Digital-Intelligent Economy and Scientific Management, 2026, 1(1), 63-97
https://doi.org/10.71204/xtcwnd69

Information Visualization analysis of the Hot Research Topics and the Research Fronts of Corporate Competitive Advantage

Yuan Zheng [1, *], Ling Chen [1, 2]

[1] Universiti Malaya, Kuala Lumpur 50603, Malaysia

[2] Beijing City University, Beijing 100083, China

*** Correspondence:**

Ling Chen

chenling1111@gmail.com

Received: 25 August 2025/ Accepted: 18 September 2025/ Published online: 3 November 2025

Abstract

The study is intended to explore the motivating forces and the dynamics behind the development of competitive advantage in markets characterized by rapid change focusing on the aspects of innovation, organizational reputation, and supply chain resilience. Utilizing bibliometric analysis of 1,944 papers from 1993 to 2023, it identifies trends, popular research areas, and future directions in emerging markets. Key findings highlight green innovation as a prominent topic and summarize eight determinants of competitive advantage. The research also suggests independent innovation capacity and green subsidizing as critical areas for further exploration. Overall, the study provides meaningful contributions for academics, decision-makers, and practitioners by shedding light on the present dynamics of competitive advantage and outlining avenues for future research.

Keywords: Competitive Advantage; Corporate; Literature Review; Bibliometric Analysis

1. Introduction

The COVID-19 crisis, alongside anti-globalization forces and economic separation, has reshaped the dynamics of contemporary business environments. This dynamic environment prompts investors to prioritize qualitative indicators, such as regulatory compliance and innovation, over traditional quantitative metrics like revenue and profit. As a result, pursuing corporate competitive advantage has become a key objective for organizations. This concept reflects a company's ability to adapt and learn while sustaining superior performance, offering greater relevance and depth than mere financial indicators for investors and policymakers.

Although research on competitive advantage has expanded in recent years, an integrated overview of the field remains limited. To date, there is no systematic review that provides a detailed visualization and multi-perspective analysis of corporate competitive advantage. This

study addresses that gap by delivering a comprehensive examination of the theoretical foundations, strategic approaches, and key determinants that shape an organization's capacity to attain and sustain a competitive position. Through synthesizing prior studies, the review contributes to a deeper understanding of the dynamic nature of competitive advantage and highlights its significance in modern business strategy.

In this study, a scientometric approach was applied to address the following research questions (RQs):

Q1: What current trends are there in the literature on competitive advantage?

Q2: Who are the most well-known experts and contributors on this topic?

Q3: What key topics does competitive advantage cover?

Q4: What elements have the greatest impact on competitive advantage?

Q5: What is the intellectual structure of current research?

Q6: What areas require special attention to gain a competitive advantage?

The structure of this review is organized as follows: Section 1 introduces the study; Section 2 describes the methodology, detailing data sources, collection procedures, search strings, software settings, and analytical techniques. Section 3 presents the findings, arranged by themes such as author, journal, and document citations, as well as keyword and reference clustering. Section 4 examines different dimensions of corporate competitive advantage, including its conceptual basis, critical determinants, and the role of independent innovation. Section 5 highlights the key findings and research limitations, while Section 6 outlines directions for future studies.

Ultimately, this review offers readers an in-depth perspective on corporate competitive advantage, the strategies for attaining it, and its wider relevance in an increasingly dynamic marketplace. It contributes to the academic community by serving as a useful reference for scholars and researchers in business and management, while also delivering practical guidance for corporate leaders seeking to address contemporary challenges and achieve long-term success.

2. Methodology

This study utilized the Web of Science (WoS) Core Collection as the main database, drawing specifically from the Science Citation Index Expanded (SCI-EXPANDED) and the Social Science Citation Index (SSCI) to obtain relevant records. The search was restricted to publications addressing the topics of "competitive advantage" and "corporate." Given our objective to comprehend the entire trend from the 1970s, the timespan was not delimited. Document types were confined to articles and review articles only, while the language was restricted to English. Lastly, the research areas were confined to Business Economics and Social Science Other Topics. Finally, up to date on October 19^{th,} 2023, the search yielded 1,966 papers (See Figure 1). We chose Citespace (version 6.2.R3 64-bit) to conduct the bibliometric analysis. Since the longest time span of Citespace is only 30 years. The 1,965 data extracted from WoS were shrunk to 1944. Time slicing was set as 1 year per slice from January 1993 to December 2023.

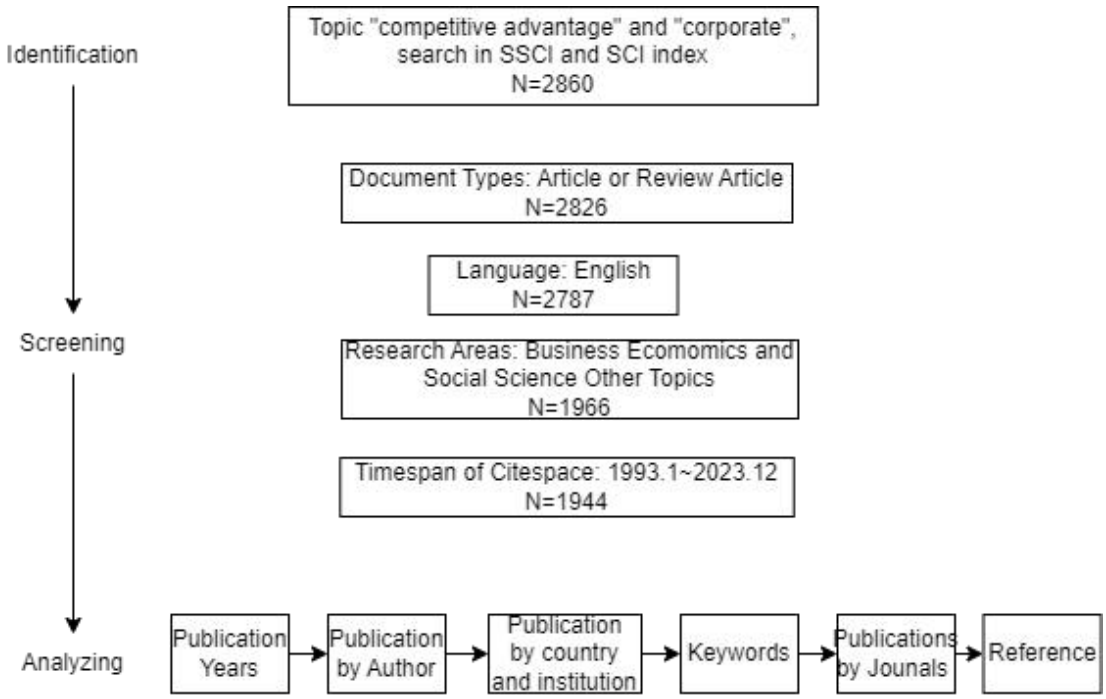

Figure 1. Process of Data Sourcing and Analyzing

3. Findings

3.1. Trend Analysis

To address RQ1, Figure 2 illustrates the timeline of publications on corporate competitive advantage, divided into three periods: 1985-2005, 2005-2015, and 2015-present. The first paper appeared in 1987, with a gradual increase in publications over the next two decades. However, post-2005 saw a significant rise, with 86% of the 1,965 articles published after that year. The average number of papers increased from 18 per year before 2005 to 89 thereafter, likely reflecting growing awareness of corporate sustainability and social responsibility following the 2007 financial crisis. Notably, after the Paris Agreement in 2015, over a third (34.5%) of articles were published between 2019 and 2023, emphasizing environmental considerations in assessing competitive advantage.

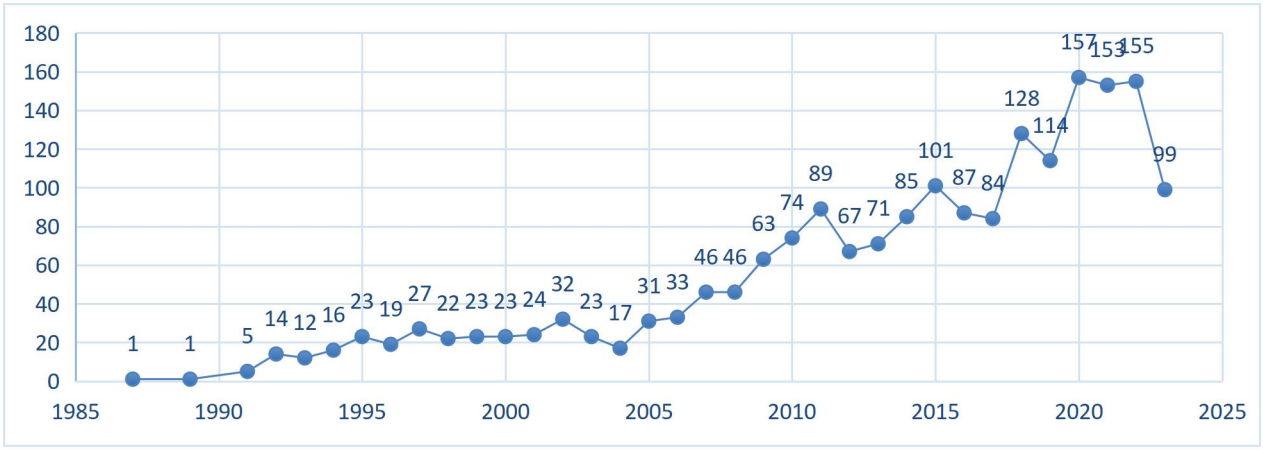

Figure 2. Number of Publications Per Year

3.2. Network of Author and Co-authorship

Answering RQ2, we analyzed publications by authors and analysis of the authorship network.

Figure 3 presents the top 25 authors ranked according to their number of publications in the WoS database. Among them, Chen YS. worked on green innovation in Taiwan(Chen, 2008; Chen et al., 2006). Molina-Azorin Jose F. and Lopez-gamero MD. collaborated on the environment management and competitive advantage of the hotel industry in Spain(Molina-Azorín et al., 2015). Leonidou LC. specialized on environmental marketing strategy of hotel and export industries(Leonidou et al., 2013, 2015). Hitt MA studied corporate political strategy(Hillman & Hitt, 1999).

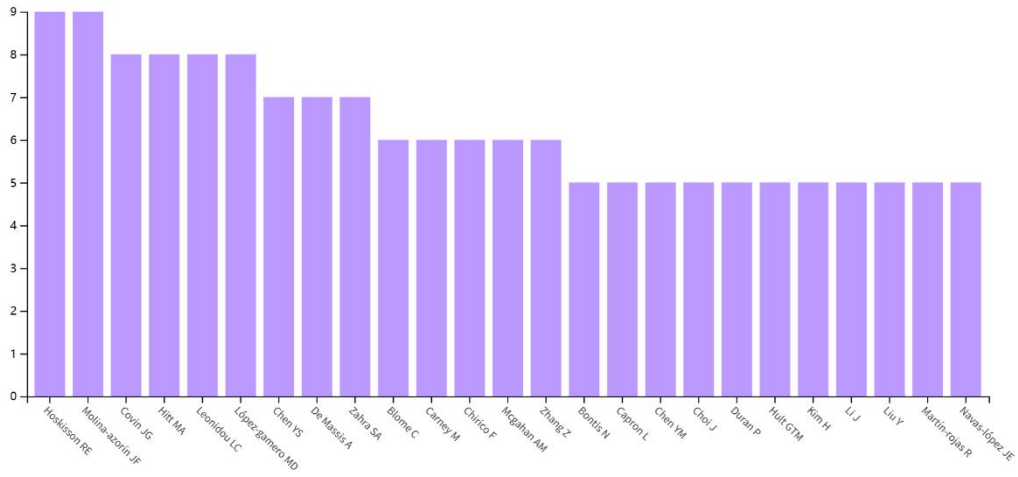

Figure 3. Publications by Authors (Source: Web of Science)

The Citespace visualization shows a collaboration network among 427 authors with 138 links, indicating that 138 authors have collaborated. Font size reflects publication frequency, with larger names for more frequent authors. Thicker lines between nodes denote stronger collaboration, while link color indicates publication age—red for recent and light grey for older works. The low network density of 0.0015 suggests a loose structure, where most authors work individually, with only a small group of three to five collaborating.

There were two recent collaborations (indicated with red links) highlighted in Figure 4. In their joint work, Agyabeng-Mensah Yaw, Afum Ebenezer, and Baah Charles investigated how corporate environmental ethics and green creativity serve as antecedents of green competitive advantage (Baah et al., 2023).

Alam Mohammad Nurul, Hossain Kamal, and Azizan Noor Azlinna studied entrepreneurial orientation and export performance(Hossain et al., 2023).

Knemeyer A Michael, Amos Clinton, and Brockhaus Sebastian worked in collaboration in 2019 to evaluate how service perceptions influence customer views of the authenticity of corporate sustainability claims(Amos et al., 2019).

De Massis Alfredo, Kotlar Josip, and Memili Esra proposed in 2018 that willingness, ability, and resource availability influence the internationalization of family firms(Fang et al., 2018).

Figure 4. Network of Authors and Co-authorship

3.3. Country and Institution Analysis

This analysis tries to depict a map of countries and institutions working globally on the topic of competitive advantage.

The country network (See Figure 5) comprises 84 nodes and 357 links, with a density of 0.1024, indicating a concentrated and closely connected structure. The top ten countries in this field are the USA (618 publications, Centrality = 0.53), China (255, 0.12), England (229, 0.26), Spain (175, 0.20), Canada (128, 0.24), Italy (100, 0.05), Taiwan (99, 0.01), Australia (98, 0.14), Germany (95, 0.03), and France (80, 0.09). Notably, China is the only developing country among the top ten.

The top five countries with high centrality are the USA(Centrality=0.53), England (0.26), Canada (0.24), Spain (0.20), and Australia (0.14). They act as joining nodes in the network.

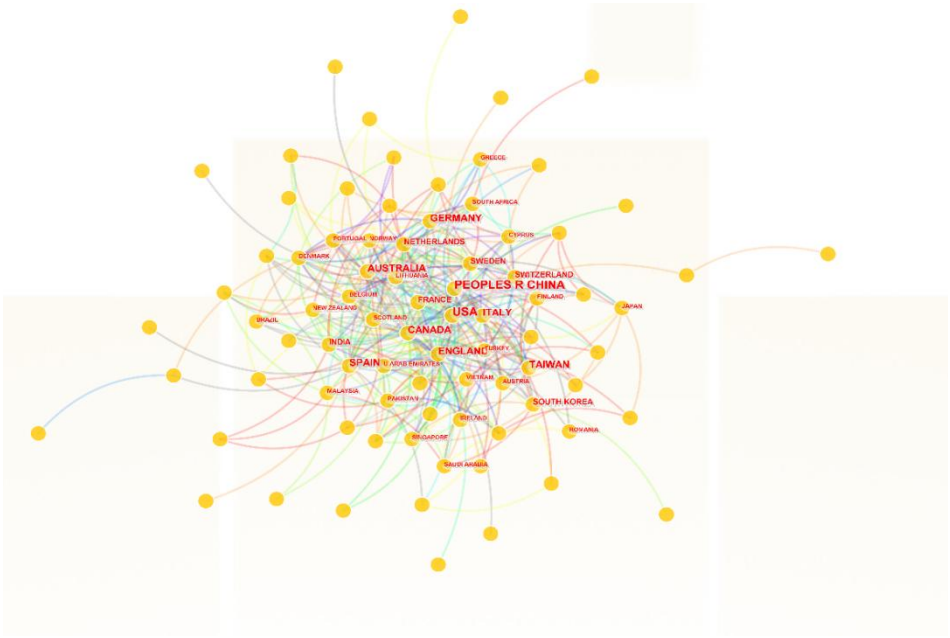

Figure 5. Country Network Analysis

The institution network (See Figure 6) consists of 479 nodes and 520 links, with a low density of 0.0045, indicating weak cooperation among institutions. The top five contributors are the State University System of Florida (32 publications, Centrality = 0.13), University System of Ohio (30, 0.08), Texas A&M University System (22, 0.04), Harvard University (20, 0.01), and California State University System (19, 0.16). The nodes are shown in the tree ring history. Different colors represent different periods. The grey color in the middle represents the oldest while the red color at the edge represents the latest.

Nodes with thicker red edges represent institutions that have more articles published recently. Among them, Indiana Institute of Management (Frequency=14), Xi'an Jiaotong University (13), Auburn University (8), Auburn University System (7), Northwestern Polytechnical University (9), and Egyptian Knowledge Bank (4) are more active.

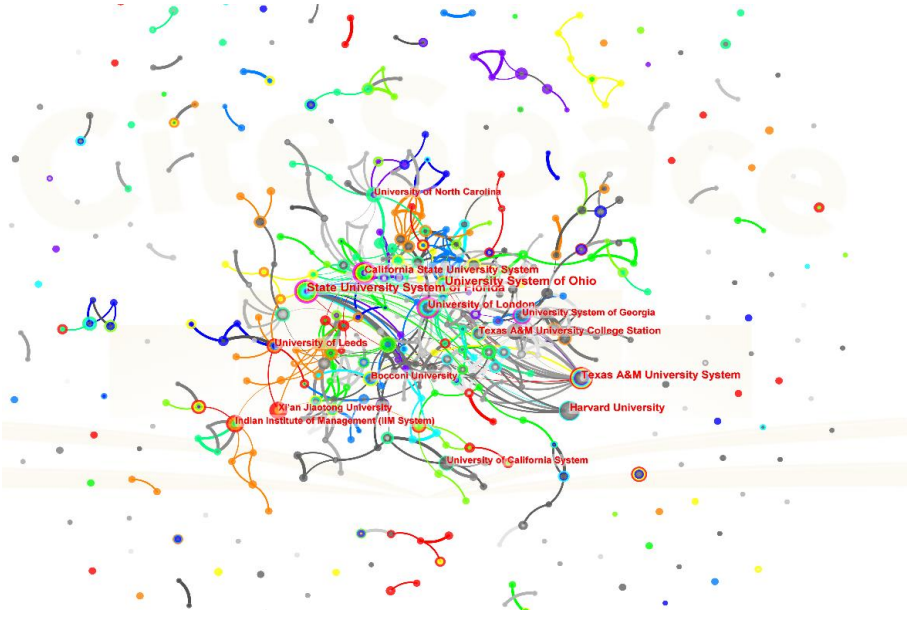

Figure 6. Institution Network Analysis

3.4. Keyword Network Analysis

This section is to identify the most popular themes among the scholars working on competitive advantage and to answer RQ3 (Which key themes involve competitive advantage?). Keywords can reflect the development direction and hot themes in a certain field.

The keyword network (See Figure 7) consists of 459 nodes and 2422 links (Density=0.023). The top 15 keywords are competitive advantage (Frequency=953), performance (473), corporate social responsibility (357), management (324), firm performance (303), impact (264), financial performance (263), resource-based view (259), strategy (253), firm (221), innovation (210), corporate governance (166), capacity (145), dynamic capacity (121), and model (117).

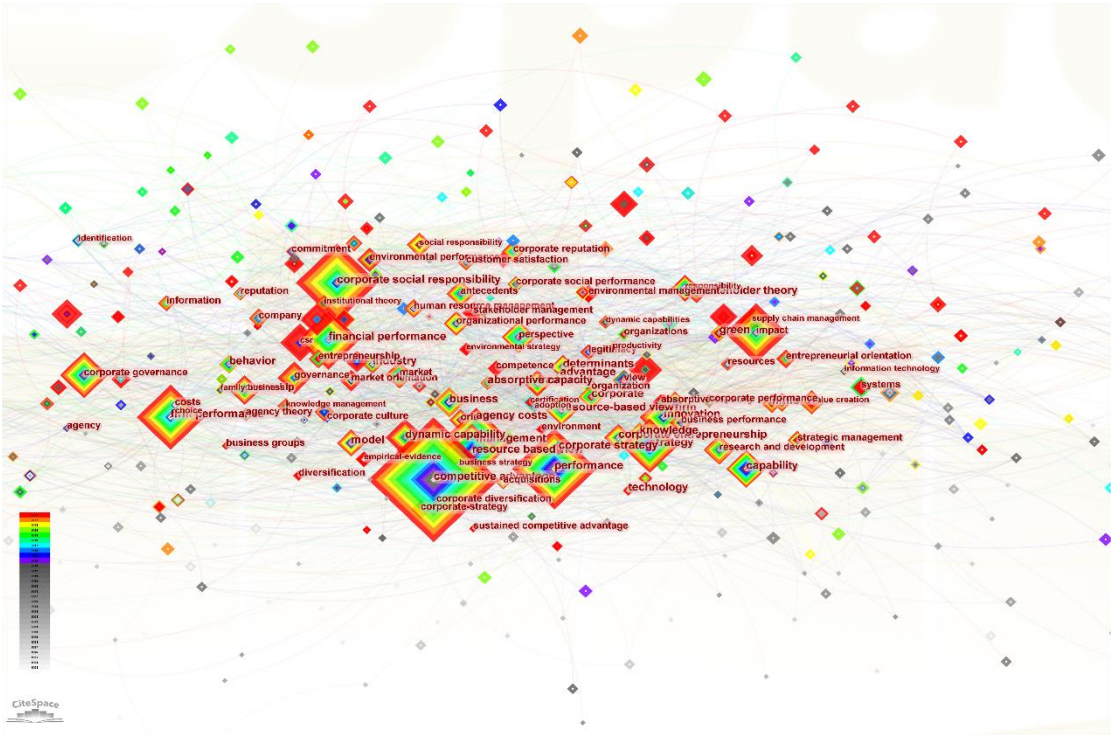

Figure 7. Network of Keywords

Table 1 shows the sudden increases in keyword citations and the length they last. We can see that “csr”, “green innovation”, “sustainability”, and “socioemotional wealth” are keywords that are very popular now.

Table 1. Keywords Citation Burst

Keywords	Year	Strength	Begin	End	1993 - 2023
firm	1993	21.25	1993	2010	
corporate strategy	1993	17.53	1993	2013	

corporate-strategy	1993	7.72	1993	2007	
sustained competitive advantage	1995	10.34	1995	2010	
strategic management	1995	10.11	1995	2009	
systems	1995	9.65	1995	2012	
competence	1995	5.39	1995	2014	
diversification	1997	5.79	1997	2011	
environment	1998	6.43	1998	2012	
strategy	1994	7.1	2000	2005	
technology	1995	6.08	2001	2012	
capability	1995	7.47	2002	2010	
view	1995	7.8	2005	2011	
productivity	2005	5.57	2005	2012	
knowledge	2000	5.78	2006	2009	
corporate	2004	6.22	2007	2012	
stakeholder management	2003	6.35	2008	2017	
green	2003	6.4	2015	2017	

socioemotional wealth	2017	9.21	2017	2023	
mediating role	2015	13.8	2019	2023	
sustainability	2016	7.85	2019	2023	
supply chain management	2009	5.41	2019	2021	
csr	2014	9.03	2020	2023	
moderating role	2012	7.99	2020	2023	
green innovation	2021	9.08	2021	2023	

To identify the specific research areas that most scholars working on, we clustered the keywords by log-likelihood ratio (LLR) and labeled them with titles, keywords, and abstracts (KTA). Then we got 8 clusters, namely corporate reputation (Cluster#0), asset divestiture (Cluster#1), family firm (Cluster#2), entrepreneurial orientation (Cluster#3), capital structure (Cluster#4), sustainable supply chain initiative (Cluster#5), corporate network (Cluster#6), and own brand (Cluster#7).

We visualized the clusters in a timeline view (See Figure 8), where keywords are located in the year it appeared first time. The size of the square represents the frequency of the keyword. The red square represents the keywords' burstiness.

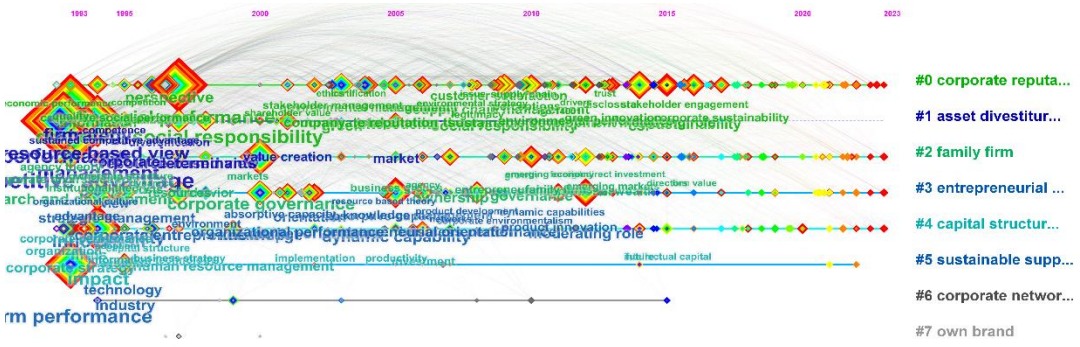

Figure 8. Clusters of Keywords-timeline View

3.5. Journals

The leading ten journals, as illustrated in Figure 9, include the Strategic Management Journal (105), Journal of Business Ethics (96), Journal of Business Research (78), Corporate Social Responsibility and Environmental Management (65), Business Strategy and the Environment (57), Management Decision (47), Journal of Management (29), Technological Forecasting and Social Change (28), Industrial Marketing Management (25), and Harvard Business Review (24).

Based on the JCR journal map (2011), we built a dual overlay map to show the connections between citing journals (the left side of the map) and cited journals (the right side of the map). As Figure 10 indicates, journals like "Psychology, Education, Social", "Economics, Economic, Political", and "Environmental, Toxicology, and Nutrition" are highly cited by "Economics, Economic, Political" headed journals.

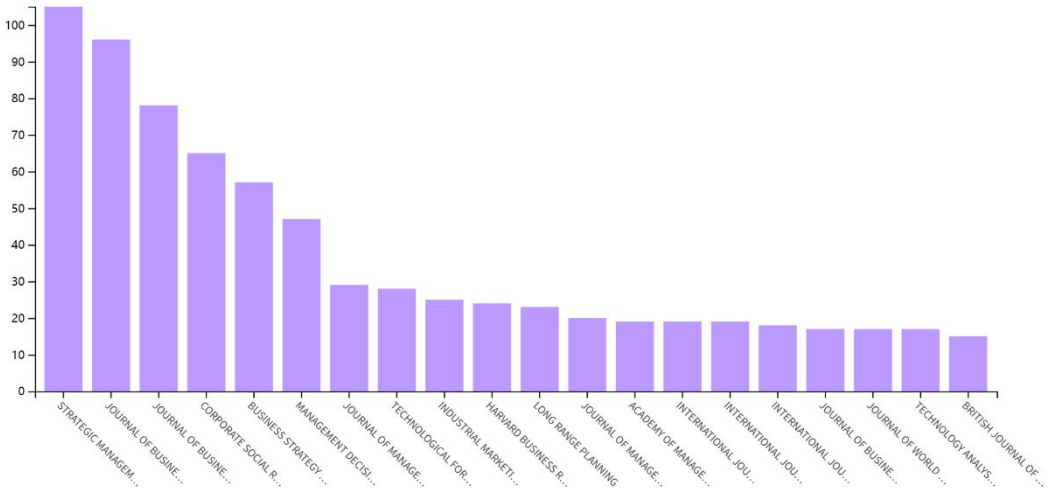

Figure 9. Publications by journals (Source: Web of Science)

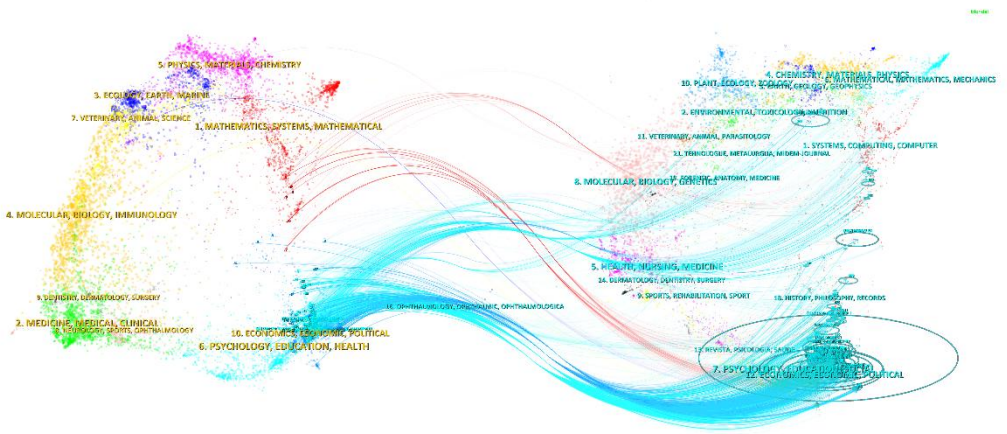

Figure 10. Dual Overlay Map of Citing and Cited Journals

3.6. Document Co-Citation Network

The author co-citation network is used to determine the relationships between different authors who have published and had work cited in a particular field of study. To respond to RQ4 (The most influential articles in the ESG and sustainability disclosures), the node type is chosen to be a reference.

The co-citation network, presented in Figure 11 and Figure 12, consists of 1,462 nodes and 5,014 links (Density = 0.0047, Modularity Q = 0.8493, Silhouette S = 0.9404), which means it is a highly organized and homogenous cluster network. Keywords were used in identifying the clusters and labeled using the log -likelihood ratio (LLR). Generally, Q=0.3 and S=0.7 are the appropriate thresholds that indicate a strong cluster structure and homogeneity of a clustering solution, respectively.

Table 2 shows the top 20 papers with the highest citations. The first with the highest citation (Frequency=138) is an overview of techniques in multivariate data analysis, not related to competitive advantage. Table 3 lists the citation bursts of references. We examined those articles in the sequence of clusters.

Table 2. List of Top 20 Papers with the Highest Citations

Rank	Frequency	Year	Cited References
1	138	2019	Hair J. F., 2019, MULTIVARIATE DATA AN, V8th, P0, DOI 10.1016/J.IJPHARM.2011.02.019
2	26	2015	Saeidi SP, 2015, J BUS RES, V68, P341, DOI 10.1016/j.jbusres.2014.06.024
3	25	2019	Hair JF, 2019, EUR BUS REV, V31, P2, DOI 10.1108/EBR-11-2018-0203
4	23	1991	BARNEY J, 1991, J MANAGE, V17, P99, DOI 10.1177/014920639101700108
5	20	2006	Porter ME, 2006, HARVARD BUS REV, V84, P78
6	19	2018	Kim KH, 2018, J MANAGE, V44, P1097, DOI 10.1177/0149206315602530
7	18	2017	Thompson J. D., 2017, ORG ACTION SOCIAL SC, V0, P0
8	16	2018	Barney JB, 2018, STRATEGIC MANAGE J, V39, P3305, DOI 10.1002/smj.2949
9	15	1993	PETERAF MA, 1993, STRATEGIC MANAGE J, V14, P179, DOI 10.1002/smj.4250140303
10	15	2011	Porter M. E., 2011, COMPETITIVE ADVANTAGE, V0, P0

11	15	1993	AMIT R, 1993, STRATEGIC MANAGE J, V14, P33, DOI 10.1002/smj.4250140105
12	15	2012	Aguinis H, 2012, J MANAGE, V38, P932, DOI 10.1177/0149206311436079
13	14	2020	Kraus S, 2020, TECHNOL FORECAST SOC, V160, P0, DOI 10.1016/j.techfore.2020.120262
14	13	2012	Campbell BA, 2012, ACAD MANAGE REV, V37, P376, DOI 10.5465/amr.2010.0276
15	13	1992	MAHONEY JT, 1992, STRATEGIC MANAGE J, V13, P363, DOI 10.1002/smj.4250130505
16	13	2017	Martinez-Conesa I, 2017, J CLEAN PROD, V142, P2374, DOI 10.1016/j.jclepro.2016.11.038
17	12	2017	Lins KV, 2017, J FINANC, V72, P1785, DOI 10.1111/jofi.12505
18	12	1997	Teece DJ, 1997, STRATEGIC MANAGE J, V18, P509, DOI 10.1002/(SICI)1097-0266(199708)18:73.0.CO;2-Z
19	12	2016	Duran P, 2016, ACAD MANAGE J, V59, P1224, DOI 10.5465/amj.2014.0424
20	11	2019	Xie XM, 2019, J BUS RES, V101, P697, DOI 10.1016/j.jbusres.2019.01.010

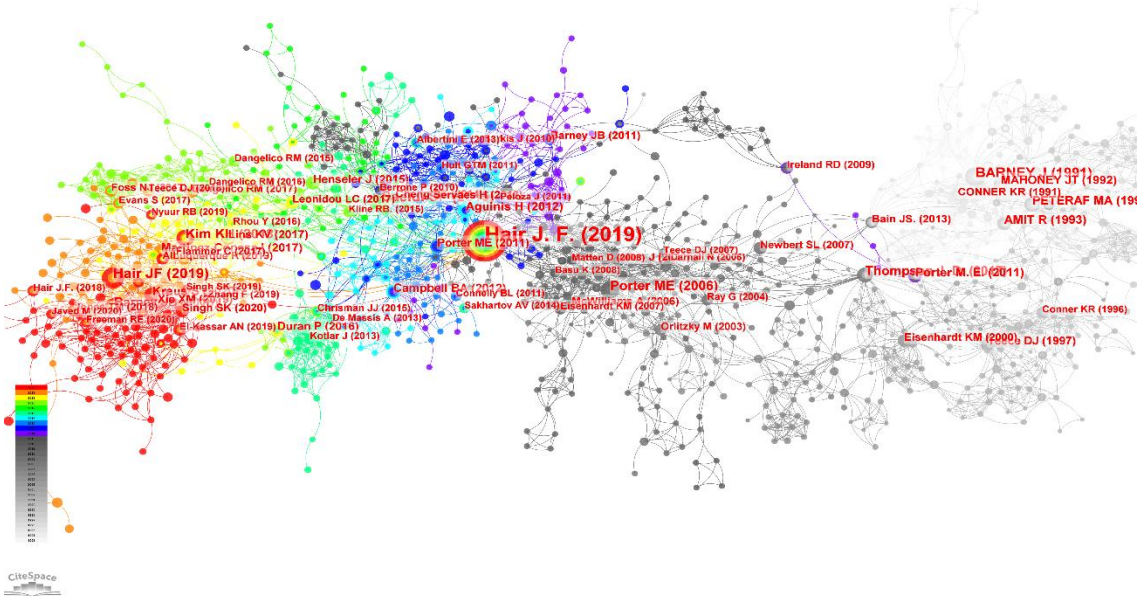

Figure 11. Reference Co-Citation Network

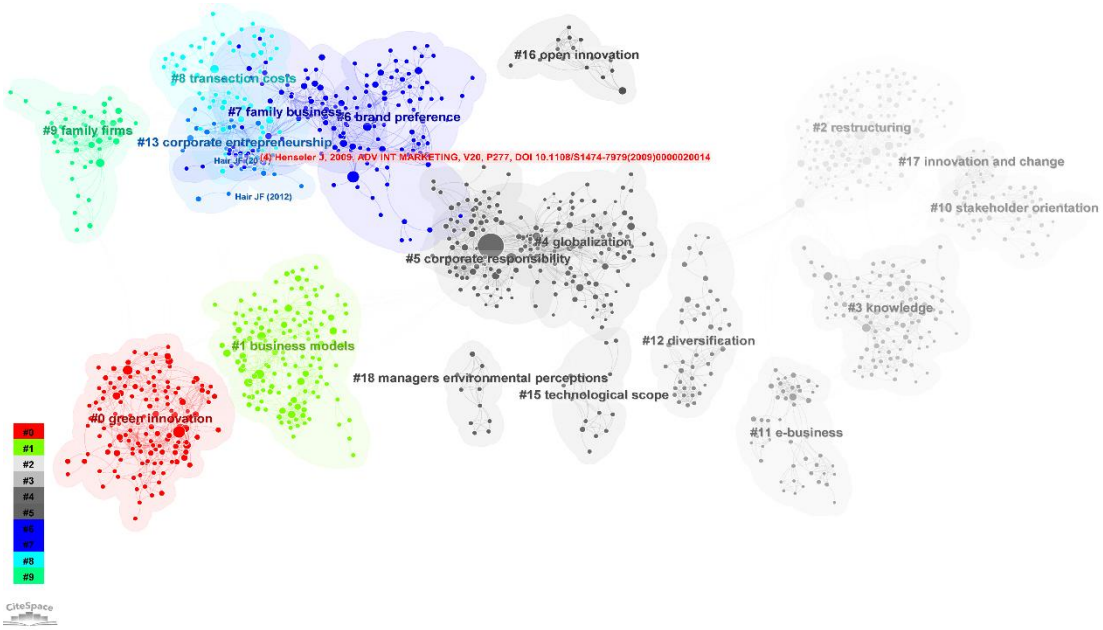

Figure 12. Clusters of Co-Citation Network

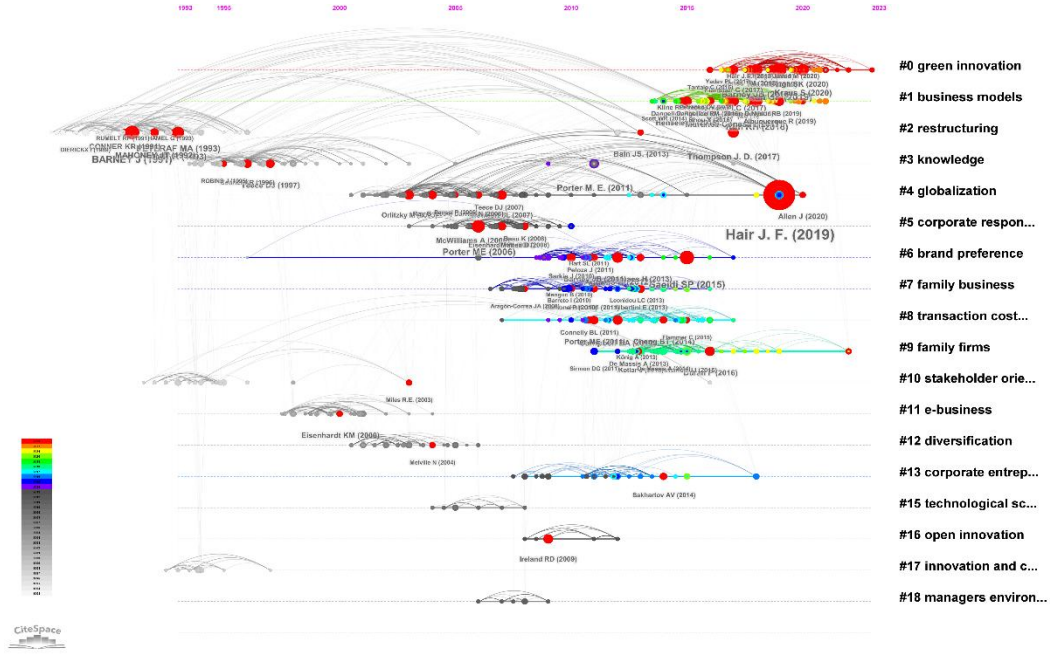

Figure 13. Cluster of Co-citations-timeline View

Cluster #0, titled "Green Innovation" (Size =142, Silhouette=0.948, Mean Yea =2019), represents the most recent research focus attracting significant global scholarly attention. Within this cluster, Jay B. Barney (Frequency =16) emphasized that the resource-based theory model should integrate stakeholder perspectives in order to secure and sustain diverse types of resources (J. B. Barney, 2018). Sacha Kraus et al. (Frequenc =14) empirically proved that CSR is positively correlated to environmental strategy and green innovation, which in turn improves the corporate environmental performance (Kraus et al., 2020). Xie XM et al. (Frequency=11) found that both green process innovation and green product innovation can improve corporate financial performance. Green product innovation mediates the relationship between green process

innovation and financial performance. A firm's green image can moderate the relationship between green product innovation and financial performance (Xie et al., 2019). Sanjay Kumar Singh et al. (Frequency=10) suggested that green transformational leadership significantly influences human resource management practices and that in turn mediates the influence of green transformational leadership on green innovation (S. K. Singh et al., 2020).

Cluster #1, labeled "Business Model" (Size = 142, Silhouette = 0.889, Mean Year = 2017), focuses on innovations in business models. Within this cluster, Kim K. H. et al. (Frequency = 19) highlighted that competitive actions act as a crucial contingency influencing how corporate social responsibility (CSR) initiatives affect a firm's financial performance (Kim et al., 2018). Isabel M. C. et al. (Frequency =13) suggested that small and medium-sized enterprises (SMEs) can enhance their innovation capabilities through CSR initiatives, thereby strengthening their competitive advantage (Martinez-Conesa et al., 2017). Karl V. Lins et al. (Frequency =12) suggested investing in social capital, which is measured by CSR intensity, to resist the risks during the financial crisis (Lins et al., 2017). Leonidas C. Leonidou et al. (Frequency =10) shed light on how internal company factors help to formulate a green business strategy among small manufacturing firms, and how this, in turn, influences their competitive advantage and performance(Leonidou et al., 2017).

Cluster#2 restructuring (Size=133, Silhouette=0.944, Mean year=1992) is the oldest topic. J. Barney (Frequency =23) analyzed the potential of four firm resources, rareness, imitability, and sustainability- for generating sustained competitive advantage (J. Barney, 1991). This paper is widely regarded as the first formalization of the then-fragmented resource-based literature into a comprehensive (and thus empirically testable) theoretical framework(Newbert, 2007). Margaret A. Peteraf (Frequency =15) discussed four conditions that underlie sustained competitive advantage, namely superior resources (heterogeneity within an industry), ex-post limits to competition, imperfect resource mobility, and ex-ante limits to competition (Peteraf, 1993). Both asset divestiture and resource redeployment can contribute to acquisition performance(Capron, 1999). Asset divestiture is a logical consequence of the process of reconfiguration of resources within firms (Capron et al., 2001). Property, plant, and equipment (PPE) volatility and intangible asset volatility can complement R&D volatility in improving a firm's performance(Patel et al., 2018).

Cluster #3, labeled "Knowledge" (Size = 106, Silhouette = 0.963, Mean Year = 1997), highlights the link between competitive advantage and rapid innovation. Within this cluster, D. J. Teece et al. introduced the dynamic capabilities framework, arguing that wealth creation in fast-changing technological environments largely depends on the firm's ability to develop and refine its internal technological, organizational, and managerial processes (Teece et al., 1997).

Cluster#4 globalization (Size=105, Silhouette=0.906, Mean year=2005) is related to how to establish competence for multinational companies. SL. Newbert (Frequency =10) assessed the RBV's support in the empirical literature (Newbert, 2007). Knight and Cavusgil investigated born-global firms and highlighted the critical role of innovative culture, knowledge, and capacities (Knight & Cavusgil, 2004). Rugman and Verbeke developed a framework to assess patterns of competence building in MNEs (Rugman & Verbeke, 2001).

Cluster #5, titled "Corporate Responsibility" (Size = 83, Silhouette = 0.897, Mean Year = 2007), addresses research on the relationship between corporate social responsibility (CSR) and firm performance. In his seminal work, M. E. Porter (Frequency = 20) proposed the "Strategy and Society" framework, which includes an inside-out perspective outlining the activities companies can pursue in their business operations and an outside-in perspective showing how social initiatives influence competitiveness ("Strategy and Society," 2007). Similarly, Marc Orlitzky et al. (Frequency = 9) conducted a meta-analytic review to clarify the link between corporate social performance (CSP) and corporate financial performance (CFP) (Orlitzky et al., 2003). A. McWilliams et al. (Frequency = 10) examined a wide range of CSR studies and proposed a research agenda highlighting unresolved theoretical and empirical issues, such as defining CSR, understanding institutional variations across countries, identifying CSR motivations, modeling CSR effects on firms and stakeholders, and evaluating the role of leadership and culture (McWilliams et al., 2006).Additionally, Herman Aguinis and Ante Glavas (Frequency = 15) offered a comprehensive review of CSR literature across institutional, organizational, and individual levels, pinpointing research gaps and suggesting directions for future investigation (Aguinis & Glavas, 2012).

Cluster #6 (Size = 79, Silhouette = 0.913, Mean Year = 2011) focuses on brand preference. Within this cluster, Saeidi S. P. et al. (Frequency = 26) demonstrated that corporate reputation and competitive advantage act as mediators in the relationship between CSR and firm performance (Saeidi et al., 2015). Henri Servaes and Ane Tamayo (Frequency = 10) argued that firms can create value through CSR initiatives only when these activities are consistent with and reinforce the company's reputation (Servaes & Tamayo, 2013).

The other clusters are either too small or too old to facilitate thematic analysis.

Table 3. List of References with Strongest Citation Burst

No.	References	Year	Strength	Begin	End	1993 - 2023
1	BARNEY J, 1991, J MANAGE, V17, P99, DOI 10.1177/014920639101700108, DOI	1991	14.11	1993	1996	
2	AMIT R, 1993, STRATEGIC MANAGE J, V14, P33, DOI 10.1002/smj.4250140105, DOI	1993	8.46	1993	1998	
3	MAHONEY JT, 1992, STRATEGIC MANAGE J, V13, P363, DOI 10.1002/smj.4250130505, DOI	1992	7.64	1993	1997	
4	CONNER KR, 1991, J MANAGE, V17, P121, DOI 10.1177/014920639101700109, DOI	1991	6.32	1993	1995	
5	PETERAF MA, 1993, STRATEGIC MANAGE J, V14, P179, DOI 10.1002/smj.4250140303, DOI	1993	8.73	1994	1998	
6	Thompson J. D., 2017, ORG ACTION SOCIAL SC, V0, P0	2017	7.63	2017	2009	

7	Teece DJ, 1997, STRATEGIC MANAGE J, V18, P509, DOI 10.1002/(SICI)1097-0266(199708)18:7509::AID-SMJ882>3.0.CO;2-Z, DOI	1997	7.53	1999	2002	
8	Eisenhardt KM, 2000, STRATEGIC MANAGE J, V21, P1105, DOI 10.1002/1097-0266(200010/11)21:10/111105::AID-SMJ133>3.0.CO;2-E, DOI	2000	6.47	2002	2005	
9	Orlitzky M, 2003, ORGAN STUD, V24, P403, DOI 10.1177/0170840603024003910, DOI	2003	5.7	2006	2008	
10	Porter ME, 2006, HARVARD BUS REV, V84, P78	2006	11.54	2008	2011	
11	McWilliams A, 2006, J MANAGE STUD, V43, P1, DOI 10.1111/j.1467-6486.2006.00580.x, DOI	2006	5.75	2008	2011	
12	Newbert SL, 2007, STRATEGIC MANAGE J, V28, P121, DOI 10.1002/smj.573, DOI	2007	5.68	2009	2010	
13	Barney JB, 2011, J MANAGE, V37, P1299, DOI 10.1177/0149206310391805, DOI	2011	5.73	2013	2015	
14	Aguinis H, 2012, J MANAGE, V38, P932, DOI 10.1177/0149206311436079, DOI	2012	8.01	2014	2017	
15	Campbell BA, 2012, ACAD MANAGE REV, V37, P376, DOI 10.5465/amr.2010.0276, DOI	2012	6.94	2014	2017	
16	Saeidi SP, 2015, J BUS RES, V68, P341, DOI 10.1016/j.jbusres.2014.06.024, DOI	2015	12.39	2016	2020	
17	Servaes H, 2013, MANAGE SCI, V59, P1045, DOI 10.1287/mnsc.1120.1630, DOI	2013	5.68	2016	2018	
18	Hair J. F., 2019, MULTIVARIATE DATA AN, V8th, P0, DOI 10.1016/J.IJPHARM.2011.02.019, DOI	2019	8.12	2019	2023	
19	Duran P, 2016, ACAD MANAGE J, V59, P1224, DOI 10.5465/amj.2014.0424, DOI	2016	5.94	2018	2021	
20	Henseler J, 2015, J ACAD MARKET SCI, V43, P115, DOI 10.1007/s11747-014-0403-8, DOI	2015	6.62	2019	2020	
21	Lins KV, 2017, J FINANC,	2017	5.61	2019	2023	

	V72, P1785, DOI 10.1111/jofi.12505, DOI					
22	Kim KH, 2018, J MANAGE, V44, P1097, DOI 10.1177/0149206315602530, DOI	2018	7.78	2020	2023	
23	Hair JF, 2019, EUR BUS REV, V31, P2, DOI 10.1108/EBR-11-2018-0203, DOI	2019	11.75	2021	2023	
24	Barney JB, 2018, STRATEGIC MANAGE J, V39, P3305, DOI 10.1002/smj.2949, DOI	2018	7.5	2021	2023	
25	Martinez-Conesa I, 2017, J CLEAN PROD, V142, P2374, DOI 10.1016/j.jclepro.2016.11.038, DOI	2017	7.3	2021	2023	

4. Discussion

4.1. The Key Determinants

Corporate competitive advantage is the holy grail of business strategy, and its achievement and sustainability depend on a multitude of determinants. In this discussion, we will explore and analyze the key determinants of corporate competitive advantage, shedding light on how they shape an organization's ability to gain and maintain a competitive edge.

4.1.1. Corporate Social Responsibility (CSR)

In today's era of increased environmental and social awareness, companies that prioritize sustainability and corporate responsibility can gain a competitive advantage. International cultural diversification is positively linked to the social performance of multinational enterprises viewed as socially responsible (Aguilera-Caracuel et al., 2015). CSR can promote firm performance indirectly through enhancing reputation and competitive advantage(Saeidi et al., 2015). A green corporate image can mediate the relationship between environmental management system (EMS) and firm performance (Martín-de Castro et al., 2016). Green practices and social initiatives can resonate with consumers and attract ethically-minded investors. Empirical research shows that firms with strategic CSR achieve growth through both their product and their process innovations (Bocquet et al., 2017). Corporate reputation moderates the positive relationship between CSR and organizational performance (K. Singh & Misra, 2021). Also, it is important for corporates to effectively publicize their CSR activities (Rhou et al., 2016).

4.1.2. Entrepreneurial Orientation

Lumpkin and Dess (1996) defined entrepreneurial orientation (EO) as the decision-making styles and processes guiding a firm's entrepreneurial activities, also characterizing it as a form of strategic orientation (Wiklund & Shepherd, 2003, 2005). They identified five dimensions of EO: risk-taking, innovativeness, proactiveness, competitive aggressiveness, and autonomy. Research shows that EO positively impacts business performance, especially through proactiveness and

innovativeness, while risk-taking has negative effects. Competitive aggressiveness and autonomy appear to hold no business performance value at an embryonic stage of firm growth (Hughes & Morgan, 2007). Johan Wiklund et al. developed an integrated model of small business growth that includes entrepreneurial orientation, environmental characteristics, firm resources, and managers' attitudes (Wiklund et al., 2009).

4.1.3. Green Innovation and Technology

Green innovation, which integrates product and process innovations, aims to reduce energy use, minimize pollution, recycle waste, and promote sustainable resource use. This enhances environmental performance and competitive advantage. Likewise, green process innovation improves both environmental and organizational performance, further boosting competitive advantage (El-Kassar & Singh, 2019). In addition, firms with greater intellectual capital tend to attract more investors' attention and have greater market value (Nimtrakoon, 2015).

4.1.4. Human Capital

A skilled and motivated workforce can be a significant determinant of competitive advantage. Human capital, including the knowledge, skills, and creativity of employees, can be a source of innovation and differentiation. Firm-specific human capital- knowledge and skills embodied in individuals that cannot be easily applied in other firms- is assumed to support sustained competitive advantage (Campbell et al., 2012). The ability to attract and retain top talent is crucial.

4.1.5. Supply Chain Management

Efficient supply chain management, streamlined operations, and effective cost control can lead to cost advantages that drive competitive positioning. Firms that implement sustainable supply chain initiatives can realize positive reverse logistics outcomes (Hsu et al., 2016). Retailers must revise their supply chain structures, strategies, and management practices to adapt to the recent global sourcing, multichannel, and relation-based innovation (Ganesan et al., 2009). Companies must ensure their international suppliers comply with their corporate codes of conduct to meet the challenge of satisfying stakeholders' alternating sustainability expectations across their global supply base (Reuter et al., 2010). Three global trends- sourcing practices, multichannel routes to market, and relationship-based innovation- are enhancing retailers' competitive advantage with regard to brand image, reputation, sales and profits, innovation, and relationship (Ganesan et al., 2009). Profound Sustainable global supplier management (SGSM) capacities were a source of competitive advantage in the chemical industry (Reuter et al., 2010). Sustainable supply chain initiative can realize positive reverse logistics outcomes (Hsu et al., 2016).

To maintain the competitive advantage under the extreme conditions like sanctions or a scenario of economic decoupling and de-risking, companies must adopt several key strategies. Firstly, diversification is essential (Lin et al., 2020). This involves diversifying products, services, markets, and supply chains. Companies should seek new markets, reduce reliance on sanctioned regions, and explore alternative suppliers. Additionally, stringent compliance and risk management are essential to align with international regulations and navigate the evolving sanctions landscape, avoiding legal and reputational risks. Collaborative strategies, such as

forming partnerships with needed institutions or being part of a cluster (Porter, 2000), can also provide a competitive edge.

4.1.6. Brand and Reputation

Building a strong brand and a positive reputation can create a significant competitive advantage. Consumers are often willing to pay a premium for products or services associated with trusted and recognized brands. Corporate reputation can moderate the relationship between CSR and organization performance (K. Singh & Misra, 2021). Reputation is one of the consequences of high customer satisfaction over the long term. Customer satisfaction mediates the relationship between CSR and financial performance (Saeidi et al., 2015). The special characteristics of family firms, such as the owning family's involvement and control or its strong identification with the business, make creating and preserving a good reputation desirable. Good reputation has positive financial and non-financial effects on family firms and helps create competitive advantages (Sageder et al., 2018).

4.1.7. Scale and Network

For some industries, economies of scale and network effects can be critical determinants of competitive advantage. As a company grows and gains more customers, it can achieve cost efficiencies and create a more valuable product or service due to network effects. Cheng BT. et al. (Frequency=10) found that firms with better CSR performance face significantly lower capital constraints (Cheng et al., 2014). However, highly specific and opaque resources limit the borrowing capacity of the firm (Vicente-Lorente, 2001).

ME. Porter mentioned that a cluster, which is a geographically group of companies and institutions in a particular field, can affect competitive advantage by increasing the current (static) productivity of constituent firms or industries, increasing the capacity of cluster participants for innovation and productivity growth, and stimulating new business formation that supports innovation and expands the cluster (Porter, 2000).

4.1.8. Regulatory Environment

Government regulations, policies, and compliance can significantly impact a company's competitive advantage. Firms that can navigate regulatory challenges effectively and stay ahead of industry-specific regulations gain a strategic edge. For example, many countries have government-funded ISO 14001 support program, which play an important and positive role in assisting firms to gain a competitive advantage (Delmas, 2001). Other measures include public procurement and the creation of partnerships that engage different stakeholders (Doran & Ryan, 2016).

The role of public policy is crucial in incentivizing firms to engage in innovation through the use of subsidies or by imposing penalties for non-engagement (Doran & Ryan, 2016). Firms frequently engage in eco-innovation in anticipation of stringent environmental regulations, as this strategy enables them to proactively reduce future compliance costs while simultaneously gaining a competitive edge over their industry counterparts (Doran & Ryan, 2016). Advocating for a

pragmatic, progressive policy enables firms to shape future policies around their existing environmental strengths and systematically embracing advancing regulation enables firms to satisfy activists who would place pressure on policy makers to force firms to conform to higher environmental standards (Marcus et al., 2011).

In conclusion, the determinants of corporate competitive advantage are multifaceted and interrelated, evolving over time. Adaptability and strategic agility are essential in today's dynamic business landscape. Achieving and sustaining competitive advantage requires a holistic approach that strategically combines these determinants to fit an organization's specific context and goals.

4.2. The Measurement of Competitive Advantage

One challenge in studying competitiveness is the lack of comprehensive and accurate measurement. Researchers face difficulties in assessing competitive advantage through objective or subjective measures, with no standardized approach currently available. Previous studies have used widely accepted scales ranging from 6 to 16 items (summarized in Appendix 1), covering qualitative dimensions like corporate image, product quality, R&D investment, management ability, profitability, and product differentiation. Alternatively, some researchers opt for quantitative metrics like ROA or sales growth rate to assess corporate efficiency (Lin et al., 2020).

Another challenge lies in the fact that many researchers employ alternative concepts, such as firm performance, financial performance, organizational performance, and company value, to substitute the concept of corporate competitive advantage when conducting quantitative research.

For financial performance, return on asset (ROA) is widely used as a proxy (Lin et al., 2020; Nimtrakoon, 2015). ROA is more stable than sales growth or return on sales in measuring financial performance because of both the managerial effect of short-term activities and uncertainty about the external environment in emerging markets (Xie et al., 2019).

For firm performance, Tobin's Q is widely used to measure firm performance incorporating current operations, potential growth opportunities, and future operating performance (Memili et al., 2015; Rhou et al., 2016). The advantage of using Tobin's q over profitability is that profitability is a short-term measure, whereas Tobin's q is a long-term measure because it is based on the market value of the firm (Servaes & Tamayo, 2013). This measure takes into account the present value of future expected cash flows discounted at the required rate of return, thereby inherently adjusting for risk.

Compared to accounting-based measures, stock market-based measures of performance are less subjective to different accounting procedures and managerial manipulation.

Numerous measurement methods can result in inconsistencies in experimental outcomes and a lack of comparability, potentially leading to confusion regarding enterprise competitiveness for management perception. Considering the complexity of competitive advantage, the measurement of enterprise competitiveness is better conducted using a combination of both subjective and objective indicators, as well as short-term and long-term indicators.

5. Conclusions

This study utilized Citespace for a bibliometric analysis of corporate competitive advantage. For RQ1, the trend analysis revealed a significant increase in published papers from 2019 to 2023. RQ2 mapping highlighted key experts and collaborations in the field. In addressing RQ4, we identified research that gained substantial attention over time, marked by bursts of activity in previously overlooked areas. For RQ3 and RQ5, we clustered references by keywords and created a research timeline. RQ6 pointed to government intervention and independent innovation capacity as critical areas for further exploration in emerging markets.

Despite its advantages, the bibliometric method has limitations. It relies on the researcher's theoretical knowledge and should complement comprehensive literature reviews rather than replace them. Long publication times, self-citations, and atypical citations can distort co-citation analysis. Additionally, focusing solely on the Web of Science database and SSCI/SCI-indexed papers may overlook key contributions due to limited coverage.

6. Future Avenues

Customer and regulatory pressures influence enterprise decision-makers to address environmental challenges. A green entrepreneurial orientation has been shown to foster innovation (Jiang et al., 2018), while a strong green brand image can translate into green competitive advantage (Zameer et al., 2020). Moreover, green product innovation positively impacts dynamic capabilities and competitive advantage in the manufacturing sector (Qiu et al., 2020; M. Wang et al., 2021). However, empirical evidence is lacking on the moderating role of green subsidies in the relationship between green product innovation and financial performance (Xie et al., 2019). This nonsignificant effect may result from the relatively slow pace of green innovation (Xie et al., 2019) and the high uncertainty of environmental policies (Xie et al., 2019). Future research could further explore the moderating influence of governmental interventions or green subsidies on the link between green innovation and competitive advantage.

Author Contributions:

Conceptualization, Yuan Zheng and Ling Chen .; methodology, Yuan Zheng; writing—original draft preparation, Yuan Zheng.; writing—review and editing, Ling Chen; visualization,Yuan Zheng.; supervision, Ling Chen. All authors have read and agreed to the published version of the manuscript.

Funding:

This research was supported by the Beijing Education Science "14th Five-Year Plan" Project [Grant Number: CDGB25543]. The funder had no role in study design, data collection, analysis, interpretation, manuscript preparation, or the decision to publish.

Institutional Review Board Statement:

Not applicable.

Informed Consent Statement:

Not applicable.

Data Availability Statement:

Not applicable.

Acknowledgments:

The authors would like to express their sincere gratitude to the funding agency for its financial support, to all colleagues and partner institutions for their valuable guidance and assistance throughout this study, and to the editors for their thoughtful comments and professional handling of the manuscript.

Conflict of Interest:

The authors declare no conflict of interest.

Appendix A

Variable	Measurement	Items	Reference
Competitive advantage	The measurement of corporate competitive advantage contained eight items:	(1) the company has the competitive advantage of low cost compared to other competitors; (2) the quality of the products or services that the company offers is better than that of the competitor's products or services; (3) the company is more capable of R&D and innovation than the competitors; (4) the company has better managerial capability than the competitors; (5) the company's profitability is better; (6) the growth of the company exceeds that of the competitors; (7) the company is the first mover in some important fields and occupies the important position; (8) the corporate image of the company is better than that of the competitors.	(Chen et al., 2006)
Competitive advantage	CA was measured by using 16 items from Zhang (2001) and Bratic (2011). The 16-item scale was organized into five dimensions: price/cost, 2. quality, 3. delivery dependability, 4. product innovation and 5. time to	1. Price/Cost: an organization is capable of competing against major competitors based on low price We offer competitive prices We are able to offer prices as low or lower than our competitors 2. Quality: an organization is capable of offering product quality and performance that creates higher value for	(Bratić, 2011; Nyuur et al., 2019)

	market.	customers We are able to compete based on quality We offer products that are highly reliable We offer products that are very durable We offer high quality products to our customer 3. Deliver Dependability: an organization is capable of providing on time the type and volume of products required by customers We deliver the kind of products needed We deliver customer order in time We provide dependable delivery 4. Time to Market: an organization is capable of introducing new products faster than major competitors We deliver product to market quickly We are first in the market in introducing new products We have time-to-market lower than industry average We have fast product development 5. Product Innovation: an organization is capable of introducing new products and features in the market place We provide customized products We alter our products offerings to meet client needs We respond well to customer demand for new features	
Competitive advantage	The competitive advantage (CA) was measured using items that focused on investment in research and development, cost savings, and growth opportunities in new markets.	1.Being environmentally conscious can lead to substantial cost advantages for our firm. 2.Our firm has realized significant cost savings by experimenting with ways to improve the environmental quality of our products and processes. 3.By regularly investing in research and development on cleaner products and	(Banerjee et al., 2003; Leonidou et al., 2013, 2017)

		processes, our firm can be a leader in the market. 4.Our firm can enter lucrative new markets by adopting environmental strategies. 5.Our firm can increase market share by making our current products more environmentally friendly. 6.Reducing the environmental impact of our firm's activities will lead to a quality improvement in our products and processes.	
Competitive advantage	The sustainability of competitive advantage refers to the persistence of a firm's superior performance, which is measured by the percentage of superior performance in any prior period.		(Villalonga, 2004; Yadav et al., 2017)
Competitive advantage	The CA was measured using differentiation (4 items) and cost (3 items) scales. These items were obtained from the works by Miller (1988), Govindarajan (1988), Lee and Miller (1996) and Beal (2000).	Differentiation competitive advantage (reflective) 1. Creation of a brand image identifying the firm 2. The quality of the service offered is better than that offered by competitors 3. A great number of supplementary services is offered, adding value for customers 4. Important innovations are made in the service Costs competitive advantage (reflective) 1. General costs are minimized 2. An attempt is made to improve productivity 3. Efforts are made to reach economies of scale,	(Khan et al., 2019; Molina-Azorín et al., 2015)
Competitive advantage	CA was assessed by two dimensions – effectiveness and efficiency.	Firm effectiveness as the sales growth rate and firm efficiency as profitability in return on assets (ROA).	(Lin et al., 2020)
Competitive advantage	The research adopted six items from Barney (1991),	1. Products/services are better than its competitors;	(S. K. Singh et al., 2019)

	and Porter and van der Linde (1995) to measure firm competitive advantage.	2. R&D capabilities are better than its competitors; 3. Managerial capabilities are better than its competitors; 4. Profitability is better than its competitors; 5. Image is better than its competitors; 6. Competitive advantage is better than its competitors.	
Competitive advantage	Competitive Advantage (CA) was measured with seven items. The items sought to determine innovative skills, product quality, customer satisfaction, and production costs. Reductions in wastes and emissions, and consumption of fewer resources along with compliance to regulations were also measured.	1. Reduction of hazardous waste, emissions, etc. 2. Consume less resources, such as energy, water, electricity, gas and petrol, etc. 3. Compliance to environmental regulations 4. Customer satisfaction in relation to product design and development 5. Product design and innovation skill 6. Quality of product and service 7. Production cost	(El-Kassar & Singh, 2019)
Firm performance	To measure firm performance, this research used a variable focused on competitive performance, similar to that adopted by Marín et al. (2012) or Gallardo-Vazquez and S anchez-Hern andez (2013).	Firm Perf. 1 In the last 3 years, our company has improved regarding ... FP1 Profits FP2 Return on assets Firm Perf. 2 In the last 3 years, our company has introduced improvements relative to .... FP3 Customer service FP4 Relations with customers FP5 Customer loyalty Firm Perf. 3 In the last 3 years, our company has improved with regard to ... FP6 Staff absenteeism FP7 The working environment FP8 Employees' loyalty and morale	(Martinez-Conesa et al., 2017)
Firm performance	The main dependent variable is firm growth, our proxy for firms' economic performance (Orlitzky et al. 2003; Roberts 1992; RussoandFouts1997). We measured growth in turnover between 2007 and 2009 in two ways.	First, we computed growth for the overall time period using the variation of firm turnover in real price (DVCA79). Second, we calculated an average growth rate, to account for likely evolution during the overall time period. This variable is simply the arithmetic mean of the two-period growth rate (MOYDVCA79)	(Bocquet et al., 2017)

Firm performance	Firm performance as the sole dependent variable in this study will be measured through seven items which are related to financial performance in Balanced Scorecard (BSC) methodology. Developed by Robert Kaplan and David Norton in 1992 the Investment Balanced Scorecard methodology is a comprehensive approach that analyzes an organization's overall performance in four ways.	Market share growth and growth in sales as the growth determinant, and Return on Equity (ROE), Return on Sales (ROS) Return on Assets (ROA), Return on (ROI), and net profit margin of the firm as monetary accounting performance constructs	(Saeidi et al., 2015)
Firm performance	The research used two measures for performance: one that was objective (accounting-based) and one which was subjective (perceptual-based).	Objective performance: return on assets (ROA); Subjective performance: 4-items measurement scale ITEM Related to your business' largest competitor: 1. The profits obtained by your firm are 2. The size of your firm is 3. The market share of your firm is 4. The rate of growth that your firm has is	(Guerrero-Villegas et al., 2018, 2018)
Firm financial performance	The research focused on economic results (ROA growth, ROE growth and ROCE growth) relative to competitors, following the same line as other scholars within the environmental field (Hart and Ahuja, 1996; Russo and Fouts, 1997; Wagner et al., 2002; González-Benito and González-Benito, 2005; Aragón-Correa and Rubio-López, 2007).		(Martín-de Castro et al., 2016)
Firm performance	Firm performance is measured via Tobin's Q	((common shares outstanding × calendar year closing price) + (current liabilities-	(Memili et al., 2015)

	(Chung and Pruitt, 1994) with accounting data provided by Thomson Reuters. The use of this firm performance measurement in this study followed Anderson and Reeb (2004), Villalonga and Amit (2006a, b, 2009), and Miller et al. (2007).	current assets) + (long-term debt) + (liquidating value of preferred stock)/total assets).	
Firm performance	Prior studies have recommended selfreported measures for FP in cases involving SMEs (Shirokova, Bogatyreva, Beliaeva, & Puffer, 2016). We thus relied on self-reported measurements used by (Stam & Elfring, 2008; see Appendix A for details).	Our firm performs well relative to our key competitors in Sales growth Employment growth Market share Gross Profit Net Profit Margin Innovation in products Speed in developing new products Quality of products Cost control Customer satisfaction	(Khan et al., 2019)
Financial performance	The research used ROA to measure the financial performance of the firms.		(Xie et al., 2019)
Financial performance	Tobin's Q, ratio of the market value of a firm to the replacement cost of its assets, is used as dependent variable following past studies testing the impact of strategic choices (e.g., CSR) on firm value both in the mainstream and hospitality-finance literature.	The market's evaluation of a firm's future profitability is calculated as {(TA − EQ − TXDB) + (Shares outstanding × Price)}/TA, where TA is total assets, EQ is the book value of company equity, TXDB is deferred taxes, Shares outstanding is total number of shares outstanding, and Price is stock price at fiscal year-end.	(Rhou et al., 2016)
Financial performance	Source: Alayo n et al. (2017), Jabbour et al. (2020), Baah et al. (2021b, c)	1. Our business has a large market share 2. Our firm accrues high returns on investment 3. Our company has high growth of market share 4. Our business has high profit margin on sales 5. Our firm has high returns on equity	(Baah et al., 2023)
Financial	Two traditional	Margin ratio = net profit/total net sales	(Nimtrakoo

performance	performance measures are used in the study, including margin ratio and ROA. Margin ratio, a measure of profitability from sales, demonstrates the ability of firms to generate net profit from total sales.	ROA =operating income/average total assets.	n, 2015)
Firm performance	To measure performance, the research employed Tobin's q, which is the market value of the firm, divided by the replacement value of its assets.	Tobin's q = (book value of assets − book value of equity−deferred taxes+ market value of equity)/book value of assets.	(Servaes & Tamayo, 2013)
Organization performance	Organizational performance (OP) was measured by four items drawn from a previous study (Lin et al., 2013). These items measured the improvement in market position, sales volume, profit rate, and reputation.	Market position improvement Enhancing sale volume Enhancing the profit rate Enhancing the reputation	(El-Kassar & Singh, 2019)
Organization performance	Four items developed by Deshpandé, Farley, and Webster (1993); Jaworski and Kohli (1993); Samiee and Roth (1992) were used to measure organizational performance.		(K. Singh & Misra, 2021)
Business performance	Two dimensions: customer performance and product performance. A firm's customer performance is usually characterized by customer acquisition and customer retention (e.g., Hansotia, 2004; Jayachandran, Sharma, Kaufman, & Raman, 2005; Reinartz, Thomas, & Kumar, 2005; Thomas, 2001). Product performance measures were	Product performance Relative to competing products, those of our business have been more successful in terms of sales Relative to competing products, those of our business have been more successful in terms of achieving and establishing market share Customer performance We have been able to attract totally new customers this year We have been able to expand our existing	(Hughes & Morgan, 2007)

	based on the relative success of the firm's products in terms of sales and at achieving market share. Support for these measures is drawn from the new product performance research of Atuahene-Gima and Li (2004), Song and Xie (2000),andWei and Morgan (2004).	customer base this year We have succeeded in sustaining our customer base and achieving repeat orders	

References

Aguilera-Caracuel, J., Guerrero-Villegas, J., Vidal-Salazar, M. D., & Delgado-Márquez, B. L. (2015). International Cultural Diversification and Corporate Social Performance in Multinational Enterprises: The Role of Slack Financial Resources. Management International Review, 55(3), 323–353.

Aguinis, H., & Glavas, A. (2012). What We Know and Don't Know About Corporate Social Responsibility: A Review and Research Agenda. Journal of Management, 38(4), 932–968.

Amos, C., Brockhaus, S., Fawcett, A. M., Fawcett, S. E., & Knemeyer, A. M. (2019). Blinded by the light? Analyzing sustainability authenticity, customer service perceptions, and halo effects. The International Journal of Logistics Management, 30(1), 117–139.

Baah, C., Agyabeng-Mensah, Y., Afum, E., & Lascano Armas, J. A. (2023). Exploring corporate environmental ethics and green creativity as antecedents of green competitive advantage, sustainable production and financial performance: Empirical evidence from manufacturing firms. Benchmarking: An International Journal, 31 (3): 990-1008.

Balconi, M. (2002). Tacitness, codification of technological knowledge and the organisation of industry. Research Policy, 31(3), 357-379.

Banerjee, S. B., Iyer, E. S., & Kashyap, R. K. (2003). Corporate Environmentalism: Antecedents and Influence of Industry Type. Journal of Marketing, 67(2), 106–122.

Barney, J. (1991). Firm Resources and Sustained Competitive Advantage. Journal of Management, 17(1), 99–120.

Barney, J. B. (2018). Why resource-based theory's model of profit appropriation must incorporate a stakeholder perspective. Strategic Management Journal, 39(13), 3305–3325.

Barreto, I. (2010). Dynamic Capabilities: A Review of Past Research and an Agenda for the Future. Journal of Management, 36(1), 256–280.

Berrone, P., Cruz, C., Gomez-Mejia, L. R., & Larraza-Kintana, M. (2010). Socioemotional Wealth and Corporate Responses to Institutional Pressures: Do Family-Controlled Firms Pollute Less? Administrative Science Quarterly, 55(1), 82–113.

Bhandari, K., Ranta, M., & Salo, J. (2022). The resource-based view, stakeholder capitalism, ESG, and sustainable competitive advantage: The firm's embeddedness into ecology, society, and governance. BUSINESS STRATEGY AND THE ENVIRONMENT, 31(4), 1525–1537.

Bocquet, R., Le Bas, C., Mothe, C., & Poussing, N. (2017). CSR, Innovation, and Firm Performance in Sluggish Growth Contexts: A Firm-Level Empirical Analysis. Journal of Business Ethics, 146(1), 241–254.

Bratić, D. (2011). Achieving a Competitive Advantage by SCM. IBIMA Business Review Journal, 1–13.

Campbell, B. A., Coff, R., & Kryscynski, D. (2012). Rethinking Sustained Competitive Advantage from Human Capital. Academy of Management Review, 37(3), 376–395.

Cantwell, J. (2017). Innovation and international business. Industry and Innovation, 24(1), 41–60.

Capron, L. (1999). The long-term performance of horizontal acquisitions. Strategic Management Journal, 20(11), 987–1018.

Capron, L., Mitchell, W., & Swaminathan, A. (2001). Asset divestiture following horizontal acquisitions: A dynamic view. Strategic Management Journal, 22(9), 817–844.

Chen, Y.-S. (2008). The Driver of Green Innovation and Green Image – Green Core Competence. Journal of Business Ethics, 81(3), 531–543.

Chen, Y.-S., Lai, S.-B., & Wen, C.-T. (2006). The Influence of Green Innovation Performance on Corporate Advantage in Taiwan. Journal of Business Ethics, 67(4), 331–339.

Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance: CSR and Access to Finance. Strategic Management Journal, 35(1), 1–23.

Chesbrough, H. W., & Appleyard, M. M. (2007). Open Innovation and Strategy. California Management Review, 50(1), 57–76.

Levinthal, C. D. A. . (1990). Absorptive capacity: a new perspective on learning and innovation. Administrative Science Quarterly, 35(1), 128-152.

Cohen, W. M., & Levinthal, D. A. (1989). Innovation and Learning: The Two Faces of R & D. The Economic Journal, 99(397), 569.

Dai, R., & Zhang, J. (2017). Green process innovation and differentiated pricing strategies with environmental concerns of South-North markets. Transportation Research Part E: Logistics and Transportation Review, 98, 132–150.

Delmas, M. (2001). STAKEHOLDERS AND COMPETITIVE ADVANTAGE: THE CASE OF ISO 14001. Production and Operations Management, 10(3), 343–358.

Doran, J., & Ryan, G. (2016). The Importance of the Diverse Drivers and Types of Environmental Innovation for Firm Performance. Business Strategy and the Environment, 25(2), 102–119.

Duran, P., Kammerlander, N., Van Essen, M., & Zellweger, T. (2016). Doing More with Less: Innovation Input and Output in Family Firms. Academy of Management Journal, 59(4), 1224–1264.

Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? Strategic Management Journal, 21(10–11), 1105–1121.

El-Kassar, A.-N., & Singh, S. K. (2019). Green innovation and organizational performance: The influence of big data and the moderating role of management commitment and HR practices. Technological Forecasting and Social Change, 144, 483–498.

Eraut, M. (2000). Non-formal learning and tacit knowledge in professional work. British Journal of Educational Psychology, 70(1), 113–136.

Fang, H., Kotlar, J., Memili, E., Chrisman, J. J., & De Massis, A. (2018). The pursuit of international opportunities in family firms: Generational differences and the role of knowledge-based resources. Global Strategy Journal, 8(1), 136–157.

Ganesan, S., George, M., Jap, S., Palmatier, R. W., & Weitz, B. (2009). Supply Chain Management and Retailer Performance: Emerging Trends, Issues, and Implications for Research and Practice. Journal of Retailing, 85(1), 84–94.

Ge, J., Carney, M., & Kellermanns, F. (2019). Who Fills Institutional Voids? Entrepreneurs' Utilization of Political and Family Ties in Emerging Markets. Entrepreneurship Theory and Practice, 43(6), 1124–1147.

Guerrero-Villegas, J., Sierra-García, L., & Palacios-Florencio, B. (2018). The role of sustainable development and innovation on firm performance. Corporate Social Responsibility and Environmental Management, 25(6), 1350–1362.

Hillman, A. J., & Hitt, M. A. (1999). Corporate Political Strategy Formulation: A Model of Approach, Participation, and Strategy Decisions. The Academy of Management Review, 24(4), 825.

Hossain, K., Che Abdullah, A. S., Mohd Balwi, M. A. W. F., Lubis, A., Azizan, N. A., Alam, M. N., & Taha, A. Z. (2023). Linking entrepreneurial orientation with export performance: Mediation effects of multiple differentiation strategies. Journal of Business & Industrial Marketing, 38(9), 1769–1793.

Hou, J., Chen, H., & Xu, J. (2017). External Knowledge Sourcing and Green Innovation Growth with Environmental and Energy Regulations: Evidence from Manufacturing in China. Sustainability, 9(3), 342.

Hsu, C.-C., Tan, K.-C., & Mohamad Zailani, S. H. (2016). Strategic orientations, sustainable supply chain initiatives, and reverse logistics: Empirical evidence from an emerging market. International Journal of Operations & Production Management, 36(1), 86–110.

Hughes, M., & Morgan, R. E. (2007). Deconstructing the relationship between entrepreneurial orientation and business performance at the embryonic stage of firm growth. Industrial Marketing Management, 36(5), 651–661.

Jiang, W., Chai, H., Shao, J., & Feng, T. (2018). Green entrepreneurial orientation for enhancing firm performance: A dynamic capability perspective. Journal of Cleaner Production, 198, 1311–1323.

K. Kakabadse, N., Kouzmin, A., & Kakabadse, A. (2001). From tacit knowledge to knowledge management: Leveraging invisible assets. Knowledge and Process Management, 8(3), 137–154.

Khan, S. Z., Yang, Q., & Waheed, A. (2019). Investment in intangible resources and capabilities spurs sustainable competitive advantage and firm performance. Corporate Social Responsibility and Environmental Management, 26(2), 285–295.

Kim, K.-H., Kim, M., & Qian, C. (2018). Effects of Corporate Social Responsibility on Corporate Financial Performance: A Competitive-Action Perspective. Journal of Management, 44(3), 1097–1118.

Knight, G. A., & Cavusgil, S. T. (2004). Innovation, organizational capabilities, and the born-global firm. Journal of International Business Studies, 35(2), 124–141.

Kohli, A. K., Jaworski, B. J., & Kumar, A. (1993). MARKOR: A Measure of Market Orientation. Journal of Marketing Research, 30(4), 467.

Kokko, A., Tansini, R., & Zejan, M. C. (1996). Local technological capability and productivity spillovers from FDI in the Uruguayan manufacturing sector. Journal of Development Studies, 32(4), 602–611.

Kraus, S., Rehman, S. U., & García, F. J. S. (2020). Corporate social responsibility and environmental performance: The mediating role of environmental strategy and green innovation. Technological Forecasting and Social Change, 160, 120262.

Leonidou, L. C., Christodoulides, P., Kyrgidou, L. P., & Palihawadana, D. (2017). Internal Drivers and Performance Consequences of Small Firm Green Business Strategy: The Moderating Role of External Forces. Journal of Business Ethics, 140(3), 585–606.

Leonidou, L. C., Fotiadis, T. A., Christodoulides, P., Spyropoulou, S., & Katsikeas, C. S. (2015). Environmentally friendly export business strategy: Its determinants and effects on competitive advantage and performance. International Business Review, 24(5), 798–811.

Leonidou, L. C., Leonidou, C. N., Fotiadis, T. A., & Zeriti, A. (2013). Resources and capabilities as drivers of hotel environmental marketing strategy: Implications for competitive advantage and performance. Tourism Management, 35, 94–110.

Li, D., & Liu, J. (2014). Dynamic capabilities, environmental dynamism, and competitive advantage: Evidence from China. Journal of Business Research, 67(1), 2793–2799.

Li, M. H., Cui, L., & Lu, J. (2017). Marketized state ownership and foreign expansion of emerging market multinationals: Leveraging institutional competitive advantages. Asia Pacific Journal of Management, 34(1), 19–46.

Lin, H.-E., Hsu, I.-C., Hsu, A. W., & Chung, H.-M. (2020). Creating competitive advantages: Interactions between ambidextrous diversification strategy and contextual factors from a dynamic capability perspective. Technological Forecasting and Social Change, 154, 119952.

Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social Capital, Trust, and Firm Performance: The Value of Corporate Social Responsibility during the Financial Crisis. The Journal of Finance, 72(4), 1785–1824.

Lu, F., & Mu, L. (2011). Learning by innovating: Lessons from China's digital video player industry. Journal of Science and Technology Policy in China, 2(1), 27–57.

Marcus, A., Aragon-Correa, J. A., & Pinkse, J. (2011). Firms, Regulatory Uncertainty, and the Natural Environment. California Management Review, 54(1), 5–16.

Martín-de Castro, G., Amores-Salvadó, J., & Navas-López, J. E. (2016). Environmental Management Systems and Firm Performance: Improving Firm Environmental Policy through Stakeholder Engagement. Corporate Social Responsibility and Environmental Management, 23(4), 243–256.

Martinez-Conesa, I., Soto-Acosta, P., & Palacios-Manzano, M. (2017). Corporate social responsibility and its effect on innovation and firm performance: An empirical research in SMEs. Journal of Cleaner Production, 142, 2374–2383.

McWilliams, A., Siegel, D. S., & Wright, P. M. (2006). Corporate Social Responsibility: Strategic Implications. Journal of Management Studies, 43(1), 1–18.

Melville, Kraemer, & Gurbaxani. (2004). Review: Information Technology and Organizational Performance: An Integrative Model of IT Business Value. MIS Quarterly, 28(2), 283.

Memili, E., Fang, H. C., & Welsh, D. H. B. (2015). Value creation and value appropriation in innovation process in publicly-traded family firms. Management Decision, 53(9), 1921–1952.

Miller, D., Breton-Miller, I. L., & Lester, R. H. (2013). Family Firm Governance, Strategic Conformity, and Performance: Institutional vs. Strategic Perspectives. Organization Science, 24(1), 189–209.

Molina-Azorín, J. F., Tarí, J. J., Pereira-Moliner, J., López-Gamero, M. D., & Pertusa-Ortega, E. M. (2015). The effects of quality and environmental management on competitive advantage: A mixed methods study in the hotel industry. Tourism Management, 50, 41–54.

Mueller, D. C., & Tilton, J. E. (1969). Research and Development Costs as a Barrier to Entry. The Canadian Journal of Economics, 2(4), 570.

Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. Strategic Management Journal, 28(2), 121–146.

Nimtrakoon, S. (2015). The relationship between intellectual capital, firms' market value and financial performance: Empirical evidence from the ASEAN. Journal of Intellectual Capital, 16(3), 587–618.

Nyuur, R. B., Ofori, D. F., & Amponsah, M. M. (2019). Corporate social responsibility and competitive advantage: A developing country perspective. Thunderbird International Business Review, 61(4), 551–564.

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate Social and Financial Performance: A Meta-Analysis. Organization Studies, 24(3), 403–441.

Patel, P. C., Guedes, M. J., Soares, N., & Da Conceição Gonçalves, V. (2018). Strength of the association between R&D volatility and firm growth: The roles of corporate governance and tangible asset volatility. Journal of Business Research, 88, 282–288.

Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. Strategic Management Journal, 14(3), 179–191.

Porter, M. E. (2000). Location, Competition, and Economic Development: Local Clusters in a Global Economy. Economic Development Quarterly, 14(1), 15–34.

Qiu, L., Jie, X., Wang, Y., & Zhao, M. (2020). Green product innovation, green dynamic capability, and competitive advantage: Evidence from Chinese manufacturing enterprises. Corporate Social Responsibility and Environmental Management, 27(1), 146–165.

Reuter, C., Foerstl, K., Hartmann, E., & Blome, C. (2010). SUSTAINABLE GLOBAL SUPPLIER MANAGEMENT: THE ROLE OF DYNAMIC CAPABILITIES IN ACHIEVING COMPETITIVE ADVANTAGE. Journal of Supply Chain Management, 46(2), 45–63.

Rhou, Y., Singal, M., & Koh, Y. (2016). CSR and financial performance: The role of CSR awareness in the restaurant industry. International Journal of Hospitality Management, 57, 30–39.

Rosenberg, N. (2010). Studies on science and the innovation process: Selected works. World Scientific, 428. https://doi.org/10.1142/7306

Rugman, A. M., & Verbeke, A. (2001). Subsidiary-specific advantages in multinational enterprises. Strategic Management Journal, 22(3), 237–250.

Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saaeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. Journal of Business Research, 68(2), 341–350.

Sageder, M., Mitter, C., & Feldbauer-Durstmüller, B. (2018). Image and reputation of family firms: A systematic literature review of the state of research. Review of Managerial Science, 12(1), 335–377.

Sakhartov, A. V., & Folta, T. B. (2014). Resource relatedness, redeployability, and firm value: Resource Relatedness, Redeployability, and Firm Value. Strategic Management Journal, 35(12), 1781–1797.

Servaes, H., & Tamayo, A. (2013). The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness. Management Science, 59(5), 1045–1061.

Singh, K., & Misra, M. (2021). Linking Corporate Social Responsibility (CSR) and Organizational Performance: The moderating effect of corporate reputation. European Research on Management and Business Economics, 27(1), 100139.

Singh, S. K., Chen, J., Del Giudice, M., & El-Kassar, A.-N. (2019). Environmental ethics, environmental performance, and competitive advantage: Role of environmental training. Technological Forecasting and Social Change, 146, 203–211.

Singh, S. K., Giudice, M. D., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. Technological Forecasting and Social Change, 150, 119762.

Song, W., & Yu, H. (2018). Green Innovation Strategy and Green Innovation: The Roles of Green Creativity and Green Organizational Identity. Corporate Social Responsibility and Environmental Management, 25(2), 135–150.

Strategy and society. (2007). Strategy and society: The link between competitive advantage and corporate social responsibility. Strategic Direction, 23(5), 18.

Teece, D. J. (2019). China and the Reshaping of the Auto Industry: A Dynamic Capabilities Perspective. Management and Organization Review, 15(1), 177–199.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. Strategic Management Journal, 18(7), 509–533.

Tsai, K., & Liao, Y. (2017). Sustainability Strategy and Eco-Innovation: A Moderation Model. Business Strategy and the Environment, 26(4), 426–437.

Vicente-Lorente, J. D. (2001). Specificity and opacity as resource-based determinants of capital structure: Evidence for Spanish manufacturing firms. Strategic Management Journal, 22(2), 157–177.

Villalonga, B. (2004). Intangible resources, Tobin's q, and sustainability of performance differences. Journal of Economic Behavior & Organization, 54(2), 205–230.

Wang, L. (n.d.). (2016). Developing Innovation Capability: The Case of Chinese Automobile Companies. University of Oxford (United Kingdom).

Wang, M., Li, Y., Li, J., & Wang, Z. (2021). Green process innovation, green product innovation and its economic performance improvement paths: A survey and structural model. Journal of Environmental Management, 297, 113282.https://doi.org/10.1016/j.jenvman.2021.113282

Wiklund, J., Patzelt, H., & Shepherd, D. A. (2009). Building an integrative model of small business growth. Small Business Economics, 32(4), 351–374.

Winter, S. G. (2000). The Satisficing Principle in Capability Learning. Strategic Management Journal, 21(10/11,), 981–996.

Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. Journal of the Academy of Marketing Science, 25(2), 139–153.

Xie, X., Huo, J., & Zou, H. (2019). Green process innovation, green product innovation, and corporate financial performance: A content analysis method. Journal of Business Research, 101, 697–706.

Yadav, P. L., Han, S. H., & Kim, H. (2017). Sustaining Competitive Advantage Through Corporate Environmental Performance. Business Strategy and the Environment, 26(3), 345–357.

Zameer, H., Wang, Y., & Yasmeen, H. (2020). Reinforcing green competitive advantage through green production, creativity and green brand image: Implications for cleaner production in China. Journal of Cleaner Production, 247, 119119.