and machines birthed by technological advancements, is epitomized by social networking sites that transcend geographical locations and time zones as well as the ever-expanding Internet of things (IoT) (Dawson, 2020; Yap and Lim, 2023). Obligation, marking the imperative to navigate and fulfill a broader spectrum of commitments, emerges from the evolution beyond shareholder priorities to encapsulate stakeholder concerns like data protection and environmental, social and governance (ESG) imperatives (Lim *et al.*, 2023a; Mahajan *et al.*, 2023). Globalization, representing the pervasive intermingling of people, corporations and governments across borders, is illustrated by the proliferation of multinational entities, global supply chains and multicultural virtual teams (Donthu *et al.*, 2021; Kumar *et al.*, 2022; Lim, 2023c; Mandrinos *et al.*, 2022). Sustainability, the renewed focus on addressing current needs without jeopardizing future generations' ability to fulfill their own, is reflected in the mounting concern over climate change, inequality and poverty, as well as the increasing adoption of corporate social responsibility (CSR) initiatives, green energy solutions and ESG reporting standards (Lim, 2022b, 2023a; Lim *et al.*, 2023a; Prasad *et al.*, 2022).

In this rapidly evolving landscape, the business world is concurrently challenged by disruption, ushered in by novel technologies and shifting market dynamics; volatility, stemming from unpredictable global events; uncertainty, fueled by an ever-changing regulatory and geopolitical environment; complexity, due to the multifaceted interplay of economic, environmental, ethical, social and technological factors; and ambiguity, arising from unclear cause-and-effect chains and the blurring of traditional boundaries (Lim, 2016, 2022c; Lim *et al.*, 2022a; Taskan *et al.*, 2022). This DVUCA context further accentuates the importance of agility (speed), adaptability (flexibility) and ambidexterity (versatility) (i.e. the 3As) in navigating the future of business (Ciasullo and Lim, 2022; Lim, 2023b).

These concurrent trends urgently call for a critical reevaluation of our philosophical underpinnings and research paradigms. Such scrutiny ensures that business research remains relevant, rigorous and impactful amid these profound transformations. This article, therefore, embarks on a meticulous exploration of the philosophy of science and research paradigm, targeting the ambitious goal of outlining a clear, comprehensive and contemporary (i.e. the 3Cs) approach to business research pertinent to this transformative era of automated, digital, hyperconnected, obligation-laden, globalized and sustainable economies, based on the 3Es of exposure (readings), expertise (business) and experience (research) of the author in line with Kraus *et al.* (2022).

The philosophy of science functions as navigational tools for scientific inquiry, guiding how we comprehend reality (ontology), perceive the nature of knowledge (epistemology), devise strategies to pursue truth (methodology), recognize our biases (axiology) and communicate our research (rhetoric). These philosophical components along with the paradigms they inspire shape our research designs, data collection and analysis procedures, and interpretation of findings. However, as we venture through the transformative age of automation, digitalization, hyperconnectivity, obligations, globalization and sustainability (ADHOGS), these philosophical foundations and paradigmatic bedrocks confront a plethora of novel challenges and opportunities, necessitating thoughtful reconsideration and reimagination.

Automation and digitalization are revolutionizing how research is approached and conducted, propelling our theoretical, contextual, methodological and empirical understanding into new frontiers. Hyperconnectivity and globalization, meanwhile, are dismantling traditional boundaries in business research, necessitating more integrative, interdisciplinary and multicultural research approaches. Simultaneously, the shift from shareholder to stakeholder viewpoints has led to increasing obligations while the mounting urgency for sustainability is recalibrating the discourse in business research, pressing for the adoption of inclusive and innovative approaches that can encapsulate the complexity, interdisciplinarity and long-term orientation of grand sustainability challenges pertinent to a myriad of stakeholders.

In maneuvering this ever-evolving terrain of business research, this article will probe the interplay between the philosophy of science, research paradigm and global trends. The intention is to offer a profound synthesis capable of better preparing business researchers and practitioners to navigate the intricacies of the automated, digital, hyperconnected, obligation-laden, globalized and sustainable age. It is envisaged that this article will not only add to the theoretical discourse but also stimulate practical impact by providing actionable guidance for shaping the future trajectory of business research.

The exploration at hand is both essential and timely. Amid an era punctuated by disruption, volatility, uncertainty, complexity and ambiguity (DVUCA), the capacity to generate robust, relevant and reliable (i.e. the 3Rs) knowledge becomes all the more indispensable. By reevaluating and reinventing our philosophical and paradigmatic foundations, we can ensure that business research continues to evolve, adapt and deliver invaluable contributions to academia, business and society at large.

The structure of this article unfolds as follows: The philosophy of science and its relevance in business research are clarified, succeeded by a critical discourse on the prevalent research paradigms [1]. Drawing upon these insights, this article culminates in a discussion on the implications of this exploration for academia and business, alongside the proposition of potential avenues for future research for the automated, digital, hyperconnected, obligation-laden, globalized and sustainable age.

2. The philosophy of science and its relevance in business research

Science, as defined by Ponterotto (2005), represents a systematic quest for knowledge. The philosophy of science, in turn, undergirds this quest, establishing the conceptual roots that ground our understanding of the world. This understanding unfolds through five philosophical anchors: ontology, epistemology, methodology, axiology and rhetorical structure (Table 1). Each of these anchors shapes the trajectory of the knowledge pursuit, offering distinct insights and perspectives.

For instance, a business researcher employing a positivist approach might focus on quantifiable data and statistical methods to understand phenomena (e.g. consumer behavior, market trends, leadership styles, innovation processes, organizational dynamics), with an

The philosophy of science and its implications for business research

Philosophical anchor	Philosophical principle	Philosophical questions	Role of anchor or principle in business research	Impact of neglecting this anchor or principle
• Ontology	• Concerns the nature of reality and how we understand things	• What are our assumptions about the nature of reality – is there a single, observable reality or multiple realities shaped by subjectivity? • How do we perceive reality to exist, function and evolve – independent of or interdependent with our perceptions?	• Reflects our assumptions about the nature of the business world and influences our choice of business research topics, methodologies and interpretations	• Could lead to a mismatch between the business reality we seek to study and the methods we employ, undermining the validity of our findings
• Epistemology	• Considers the nature of knowledge and how we come to know things	• What constitutes or qualifies as knowledge? • How is knowledge discovered or constructed? • How is the validity of knowledge established?	• Guides the exploration of the relationship between the business researcher and the business knowledge they seek • Determines what qualifies as "acceptable knowledge" in the business field	• Can result in business knowledge claims that lack support or credibility within the business community
• Methodology	• Embodies the strategies and methods used in the research process	• What research strategies and methods (methodology) are being used? • How does the methodology align with the ontology and epistemology of the research? • How does the methodology ensure effective investigation of the research questions?	• Embodies the strategy or plan of action underlying our choice and use of specific business research methods • Informed by our philosophical understanding of ontology and epistemology guiding the business research	• Could result in misaligned business research processes, leading to potentially inconsistent or inconclusive findings

Table 1.
The philosophy of science and its implications for business research

The philosophy of science

Philosophical anchor	Philosophical principle	Philosophical questions	The implications for business research Role of anchor or principle in business research	Impact of neglecting this anchor or principle
• Axiology	• Encompasses the values that influence research	• What values (and biases) might influence the research? • How might these values (and biases) affect the formulation of research questions and the interpretation of findings? • How are these potential influences recognized and mitigated in the research process?	• Examines the role of values in the research process of business research • Helps in acknowledging the potential influence of personal values on our business research and mitigating any unintended biases	• Could result in business research that is biased, unbalanced, or skewed toward the business researcher's personal values
• Rhetoric	• Entails the convention of communicating research	• How is the research being communicated? • Is the language used to communicate research appropriate and congruent with the other philosophical anchors? • Is the research communicated clearly, convincingly and impactfully?	• Relates to the language and presentation employed to communicate our findings in the business world • Enhances the clarity, persuasiveness, and impact of our business research • Strengthens credibility by mitigating misrepresentation of business findings	• Can result in business research that is unclear, unpersuasive or misrepresentative, making it less accessible or less credible to others in the business field

Source(s): Adapted from Lincoln and Guba (2000), Ponterotto (2005) and Saunders *et al.* (2015)

Table 1.

objective of generalizing results to larger populations (e.g. baby boomers, Gen X, Gen Y or millennials, Gen Z or zoomers, Gen Alpha). Alternatively, a business researcher leaning toward post-positivism might incorporate some qualitative methods and take into account the impact of context, acknowledging that findings are influenced by subjectivity.

Noteworthily, these philosophical principles are not abstract or removed from the practicalities of research. Instead, they deeply influence the planning, execution, interpretation and dissemination of business research. By recognizing and deliberately engaging with these philosophical anchors, business researchers can conduct their work with greater awareness, rigor and credibility.

2.1 The key philosophical anchors of science for business research

2.1.1 Ontology: the foundation of business reality. Ontology concerns itself with the nature of being and reality—what constitutes "reality," and how it exists independent of or in relation to our perceptions. In the context of business research, ontology reflects our assumptions about the nature of the business world—how it exists, functions and evolves. Recognizing our ontological stance is vital as it influences our choice of business research topics, methodologies and interpretations. Failing to consider ontological assumptions could lead to a mismatch between the business reality we seek to study and the methods we employ, thereby undermining the validity of our findings.

2.1.2 Epistemology: the exploration of knowledge in business. Epistemology delves into understanding knowledge—its nature, origin and scope. In the context of business research, epistemology manifests as an exploration of the relationship between the business researcher and the business knowledge they seek. An essential aspect of epistemology is determining what qualifies as "acceptable knowledge" in the business field. A clear grasp of epistemology allows for the selection of appropriate strategies for knowledge acquisition and validation. Neglecting epistemological considerations can result in business knowledge claims that lack support or credibility within the business community.

2.1.3 Methodology: the roadmap for business research. Methodology pertains to the systematic, theoretical analysis of the methods applied in a field of study [2]. In the context of business research, methodology embodies the strategy or plan of action underlying our choice and use of specific business research methods. Our philosophical understanding of ontology and epistemology informs our methodology, ensuring alignment across all stages of the business research process. A lapse in considering methodology could result in misaligned business research processes, leading to potentially inconsistent or inconclusive findings.

2.1.4 Axiology: the role of values in business research. Axiology examines the role of values in the research process. In the context of business research, business researchers invariably bring their personal values, including the professional values that they choose or choose not to subscribe to, to their work. These values can subtly influence many aspects of business research, from the formulation of research questions to the interpretation of findings. Recognizing and considering axiology helps in acknowledging the potential influence of personal values on our business research and mitigating any unintended biases. Overlooking axiological aspects could result in business research that is biased, unbalanced or skewed toward the business researcher's personal values [3].

2.1.5 Rhetoric: the art of communicating business research. Rhetoric refers to the art of effective or persuasive speaking or writing. In the context of business research, rhetoric relates to the language and presentation employed to communicate our findings in the business world. Mastering the art of rhetoric can enhance the clarity, persuasiveness and impact of our business research, aiding the broader dissemination and application of our findings. Importantly, the language and rhetorical strategies adopted should be congruent with the ontological, epistemological, methodological and axiological choices made in the

research process. Any overgeneralizations or unfounded claims that are not supported by these philosophical anchors could potentially undermine the integrity and credibility of the research. Hence, an attuned consideration of rhetorical aspects is vital, as a failure to do so can result in business research that is unclear, unpersuasive or misrepresentative, making it less accessible or less credible to other researchers and practitioners in the business field.

Moving forward, the discourse will pivot to a detailed discussion of these philosophical anchors in relation to research paradigms: "positivism–post-positivism", "constructivism–interpretivism" and "pragmatism". Understanding how these anchors influence and shape these philosophical perspectives can better equip us to align our business research approach with the nature and demands of our research questions, thereby enhancing the quality and impact of our research.

2.2 The major research paradigms of science for business research

A research paradigm, representing a philosophical framework, directs the trajectory of scientific discovery and reporting. Herein, the "philosophy" emerges through the ontology and epistemology, while the discovery and reporting of "science" are articulated within the methodology, axiology and rhetoric. Hence, a research paradigm consolidates interrelated assumptions reflecting the adopted perspective, subsequently guiding the direction, choices and scope of a study.

Following Ponterotto (2005) and Saunders *et al.* (2015), the present discourse adopts the schema of research paradigms proposed by Lincoln and Guba (2000), primarily for its parsimony—that is, its concise and manageable format [4]. However, the original schema—which includes positivism, post-positivism, critical theory, constructivism and participatory paradigms—is reimagined in this article, motivated by two significant reasons.

First, the axiology underlying Lincoln and Guba's (2000) paradigm tilts, to some degree, toward qualitative research rather than quantitative or mixed-method research. For example, their depiction of the ontology of positivism as "naïve" implies a certain bias. This article seeks to adjust this balance, drawing on a spirit of research inclusivity. Indeed, it is sensible to acknowledge that different types of research yield unique perspectives, and a holistic understanding emerges when these perspectives are considered collectively, rather than in isolation (Lim *et al.*, 2022b).

Second, the heightened emphasis on novelty, rigor and impact that modern-day research stakeholders—including funders, editors, reviewers and society at large—demand calls for research paradigms that are inherently critical and inclusive (Aguinis *et al.*, 2020; Lim, 2021b, 2022a). This outlook underlines the importance of the critical theory and participatory research paradigms. Two implications stem from this observation. One involves focusing exclusively on these two critical paradigms, potentially at the expense of others. The other incorporates elements from these paradigms into other existing ones, creating a more inclusive and sensible approach, which this article adopts.

To address these considerations, this article proposes a typology of research paradigms: "positivism–post-positivism", "constructivism–interpretivism" and "pragmatism". The nuances of each of these paradigms are summarized in Table 2 and will be explored in detail in the subsequent sub-sections.

2.2.1 The positivism–post-positivism paradigm. Situated at two ends of a spectrum, the positivism and post-positivism research paradigms offer contrasting views on reality, knowledge, methodologies and values while sharing a common foundation in their commitment to scientific inquiry. The understanding of these paradigms can be enriched by examining their philosophical anchors—i.e. ontology, epistemology, methodology, axiology and rhetoric—and considering how the infusion of critical theory and participatory elements can add nuance and complexity to their traditional definitions.

Research paradigm →/ philosophical anchor ↓	Positivism–post-positivism		Constructivism–interpretivism		
	Positivism	Post-positivism	Constructivism	Interpretivism	Pragmatism
Ontology	Structural realism: Singular, objective reality	Critical realism: Singular, apprehensible reality	Foundationalism: Multiple constructed realities	Instrumentalism: Multiple experienced realities	Strong paradigm: Problem-driven realities
Epistemology	Knowledge is discovered	Knowledge is approximated	Knowledge is constructed	Knowledge is experienced	Knowledge is enacted
Methodology	Quantitative methods	Both quantitative and qualitative methods	Qualitative methods	Qualitative methods	Pluralistic, based on problem nature
Axiology	Values are controlled and minimized	Values are recognized, controlled	Values inform research	Values inform research	Values are integral to research
Rhetoric	Formal and objective	Formal, with greater reflexivity	Reflexive and dialogical	Personal, subjective	Clear, practical, utility-focused
Infusing critical theory	Rarely considered	May be considered	Often considered	Often considered	Encouraged
Incorporating participatory elements	Unlikely to incorporate	May incorporate	Incorporates as part of constructivist approach	Incorporates to capture individual experiences	Encouraged and embraced

Source(s): Adapted from Lincoln and Guba (2000), Ponterotto (2005) and Saunders *et al.* (2015)

Table 2.
Comparison of research paradigms

Ontology. Positivism operates under the ontology of "structural realism", [5] a view that a singular, independent and objective reality exists—a "truth" that is absolute and can be discerned through appropriate scientific methods. This philosophical anchor views reality as concrete and largely unaffected by the observer's perception or contextual influences. In this regard, the emphasis lies in uncovering and understanding the causative mechanisms or "universal laws" that govern this reality.

In contrast, post-positivism presents a more nuanced ontology rooted in "critical realism" [6]. This perspective retains the belief in an objective reality, but recognizes that our comprehension of it is inevitably tinted by our subjective lenses—our biases, previous experiences, and social and cultural contexts. Post-positivism moves away from the positivist absolutism to appreciate the multifaceted and contextual nature of "truth". This stance concedes that the "truth" we grasp is merely a fraction of the objective reality, contingent upon the conditions and context of our investigation. Rather than rejecting objectivity, post-positivism endeavors to recognize and work within the limits of our biases to approach objective knowledge as closely as possible. The acknowledgment of the "probabilistic truth" within this philosophical stance adds fluidity to the post-positivist understanding of reality.

Epistemology. Both positivism and post-positivism approach knowledge as discoverable and quantifiable, believing strongly in the capability of scientific methods to reveal the "truth". However, post-positivism differentiates itself by moving away from the rigid certainty that positivism upholds. Specifically, post-positivism acknowledges the probabilistic nature of findings and accepts the potential influence of human subjectivity on our perception of "truth".

While post-positivism does recognize the existence of subjectivity, it aims to minimize its impact rather than deeply exploring it. Noteworthily, post-positivism retains a strong commitment to empirical methodologies, predominantly quantitative, but allows for some degree of methodological flexibility depending on the research context and objectives. For example, qualitative data might be used to inform the design or interpretation of a predominantly quantitative study. This nuanced handling of subjectivity, in conjunction with a commitment to methodological rigor, allows post-positivism to uncover a version of "truth" that, while acknowledging the influence of personal perspectives, strives for a credible and reliable representation of an independent reality.

Methodology. Positivism and post-positivism predominantly favor empirical methodologies, with a particular emphasis on quantitative techniques that yield generalizable, replicable results. Both paradigms reflect their origins in the scientific method, asserting a commitment to the production of objective knowledge that can be generalized to larger populations.

However, post-positivism diverges slightly from strict positivism in its approach to methodologies. Recognizing that our understanding of reality is inevitably colored by our subjective lenses—our biases, previous experiences and cultural contexts—it concedes some value in using qualitative methods to supplement primary, quantitative data. This is especially true when post-positivists aim to understand better the context of their research or clarify the mechanisms behind the relationships or trends observed in their quantitative data. This supplemental use of qualitative methods does not signify a departure from the empirical focus but rather serves as a means to enhance the depth and contextuality of their findings.

Notwithstanding, it is important to remember that post-positivism still fundamentally differs from constructivism and interpretivism. These paradigms view qualitative methods as primary means of inquiry, intending to explore in depth perceptions and lived experiences. They embrace subjectivity, whereas post-positivism, even when using qualitative methods, continues to strive for objectivity and empirical validity.

Axiology. Positivism upholds the values of objectivity, replicability and empirical evidence, striving to ensure that the researcher's personal values remain separate from the research process. This paradigm embodies an ideal of value-free, neutral research where results are solely determined by the phenomenon under study.

Post-positivism, on the other hand, challenges this notion of an entirely value-free research process. This perspective acknowledges that researchers are unable to fully isolate themselves from their research and that subjective perspectives can subtly influence the research process, from question formulation to data interpretation. Rather than uncritically accepting this element of subjectivity, post-positivism advocates reflexivity in the research process. Researchers are encouraged to acknowledge and be transparent about their biases and actively work toward minimizing their influence on the research outcomes to the best extent possible.

Rhetoric. The rhetoric of the positivism–post-positivism paradigm is generally characterized by a formal, impersonal language that reflects the paradigm' commitment to objectivity and the scientific method. In the positivist tradition, the use of passive voice, third-person perspective and technical jargon is commonplace, reinforcing the perceived distance between the researcher and the researched.

In contrast, post-positivist rhetoric, while maintaining a level of formality, may allow for a more flexible and reflexive narrative style, subtly acknowledging the researcher's presence in the process. Yet, it continues to prioritize clarity, precision and transparency to ensure the reproducibility and scrutiny of research findings, thereby upholding the core tenets of scientific inquiry.

Infusing critical theory. Both positivism and post-positivism can benefit from incorporating elements of critical theory, though this integration is typically more

prominent in post-positivism. Adopting a critical lens allows researchers to scrutinize the assumptions underpinning their methods, interpretations and the reporting of research findings. Even within the positivist paradigm, a critical perspective can spur transformative effects by encouraging a skeptical attitude toward the so-called absolute truth. This skepticism stimulates discussions around the ways in which power dynamics and inherent biases may sway what is accepted as "truth", nudging researchers to delve deeper than surface-level observations and interpretations.

Incorporating participatory elements. Adding participatory elements to research enriches the entire process, offering value to the outcomes. Within the positivism–post-positivism spectrum, the role of participants varies significantly. In positivist research, participatory methods can be employed while preserving the paradigm's characteristic objectivity. Although participants may be actively involved, their contributions are generally collected and analyzed through objective, quantifiable methods. For example, feedback from participants might be used to design experimental conditions or verify quantitative measures. In contrast, post-positivism views participatory elements as opportunities to acknowledge and reflect on potential influences of researchers' biases or assumptions on the research process and outcomes. This acknowledgment may involve open discussions about the limitations of objectivity, explicit conversations regarding how researchers' perspectives could shape interpretations, or the consideration of alternative interpretations.

The exploration of the positivism–post-positivism paradigm offers a nuanced understanding of its strengths, limitations and potential for flexibility. It also highlights how the infusion of critical theory and participatory elements can diversify and enrich the traditionally rigid, objectivity-focused positivist approach, thereby opening new avenues for exploration within the realm of business research.

2.2.2 The constructivism–interpretivism paradigm. Spanning across the spectrum from constructivism to interpretivism, this paradigm offers a contrasting and complementary perspective to positivism–post-positivism paradigm. The constructivism–interpretivism paradigm foregrounds the subjective experiences and perspectives of individuals, rejecting the notion of a singular, objective reality in favor of multiple, constructed realities. This worldview has profound implications for how business researchers perceive reality, generate knowledge, select and implement methods, incorporate values and communicate their research. The incorporation of critical theory and participatory elements further enhances the richness and relevance of the constructivism–interpretivism paradigm.

Ontology. The constructivism–interpretivism paradigm espouses a nuanced view of reality that diverges from the objectivity-oriented ontologies of positivism and post-positivism. Within this paradigm, the ontological perspectives of constructivism and interpretivism differ subtly but importantly in their assumptions and implications.

Constructivism operates under the ontology of foundationalism. In this view, reality is seen as a complex construct built on the foundational elements of individual experiences and social interactions. These constructs are unique yet common to each group and evolve over time as these entities navigate and make sense of their world. From a foundationalist perspective, reality is not a given, but a constantly negotiated construct that emerges from the shared understandings and collective meanings of individuals within a social context. The task of a constructivist researcher, therefore, is to discern the underlying patterns and structures that form these subjective realities, appreciating that they are continually molded by contextual and social dynamics.

Interpretivism, on the other hand, adheres to the ontology of instrumentalism. Instrumentalists perceive reality as an experiential construct, individualized and shaped by personal interpretations and meanings. Here, reality is not only constructed but also interpreted and experienced in highly personal and unique ways. The focus is less on identifying shared social constructs and more on understanding the diversity and uniqueness

of individual interpretations and experiences. In this regard, an interpretivist researcher is less concerned with uncovering general patterns or structures, but rather focuses on gaining a deep understanding of how individuals make sense of their world in their own terms.

Collectively, the constructivism–interpretivism paradigm posits a highly subjective, multifaceted ontology. The paradigm recognizes that reality is not a singular, fixed entity but an array of diverse constructs that are continually shaped and reshaped by individual experiences and social interactions. This understanding of reality underscores the paradigm's commitment to exploring the intricacies of individual perspectives, subjective meanings and personal experiences and provides a complementary counterpoint to the objectivity-oriented views of the positivism–post-positivism paradigm.

Epistemology. Within the constructivism–interpretivism paradigm, knowledge is perceived as a product of social processes, with different emphases put on these processes by constructivists and interpretivists.

In constructivism, knowledge is not discovered but actively constructed. This process of construction occurs through the interaction between the researcher and the research participants, where their mutual engagement forms the building blocks of understanding. Constructivism, therefore, emphasizes dialogue, reflection and the negotiation of meaning in a communal context. Researchers here are not detached observers but active contributors to the knowledge construction process, acknowledging the influence of cultural and social dynamics on the way knowledge is built.

Interpretivism, on the other hand, focuses more on understanding the subjective experiences and interpretations of individuals. The knowledge creation process in interpretivism is deeply rooted in personal experiences and the meaning individuals assign to their interactions with the world. Interpretivists believe that the researcher's role is to deeply comprehend these subjective experiences, which requires empathy, open-mindedness and a commitment to understanding the world from the participants' viewpoint. This means interpretive research often prioritizes depth over breadth, seeking to uncover the intricate web of meanings and experiences that constitute individuals' realities.

Effectively, the constructivism–interpretivism paradigm presents knowledge as a dynamic and subjective entity, emerging from the interplay between (cultural) context, (social) interaction and (personal) interpretation. This stands in stark contrast to the positivism–post-positivism paradigm, which views knowledge as an objective entity to be discovered and measured.

Methodology. Methodological practices within the constructivism–interpretivism paradigm are inherently different from those observed in the positivism–post-positivism paradigm. Rather than relying on quantitative, empirical methods aiming for generalizable findings, the constructivism–interpretivism paradigm often adopts qualitative approaches to enable deep, contextual understanding of the studied phenomena. These approaches emphasize the importance of the natural setting, the context in which the phenomena occur, recognizing the influence it has on the individuals' experiences and perceptions.

In constructivism, methods such as interviews, focus groups and participant observations are common, designed to facilitate dialogue and interaction, which are essential for the co-construction of knowledge. These methods allow researchers to engage with participants in their natural settings, offering insights into the cultural, social and situational contexts that influence knowledge construction. Grounded theory, a method developed for the purpose of constructing theory from data, is also associated with this paradigm. This method emphasizes iterative cycles of data collection and analysis, allowing for the emergence of theory that is firmly grounded in the experiences and realities of the participants.

Interpretivism, while also utilizing qualitative methods, emphasizes understanding the subjective world of human experience. To access these subjective experiences, interpretive

researchers employ methods that capture personal stories, emotions and the complexity of lived experiences. These might include in-depth interviews, diary studies and narrative analysis. Phenomenology, a method focusing on the detailed examination of human consciousness and experiences, is a common approach within the interpretive paradigm. This method provides a pathway to delve deeply into individuals' lived experiences, aiming to understand the phenomena from the participants' own perspectives.

Essentially, the constructivism–interpretivism paradigm values methodological approaches that provide rich, contextual and nuanced understandings of human experiences. The choice of methodology is informed by the intention to honor individuals' voices, narratives and the socially constructed nature of their realities, reflecting a stark contrast to the empirically driven positivism–post-positivism paradigm.

Axiology. The axiology within the constructivism–interpretivism paradigm fundamentally diverges from that of the positivism–post-positivism paradigm. While the latter aims to minimize the influence of the researcher's personal values on the research process, constructivism and interpretivism acknowledge and embrace the subjective and value-laden nature of inquiry.

In constructivism, the research process is viewed as a co-construction of knowledge between the researcher and the researched. This suggests that the researcher's values are not just present but play an active role in shaping the research. Researchers in this paradigm must acknowledge their biases and values, and the influence they have on the study. This does not imply a bias in the negative sense but rather a necessary precondition for the co-construction of knowledge.

Interpretivism, on the other hand, focuses on understanding the subjective world of human experience, thereby necessitating the acknowledgment of researchers' values. Interpretivist researchers consider their values and assumptions as integral to interpreting the experiences and actions of those they study. They believe that understanding can only be achieved by interpreting the world as others see it and recognizing the value-laden nature of this interpretation.

Hence, in both constructivism and interpretivism, the personal values, beliefs and biases of the researcher are recognized as inherent components of the research process. These paradigms call for reflexivity—acknowledging and reflecting on one's values and their impact on the research process. This distinguishes them from positivist and post-positivist perspectives that seek to separate and limit the influence of the researcher's values on their research.

Rhetoric. The constructivism–interpretivism paradigm favors a more personal and reflexive rhetoric, contrasting starkly with the impersonal, objective language traditionally associated with the positivism–post-positivism paradigm. Given the subjective nature of the constructivist and interpretivist approaches, the language used to convey research findings often reflects this subjectivity.

In constructivism, the language is often collaborative and inclusive, mirroring the co-construction of knowledge between the researcher and the researched. The narrative may include first-person pronouns to emphasize the active role of the researcher in the knowledge construction process. The language used is typically rich, descriptive and context-specific, aiming to capture the complexities of the socially constructed realities under investigation.

Interpretivism, on the other hand, may adopt a somewhat detached but deeply reflexive narrative style, aiming to convey the subjective understandings of the individual or group being studied. The language tends to be descriptive and in-depth, capturing the intricate details and nuances of individual experiences and perceptions.

Infusing critical theory. The infusion of critical theory is notably compatible with the constructivism–interpretivism paradigm. Given the paradigm's emphasis on subjective experiences and realities, a critical lens can provide a valuable mechanism for questioning

and deconstructing established norms and power structures. In both constructivism and interpretivism, researchers may use critical theory to challenge dominant narratives and explore marginalized or alternate perspectives.

For constructivist researchers, this could involve exploring how societal norms and power dynamics influence the construction of reality, thereby potentially uncovering alternate realities that challenge established assumptions. Similarly, interpretivists may use critical theory to expose and challenge taken-for-granted beliefs that influence the interpretation of individual experiences, thereby opening up new possibilities for understanding.

Incorporating participatory elements. The constructivism–interpretivism paradigm is inherently participatory, given its focus on understanding subjective experiences and realities. Both constructivist and interpretivist researchers typically involve participants directly in the research process, viewing them not just as subjects of research, but as co-constructors or interpreters of knowledge.

In constructivist research, participants are often involved in every stage of the research process, from designing the study to interpreting the findings. The aim is to co-construct knowledge that is truly representative of the participants' experiences and perspectives.

In interpretivist research, participants play a crucial role in interpreting and making sense of their experiences. The researcher's role is to facilitate this process, ensuring that the interpretations are deeply grounded in the participants' subjective experiences. This deep engagement with participants allows interpretivist researchers to gain an in-depth understanding of the phenomena under investigation, thereby enhancing the richness and authenticity of their findings.

Noteworthily, it is important to remember that the extent and manner of incorporating participatory elements can vary greatly depending on the specific research context and objectives. Nevertheless, the core commitment to engaging with participants as active contributors to the research process remains a defining characteristic of the constructivism–interpretivism paradigm.

2.2.3 The pragmatism paradigm. The pragmatism paradigm stands in contrast to the positivism–post-positivism and constructivism–interpretivism paradigms by focusing less on the philosophical debates about the nature of reality and more on the practical implications of research. This paradigm emphasizes the instrumental and practical application of beliefs, ideas and theories, guided by the principle that the value of an idea or a theory lies in its utility and workability. The pragmatism paradigm aims to bridge the gap between theory and practice by aligning research efforts with real-world problem-solving and decision-making processes.

Ontology. The pragmatism paradigm is grounded in what can be termed as "strong paradigm" ontology [7]. Instead of committing to a single conception of reality, it seeks to synthesize, fuse or traverse multiple ontological positions in order to achieve the desired research objectives. This pluralistic approach enables the pragmatist researcher to shift between different ontologies based on the research problem at hand, the research context and the desired outcomes.

In a strong paradigm ontology, realities can be seen as singular, multiple, objective, subjective or a fusion thereof, depending on what best suits the research problem. This pragmatic approach opens up the possibility of blending different paradigms to articulate a holistic understanding of a complex problem. The overarching goal of this ontological perspective is not just to comprehend or interpret reality, but to also effect positive change and make a difference in the world. The facts or truths defined by different paradigms are strategically selected and applied to solve real-world puzzles and challenges.

This ontology contrasts with the positivism–post-positivism paradigm, which posits a singular, objective reality and the constructivism–interpretivism paradigm, which posits

multiple, subjective realities. It offers an alternative pathway that is less concerned with philosophical purity and more concerned with the practical utility and efficacy of research.

Epistemology. Pragmatism rejects the dichotomy between objectivist and subjectivist views of knowledge, instead opting for a pluralistic and context-dependent approach. In this paradigm, knowledge is seen not as a mirror of nature, but as a tool for dealing with problems and making a difference in the world. In this regard, the validity of knowledge should be judged by its practical consequences and its usefulness in a given context. Under this view, both objective and subjective knowledge have their places. Objective knowledge can help identify general patterns, principles and cause-and-effect relationships, while subjective knowledge can provide a deep understanding of individual experiences and interpretations, which is particularly important in complex and diverse social contexts.

The pragmatism paradigm also emphasizes the interactive and dynamic nature of the research process. The paradigm contends that researchers are not detached observers, but active participants in the construction and application of knowledge. They interact with the research subjects, interpret the data, make decisions about the research process and use the findings to inform actions and decisions. This interactive and practical view of knowledge production aligns well with the growing demand for research that is not only scientifically rigorous but also socially relevant and impactful. This pragmatic epistemology allows for a dynamic engagement with the research subject matter, making it well suited to contemporary business research in a rapidly changing world.

Methodology. In the pragmatism paradigm, the choice of research methods is driven by the research question and the practical needs of the situation. Pragmatism is open to the use of both quantitative and qualitative methods and encourages methodological pluralism and the use of mixed methods. The emphasis is on choosing the most suitable methods for answering the research question and achieving practical outcomes.

Quantitative methods, such as surveys and experiments, can provide generalizable findings, uncover patterns and relationships, and test hypotheses. Qualitative methods, such as interviews and observations, can provide rich, detailed insights into individual experiences and perspectives, and explore complex phenomena in depth.

Pragmatism also encourages the use of innovative methods and the combination of different methods to address complex problems from multiple angles. For example, a researcher might combine a large-scale survey to identify general patterns with in-depth interviews to explore individual experiences in detail.

In addition, the pragmatism paradigm promotes the use of action research and participatory research methods, which involve researchers working closely with practitioners to address real-world problems. These methods can produce not only useful academic knowledge but also practical solutions to problems, thus fulfilling the pragmatic commitment to making a difference in the world.

Lastly, pragmatism promotes the importance of reflexivity in the research process, where the researcher is aware of their role and influence in constructing and interpreting the research findings. This reflexive approach can help ensure the research is not only rigorous but also ethical and socially responsible.

Axiology. In the pragmatism paradigm, axiology holds a pivotal role in the research process. As pragmatists fundamentally believe that research is an inherently value-laden activity, the assumption that researchers can or should detach themselves from their values is seen as untenable. The axiological stance of the pragmatism paradigm encourages researchers to maintain transparency about their value systems and to consciously reflect on how these might interact with and influence their research processes and findings. Moreover, within this paradigm, there is a pronounced emphasis on the ethical aspects of research, with a focus on employing the research process as a tool for advancing social justice, empowering marginalized groups and improving overall welfare. Hence, the axiological

underpinnings of the pragmatism paradigm effectively intertwine the moral and scientific aspects of research.

Rhetoric. The pragmatism paradigm's approach to rhetoric emphasizes clarity, practical applicability and utility. This pragmatic rhetoric emerges from the belief that research findings should not be esoteric or exclusively accessible to a select group of academic experts. Instead, research should be communicated in a clear, jargon-free language that is understandable to a broad audience. This belief extends to the use of practical examples and relatable scenarios to elucidate complex theories and concepts. Additionally, the rhetoric of pragmatism champions the utility of research, prioritizing work that bears practical implications and has the potential to contribute tangibly to the resolution of real-world problems. This direct, clear and utilitarian approach to rhetoric distinguishes the pragmatism paradigm.

Infusing critical theory. The pragmatism paradigm is not only receptive to the infusion of critical theory in research but actively encourages it. Pragmatists acknowledge that social realities are shaped by power dynamics and systemic inequalities, which in turn permeate individuals' experiences and perceptions of reality. Through the integration of elements of critical theory, researchers working within the pragmatism paradigm seek to challenge and destabilize existing power structures and foster social justice. The goal is to catalyze positive social change by deconstructing oppressive systems and hierarchies, shedding light on hidden injustices and amplifying marginalized voices.

Incorporating participatory elements. The pragmatism paradigm is marked by its endorsement of participatory elements in research, fostering a collaborative environment that is inclusive of researchers, research participants and other stakeholders. This participatory approach is rooted in the pragmatic belief that by involving a broad range of stakeholders in the research process, the relevance, utility and respectfulness of the research can be enhanced. Participatory methods can facilitate trust-building among stakeholders, foster mutual understanding and ensure that research findings are reflective of the diverse perspectives and needs of all parties involved. Moreover, this approach can enable the smoother translation of research findings into practical applications and solutions, thereby amplifying the societal impact of the research.

2.3 The interplay of theoretical perspectives and research paradigms for business research
While this article primarily explores foundational philosophical anchors and research paradigms in business research, it is important to recognize the role of different theoretical perspectives that provide a lens through which to view and study business phenomena. These theoretical perspectives can intersect with and leverage the research paradigms discussed, providing an enriched understanding of the multifaceted nature of business research. This section briefly discusses two such perspectives: behaviorism and feminism.

2.3.1 Behaviorism. Behaviorism, in its broadest sense, is a theoretical perspective that focuses on observable behaviors and the factors that influence them (Watson, 2017). Though traditionally associated with empirical and quantitative methods, the study of behavior can be approached from multiple paradigmatic perspectives in the context of business research, whether it be customer behavior, organizational behavior or stakeholder behavior. For instance:

(1) Using the positivist paradigm, a behaviorist study might apply objective measurements to understand the impact of marketing stimuli, such as message framing and pricing strategies, on customer purchase behaviors (customer behavior). A positivist study could also quantitatively assess the relationship between a change in organizational policy and employee productivity (organizational behavior), or

evaluate the correlation between a company's CSR practices and stakeholder engagement levels (stakeholder behavior).

(2) In a post-positivist vein, a study could use both surveys and interviews to comprehend how pricing affects consumer decision-making processes (customer behavior), how leadership styles influence team dynamics (organizational behavior) or explore the multifaceted ways in which different stakeholders perceive a company's sustainability initiatives (stakeholder behavior).

(3) From a constructivist perspective, a study might investigate how consumers collectively construct their perceptions and attitudes toward a brand or product through shared social interactions such as online reviews and ratings (customer behavior), how a team collectively develops norms and expectations in response to a new management policy, focusing on the shared narratives and mutual understandings (organizational behavior) or how different stakeholder groups co-construct their expectations of a firm's responsibilities through dialogues, negotiations or social interactions (stakeholder behavior).

(4) In an interpretivist paradigm, a researcher could explore the individual lived experiences of consumers when navigating a new technology, focusing on their unique interpretations and personal meanings associated with this experience (customer behavior), how employees individually make sense of and navigate the potential challenges and opportunities presented by a change in work environment (organizational behavior), or how stakeholders interpret and respond to a company's public relations crisis based on their personal narratives and meanings (stakeholder behavior).

(5) From a pragmatist standpoint, a study might design and test interventions to improve customer engagement and assess the effectiveness using both qualitative and quantitative methods (customer behavior). Similarly, a pragmatist study might introduce new team collaboration strategies in an organization and evaluate their impact on team performance (organizational behavior), or experiment with different CSR communication strategies to ascertain their influence on stakeholder trust (stakeholder behavior).

2.3.2 Feminism. Feminism as a theoretical standpoint critically examines the role of gender and power dynamics within economic, political and social structures, including communities, organizations and industries (Harquail, 2019). Feminist business research, while often concerned with issues of equality and justice, can be conducted from a variety of paradigmatic perspectives. For instance:

(1) Adopting a positivist perspective, a feminist study might statistically analyze the impact of gender-specific advertising on consumer purchasing behaviors, using objective data to draw correlations between gender representation in media and buying trends.

(2) Through a post-positivist lens, a feminist researcher could explore the effects of gender diversity in executive teams on organizational performance. This research might blend quantitative data (such as performance metrics) with qualitative data (such as interview responses) to provide a more nuanced understanding of the impact of gender diversity.

(3) Using a constructivist approach in an organizational context, a feminist project might investigate how gender roles are constructed within a particular organizational

culture. For instance, the study might explore narratives and mutual understandings around maternity leave policies and their influence on career progression.

(4) An interpretivist feminist study might focus on the individual experiences of female consumers, capturing their perceptions and experiences interacting with gender-targeted marketing campaigns. This could involve deep, narrative interviews to unpack the meanings these consumers ascribe to these marketing initiatives.

(5) Within a pragmatist paradigm, a feminist project might partner with stakeholder groups (e.g. female employee networks, women's consumer groups) to co-create, implement and evaluate interventions aimed at promoting gender equity in CSR initiatives. This could involve mixed methods, combining qualitative insights from stakeholders with quantitative measures of CSR impact, to generate actionable strategies for improving gender equity.

2.3.3 Ethics. Ethics, commonly known as moral philosophy, examines the principles of right and wrong alongside the ethical implications of decisions and actions (Lim, 2016). There are several branches within moral philosophy that offer distinct lenses through which to study and understand ethics: consequentialism posits that the morality of an action is determined by its outcomes or consequences; deontology, on the other hand, emphasizes duties, rules or obligations as the foundation for determining the ethicality of actions, irrespective of their outcomes; whereas, virtue ethics focuses on the moral character of individuals and the virtues they embody rather than the actions themselves (Garcia-Rosell and Moisander, 2008). In the realm of business research, ethics can play a significant role in guiding decision-making processes (Lim *et al.*, 2023b), corporate responsibilities (Bansal *et al.*, 2023) and stakeholder interactions (Mahajan *et al.*, 2023). Depending on the research paradigm, moral philosophy can be leveraged in various ways to study business phenomena. For instance:

(1) From a positivist approach, an ethics-focused study might utilize quantitative methods to assess the connection between a company's adherence to ethical guidelines and its financial performance or reputation. For example, objective measures might be used to gauge the impact of ethical supply chain practices on sales figures.

(2) From a post-positivist lens, researchers could blend quantitative data, such as ethical compliance scores, with qualitative feedback from employees or stakeholders to understand the perceived value of ethical practices within an organization.

(3) From a constructivist paradigm, a study might explore how organizational cultures construct and negotiate their ethical values and principles. For instance, how do shared narratives within a company shape its CSR policy, or how does a community co-create its ethical expectations from local businesses?

(4) From an interpretivist perspective, researchers might delve into the personal experiences of stakeholders affected by a company's ethical or unethical decisions, aiming to comprehend the meanings and feelings these individuals associate with such actions. For instance, how do local residents interpret a firm's environmental efforts, or lack thereof, in their region?

(5) From a pragmatist standpoint, a study might design interventions to enhance ethical behavior within an organization and then evaluate their success using both objective metrics (e.g. number of ethics-related incidents) and qualitative feedback. This approach could also involve co-creating ethical guidelines or policies with various stakeholder groups to ensure practical applicability and mutual understanding.

Taken collectively, these examples serve to highlight the nuanced interplay between research paradigms and theoretical perspectives in business research, reinforcing the richness, diversity and insightful potential of business inquiries.

2.4 The interplay of emergent trends and research paradigms for business research
As we navigate the complexities of the twenty-first century, a handful of emergent trends are reshaping the landscape of business research. These include automation, digitalization, hyperconnectivity, obligations, globalization and sustainability, each of which carries implications for the way we approach and interpret business phenomena. This section aims to elucidate the influence of these trends on the five research paradigms discussed above, and how they in turn shape the conduct of business research.

2.4.1 Automation. Automation, which involves the application of technology to perform tasks traditionally requiring human involvement, is revolutionizing business operations, transforming work structures and fueling new areas of research. The implications of this trend for business research are vast and extend to each of the five paradigms:

(1) Positivist studies, grounded in empirical testing and quantification, could leverage the power of automation for extensive data collection and rigorous statistical analysis. For example, using data from automated systems, researchers could study the impact of automation on business efficiency, benchmarking production times before and after the implementation of automated processes. Similarly, they might quantitively analyze how automation-driven customer relationship management systems influence customer retention and loyalty.

(2) Post-positivist research, which acknowledges the inherent complexity and probabilistic comprehensibility of social phenomena, might employ a multi-faceted approach to study automation. For instance, a researcher might blend survey data and semi-structured interviews to explore the impacts of automation on job satisfaction and turnover, acknowledging that objective metrics alone might not fully capture the employees' experiences and perceptions.

(3) Constructivist studies, which focus on the co-creation of knowledge, could investigate how groups within a business negotiate their understanding and interpretation of automation. For example, a study might examine how workers in an automated factory collectively construct their perceptions and responses to their changing work environment, capturing their shared narratives, aspirations and fears in the face of automation.

(4) Interpretivist research, emphasizing the unique, lived experiences of individuals, might focus on the personal narratives of employees adapting to automation. An interpretivist researcher might conduct in-depth interviews to understand how individuals perceive and make sense of their roles and identities in an increasingly automated workplace, shedding light on the subjective human dimension of the automation phenomenon.

(5) Pragmatist research, committed to solving practical problems, could focus on designing and assessing strategies for businesses to leverage automation effectively. For instance, a pragmatist study might design interventions to upskill workers displaced by automation, evaluating the outcomes using a combination of quantitative metrics (e.g. job placement rates) and qualitative feedback, thereby ensuring the solutions are not only effective but also sensitive to the experiences and needs of the affected individuals.

In this way, the trend of automation intersects with different research paradigms to generate diverse, insightful inquiries into the evolving world of business. As automation continues to reshape business landscapes, it will undeniably influence the direction and methodologies of business research, driving novel explorations and understandings.

2.4.2 Digitalization. Digitalization, which involves the conversion of information into a digital format and the use of digital technologies to transform business operations, is a profound trend shaping contemporary business research. The influence of this trend extends to each of the five research paradigms:

(1) Positivist research, with its emphasis on quantifiable data, can utilize digital tools to collect and analyze information in unprecedented ways. For example, a positivist study could leverage big data analytics to investigate the impact of digital marketing strategies on customer conversion rates or the relationship between social media activity and brand perception.

(2) Post-positivist studies, acknowledging the complexity of phenomena and the interplay of various factors, might explore the multifaceted effects of digitalization. For instance, a post-positivist researcher might combine survey data with semi-structured interviews to examine how digitalization intersects with demographic factors (e.g. age and educational background) and psychographics (e.g. personality, lifestyle) to influence employees' digital literacy and technology acceptance.

(3) Constructivist studies could focus on how digitalization influences and shapes social dynamics within organizations. For instance, a study might investigate how the shift toward digital communication tools (e.g. Slack or Teams) affects team dynamics and the construction of workplace culture in remote working environments.

(4) Interpretivist research might delve into the personal experiences of individuals navigating the digitalized business landscape. An interpretivist researcher might conduct in-depth interviews to understand how employees perceive and adapt to the transformations brought about by digitalization, exploring issues like digital stress, work–life balance in the era of remote work, or the personal experiences of digital skills learning.

(5) Pragmatist research, driven by practical problem-solving, could examine the tangible ways in which businesses can benefit from digitalization. For instance, a pragmatist study might design, implement and evaluate a new digital tool or strategy in a real-world business context, using both quantitative metrics (e.g. productivity rates) and qualitative feedback to assess its impact and effectiveness.

The trend of digitalization therefore intersects with each of the research paradigms in distinct ways, fostering diverse inquiries into the ways digital transformation is reshaping the business landscape. As this trend continues to evolve, it promises to generate a wealth of insights and opportunities for business research.

2.4.3 Hyperconnectivity. Hyperconnectivity, characterized by increasing interconnections and interdependence among individuals, institutions and systems facilitated by digital technologies, creates rich and complex opportunities for business research across different paradigms:

(1) Positivist studies could capitalize on the power of hyperconnectivity to gather and analyze extensive data sets, enabling empirical inquiries into various aspects of business. For instance, researchers might leverage social media analytics to measure the impact of hyperconnectivity on customer engagement and brand visibility. They might also use objective metrics to quantify how hyperconnectivity enables businesses to reach global markets more efficiently.

(2) Post-positivist research, which acknowledges the multifaceted nature of social phenomena, could leverage hyperconnectivity to gather diverse data. For instance, researchers could combine large-scale data analysis of virtual collaboration platforms with in-depth interviews to explore the complex effects of hyperconnectivity on team dynamics and productivity in remote working environments.

(3) Constructivist studies might focus on how hyperconnectivity is reshaping shared understandings and behaviors within and among businesses. For example, a researcher might use ethnographic methods to investigate how hyperconnectivity shapes the culture within a global virtual team, focusing on how shared meanings and practices emerge and evolve in such settings.

(4) Interpretivist research might focus on the lived experiences of individuals within the hyperconnected world, shedding light on the subjective human dimension of this trend. For example, researchers could conduct in-depth interviews to understand how professionals negotiate work–life boundaries in an era of "always-on" connectivity and how they perceive its impact on their well-being.

(5) Pragmatist research, rooted in problem-solving, could explore strategies to navigate the challenges of hyperconnectivity and optimize its benefits. For instance, researchers might design and evaluate strategies to enhance virtual team collaborations in globally distributed organizations. The intervention might involve introducing structured communication protocols and collaboration tools, with the researchers assessing the outcomes using a combination of quantitative metrics (e.g. project completion times and error rates) and qualitative feedback (e.g. team members' perceptions of their collaborative experiences and cohesion).

The trend of hyperconnectivity thus intersects with different research paradigms, driving diverse and insightful inquiries into the interconnected world of business. As hyperconnectivity continues to shape business operations and strategies, it will undoubtedly influence the direction and methodologies of business research.

2.4.4 Obligations. As the business landscape undergoes transformative shifts, the concept of "obligation" crystallizes into a key focal area. No longer confined to just shareholder expectations, modern enterprises find themselves navigating a labyrinth of nuanced commitments that encompass a broader stakeholder landscape. The following delineates how diverse research paradigms engage with this evolving notion of obligation:

(1) Positivist studies could emphasize empirical measurements of businesses' adherence to evolving obligations. For instance, a researcher might use quantitative metrics to assess corporate performance in relation to ESG goals or the effectiveness of data protection measures implemented by companies.

(2) Post-positivist research might consider the inherent complexities and potential contradictions in fulfilling diverse obligations. A study could evaluate the balance businesses strike between profit motives and societal obligations or how organizational structures evolve to better address stakeholder concerns.

(3) Constructivist studies can delve into organizational sense-making around obligation. A researcher might investigate how corporations construct their understandings of obligation, how they perceive the interplay between various commitments and how they prioritize one over another in specific contexts.

(4) Interpretivist research could provide a deep dive into individuals' perspectives within organizations. This approach could explore how employees view their company's

commitment to obligations, how they personally engage with such obligations or the ethical dilemmas they face in aligning business practices with broader societal commitments.

(5) Pragmatist research, focused on actionable outcomes, could look into effective strategies for businesses to meet their diverse obligations. For instance, a study might explore the development and testing of frameworks for better stakeholder engagement or best practices to ensure adherence to ESG standards while maintaining profitability.

The trend of obligation underscores the shifting dynamics of business responsibilities in the contemporary world. Through different research paradigms, deeper insights can be gained into how businesses are adapting to these evolving commitments, which in turn shapes more responsible and ethical business practices for the future.

2.4.5 Globalization. Globalization, denoting the process of interaction and integration among consumers, companies and governments worldwide, has significant implications for business operations, strategic decisions and areas of research. The influence of globalization permeates all five paradigms:

(1) Positivist studies, underpinned by objective measurement and quantitative analysis, might focus on empirically analyzing the impacts of globalization on various business aspects. For instance, using large-scale trade data, a researcher might quantify the effect of globalization on business performance, exploring patterns of international trade, market expansion and competitive dynamics in a globalized economy.

(2) Post-positivist research, acknowledging the complex interplay of various factors, could provide a nuanced understanding of globalization. For example, a study might combine econometric analysis with policy review to investigate how economic policies shape and are shaped by globalization, or how cultural diversity influences business operations and strategies in multinational companies.

(3) Constructivist studies could examine how organizations collectively interpret and respond to globalization. For instance, a researcher might explore how a multinational corporation develops shared understandings of global market opportunities and challenges, or how it negotiates diverse cultural norms and expectations across its global operations.

(4) Interpretivist research could delve into the lived experiences of individuals in the context of globalization. For instance, an interpretivist study might focus on how employees in a global firm navigate cross-cultural interactions, negotiate identity issues and perceive their roles and responsibilities in a globally connected work environment.

(5) Pragmatist research, with its emphasis on practical problem-solving, could design and evaluate strategies for businesses to thrive in a globalized market. For example, a study might develop and test strategies for managing cultural diversity in a multinational firm or for small businesses to break into global markets. These studies could use a mixed-methods approach to ensure both the effectiveness of the strategies and their sensitivity to the local contexts and stakeholder experiences.

The trend of globalization therefore brings about complex research questions and challenges, which can be explored through diverse paradigmatic lenses. By doing so, business research can generate multifaceted insights into the implications and opportunities of globalization for businesses, contributing to more informed and effective global business practices.

2.4.6 Sustainability. Sustainability, which can be broadly defined as the capacity to support, maintain or endure, is increasingly a central concern for businesses as they navigate their role in social and environmental stewardship. The sustainability lens demands attention to how business practices can meet present demands without compromising the ability of future generations to meet their needs.

(1) Positivist research, with its empirical rigor, can provide objective, quantifiable insights into the impacts of sustainable business practices. For example, a study might employ statistical analysis to examine the correlation between a company's sustainability measures, such as carbon footprint or waste reduction, and its financial performance or reputation among stakeholders.

(2) Post-positivist studies, recognizing the complexity of sustainability issues, could use mixed methods to delve into the multifaceted relationship between economic, environmental and social impact success. For instance, a study could combine customer surveys and case studies to explore how consumers' perceptions of a company's environmental and social sustainability efforts influence their purchasing decisions and loyalty.

(3) Constructivist research could focus on understanding how organizations and their members construct their understanding of sustainability. For example, a study might investigate how a company's sustainability narrative is negotiated and internalized among employees, influencing their engagement with sustainable practices and shaping the company's culture and policies.

(4) Interpretivist research could offer deep insights into the personal experiences and interpretations of individuals related to sustainability in business. For instance, an interpretivist study might use in-depth interviews to explore how individual employees perceive and navigate the challenges and opportunities of integrating sustainability into their daily work practices. This approach can unveil personal values, emotions and motivations linked to the sustainability discourse, thereby adding a nuanced, humanized understanding of sustainable business practices.

(5) Pragmatist researchers, with a focus on solving real-world problems, could collaborate with businesses to develop, implement and evaluate sustainability initiatives. For example, a pragmatist project could involve partnering with a company to co-create a sustainability strategy, monitoring its implementation and evaluating its impacts using both quantitative and qualitative methods to generate practical, actionable insights.

The convergence of sustainability with different research paradigms can thus create a multifaceted understanding of sustainable business practices, yielding both academic insights and pragmatic solutions. As businesses increasingly align their strategies with sustainability goals, the intersection of sustainability with research paradigms promises to drive innovative, impactful research in the business field.

3. Conclusion

The ongoing discourse about the philosophy of science in business research is a testament to the ever-evolving nature of the field. This article has explored the significant role of philosophical anchors and research paradigms, particularly in an era marked by emergent trends such as automation, digitalization, hyperconnectivity, obligations, globalization and sustainability (ADHOGS).

The overview of the major research paradigms—i.e. positivism, post-positivism, constructivism, interpretivism and pragmatism—revealed the multifaceted nature of business research. Each paradigm offers unique strengths in studying and understanding the complexities of business phenomena. Positivist and post-positivist paradigms, with their emphasis on objectivity, precision and the quest for universal laws, serve as an effective tool for empirical inquiries into quantifiable business issues. Constructivism and interpretivism, on the other hand, prioritize understanding the subjective experiences and intersubjective realities of individuals, proving invaluable in examining the human elements and intricate dynamics in business contexts. Pragmatism's utility-oriented stance and flexibility provide a versatile approach that combines the strengths of the other paradigms, addressing complex, real-world business issues.

Nonetheless, it is crucial to note that these paradigms should not be perceived as watertight compartments but as interconnected mechanisms that researchers can blend or switch between, depending on their research question, context and philosophical stance. Noteworthily, this article highlighted the role of paradigm interplay in accommodating different theoretical perspectives, such as behaviorism, feminism and ethics (moral philosophy), underscoring the rich, diverse potential of business research inquiries. Indeed, understanding and appreciating these different paradigms is not just a theoretical exercise but holds implications for the kind of knowledge business research produces and the ways in which it can contribute to theory and practice.

With the advent of automation, research questions and methods have begun to shift. Positivist research might help us quantify the impact of automation on various aspects of business performance, while constructivist research might help us understand how individuals and groups construct meaning around automation and its impact on their work roles. At the same time, a pragmatist approach to automation might involve creating and testing interventions to mitigate the challenges and maximize the opportunities that automation presents.

Similarly, the ongoing trend of digitalization presents a different set of implications for business research. A post-positivist approach might be employed to combine both objective and subjective methods to investigate the complex and multi-faceted impact of digitalization on business practices, while an interpretivist approach might delve into the subjective experiences of individuals as they navigate the increasingly digital business landscape.

The trend of hyperconnectivity has likewise reshaped the landscape of business research, with interpretivist studies helping us to understand how individuals experience and navigate this interconnectedness, and pragmatist research providing a pathway for designing and testing interventions to optimize hyperconnectivity within business contexts.

The notion of obligation introduces a renewed dimension to business research. Beyond the traditional bounds of financial responsibility to shareholders (return on investment), companies are now confronted with a layered spectrum of commitments that resonate with a broader array of stakeholders (return on value). The ascent of obligations such as data protection and ESG imperatives presents intricate research challenges and opportunities. A positivist lens might empirically examine businesses' adherence to these obligations, drawing insights into the measurable impacts of such commitments on a company's bottom line. On the other hand, constructivist inquiries could illuminate the processes through which organizations internalize and prioritize these multifarious obligations, providing a deep dive into corporate ethos in this age of heightened accountability. Furthermore, interpretivist explorations can unearth the rich tapestry of individual narratives and ethical reckonings within organizations as they grapple with these emergent obligations. Finally, pragmatism could guide actionable research, crafting strategies for businesses to effectively balance and fulfill their proliferating obligations in a manner that harmonizes profit motives with broader ethical and societal imperatives.

With the phenomenon of globalization, business researchers are provided with an opportunity to examine the interplay of local and global influences on businesses, their practices and their stakeholders. A positivist study could explore the relationship between a firm's global integration and its performance metrics, while a constructivist study could seek to understand how local cultures influence the meaning and execution of global business strategies. Additionally, pragmatist research could involve developing and testing strategies that help businesses better adapt to the challenges and seize the opportunities presented by globalization.

The growing focus on sustainability in business research is another key development. This presents an avenue for positivist research to empirically examine the impact of sustainable practices on business performance and reputation, whereas post-positivist studies could blend quantitative and qualitative methods to delve into the multifaceted relationship between sustainability practices, business operations and organizational performance. Constructivist research could provide insights into how businesses and their stakeholders negotiate and construct their understanding of sustainability, whereas an interpretivist approach could capture the lived experiences of individuals navigating sustainable practices in their work. Pragmatist research, on the other hand, could be employed to design, test and evaluate sustainability initiatives in real-world business contexts.

These discussions underscore the centrality of the philosophy of science and research paradigms in shaping the nature and scope of business research, particularly in an era marked by rapid and profound changes. As such, business researchers must be equipped with an understanding of the underpinnings of these paradigms, as well as the capacity to select and apply the most suitable paradigm for their research questions and contexts. As the business landscape continues to evolve, research paradigms, too, must adapt and expand, providing a robust and flexible framework for understanding the complex dynamics of business in the twenty-first century.

To this end, this article has sought to demystify the philosophy of science and research paradigms in business research, elucidating their theoretical foundations, their practical applications and their interplay with emergent trends such as automation, digitalization, hyperconnectivity, obligations, globalization and sustainability. Through this exploration, it has been demonstrated that these paradigms do not operate in isolation; rather, they intersect and interact in ways that enrich and diversify the insights produced by business research. Indeed, it is in the interstices and intersections of these paradigms that business research can most effectively grapple with the multifaceted, dynamic and complex nature of contemporary business phenomena. Thus, the philosophy of science and research paradigms not only provide a backbone for business research but also propel it forward, offering pathways for innovation, discovery and advancement in the ever-evolving world of business.

Notes

1. The discourse herein is guided by the 3Es of experience, expertise and exposure (Kraus *et al.*, 2022), as well as the seminal works of Lincoln and Guba (2000), Ponterotto (2005) and Saunders *et al.* (2015).

2. Methods should be understood and presented systematically. For instance, the choice of data collection techniques will directly influence the selection of data analysis strategies. Having a theoretical understanding of these methods is necessary to ensure their appropriate selection and use. This guarantees that the research methods align with the research goals, enabling effective answering of the research question and the accurate reporting of the research findings.

3. Axiology holds ethical implications, particularly in business research where decisions can have far-reaching effects. The values that researchers bring to their work extend beyond personal beliefs to encompass ethical standards and professional codes of conduct. Ethical considerations come into

play at various stages of the research, from the treatment of subjects or the handling of sensitive data to the transparency of findings. Being mindful of axiological aspects includes being conscious of these ethical considerations. Neglecting them could not only introduce bias but also compromise the ethical integrity of the research. Consequently, thorough ethical reflections and appropriate actions are imperative to ensure responsible business research.

4. Scholars such as Kilduff *et al.* (2011) propose a different classification consisting of critical realism, structural realism, foundationalism, instrumentalism and strong paradigm. While this approach aims to depersonalize the nomenclature used for research paradigms, similar to the approach taken in review studies by Kraus *et al.* (2022), this article argues in favor of retaining the use of nomenclatures for research paradigms. The reason for this is that the associated logics of foundationalist (induction logic), instrumentalist (problem-solving logic), realist (pure research logic) and strong-paradigm (exploitation logic) approaches to science align with the ontology, and by extension, the epistemology, of research paradigms. Therefore, this article adapts and infuses the philosophies of science for organizing by Kilduff *et al.* (2011) with the typology of research paradigms by Lincoln and Guba (2000).

5. The term "structural realism" is used in place of "naive realism", signifying the belief that the researchers' understanding of reality is based on the structure of the world and that this structure exists independently of their perceptions or interpretations, wherein the "structure" refers to the pattern of relationships or principles that govern the phenomena under study. This term emphasizes that while the researchers may not have direct access to an objective reality, they can still discern its structure through empirical observation and scientific reasoning.

6. The term "critical realism", associated with post-positivism, acknowledges the existence of an objective reality, but posits that the researchers' understanding and perception of this reality could be mediated (e.g. mental processes, senses), which can be fallible or biased. Critical realism challenges the notion of a singular, discoverable "truth", instead arguing for the existence of multiple, context-dependent "truths", proposing that our interpretations and understandings of reality are constructed and can therefore be deconstructed and reconstructed in ways that challenge prevailing power structures and reimagine possible meanings attached to current practices. This perspective encourages a critical engagement with the research subject and the research process, prompting us to question, critique and transform our own understanding of the world.

7. The term "strong paradigm" is adopted from Kilduff *et al.* (2011), who used it to explain the creation of a scientific paradigm and the exploitation of the implications thereof. In this article, the term is extrapolated to denote an approach that not only forms and exploits a unique scientific paradigm but also traverses and synthesizes multiple ontological positions for practical problem-solving. This conceptual extension serves to emphasize the adaptive, problem-oriented ontology that characterizes the pragmatism paradigm. The strong paradigm, in this context, resonates with the concept of "practical realism," emphasizing that the nature of reality and our understanding of it are intricately connected to practical, problem-solving activities.

References

Aguinis, H., Cummings, C., Ramani, R.S. and Cummings, T.G. (2020), "An A is an A: the new bottom line for valuing academic research", *Academy of Management Perspectives*, Vol. 34 No. 1, pp. 135-154, doi: 10.5465/amp.2017.0193.

Bamel, U., Kumar, S., Lim, W.M., Bamel, N. and Meyer, N. (2022), "Managing the dark side of digitalization in the future of work: a fuzzy TISM approach", *Journal of Innovation and Knowledge*, Vol. 7 No. 4, 100275, doi: 10.1016/j.jik.2022.100275.

Bansal, S., Garg, I. and Singh, S. (2023), "Corporate social responsibility: insights from COVID-19 and stakeholder theory", *Global Business and Organizational Excellence*. doi: 10.1002/joe.22222.

Ciasullo, M.V. and Lim, W.M. (2022), "Digital transformation and business model innovation: advances, challenges and opportunities", *International Journal of Quality and Innovation*, Vol. 6 No. 1, pp. 1-6.

Dawson, M. (2020), "Exploring secure computing for the internet of things, internet of everything, web of things, and hyperconnectivity", in Information Resources Management Association (Ed.), *Securing the Internet of Things: Concepts, Methodologies, Tools, and Applications*, IGI Global, pp. 1186-1195, doi: 10.4018/978-1-5225-9866-4.ch053.

Donthu, N., Kumar, S., Pandey, N. and Lim, W.M. (2021), "Research constituents, intellectual structure, and collaboration patterns in journal of international marketing: an analytical retrospective", *Journal of International Marketing*, Vol. 29 No. 2, pp. 1-25, doi: 10.1177/1069031X211004234.

Garcia-Rosell, J.C. and Moisander, J. (2008), "Ethical dimensions of sustainable marketing: a consumer policy perspective", *European Advances in Consumer Research*, Vol. 8, pp. 210-215.

Goodell, J.W., Kumar, S., Lim, W.M. and Pattnaik, D. (2021), "Artificial intelligence and machine learning in finance: identifying foundations, themes, and research clusters from bibliometric analysis", *Journal of Behavioral and Experimental Finance*, Vol. 32, 100577, doi: 10.1016/j.jbef.2021.100577.

Harquail, C.V. (2019), *Feminism: A Key Idea for Business and Society*, Routledge, London, New York.

Kilduff, M., Mehra, A. and Dunn, M.B. (2011), "From blue sky research to problem solving: a philosophy of science theory of new knowledge production", *Academy of Management Review*, Vol. 36 No. 2, pp. 297-317, doi: 10.5465/amr.2009.0164.

Kraus, S., Breier, M., Lim, W.M., Dabić, M., Kumar, S., Kanbach, D. and Ferreira, J.J. (2022), "Literature reviews as independent studies: guidelines for academic practice", *Review of Managerial Science*, Vol. 16 No. 8, pp. 2577-2595, doi: 10.1007/s11846-022-00588-8.

Kraus, S., Kumar, S., Lim, W.M., Kaur, J., Sharma, A. and Schiavone, F. (2023), "From moon landing to metaverse: tracing the evolution of technological forecasting and social change", *Technological Forecasting and Social Change*, Vol. 189, 122381, doi: 10.1016/j.techfore.2023.122381.

Kumar, S., Lim, W.M., Pandey, N. and Westland, J.C. (2021), "20 years of electronic commerce research", *Electronic Commerce Research*, Vol. 21, pp. 1-40, doi: 10.1007/s10660-021-09464-1.

Kumar, S., Paltrinieri, A., Lim, W.M., Pandey, N. and Mukherjee, D. (2022), "European Journal of International Management: past, present and future", *European Journal of International Management*, Vol. 18 No. 1, pp. 1-31, doi: 10.1504/EJIM.2022.123917.

Kumar, S., Lim, W.M., Sivarajah, U. and Kaur, J. (2023), "Artificial intelligence and blockchain integration in business: trends from a bibliometric-content analysis", *Information Systems Frontiers*, Vol. 25 No. 2, pp. 871-896, doi: 10.1007/s10796-022-10279-0.

Lim, W.M. (2016), "A blueprint for sustainability marketing: defining its conceptual boundaries for progress", *Marketing Theory*, Vol. 16 No. 2, pp. 232-249, doi: 10.1177/1470593115609796.

Lim, W.M. (2021a), "History, lessons, and ways forward from the COVID-19 pandemic", *International Journal of Quality and Innovation*, Vol. 5 No. 2, pp. 101-108.

Lim, W.M. (2021b), "Pro-active peer review for premier journals", *Industrial Marketing Management*, Vol. 95, pp. 65-69, doi: 10.1016/j.indmarman.2021.04.004.

Lim, W.M. (2022a), "The art of writing for premier journals", *Global Business and Organizational Excellence*, Vol. 41 No. 6, pp. 5-10, doi: 10.1002/joe.22178.

Lim, W.M. (2022b), "The sustainability pyramid: a hierarchical approach to greater sustainability and the United Nations Sustainable Development Goals with implications for marketing theory, practice, and public policy", *Australasian Marketing Journal*, Vol. 30 No. 2, pp. 142-150, doi: 10.1177/18393349211069152.

Lim, W.M. (2022c), "Ushering a new era of global business and organizational excellence: taking a leaf out of recent trends in the new normal", *Global Business and Organizational Excellence*, Vol. 41 No. 5, pp. 5-13, doi: 10.1002/joe.22163.

Lim, W.M. (2023a), "Avengers, assemble the literature! A multi-study review of consumption, environmental values, and planetary health research", *Journal of Consumer Behaviour*. doi: 10.1002/cb.2188.

Lim, W.M. (2023b), "The workforce revolution: reimagining work, workers, and workplaces for the future", *Global Business and Organizational Excellence*, Vol. 42 No. 4, pp. 5-10, doi: 10.1002/joe.22218.

Lim, W.M. (2023c), "Transformative marketing in the new normal: a novel practice-scholarly integrative review of business-to-business marketing mix challenges, opportunities, and solutions", *Journal of Business Research*, Vol. 160, 113638, doi: 10.1016/j.jbusres.2022.113638.

Lim, W.M., Chin, M.W.C., Ee, Y.S., Fung, C.Y., Giang, C.S., Heng, K.S., Kong, M.L.F., Lim, A.S.S., Lim, B.C.Y., Lim, R.T.H., Lim, T.Z., Ling, C.C., Mandrinos, S., Nwobodo, S., Phang, C.S.C., She, L., Sim, C.H., Su, S.I., Wee, G.W.E. and Weissmann, M.A. (2022a), "What is at stake in a war? A prospective evaluation of the Ukraine and Russia conflict for business and society", *Global Business and Organizational Excellence*, Vol. 41 No. 6, pp. 23-36, doi: 10.1002/joe.22162.

Lim, W.M., Kumar, S. and Ali, F. (2022b), "Advancing knowledge through literature reviews: 'what', 'why', and 'how to contribute'", *Service Industries Journal*, Vol. 42 Nos 7-8, pp. 481-513, doi: 10.1080/02642069.2022.2047941.

Lim, W.M., Ciasullo, M.V., Douglas, A. and Kumar, S. (2023a), "Environmental social governance (ESG) and total quality management (TQM): a multi-study meta-systematic review", *Total Quality Management and Business Excellence*, ahead-of-print, doi: 10.1080/14783363.2022.2048952.

Lim, W.M., O'Connor, P., Nair, S., Soleimani, S. and Rasul, T. (2023b), "A foundational theory of ethical decision-making: the case of marketing professionals", *Journal of Business Research*, Vol. 158, 113579, doi: 10.1016/j.jbusres.2022.113579.

Lincoln, Y.S. and Guba, E.G. (2000), "Paradigmatic controversies, contradictions, and emerging confluences", in Denzin, N.K. and Lincoln, Y.S. (Eds), *Handbook of Qualitative Research*, 2nd ed., Sage, Thousand Oaks, CA, pp. 163-188.

Mahajan, R., Lim, W.M., Sareen, M., Kumar, S. and Panwar, R. (2023), "Stakeholder theory", *Journal of Business Research*, Vol. 166, 114104, doi: 10.1016/j.jbusres.2023.114104.

Mandrinos, S., Lim, W.M. and Liew, C.S.L. (2022), "De-internationalization through the lens of intellectual property rights", *Thunderbird International Business Review*, Vol. 64 No. 1, pp. 13-24, doi: 10.1002/tie.22240.

Ponterotto, J.G. (2005), "Qualitative research in counseling psychology: a primer on research paradigms and philosophy of science", *Journal of Counseling Psychology*, Vol. 52 No. 2, pp. 126-136, doi: 10.1037/0022-0167.52.2.126.

Prasad, K., Kumar, S., Devji, S., Lim, W.M., Prabhu, N. and Moodbidri, S. (2022), "Corporate social responsibility and cost of capital: the moderating role of policy intervention", *Research in International Business and Finance*, Vol. 60, 101620, doi: 10.1016/j.ribaf.2022.101620.

Sahoo, S., Kumar, S., Abedin, M.Z., Lim, W.M. and Jakhar, S.K. (2023), "Deep learning applications in manufacturing operations: a review of trends and ways forward", *Journal of Enterprise Information Management*, Vol. 36 No. 1, pp. 221-251, doi: 10.1108/JEIM-01-2022-0025.

Saunders, M.N., Lewis, P., Thornhill, A. and Bristow, A. (2015), "Understanding research philosophy and approaches to theory development", in Saunders, M.N.K., Lewis, P. and Thornhill, A. (Eds), *Research Methods for Business Students*, Pearson Education, Harlow, pp. 122-161.

Taskan, B., Junça-Silva, A. and Caetano, A. (2022), "Clarifying the conceptual map of VUCA: a systematic review", *International Journal of Organizational Analysis*, Vol. 30 No. 7, pp. 196-217, doi: 10.1108/IJOA-02-2022-3136.

Watson, J.B. (2017), *Behaviorism*, Routledge, London and New York.

Yap, S.F. and Lim, W.M. (2023), "A paradox theory of social media consumption and child well-being", *Australasian Marketing Journal*, ahead-of-print, doi: 10.1177/14413582221139492.

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