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Original Article

Examining Resources and Capabilities for Corporate Sustainability: A Systematic Literature Review and Interviews with Practitioners

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Abstract:
Effective resource and capability management is crucial for achieving Environmental, Social, and Governance (ESG) goals, particularly in industries facing rapid technological and regulatory changes. In China's rapidly evolving video game industry—one of the largest and most innovative globally—challenges such as technological advancement, resource integration, and aligning innovation with ESG requirements remain underexplored, despite their critical importance for long-term sustainability. This study bridges this gap by combining a Systematic Literature Review (SLR) of 43 studies with semi-structured interviews of 10 industry leaders, offering a dual-method approach to analyze key resources and dynamic capabilities driving corporate sustainability. Grounded in an integrated framework of Resource-Based View (RBV), Dynamic Capabilities View (DCV), Resource Orchestration Theory (ROT), and Triple Bottom Line (TBL), this research employs thematic coding and qualitative content analysis to identify how resources and capabilities drive sustainable outcomes. The findings reveal that technological innovation, human capital, and financial strength, combined with dynamic capabilities like adaptability and strategic execution, are critical for achieving sustainability in the video game industry. A conceptual framework is proposed, illustrating how value creation mediates the relationship between resources, capabilities, and corporate sustainability. This study advances theoretical understanding of resource orchestration and offers actionable insights for aligning ESG-driven strategies with competitive advantage in China's video game industry.

Keywords: ESG, Corporate Sustainability, Resource Orchestration, Dynamic Capabilities, Value Creation, Video Game Industry, China

1. Introduction

The global focus on Environmental, Social, and Governance (ESG) considerations has grown as governments and business organizations move to resolve the looming environmental and societal issues, thus putting sustainability on the corporate responsibility agenda (Cantele et al., 2024). The video game sector, characterized by its stunning innovation and rapid expansion, with more than USD 200 billion in market capitalization as of 2023 (Newzoo, 2024), has challenges concerning sustainability despite its substantial economic power (Ahmed et al., 2024). According to Kim (2021) and Ma et al. (2023), these include managing carbon emissions from energy-intensive data centers, addressing user mental health, ensuring ethical content governance, and improving employee welfare. Moreover, the industry's global user base, high technological demands (e.g., AI and cloud computing), and rapidly iterating content highlight its complex sustainability dynamics (Lantano et al., 2022; Sierra & Rodríguez-Conde, 2023).

In China, one of the largest gaming markets globally, the adoption of ESG practices has become a strategic priority, driven by policies such as the "dual carbon" goals and stricter regulations on content and user protection (Li et al., 2023; Wu et al., 2023). These initiatives push companies to integrate ESG considerations into their operations, reflecting a broader global trend towards sustainability (Cantele et al., 2024). However, these efforts remain in their infancy, and systematic studies exploring resource integration and capability building under ESG-driven goals are still limited. The video game industry's unique characteristics, its technology-intensive nature, global distribution networks, and innovation-driven development, which add further complexity to achieving sustainability (Solarino et al., 2024). Unlike traditional manufacturing or consumer goods sectors, the gaming industry relies heavily on intangible and dynamic resources, such as cutting-edge technology, creative talent, and global partnerships (Shi & Zailani, 2025). Effectively managing these resources to meet ESG goals presents unique challenges, particularly in balancing innovation and operational sustainability (Rosenstein & Saam, 2024).

While ESG keeps drawing increasing attention in the video gaming sector, existing literature has predominantly focused on mainstream industries and left out how resources and capabilities facilitate CSP in the gaming industry. Moreover, practical frameworks that guide practitioners on how to dynamically combine resources and capabilities to achieve ESG outcomes are lacking. To fill these gaps, this study is looking for responses to the following research questions (RQs):

- RQ1. What key resources and capabilities effectively support the sustainability goals of enterprises in the Chinese video game industry?
- RQ2. How do technological resources (e.g., AI and data analytics) and innovation capabilities contribute to value creation in the video game industry?
- RQ3. What role do these resources and capabilities play in value creation processes, driving corporate sustainability performance (CSP)?

Addressing these questions, this study follows a two-method approach of a Systematic Literature Review (SLR) and semi-structured interviews. Founded on a comprehensive framework integrating the Resource-Based View (RBV), Dynamic Capabilities View (DCV), Resource Orchestration Theory (ROT), and the Triple Bottom Line (TBL), this study seeks to determine the key resources and capabilities enabling sustainability in the video game sector. The SLR synthesizes existing theoretical and empirical research to categorize resources and capabilities, while interviews capture real-world practices and challenges in the industry. The findings inform an integrative conceptual framework linking resources, capabilities, value creation, and CSP, providing both theoretical insights and actionable strategies.

Consequently, this study pioneers the exploration of sustainability in the video game industry, addressing unique challenges such as managing intangible resources and fostering innovation ecosystems. By integrating multiple theoretical perspectives, it develops a comprehensive framework linking resources, capabilities, value creation, and corporate sustainability performance, offering both theoretical insights and practical strategies. By combining SLR with semi-structured interviews, this study offers both theoretical depth and practical applicability, providing a roadmap for aligning resource management with ESG goals. These contributions enrich academic discourse and offer actionable tools for video game companies to operationalize sustainability while maintaining innovation and competitive advantage.

2 Theoretical Background

2.1 Resource-Based View (RBV) and Dynamic Capabilities View (DCV)

The Resource-Based View (RBV), introduced by Barney (1991), posits that firms achieve competitive advantages by possessing and effectively using valuable, rare, inimitable, and non-substitutable (VRIN) resources. These resources, whether tangible (e.g., proprietary technology) or intangible (e.g., creative talent), enable firms to differentiate themselves and sustain long-term performance (Salazar, 2017). In the video game industry, VRIN resources include advanced game engines, user data analytics capabilities, and creative talent, which drive

product innovation and competitive differentiation (Aleem et al., 2016). However, RBV's static nature limits its ability to explain how resources retain value in dynamic and volatile markets (Teece, 2018).

Dynamic Capabilities View (DCV) extends RBV by emphasizing the importance of resource reconfiguration and adaptation in rapidly changing environments (Teece et al., 1997). Dynamic capabilities allow organizations to detect and grasp opportunities, minimize hazards, and innovate in response to changing consumer demands, technology, and regulatory changes (Ding & Chen, 2023). For instance, video game companies leverage dynamic capabilities to optimize game mechanics, accelerate development cycles, and expand into global markets (Roy et al., 2022). DCV emphasizes dynamic resource management but does not provide practical advice on how organizations should configure and leverage resources to achieve strategic objectives.

2.2 Resource Orchestration Theory (ROT)

According to Sirmon et al. (2007), Resource Orchestration Theory (ROT) integrates RBV and DCV by providing a practical framework for resource management in dynamic environments. ROT focuses on three key processes: structuring, bundling, and leveraging resources (Rehman et al., 2022). Structuring involves identifying, acquiring, and organizing resources to establish a strong resource base. For example, video game companies may invest in cloud infrastructure or form global partnerships to enhance operational efficiency. Bundling entails combining and configuring resources to develop distinctive capabilities. For instance, integrating machine learning with user engagement analytics enables personalized gaming experiences that enhance user satisfaction and retention (Xin et al., 2023). Leveraging involves deploying capabilities to capitalize on market opportunities or address challenges. A video game firm might use proprietary algorithms to optimize in-game economies, driving player engagement and monetization (Silva & Silva, 2020). ROT is particularly relevant for sustainability, as it provides a structured approach to aligning resource management with ESG goals. For example, firms can structure eco-friendly technologies, bundle them with data analytics to enhance energy efficiency, and leverage these practices to communicate sustainability efforts to stakeholders, gaining a competitive advantage. By bridging the strategic value of resources (RBV) and their operational deployment (DCV), ROT offers actionable insights for achieving sustainable outcomes in complex environments (D'Oria et al., 2021; Deng & Noorliza, 2023).

2.3 Triple Bottom Line（TBL）

The Triple Bottom Line (TBL) theory proposed by (Elkington, 1998) emphasizes that corporate performance should include economic, social, and environmental benefits. Unlike traditional financial metrics, TBL offers a holistic view, evaluating a company's impact on ecological conservation, social well-being, and economic growth (Slaper & Hall, 2011). In the video game industry, TBL measures sustainability by focusing on energy efficiency, digital inclusivity, and innovation. Environmentally, companies can reduce carbon footprints through energy-efficient infrastructure, cloud optimization, and renewable energy adoption (Boncu et al., 2022; Ma et al., 2023). Socially, firms can promote digital well-being with responsible gaming features, diverse content, and fair labor practices (Choi et al., 2022; Gumbi et al., 2024). Economically, TBL emphasizes industry growth, technological advancement, and job creation (Handrich et al., 2022; Lantano et al., 2022). For example, AI-driven content generation not only boosts competitiveness but also enhances workforce skills. Thus, TBL complements RBV, DCV, and ROT by offering a sustainability-oriented lens to evaluate resource management effectiveness. By embedding TBL into resource orchestration strategies, video game companies can integrate ESG considerations into their long-term development, enhancing resilience and industry leadership.

2.4 Integration of Theories for Corporate Sustainability

This study integrates RBV, DCV, ROT, and TBL to build a theoretical framework for resource management in achieving ESG goals in the video game industry. RBV highlights unique, scarce resources as competitive advantages (D'Oria et al., 2021), while DCV focuses on dynamic resource reconfiguration amid uncertainties (Wilden et al., 2016). ROT operationalizes

resource management through structuring, bundling, and leveraging processes, offering practical guidance (Silva & Silva, 2020). TBL complements these by evaluating sustainability across environmental, social, and economic dimensions, providing a holistic benchmark for responsible value creation (Lee et al., 2022). The framework addresses the video game industry's reliance on intangible, dynamic resources like advanced technologies, creative talent, and global networks. It suggests structuring key resources, bundling them with innovation capabilities, and leveraging these to reduce carbon emissions (environmental), enhance user well-being (social), and drive industry growth (economic). By applying RBV, DCV, and ROT to this underexplored sector, the study advances academic understanding of sustainability-focused resource orchestration. It also equips practitioners with tools to align resource management with long-term ESG objectives, positioning the industry as a model for integrating innovation and sustainability.

3. Research Methodology

This study employs a dual-method approach, combining a Systematic Literature Review (SLR) and semi-structured interviews to explore resource and capability management under ESG goals in the video game industry. According to Bauer et al. (2021), the SLR following the PRISMA process, identifies and synthesizes 43 high-quality studies to establish a theoretical foundation for sustainability-linked resources and capabilities. Semi-structured interviews with industry practitioners then provide practical insights into challenges and applications of resource integration and capability building, complementing the SLR findings. By integrating theoretical and practical perspectives, the study bridges theory and practice, offering actionable strategies for sustainable resource management. Figure 1 outlines the research framework, showing how SLR findings inform interview insights. The following sections detail each stage's methodology and its contribution to the study's objectives.

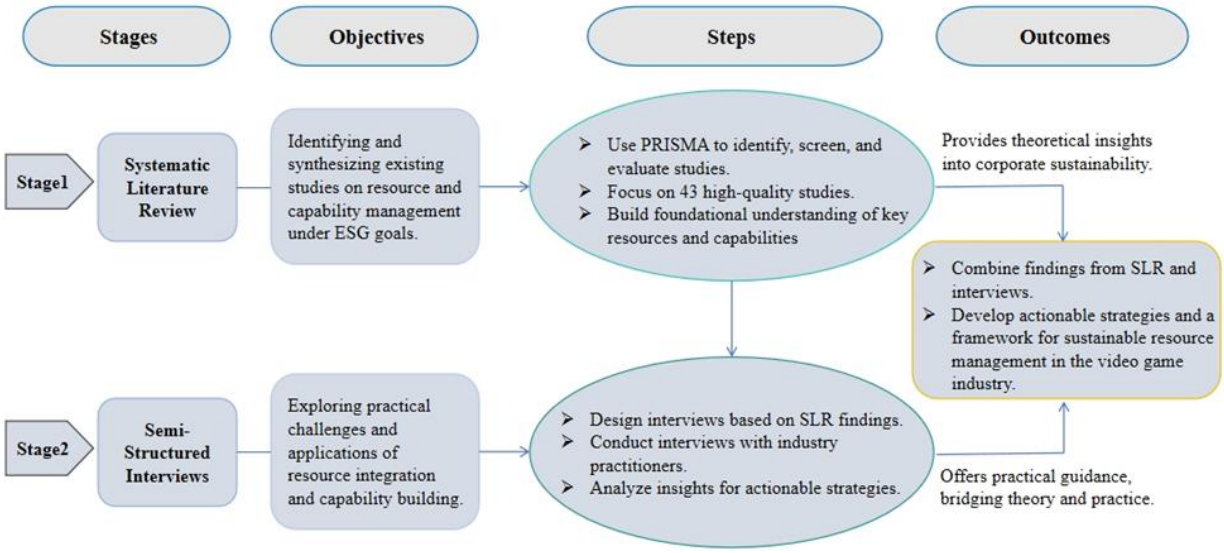

Figure 1 Research Framework

3.1 Systematic Literature Review (SLR)

The SLR is a rigorous method for evaluating existing research, identifies knowledge gaps and establishes a foundation for future studies (Kaur et al., 2021). This study employs the PRISMA process to analyze the role of resources and dynamic capabilities in driving corporate sustainability within China's video game industry. By synthesizing 43 relevant studies, the SLR explores the intersection of resource orchestration, ESG-driven strategies, and competitive advantage. Following established methodologies (Talwar et al., 2021), this study was conducted in a step-by-step process to ensure precision and replicability: first, identifying the studies; next, determining the pertinent studies; third, retrieving information; fourth, synthesizing the data; and, finally, reporting the findings. A review panel, consisting of one senior academic and one practitioner with

industry expertise, collaboratively defined the study's conceptual boundaries. Consultations were held at every stage—from the initial selection of studies to final synthesis—to resolve discrepancies and build consensus. This structured approach enabled the identification of key patterns and theoretical advancements relevant to resource orchestration and sustainability performance in the video game sector. The SLR process was conducted in four key stages, as illustrated in Figure 2.

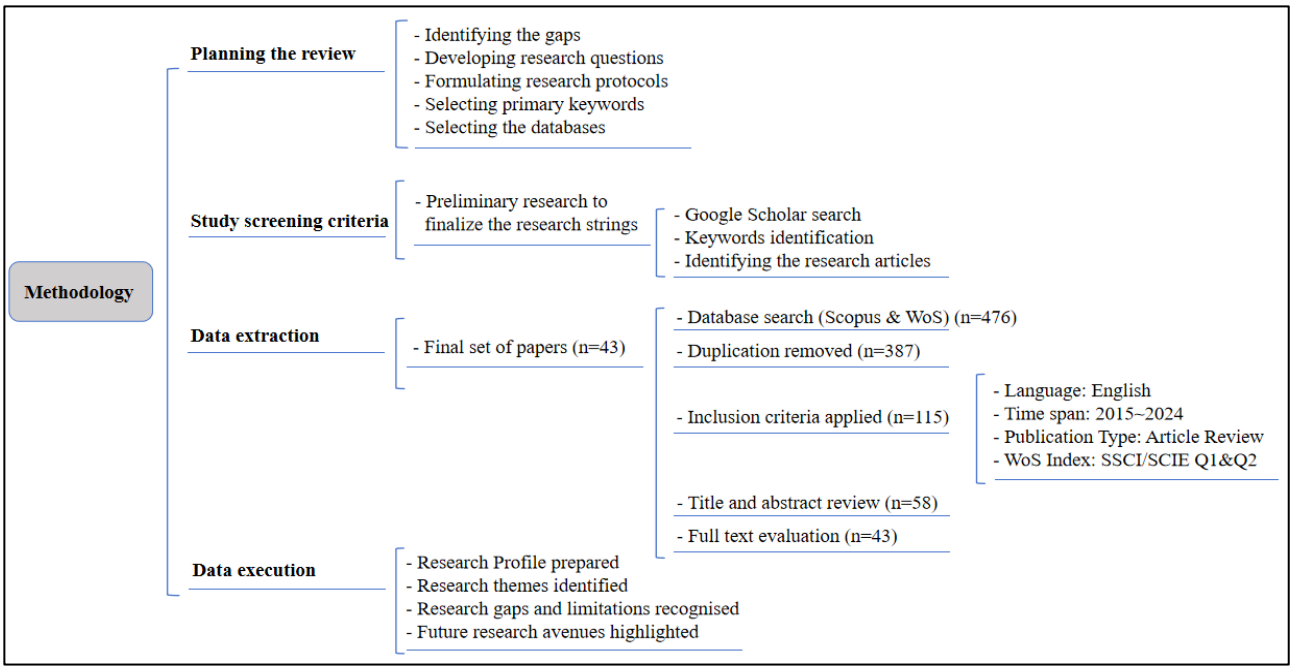

Figure 2 PRISMA flow diagram of the SLR

3.1.1 Planning the Review

According to Pati and Lorusso (2018), the SLR began with a research protocol, including research questions, search strategies, inclusion/exclusion criteria, and synthesis methods. Aligned with prior practices (Ibn-Mohammed et al., 2021), the study explored how resources and dynamic capabilities drive corporate sustainability in China's video game industry. Scopus and Web of Science were selected as the primary databases. The initial search used keywords such as "corporate sustainability" and "video game industry," which were later refined into comprehensive search strings covering resource, dynamic capabilities, and ESG strategies. The search was not confined to any specific time frame; rather, it considered all related studies.

3.1.2 Study Screening Criteria

This study defined peer-reviewed academic articles as the unit of analysis for the SLR (Mohamed Shaffril et al., 2021). Specific inclusion and exclusion criteria were applied to ensure relevance and quality (see Table 1). The initial search utilized Scopus and Web of Science databases, focusing on studies indexed in SSCI and SCIE journals ranked Q1 or Q2. The search was restricted to publications in English from the time span of 2015 to 2024, with article being the primary type considered. Non-peer reviewed literature, including white papers, theses, and conference proceedings, was excluded. Articles that did not directly address the connection between resources, dynamic capabilities, and corporate sustainability in the video game industry were also removed. The final selection process ensured that all included studies aligned with the research objectives and met the established quality criteria.

Table 1. Inclusion and exclusion criteria

Inclusion criteria (IC)	Exclusion criteria (EC)
IC1. Peer-reviewed articles written in	EC1. Articles not written in English

English	
IC2. Journal articles published from 2015 to 2024	EC2. Articles published before or on 2014
IC3. Type of publication: Article	EC3. Non-peer-reviewed articles
IC4. WoS Index: SSCI/SCIE Q1&Q2	EC4. White papers, working papers, conference papers and project reports
IC5. Article focusing on sustainability in Chinese VGI	EC5. Thesis, book chapters, editorials and essays
IC6. Articles available in full text	EC6. Articles not focusing on sustainability in Chinese VGI
	EC7. Duplicate articles

3.1.3 Data extraction

To ensure comprehensive data collection, an initial search on Google Scholar using keywords like "resources and capabilities for corporate sustainability in the video game industry" was conducted. From the first 100 results, titles, abstracts, and keywords were analyzed to refine the search string. The final search string comprised three modules as follows:

1) Resource and Capability Terms: ("Resource" OR "RBV" OR "ROT" OR "Capability" OR "Capabilities" OR "DCV" OR "Agility" OR "Organizational Flexibility" OR "Resilience" OR "Change Management" OR "Technology" OR "Innovation" OR "Digital Transformation" OR "Creativity" OR "Product" OR "Finance" OR "Marketing" OR "Brand Management" OR "Talent" OR "Human Capital" OR "Human Resources" OR "Knowledge Management" OR "Intellectual Capital" OR "Artificial Intelligence" OR "Internationalization" OR "Globalization" OR "Culture" OR "Supply Chain Management").

2) Sustainability Performance Terms: ("ESG" OR "Corporate Governance" OR "Sustainability" OR "Sustainable Development" OR "Social Responsibility" OR "CSR" OR "Green Practice" OR "Green Economy" OR "Triple Bottom Line" OR "Environmental Performance" OR "Social Performance" OR "Economic Performance" OR "Sustainable Competitive Advantage" OR "Value Creation").

3) Video Game Industry Terms: ("Video Game" OR "Digital Game" OR "Mobile Game" OR "Online Game" OR "Console Game" OR "Computer Game" OR "Gaming Sector" OR "Gaming Industry" OR "Esports" OR "Interactive Entertainment" OR "Entertainment Industry" OR "Digital Entertainment").

These three modules were connected using the logical operator AND, as per the framework applied to examining resources and capabilities related to corporate sustainability in the video game industry. The literature search was performed in two leading scholarly databases, Scopus and Web of Science (WoS), following established systematic literature review procedures (Madanaguli et al., 2022). The procedure, completed on October 30, 2024, yielded a total of 476 studies: 337 Scopus articles and 139 WoS articles. The process of filtering involved several systematic procedures to limit the dataset. Firstly, duplicate records were identified and removed, yielding 387 distinctive studies. Secondly, inclusion criteria were applied to exclude irrelevant publications, narrowing the scope to 115 studies. To guarantee quality and relevance, stringent inclusion criteria were applied: studies had to be published in English; the publication period was restricted to between 2015 and 2024 to guarantee timeliness; articles were classified as research papers; studies indexed in SSCI or SCIE with Q1 or Q2 rankings were included to ensure high-quality standards. In the third phase, we inspected the titles and abstracts of these studies and hence reduced the list to 58 articles. Finally, a full-text review was conducted, and a final list of 43 studies that met all provided criteria was obtained.

3.1.4 Data Execution

For the sake of comparison of the shortlisted 43 studies, we created a research profile based on descriptive statistical data, such as the year of publication, geographical distribution, publication sources, and methodologies adopted, as guided by previous studies (Tandon et al., 2020). The studies were categorized year wise, with few publications before the year 2021 (see Figure 3). However, the sharp growth in publication activity was registered

during the period 2022-2023. Second, the research revealed a wide geographical distribution of existing literature. In particular, the distribution of studies was as follows: European Union (3), China (3), United States (3), Taiwan (2), Japan (2), Germany (2), United Kingdom (2), other nations (10), and 17 papers without indicated geographical data (see Figure 4). There have been various pertinent articles based on this topic published in a variety of journals, with a majority of them being published in the journal Sustainability (see Figure 5). Methodologically, most of the prior research utilized quantitative approaches to examine the influence of resources and capabilities on sustainability (see Figure 6).

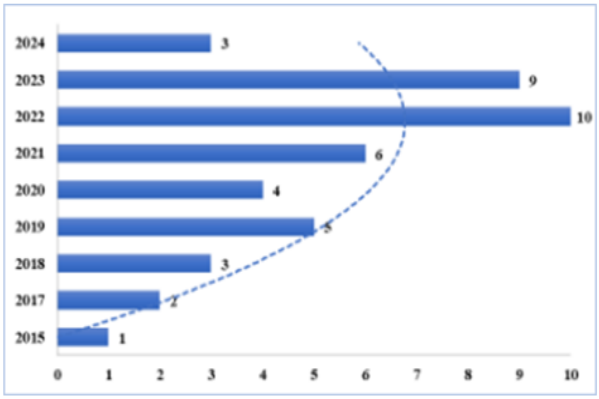

Figure 3. Year-wise distribution of studies

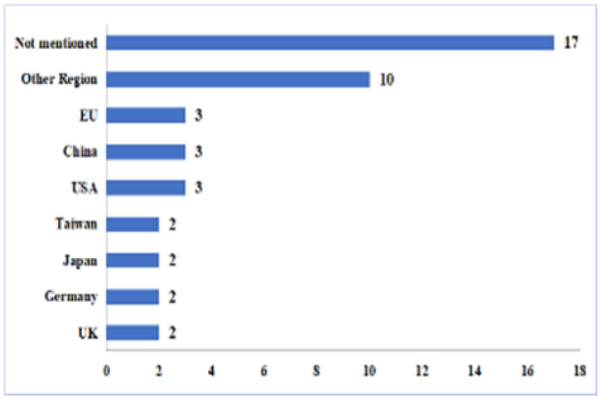

Figure 4. Geographical focus of the studies

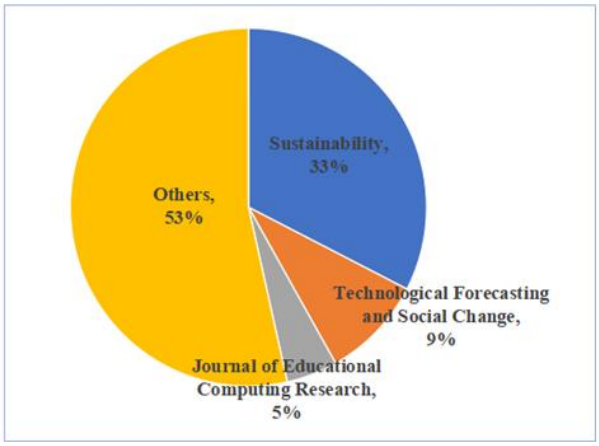

Figure 5 Journal-wise classification of studies

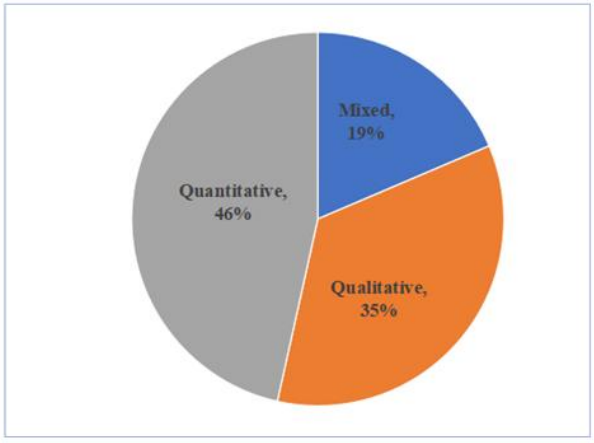

Figure 6 Research methods used in studies

Table 2 outlines the theoretical foundations employed in previous literature. Only a limited number of included studies utilized theoretical frameworks to support their findings. The theories applied by scholars include Co-Creation Value Theory (Klimas & Czakon, 2022), Complexity Theory (Goumagias et al., 2022), Coopetition Theory (Roy et al., 2022), Education for Sustainability (Pineda-Martínez et al., 2023), Innovation Ambidexterity (Inoue, 2021), and Innovation Ecosystem Theory (Klimas & Czakon, 2022). Other theories employed are Intrinsic Motivation Inventory (Schulze et al., 2015), Involvement Theory (Wang et al., 2019), Knowledge Co-Creation Theory (Jean et al., 2018), and Prospect Theory (Rietveld, 2018). Additionally, Push-Pull-Mooring (PPM) Theory (Su, 2018). Resource Dependence Theory (Gandia & Gardet, 2019), Resource-Based View (RBV) (Goumagias et al., 2022), Self-Determination Theory (Li et al., 2021; Wang et al., 2020), and Social Choice Theory (Tung & Lan, 2017) were utilized in the literature. Social Cognitive Theory (Aneni et al., 2023; Wang et al., 2020), Technology Acceptance Model (TAM) (Gumasing et al., 2023; Gumbi et al., 2024; Su, 2018), Theory of Planned Behavior (TPB) (Su, 2018) ,and User Innovation Strategies (Koch & Artmayr, 2020) also feature prominently among the theoretical frameworks.

Table 2. Theories employed by the selected studies

Study	Theory	Research Design
Klimas and Czakon (2022)	Co-Creation Value Theory	Literature review, Interviews, Observations
Goumagias et al. (2022)	Complexity Theory	Case study, Synthesis analysis
Roy et al. (2022)	Coopetition Theory	Data analysis (primary and secondary sources)
Pineda-Martínez et al. (2023)	Education for Sustainability	Literature review
Inoue (2021)	Innovation Ambidexterity	Statistical modeling (secondary sources)
Klimas and Czakon (2022)	Innovation Ecosystem Theory	Literature review, Interviews, Observations
Schulze et al. (2015)	Intrinsic Motivation Inventory	Survey questionnaire
Wang et al. (2019)	Involvement Theory	Survey questionnaire
Jean et al. (2018)	Knowledge Co-Creation Theory	Survey questionnaire, Interview
Rietveld (2018)	Prospect Theory	Statistical modeling (secondary sources)
Su (2018)	Push-Pull-Mooring (PPM) Theory	Survey questionnaire, Statistical modeling
Gandia and Gardet (2019)	Resource Dependence Theory	Interviews, Comparative study
Goumagias et al. (2022)	Resource-Based View (RBV)	Case study, Synthesis analysis
Li and Chu (2021); Wang et al. (2020)	Self-Determination Theory	Survey questionnaire, Interview
Tung and Lan (2017)	Social Choice Theory	Survey questionnaire
Wang et al. (2020); Aneni et al. (2023)	Social Cognitive Theory	Survey questionnaire, Interview
Su (2018); Gumasing et al. (2023); Gumbi et al. (2024)	Technology Acceptance Model (TAM)	Survey questionnaire, Statistical modeling
Su (2018)	Theory of Planned Behavior (TPB)	Survey questionnaire, Statistical modeling
Koch and Artmayr (2020)	User Innovation Strategies	Data analysis (secondary sources)

3.1.5 Quality Assessment

In order to ascertain the reliability of the findings of the review, this research undertook an extensive quality evaluation of the literature covered. Various evaluation criteria were utilized, such as publication in leading journals, citation impact, and methodological rigor. Research works that had poor methodological quality or very small sample sizes were not considered for analysis. The selected 43 articles offer firm theoretical foundation for the successful application of resources and competencies in sustainability management in the video game industry context.

3.2 Semi-structured Interviews

3.2.1 Research design

Semi-structured interviews were employed in this study as informed by the methodological framework of Wohlin et al. (2012). The central objective was to gather empirical data that would reinforce and complement the findings of the SLR. To fulfill this objective, we employed purposive sampling, a qualitative research approach focused on sampling participants based on specific criteria that are of importance in addressing the research questions (Etikan & Bala, 2017). Specifically, we employed expert sampling, target participants experienced and

knowledgeable in ESG application and resource orchestration in the video game industry.

3.2.2 Participant selection

Expert sampling requires rigorous inclusion to ensure that participants are equipped with the desired expertise (Moser & Korstjens, 2018). To this end, we developed explicit criteria, including educational level, professional position, years of experience in the field, and active involvement in projects related to ESG or sustainability initiatives. Table 3 outlines the relevant inclusion criteria. Based on these criteria, 10 participants were chosen via professional networks and industry contacts. This purposeful sampling made the sample representative as well as heterogeneous, covering both strategic and operational viewpoints.

Table 3. Interviewees' Inclusion Criteria

Criterion	Description
Education	Bachelor, Master or PhD degree
Position	Senior management, ESG officers, or project leads
Years of Experience	Minimum of five years in the video game industry
Project Involvement	Direct experience with resource management or ESG initiatives

3.2.3 Interview Protocol

We prepared an interview guide prior to conducting the interviews, comprising the principal themes and a comprehensive set of questions that were pertinent to our research questions. This interview guide is shown in Appendix A. The interviews were held in an open-ended fashion, nonetheless, allowing the interviewer the flexibility to alter the sequence and precise phrasing of the questions, provided that all questions contained in the guide were addressed. Also, the type of interview used was semi-structured, in a way that the interviewer could rephrase questions while making sure that all the areas of interest to be addressed were mentioned. Interviews began with an overview of the objectives, confidentiality measures, and the approximate length of the interviews. Participants were invited to include any extra comments, or follow-up matters that they believed were pertinent. The project began in November and concluded in December 2024. The ten interviews took 45 to 60 minutes each. Some of the participants accepted audio recording, but others used notetaking for confidentiality. Participant responses were documented through a standardized template to allow for systematic data gathering and subsequent analysis.

3.2.4 Data Processing

Upon completing all the interviews, the authors made an independent pass at analyzing the open-ended text responses obtained through the interviews. Adhering to the qualitative data analysis guidelines set out by (Rivas, 2012), the authors made initial coding. The initial codes were subsequently compared and debated to create higher-order categories and to reach final codes that resulted in the findings discussed in the following sections. Samples of the initial codes employed in analyzing the interview transcripts are provided in Appendix B.

4. Data Analysis and Findings

4.1 Systematic Literature Review Results

The SLR generated a final total of 43 eligible studies, providing findings on the interactions among key resources, value creation, and corporate sustainability in the Chinese video game sector. It is noteworthy that over half of the selected research works were published in or after 2021, reflecting the increasing scholarly attention to corporate sustainability and the contribution of capabilities and resources in the context of the Chinese video game sector. The list of the papers reviewed is provided in Appendix C. The findings are structured according to the research questions (RQs) and presented below.

RQ1. What key resources and capabilities effectively support the sustainability goals of enterprises in the Chinese video game industry? Findings relevant to RQ1 are summarized in Table 4.

Table 4. SLR Findings for RQ1.

Resources and Capabilities	Occurrence Count	IDs Involved
Technical Capabilities	22	1, 2, 3, 8, 9, 10, 11, 14, 17, 18, 21, 23, 27, 32, 33, 34, 35, 36, 38, 39, 40, 43
Innovation Capabilities	18	5, 6, 13, 15, 17, 19, 20, 22, 23, 25, 28, 30, 31, 32, 33, 37, 42, 43
Strategic Execution Capabilities	12	1, 4, 6, 10, 12, 18, 21, 24, 26, 27, 28, 29
Operational Capabilities	5	9, 14, 32, 36, 38
Human Resources	4	8, 29, 32, 41
Brand Value Resources	3	7, 8, 27
Marketing Capabilities	2	5, 35
User Community Resources	2	7, 13
Financial Resources	1	8
Physical Assets Resources	1	8
Cross-Cultural Adaptation Capabilities	1	16

This study uncovered a multi-faceted set of resources and capabilities essential to propelling corporate sustainability within the video game sector. Most often mentioned is the Technical Capabilities, identified in 22 separate studies, emphasizing its significant role in projects associated with sustainability. These include raising environmental awareness, making production more efficient, and improving educational quality (Bengel & Peter, 2023; Solarino et al., 2024). Innovation Capabilities emerged as the second most frequently cited capability, discussed in 18 different studies, and is commonly associated with leading environmental awareness, enhancing customer involvement, and developing social value (Janakiraman et al., 2021; Sharma et al., 2024). Strategic Execution Capabilities appeared in 12 studies as emphasizing its role in decision-making performance, ecological value creation, and competitive strategies with sustainability goals (Jean et al., 2018; Roy et al., 2022; Saiz-Alvarez et al., 2021).

The other significant resources and capabilities were Operational Capabilities (5 studies) that facilitate multi-platform coordination and brand image (Inoue, 2019; Li et al., 2023), Human Resources (4 studies), which is associated with digital capabilities and business expansion (Gumbi et al., 2024; Na et al., 2022), and Brand Value Resources (3 studies) that underpin user community involvement and platform value (Cennamo & Santaló, 2019; Lantano et al., 2022). Less frequently mentioned but still significant were Marketing Capabilities (2 studies), User Community Resources (2 studies), Financial Resources (1 study), Physical Assets Resources (1 study), and Cross-Cultural Adaptation Capabilities (1 study), each in its own special way playing a part in sustainable practice in the sector.

RQ2. How do technological resources (e.g., AI and data analytics) and innovation capabilities contribute to value creation in the video game industry? Findings relevant to RQ2 are summarized in Table 5.

Table 5. SLR Findings for RQ2.

Value Creation	Occurrence Count	IDs Involved
Environmental-Related Values	12	1, 2, 4, 10, 11, 12, 19, 22, 34, 38, 40, 43
Education and Skill Development	11	2, 6, 14, 18, 20, 30, 32, 37, 38, 39, 41
Innovation and Knowledge Value	7	8, 17, 24, 26, 31, 33, 35
Industry and Market Growth	6	21, 25, 28, 29, 36, 39
User and Market Value	6	3, 5, 7, 13, 27, 42
Health and Well-being	4	15, 16, 23, 32
Platform and Collaboration Value	1	9

The systematic literature review reveals that innovation capacity and technological resources are at the center of a number of value creation processes within the video game industry. Environmental values, addressed in 12 studies, are supported by AI-driven energy optimization, green computing, and data analytics that allow companies to monitor and reduce carbon footprints (Miller et al., 2019; Schulze et al., 2015). Education and skills development, investigated in 11 studies, is fostered by game-based learning environments, virtual simulation, and AI-based workforce training, which enable knowledge transfer and upskilling (Solarino et al., 2024; Wang et al., 2020). Innovation and knowledge value, identified in 7 studies, is enabled by R&D investments in AI, blockchain, and data-informed game design, which trigger creativity and guarantee responsible data use (Rietveld, 2018; Saiz-Alvarez et al., 2021). Industry and market growth, appearing in 6 studies, is driven by big data analytics, cloud computing, and algorithmic market predictions, optimizing production efficiency and enabling global expansion (Ikenami et al., 2020; Inoue, 2019). Similarly, user and market value benefits from UX/UI innovations, personalization algorithms, and player engagement analytics, enhancing retention and social responsibility awareness (Pineda-Martínez et al., 2023). Health and well-being, covered in 4 studies, is supported by VR-based therapy applications and AI-driven mental health interventions, demonstrating gaming's role in psychological and physical well-being (Gumbi et al., 2024). Lastly, platform and collaboration value, found in 1 study, is linked to blockchain-enabled decentralized gaming ecosystems, fostering transparency and fair resource distribution.

These findings underscore how technological resources and innovation capabilities drive sustainable value creation in the video game industry. By leveraging AI, big data, and emerging technologies, companies can enhance sustainability, education, and market expansion, while aligning with broader economic, social, and environmental goals. These advancements reinforce the industry's role in a technology-driven sustainable future.

RQ3. What role do these resources and capabilities play in value creation processes, driving corporate sustainability performance (CSP)? Findings relevant to RQ3 are summarized in Table 6.

Table 6. SLR Findings for RQ3.

TBL Dimensions	Occurrence Count	IDs Involved
Economic Dimenstion	25	1, 3, 5, 7, 8, 9, 12, 13, 17, 18, 20, 21, 24, 25, 26, 27, 28, 29, 31, 33, 34, 35, 36, 39, 42
Social Dimension	24	1, 2, 4, 6, 12, 14, 15, 16, 18, 20, 23, 26, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41
Environmental Dimension	12	1, 2, 4, 6, 10, 11, 14, 19, 22, 38, 40, 43

The in-depth analysis emphasizes the pivotal position of capabilities and resources in improving corporate sustainability performance (CSP) on the economic, social, and environmental dimensions of the Triple Bottom Line (TBL) framework. These results validate several paths through key resources and capabilities that lead to sustainable value creation and CSP.

The economic dimension, covered by 25 studies, is the most researched dimension of CSP. Among the significant results is that associated with how technological innovation competencies impact the improvement of operational effectiveness, income generation, and competitiveness in the global marketplace. For example, it has been demonstrated that big data analytics and cloud video game technologies have the ability to optimize production and dissemination systems and therefore lower expenses while improving worldwide reach (Kim, 2021; Wang et al., 2020). Similarly, R&D investments and innovative game design are also accountable for viable business models that balance profitability and long-term market sustainability (Inoue, 2021; Li et al., 2023). All these articles point out how strategic resource allocation facilitates financial performance as well as sustainability in the video game industry.

The social aspect, which 24 studies concentrate on, underscores how resources support the

welfare, education, and inclusivity of society. Such technological advancements as virtual simulations, gamification of learning, and AI-powered learning environments enable learning about skills acquisition and knowledge dissemination, thus rendering gains to people and society (Gumbi et al., 2024; Merino-Cajaraville et al., 2023). Additionally, firms are ever more including social responsibility topics in their gaming material, leveraging their platforms to draw attention to world problems or advocate for inclusivity (Aneni et al., 2023). Such initiatives, backed by promotional efforts, play a significant role in establishing brand reputation and consumers' trust, thereby underlining the strategic relevance of social impact efforts.

The environmental dimension with 12 occurrences emphasizes the capabilities and resources as a way to address environmental concerns. Advancements in AI and green computing enable companies to reduce their carbon footprint by developing energy-efficient data centers, optimizing resource utilization, and promoting environmentally friendly gaming (Janakiraman et al., 2021; Solarino et al., 2024). Moreover, blockchain-based systems increase transparency along with accountability in supply chain operations, thereby facilitating sustainable use of resources (Tandon et al., 2020). While scholarly literature in this area is less comprehensive compared to its economic and social dimensions, the foregoing findings confirm the sector's potential for alignment with global objectives of environmental sustainability.

These findings point to multifaceted roles of resources and capabilities in shaping CSP along TBL dimensions. Although economic and social impacts remain the priority, emerging concern for environmental sustainability demonstrates a shifting industry commitment. Through combining the dimensions, video game companies are able to employ resource orchestration routines toward enhanced long-term performance and societal contribution.

4.2 Interview Results

A summary of the interviewees' characteristics is presented in Table 7. The sample consists of a slightly higher proportion of male respondents than female. In terms of experience, all interviewees have at least five years of professional experience, with the majority (seven out of ten) having between five and nine years, while the remaining three have over ten years of experience. To ensure a comprehensive perspective, the interviewees were selected from different professional backgrounds, with the most occupying key functional management roles. Additionally, this study gathered insights from ESG officers and industry analysts, providing a well-rounded view on the research topics. In the following sections, it discusses the main findings in relation to each research question, highlighting key themes and main findings from the data.

Table 7. Characteristics of the Interviewees

Item	Values	Number
Gender	Male	7
	Female	3
Experience in years	Less than 5	0
	Between 5 and 9	7
	10 and above	3
Role	Industry Analyst	1
	ESG Officer	1
	Key Functional Manager or above	8

RQ1: What key resources and capabilities effectively support the sustainability goals of enterprises in the Chinese video game industry?

Interviewees' responses indicated that video game companies draw on a wide variety of resources and capabilities to achieve sustainability objectives. Despite differences in priority, three broad categories recurred in numerous responses: technological capabilities, human resources, and financial resources. Yet, other critical resources like user communities, brand value, strategic execution, and localization were always

prioritized as drivers of long-term sustainability. Three broad perspectives can be discerned from the responses: a). Technology-Driven Sustainability: A large number of respondents pointed to the crucial role of technological advancement in maintaining long-term competitiveness. Investment in game engines of the next generation, artificial intelligence-based tools for development, cloud computing, and real-time rendering technology is regarded as instrumental in sustaining leadership in the industry. Leading game studios' respondents indicated that in-house technological capabilities enable firms to boost development productivity and product differentiation. b). Human Resources and Creative Excellence: Talent was emphasized as being especially vital, as a number of the interview respondents underlined the necessity for talented developers, AI experts, game designers, and localizers. Access to, and retention of, top creative and technical talent is regarded as being essential to the development of improved, more innovative games that offer longer player engagement. A few of the interviewees answered that ensuring robust financial and market flexibility would be key to sustaining a development trajectory. c). Market and Financial Flexibility and Resilience: Healthy finances were broadly viewed as a cornerstone of sustainability. Stable cash flow, multiple revenue streams (e.g., in-app purchases, advertising, and licensing), and ongoing R&D investments were all discussed by many of the interviewees as being important. The economic resilience of a company not only supports continuous innovation but also reduces the risks involved in the unpredictable gaming market.

Besides these core resources, numerous additional factors support sustainability. A highly invested community of gamers, supported by live events, user-generated content (UGC), and influencer communities, has been seen as instrumental in driving retention and building brand loyalty. The development of franchise titles via cross-media expansion such as anime, merchandise, and novels has been pointed out as a method for long-term sustainability on a per-title basis. Further, global publishing players emphasized the role of localization, language capabilities, and cultural intelligence in maintaining international presence.

Despite all participants recognizing the nature of these resources, orchestration strategies differed. Some invested early in technology, while others invested in long-term brand building and community engagement. Those that utilized strong outsourcing networks emphasized external partners for scalability and efficiency. Cumulatively, the responses indicate that the pursuit of sustainability in the Chinese video game market is not led by a single resource; instead, it emanates from an interactive play of technological, talents, financial, and strategic resources, managed in line with market needs and long-term strategic vision.

RQ2: How do technological resources (e.g., AI and data analytics) and innovation capabilities contribute to value creation in the video game industry?

Artificial intelligence and data analytics, being recognized as essential technological capabilities and innovation strengths, are instrumental in the process of value creation in the video game sector. The highest value additions of technological innovation to value creation are in three aspects. First, in Innovation and Knowledge Value, procedural content generation using AI accelerates game development by enabling dynamic world creation, reducing production expenses, and enhancing creative possibilities. In addition, AI-driven intelligent localization leverages NLP-enabled machine translation and voice synthesis to deliver seamless global launches and cross-cultural adaptation. Second, in User and Market Value, AI improves player experience through intelligent matchmaking, personalized recommendation systems, and AI-driven NPC interactions to heighten immersion and longevity of play. AI-driven anti-cheating mechanics and real-time community moderation additionally offer a level and inclusive playing field. Last, in the value of Industry and Market Growth, data analytics maximizes dynamic pricing strategies by means of predicting player spending habits, whereas AI-enhanced precision marketing simplifies and targeting and improves ROI, thus introducing sustainable growth to the industry.

Apart from their immediate effects on innovation, user engagement, and market growth, AI and data analytics introduce additional environmental, educational, well-being, and co-benefits to the video game sector. Under Environmental-Related Values, AI enhances server load optimization to

reduce energy consumption and carbon footprints, and cloud gaming reduces the need for high-end hardware, thereby eradicating electronic waste. Under Education and Skill Development, AI-powered game-based learning platforms personalize learning experiences, improving cognitive skill acquisition. AI-powered cross-disciplinary learning also enables players to acquire creativity and problem-solving abilities from procedurally generated content. Additionally, in Health and Well-Being, AI has the ability to monitor gaming behavior, identify risks of gaming addiction, and intervene early, promoting healthy gaming. Lastly, in Platform and Collaboration Value, AI accelerates cloud gaming infrastructure, enabling instant access worldwide, and enhances cross-cultural collaboration by providing real-time translation and localization support, making international co-development easier.

In general, AI and data analytics are essential value creation drivers in the video game industry through innovation, enhancing user experience, industry growth, and promoting sustainability. Through resource orchestration, firms coordinate AI technologies with market data to attain competitiveness while maintaining long-term business feasibility. In the future, AI will be expected to fuel additional cross-industry collaborations, adoption of green technologies, and development of global game ecosystems, toward a more sustainable, innovative, and inclusive business landscape.

RQ3: What roles do these resources and capabilities play in value creation processes, driving corporate sustainability performance (CSP)?

The video game sector's sustainability relies on how well capabilities and resources are managed, which has a direct impact on corporate sustainability performance from an economic, social, and environmental point of view. To begin with, from an economic standpoint, strategic implementation and technological innovation capabilities facilitate the creation of various monetization models. Cloud gaming services, AI-based player personalization, and hybrid revenue models (e.g., battle passes, microtransactions, and subscription services) enable financial sustainability through stable cash flows and protection from market risks. Second, socially, companies leverage user community assets and brand equity to power inclusive, fun gaming experiences. This includes enabling talent growth, empowering cultural diversity, and powering player economies that enhance industry resilience. Third, environmentally, sustainable gaming infrastructure and energy-efficient server utilization facilitate carbon footprint minimization in alignment with broader ESG and carbon neutrality goals. Green computing, cloud-based dissemination, and digital-first strategies significantly lower physical waste and energy consumption.

Besides the key elements, several additional mechanisms support sustainability across TBL dimensions. Economic sustainability is also enabled by global growth and platform versatility, offering diversification of markets and stability of revenues. Global accessibility is also enabled while increasing cost savings through the utilization of AI-based content moderation and automated localization. Social sustainability is enabled by ethical monetization models, secure gaming practices, and increased interaction with gaming communities through user-generated content. Platforms that foster digital well-being, content moderation, and ethical labor standards throughout outsourcing chains drive social responsibility industry-wide. From an environmental perspective, investments in carbon-neutral game development pipelines and power-efficient data centers enable companies to minimize emissions. Further, AI-powered optimization in game development workflows minimizes waste of resources, further driving a greener gaming ecosystem.

In summary, the strategic management of capabilities and resources in the video game industry is important in aligning business operations with sustainable development goals. Economic sustainability is achieved through diversified business models that ensure financial strength and long-term growth. Social sustainability is supported by the facilitation of inclusive communities, talent development, and compliance with ethical business practices. Environmental sustainability is supported by adopting green computing technologies, cloud-based distribution models, and energy-efficient infrastructure. By their integrated consideration of these dimensions, video game companies not only

generate value but also drive their overall corporate sustainability performance and become responsible industry leaders in an ever more ESG-conscious global economy.

5. Discussion

The SLR and interview results provide complementary insights into the role of resources and capabilities in driving corporate sustainability performance (CSP) within the Chinese video game industry. The integration of these findings enables a more comprehensive understanding of how different resources contribute to value creation and sustainability outcomes. This section synthesizes key themes identified from both data sources, structured around the three core research questions.

5.1 Key Resources and Capabilities for Sustainability

Both SLR and interview findings highlight the critical role of technical capabilities, innovation capabilities, and strategic execution capabilities in achieving sustainability goals. The SLR identified technical capabilities as the most frequently mentioned resource, emphasizing their role in efficiency enhancement, environmental awareness, and social engagement (Sierra & Rodríguez-Conde, 2023). Interview results reinforce this finding, with industry practitioners frequently citing AI-driven development, cloud gaming, and blockchain technology as transformative forces in sustainable game production and operations. Innovation capabilities, ranked second in the SLR, were also frequently discussed by interviewees, particularly in the context of product differentiation and adaptive strategies for regulatory compliance (Solarino et al., 2024). Several interviewees emphasized the increasing importance of regulatory adaptability, especially given China's tightening game industry policies. Strategic execution capabilities were similarly highlighted in both sources as essential for aligning corporate strategies with long-term sustainability objectives. The SLR identified additional resources such as operational capabilities, human resources, and brand value resources, which were less frequently discussed in interviews (Gumbi et al., 2024; Pineda-Martínez et al., 2023). However, interviewees emphasized the significance of marketing capabilities and user community resources, particularly in fostering long-term engagement and monetization strategies aligned with sustainability principles. This suggests that while academic literature has focused more on technical and innovation-driven sustainability, practitioners place equal importance on market-oriented and user-driven factors.

5.2 Value Creation through Technological and Innovation Capabilities

The synthesis of SLR and interview data also underscores the role of technological and innovation capabilities in enabling value creation. SLR results identified environment-related values, education and skill development, and innovation as the most cited value creation mechanisms (Schneider et al., 2020; Sierra & Rodríguez-Conde, 2023). Interviews validated these results, with participants describing how AI-driven analytics, big data, and cloud computing enhance resource efficiency and reduce environmental footprint. The stakeholders highlighted the role of gamification in education and skills development, referring to increased demand for serious games that facilitate learning and attitude shift. The SLR was cognizant of such a trend; however, findings from interviews explained in detail associated challenges, i.e., attaining a mix of educational content and marketability. Moreover, while blockchain-enabled transparency and decentralized gaming ecosystems were mentioned in the SLR (Tandon et al., 2020), interviews highlighted their growing significance in enabling fair revenue sharing and ethical monetization practices.

5.3 The Role of Resources and Capabilities in Corporate Sustainability Performance

The combined findings show that resources and capabilities contribute to CSP across all three pillars of the TBL: economic, social, and environmental. The SLR was dominated by economic and social orientation, with the environmental aspect being comparatively less debated. The same trend was observed in the interview results, where financial viability, business expansion, and user engagement were emphasized as key drivers of sustainability by the interviewees. Economic sustainability was a dominant theme in both the SLR and interviews, with technological advancement in cloud gaming and AI-powered personalization identified as

important drivers of cost reduction and revenue optimization. However, practitioners also emphasized the rising costs of compliance and regulatory adaptation, which were less explicitly covered in the academic literature. In terms of social sustainability, both data sources acknowledged the role of corporate social responsibility (CSR) initiatives, inclusive game design, and workforce development. Yet, whereas the SLR concentrated on theoretical analysis linked to social impact, interview participants offered concrete instances indicating how businesses incorporate social responsibility within their business models, such as digital literacy programs and game design with accessibility in mind. With regard to environmental sustainability, the SLR focused primarily on green computing and power-efficient data centers (Miller et al., 2019), whereas interviews reflected pragmatic implementation challenges. Interview participants noted that while sustainability in operations is gaining prominence, it is often traded off against near-term pressures for profitability. Several industry practitioners were skeptical about the scalability of current green initiatives, citing the necessity for more regulatory incentives and technological innovation.

5.4 Convergence and Divergence between SLR and Interview Findings

The integration of SLR and interview results enables convergence and divergence of perceptions. There is unequivocal agreement on the importance of technical and innovation competencies, along with their role in sustainability-driven value creation. Whereas the SLR presents more of a general theoretical perspective, interviews give practical feedback on industry-specific concerns like regulatory limitations, monetization models, and acceptance of green practices. A significant deviation is the focus on user community resources within interviews, which was comparatively underemphasized in the SLR. This indicates that although scholarly literature concentrates on internal capacities and firm-level strategies, industry professionals acknowledge the increasing impact of user-driven interaction and co-creation towards sustainability performance. Overall, the combined analysis highlights the diversity of the role of resources and capabilities in corporate sustainability performance. Through the utilization of technological innovation, strategic alignment with regulatory frameworks and market needs, and driving innovation using technology advancements, Chinese video game firms can improve their sustainability performance without compromising competitiveness. Future research should explore the evolving interplay between firm-level capabilities and user-driven sustainability initiatives to bridge the gap between theoretical frameworks and industry practices.

6. Implications, Limitations, and Future Research

6.1 Research Contributions

This study addresses both theoretical and practical gaps in resource orchestration and corporate sustainability within the video game industry, particularly in the context of ESG considerations.

Academically, this research offers a novel integration of the RBV, DCV, ROT, and TBL, forming a comprehensive theoretical framework (see Figure 7). By applying these theories to the video game industry, a sector underexplored in sustainability discourse, this study reveals unique mechanisms through which dynamic and intangible resources (e.g., technological innovation, brand value, and cross-cultural adaptation) contribute to sustainable competitive advantage. It bridges the gap between resource orchestration and corporate sustainability by demonstrating how specific resource configurations facilitate value creation, offering a refined understanding of the roles in achieving long-term ESG objectives.

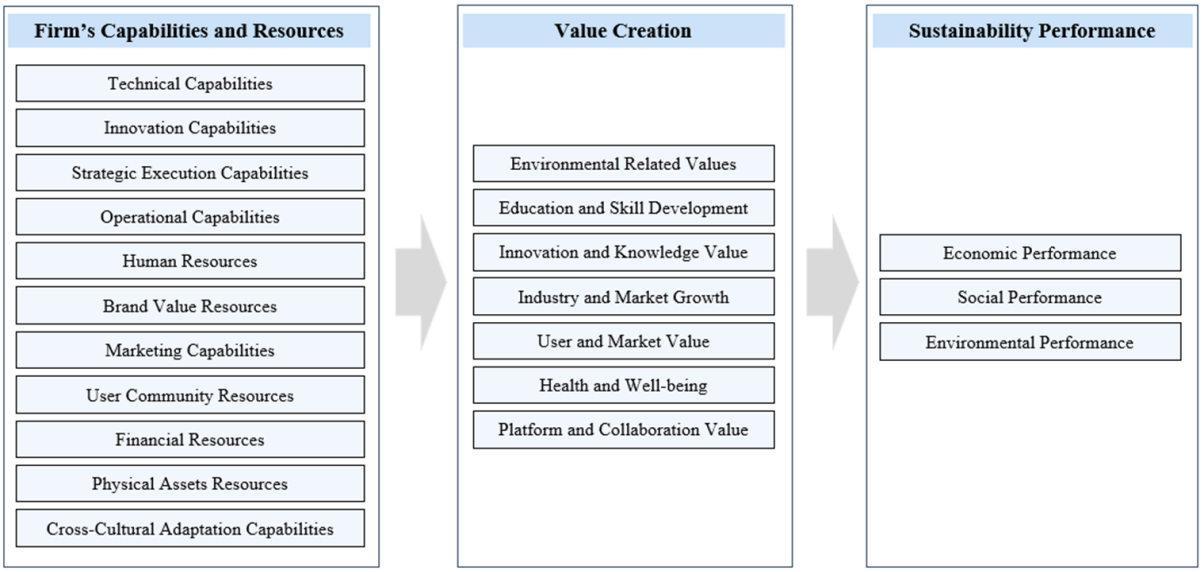

Figure 7. Theoretical Framework

Practically, this study provides actionable insights into resource allocation, capability development, and value creation tailored to the video game industry's unique characteristics. By combining theoretical insights with empirical findings from SLR and semi-structured interviews, the research offers a structured approach to aligning resource orchestration strategies with corporate sustainability goals. This equips industry leaders with data-driven strategies to enhance both financial and non-financial performance in an ESG-driven environment.

Building upon the theoretical and practical contributions outlined, this study introduces several key innovations. First, it pioneers an industry-specific perspective by addressing the unique challenge of balancing innovation-driven growth with long-term sustainability objectives, an aspect often overlooked in existing research. Second, by combining RBV, DCV, ROT, and TBL, this study creates an integrative framework that systematically connects resource orchestration, value generation, and corporate sustainability performance, providing a more comprehensive approach to sustainability management. Third, the study takes a dual-method approach, combining SLR and semi-structured interviews to ensure theoretical robustness and practical applicability, hence increasing the reliability and relevance of its findings. Finally, this study provides a systematic ESG roadmap suited to the video game industry, with explicit guidelines on how to integrate sustainability principles into business models while keeping a competitive advantage through continuous innovation.

6.2 Research Limitations

While this study offers valuable insights into resource orchestration and corporate sustainability in China's video game industry, several limitations must be acknowledged, primarily related to methodology and research scope. First, the SLR, though rigorous, is limited to English-language publications, potentially excluding relevant studies in Chinese and introducing language bias. Additionally, reliance on published literature may lead to publication bias, as studies with significant findings are more likely to be included, possibly overlooking negative or inconclusive results. Moreover, variations in research design among the selected 43 studies may affect the robustness of the synthesized findings. Second, the interview method also presents constraints. The sample focuses on China's video game industry, limiting insights into practices in other regions such as North America or Europe. While interviews with 10 industry professionals provided rich qualitative data, the small sample size affects generalizability. A slight gender imbalance (7 out of 10 respondents were male) may further introduce bias, potentially underrepresenting female perspectives. Additionally, social desirability bias may have influenced responses, particularly on sensitive topics like regulatory compliance and ESG practices. Third, Time constraints pose another challenge, as most SLR studies reviewed were published post-2021,

capturing recent trends but not the industry's long-term evolution. Similarly, interview data reflect a specific timeframe and may not fully account for rapid changes, such as AI advancements or shifting regulations. A longitudinal approach in future research could provide deeper insights into sustainability trends over time. Last, this study is shaped by China's unique cultural and regulatory landscape, where strict content regulations and data privacy laws influence corporate sustainability strategies. As a result, the findings may not fully generalize to countries with different regulatory frameworks. Future studies should explore how cultural, and policy variations affect sustainability practices across regions.

6.3 Future Research Directions

Future research can enhance the comprehension of corporate sustainability within the video game business in multiple ways. Initially, broadening the geographic and cultural focus to include locations such as North America, Europe, and emerging markets (e.g., India, Southeast Asia) can elucidate how varying legislative and cultural contexts influence sustainability efforts. Second, implementing longitudinal studies would facilitate the monitoring of the long-term development of sustainability practices, documenting industry reactions to technical innovations, regulatory changes, and evolving customer preferences. Third, the incorporation of mixed methods approaches, such as questionnaire surveys with qualitative interviews or case studies, would augment the robustness and generalizability of the findings. Future research could investigate external factors, including regulatory restrictions, market competition, and user-driven innovation, to offer a comprehensive picture of the drivers of sustainability. Analyzing the impact of data privacy regulations and competitive dynamics on sustainability initiatives would provide profound insights into the industry's changing landscape.

7. Conclusion

This study used a dual-method approach to systematically analyze the role of resources and capabilities in generating corporate sustainability performance (CSP) in China's video game sector, combining SLR with semi-structured interviews. Key resources for sustainability include technical innovation, human capital, and financial strength, as well as dynamic characteristics like adaptation and strategy execution. AI and data analytics play critical roles in value generation by promoting environmental sustainability, education, and market growth. This study, which incorporates RBV, DCV, ROT, and TBL, provides a complete framework for understanding how resource orchestration influences long-term sustainability. The findings show the importance of aligning resource management with ESG goals in a changing industry. The SLR identified technology and innovation capabilities as key sustainability drivers, while interviews indicated issues like regulatory compliance and market instability. User community resources and brand value are identified as critical factors in long-term engagement. This study applies resource orchestration theory to the video game business and provides practical recommendations for aligning resource allocation with ESG goals.

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Disclosure statement

Supplemental online material

Data availability

The datasets generated during and/or analysed during the current study are available in the WOS.

Data sharing

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Ethical approval

This article does not contain any studies with human participants performed by any of the authors.

Informed consent

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Appendix A: Interview Guide

1. Introduction
The following introductory information is provided to the interviewee to establish a clear understanding of the process: - Consent: Request permission to record the interview. If the interviewee refuses, proceed without recording and rely on detailed notes. - Purpose: Explain the objective of the study and highlight how their insights contribute to the research. - Confidentiality: Assure the interviewee that all information will be anonymized and used solely for research purposes, with no identifiable information disclosed in the published findings. - Voluntary Participation: Inform the interviewee that they may decline to answer any questions or terminate the interview at any time without providing a reason.
2. Contextual Information
- Establishing the context for further questions by learning about the interviewee regarding their professional profile, including their current job title and role; years of experience in the video game industry; specific expertise in ESG implementation and resource orchestration. - Organization the interviewee currently works for, including size and structure of the organization; industry focus and key operational areas; current ESG strategies and resource management practices.
3. Key Themes and Questions
3.1 Resources and Capabilities - RQ1: What key resources and capabilities are most critical for the sustainable development of video game enterprises? - RQ2: How do enterprises build or acquire these resources and capabilities? What role does external collaboration play in this process? - RQ3: Beyond economic benefits, how do video game enterprises leverage resources and capabilities to support environmental and social sustainability?

3.2 Value Creation - RQ4: How do technologies such as AI and data analytics enhance the market competitiveness and user experience of video game products, thereby creating value? - RQ5: How does technological innovation drive new business models in the video game industry and generate long-term value? - RQ6: How do enterprises utilize technology and innovation capabilities to improve operational efficiency, enhance brand value, and even create social or environmental value?
3.3 Sustainable Development across economic, social, and environmental dimensions - RQ7: In actual business operations, how are technology, innovation, and market resources transformed into sustainable business models? - RQ8: How do you think these resources and capabilities contribute to corporate sustainability performance across economic, social, and environmental dimensions? - RQ9: What emerging trends in sustainability might shape the future of the video game industry? How should enterprises adjust their strategies to adapt to these trends?
4. Methodological Aspects (Elicitation Techniques and Best Practices)
- Describe the approach used to gather ESG-related requirements from stakeholders. - How are ambiguous requirements clarified and documented? - Which practices have been most effective in managing ESG-related resources and capabilities?
5. Closing and Follow-Up
- Conclusion: Summarize the key points discussed and thank the interviewee for their participation. - Additional Input: Invite the interviewee to share any further remarks or insights they consider relevant. - Validation: Inform the interviewee that a summary of the interview will be sent to them for review and confirmation.
This guide is designed to ensure that interviews are comprehensive, structured, and capable of generating actionable insights while maintaining flexibility for exploring unanticipated themes.

Appendix B: An Example of Coding

No.	Interview Text	Initial Codes
1	Researcher: What key resources are most critical for the sustainable development of video game enterprises? Interviewee: Three key resources are fundamental: technological innovation, talent, and financial resources. The video game industry is highly dynamic, requiring continuous investment in cutting-edge game engines, AI, cloud computing, and real-time rendering technologies to maintain a competitive edge. Talent, especially in areas like game design, AI development, and user experience optimization, is another critical driver of sustainability. Additionally, strong financial backing ensures long-term R&D investment and risk mitigation in an industry with high development costs and unpredictable market trends.	Technical Capabilities, Innovation Capabilities, Human Resources, Financial Resources
2	Researcher: How do enterprises build or acquire these resources? What role does external collaboration play in this process? Interviewee: Enterprises typically acquire these resources through a combination of internal development, strategic partnerships, and acquisitions. For example, XX company heavily invests in R&D while also acquiring and collaborating with innovative game studios worldwide. External collaborations, such as joint ventures, government-backed R&D programs, and industry alliances, play a crucial role in accessing emerging technologies and market opportunities. The Chinese government, for instance, offers policy incentives for cloud gaming and AI-driven content moderation, which help game companies align with regulatory expectations while fostering innovation.	Technical Capabilities, Innovation Capabilities, Financial Resources, Marketing Capabilities

3	Researcher: Beyond economic benefits, how do video game enterprises leverage resources and capabilities to support environmental and social sustainability? Interviewee: Environmental and social sustainability have become increasingly important in the industry. On the environmental side, XX company is actively exploring green computing by optimizing server energy efficiency and promoting cloud-based gaming, reducing hardware waste. On the social side, we integrate socially responsible narratives into game content, such as promoting mental health awareness, historical education, and cultural preservation. Moreover, XX company implements strict anti-addiction measures for younger audiences, ensuring responsible gaming habits while aligning with government regulations.	Technical Capabilities, Innovation Capabilities
4	Researcher: How do technologies such as AI and data analytics enhance the market competitiveness and user experience of video game products, thereby creating value? Interviewee: AI and data analytics are game-changers. AI-driven procedural content generation enables personalized gaming experiences, while machine learning algorithms optimize matchmaking systems for fairer and more engaging gameplay. AI is also crucial in real-time cheating detection, predictive user behavior analysis, and dynamic difficulty adjustment, ensuring player retention and monetization. Additionally, data analytics helps optimize game balance, in-game economy, and targeted marketing strategies, increasing both player satisfaction and revenue.	Innovation and Knowledge Value, User and Market Value
5	Researcher: How does technological innovation drive new business models in the video game industry and generate long-term value? Interviewee: Technological innovation has reshaped business models in multiple ways. Cloud gaming eliminates hardware barriers, expanding the potential player base and supporting subscription-based revenue models. AI-driven personalization enhances freemium monetization models, allowing for dynamic pricing and tailored in-game purchases. XX company is also exploring NFT-based digital asset ownership and blockchain-backed virtual economies, although regulatory uncertainty remains a challenge in China.	Innovation and Knowledge Value, Industry and Market Growth
6	Researcher: How do enterprises utilize technology and innovation capabilities to improve operational efficiency, enhance brand value, and even create social or environmental value? Interviewee: Technology optimizes operations across multiple levels. Cloud-based game development tools reduce production costs and facilitate global collaboration. AI-powered automation enhances quality assurance and debugging, significantly cutting down development cycles. On the brand side, XX company leverages big data analytics to refine marketing strategies and improve player engagement. From a social perspective, AI-driven content moderation ensures a safer gaming environment, while green data centers contribute to environmental sustainability by reducing carbon emissions.	User and Market Value, Platform and Collaboration Value
7	Researcher: In actual business operations, how are technology, innovation, and market resources transformed into sustainable business models? Interviewee: Sustainable business models stem from a balanced integration of technological leadership, data-driven decision-making, and community engagement. For instance, XX company's live-service game model ensures continuous player engagement while optimizing monetization through periodic content updates. Meanwhile, cross-platform expansion and internationalization strategies reduce dependence on a single market, improving resilience against regulatory and economic shifts. Additionally, strategic IP partnerships and metaverse initiatives allow XX company to create long-lasting ecosystems rather than single-hit games.	Economic Dimension, Social Dimension
8	Researcher: How do you think these resources and capabilities contribute to corporate sustainability performance across economic, social, and environmental dimensions? Interviewee: Innovation-driven business models (e.g., cloud gaming, AI	Economic Dimension, Social

	monetization) enhance profitability and long-term market stability. Games increasingly serve as educational, cultural, and social engagement tools, promoting responsible gaming and social good. Green computing and carbon-neutral gaming infrastructure help reduce the environmental footprint, aligning with China's carbon neutrality goals.	Dimension, Environmental Dimension
9	Researcher: What emerging trends in sustainability might shape the future of the video game industry? How should enterprises adjust their strategies to adapt to these trends? Interviewee: Several sustainability trends are likely to define the industry's future: Green Gaming: Increased focus on energy-efficient game development, carbon-neutral data centers, and cloud-based gaming to reduce hardware waste. AI Ethics & Responsible Gaming: Stricter regulations on AI-driven monetization strategies and youth protection policies will shape game design. Decentralized Gaming Economies: The rise of blockchain gaming and NFTs will introduce new asset ownership models, although regulatory challenges persist. Metaverse & Virtual Workspaces: Games will evolve beyond entertainment into social and work platforms, requiring responsible and sustainable digital ecosystem development.	Social Dimension, Environmental Dimension

Appendix C: List of SLR Qualified Articles

ID	Sources	Key Resources and Capabilities	Value Creation	TBL Dimensions
1	Schulze et al. (2015)	Technical Capabilities, Strategic Execution Capabilities	Environmental-Related Values	Environmental, Social, Economic
2	Madani et al. (2017)	Technical Capabilities	Environmental-Related Values	Environmental, Social
3	Tung and Lan (2017)	Technical Capabilities	User and Market Value	Economic
4	Jean et al. (2018)	Strategic Execution Capabilities	Environmental-Related Values	Environmental, Social
5	Rietveld (2018)	Innovation Capabilities, Marketing Capabilities	User and Market Value	Economic
6	Su (2018)	Innovation Capabilities, Strategic Execution Capabilities	Education and Skill Development	Environmental, Social
7	Cennamo and Santaló (2019)	Technical Capabilities, Brand Value, User Community	User and Market Value	Economic
8	Gandia and Gardet (2019)	Financial Resources, Physical Assets, Human Resources, Technical Capabilities, Brand Value	Innovation and Knowledge Value	Economic
9	Inoue (2019)	Technical Capabilities, Operational Capabilities	Platform and Collaboration Value	Economic
10	Miller et al. (2019)	Technical Capabilities, Strategic Execution Capabilities	Environmental-Related Values	Environmental
11	Wang et al. (2019)	Technical Capabilities	Environmental-Related Values	Environmental
12	Ikenami et al. (2020)	Strategic Execution Capabilities	Environmental-Related Values	Social, Economic
13	Koch and Artmayr (2020)	User Community, Innovation Capabilities	User and Market Value	Economic
14	Schneider et al. (2020)	Technical Capabilities, Operational Capabilities	Education and Skill Development	Social, Environmental
15	Wang et al. (2020)	Innovation Capabilities	Health and Well-being	Social

16	Benito-Santos et al. (2021)	Cross-Cultural Adaptation Capabilities	Health and Well-being	Social
17	Inoue (2021)	Technical Capabilities, Innovation Capabilities	Innovation and Knowledge Value	Economic
18	Jääskä et al. (2021)	Technical Capabilities, Strategic Execution Capabilities	Education and Skill Development	Social, Economic
19	Janakiraman et al. (2021)	Innovation Capabilities	Environmental-Related Values	Environmental
20	Li et al. (2021)	Innovation Capabilities	Education and Skill Development	Social, Economic
21	Saiz-Alvarez et al. (2021)	Technical Capabilities, Strategic Execution Capabilities	Industry and Market Growth	Economic
22	Boncu et al. (2022)	Innovation Capabilities	Environmental-Related Values	Environmental
23	Choi et al. (2022)	Technical Capabilities, Innovation Capabilities	Health and Well-being	Social
24	Goumagias et al. (2022)	Strategic Execution Capabilities	Innovation and Knowledge Value	Economic
25	Handrich et al. (2022)	Innovation Capabilities	Industry and Market Growth	Economic
26	Klimas and Czakon (2022)	Strategic Execution Capabilities	Innovation and Knowledge Value	Social, Economic
27	Lantano et al. (2022)	Technical Capabilities, Brand Value, Strategic Execution Capabilities	User and Market Value	Economic
28	Roy et al. (2022)	Strategic Execution Capabilities, Innovation Capabilities	Industry and Market Growth	Economic
29	Na et al. (2022)	Human Resources, Strategic Execution Capabilities	Industry and Market Growth	Social, Economic
30	Udeozor et al. (2022)	Innovation Capabilities	Education and Skill Development	Social
31	Yue et al. (2022)	Innovation Capabilities	Innovation and Knowledge Value	Social, Economic
32	Aneni et al. (2023)	Technical Capabilities, Human Resources, Innovation Capabilities, Operational Capabilities	Health and Well-being; Education and Skill Development	Social
33	Bengel and Peter (2023)	Technical Capabilities, Innovation Capabilities	Innovation and Knowledge Value	Social, Economic
34	Gumasing et al. (2023)	Technical Capabilities	Environmental-Related Values	Social, Economic
35	Lehtonen et al. (2023)	Technical Capabilities, Marketing Capabilities	Innovation and Knowledge Value	Economic, Social
36	Lin et al. (2023)	Technical Capabilities, Operational Capabilities	Industry and Market Growth	Social, Economic
37	Merino-Cajaraville et al. (2023)	Innovation Capabilities	Education and Skill Development	Social
38	Pineda-Martínez et al. (2023)	Technical Capabilities, Operational Capabilities	Environmental-Related Values; Education and Skill Development	Social, Environmental

39	Sierra and Rodríguez-Conde (2023)	Technical Capabilities	Education and Skill Development; Industry and Market Growth	Social, Economic
40	Vlăduțescu and Stănescu (2023)	Technical Capabilities	Environmental-Related Values	Environmental
41	Gumbi et al. (2024)	Human Resources	Education and Skill Development	Social
42	Sharma et al. (2024)	Innovation Capabilities	User and Market Value	Economic
43	Solarino et al. (2024)	Technical Capabilities, Innovation Capabilities	Environmental-Related Values	Environmental