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Examining the Impact of Board Diversity on Firm Performance: Insights from Demographics, Human Capital, Social Capital, Culture and Structure

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Abstract

The goal of this systematic literature review is to develop a thorough analytical framework for understanding the relationship between board diversity and firm performance. A systematic approach was employed to collect a sample of 140 studies from the Web of Science database. These studies were assessed through content analysis, considering relevant publication trends, theoretical applications, and analytical frameworks for the relationship between board diversity and firm performance (including demographic characteristics, labour resources, social capital, cultural, and structural aspects). The findings revealed inconsistencies in the results of studies examining the impact of board diversity on firm performance. Additionally, it was identified that frameworks for analysing board diversity and firm performance fall into several categories: demographic characteristics (such as gender, age, ethnicity, nationality, and religion); human capital (including educational background, education level, expertise, tenure, and experience); social capital (encompassing relationships with the government, networks, employee representatives, surname sharing, and interlocking directors); and cultural and structural composition (including cultural composition, CEO duality, board size, management ownership/power levels, and board independence). The research implications include establishing a systematic framework for assessing the scope of board diversity, particularly considering its impact on firm performance.

Keywords: Board Diversity, Firm Performance, Demographic Characteristics, Human Capital, Social Capital, Sustainable Development.

Introduction

The board of directors is crucial in overseeing and crafting strategic decisions, contributing to the establishment of the company's vision and mission (Mgammal, 2022), and thus serving the interests of diverse stakeholders. It not only helps to eliminate an ineffective management team but also assists the enterprise interconnectivity linkages to the external environment facilitates acquiring external resources. The diverse structure of the board of directors, as the top leadership team of a company, can provide the organization with a variety of perspectives, insights, knowledge, and experience that can inspire the board to better perform its duties. However, there is no consensus on the definition of boardroom diversity (Behlau et al., 2024). For instance, Khatib et al. (2023) describe boardroom composition as encompassing variations in board membership related to race, age, education, gender, geographic origin, and professional experience; Zattoni et al. (2023) take into account social capital attributes (personal networks or relationships) as well; Arnaboldi et al. (2020a) measure board diversity by reflecting on four areas: gender, age, nationality and employee representation. Behlau et al. (2024) constructed an analytical framework to assess board diversity. This framework focuses on structural, demographic, and human capital characteristics of boards, based on a systematic review of 61 papers. Therefore, this study analyzes and classifies 140 sample papers in depth (Table 1). It categorizes board diversity into demographic characteristics, human capital, social capital, cultural aspects, and structural factors, exploring their relationship with firm performance.

Table 1
Gaps in prior research on board diversity reviews

No	Author	Time period	Research gap
1	Anzhela Knyazeva et al. (2021)	No limited	There is no theoretical review and the analysis of diversity dimensions is not exhaustive.
2	Baker et al. (2020)	1999-2019	The research does not include a theoretical review nor conduct a thorough analysis of board diversity categories, such as cultural, human capital, source diversity, demographic, and social capital dimensions.
3	Khatib et al. (2023)	1989-2020	There is no theoretical analysis and further discussion is needed on the various themes of board diversity.
4	Mgammal (2022)	1988-2021	There is no theoretical review and no categorical discussion of board diversity.
5	Behlau et al. (2024)	No limited	The theoretical analyses present only the resource curse theory, ignoring role in the following other theories; analytical framework for board diversity is not comprehensive enough and does not take into account board social capital diversity and board cultural diversity.
6	Zattoni et al. (2023)	1986-2021	The survey on board diversity and financial results was not broken down into subcategories.

7	Khatib et al. (2021)	1995-2020	Regarding the connection between firm performance and board diversity, the paper only examines gender and age diversity, neglecting to separately address structural, human capital, social capital, and cultural diversity.
8	Muneza Kagzi and Mahua Guha (2018)	1989-2015	The discussion of the dimensions of board diversity is not comprehensive enough.
9	Maturo et al. (2019)	No limited	The discussion solely focused on the nationality diversity of the board, without addressing other dimensions.
10	Beasy and Gale (2020)	2009-2019	There is no discussion of whether the board's dimensions of human resources, social capitalism and cultural diversity have an impact on sustainable development.
11	Reddy and Jadhav (2019)	No limited	The impact of the other board diversity dimensions on economic efficiency could be further explored.
12	Bogdan et al. (2023)	1996-2021	There is an absence of content analysis regarding the gender variety of the board of trustees and its correlation with firm performance. Furthermore, there is no exploration of the connection between various dimensions of board diversity and firm performance.
13	Lu et al. (2022)	1973-2021	The authors do not categorize board diversity or analyse its relationship to financial consequences by category.
14	van Bommel et al. (2023)	1967-2022	An in-depth content analysis of board diversity is not yet available.
15	Hazaea et al. (2023)	2002-2022	Only the impact of gender variety was addressed, with no mention of other types of diversity.
16	Laique et al. (2023)	1996-2022	The analysis solely focused on the correlation between gender variety and financial status, without exploring the impact of other categories of diversification.
17	Drago and Aliberti (2018)	2010-2017	There was no specific content analysis of the literature on interlocking directors and gender variety.

Board diversity can take into account the perspectives of different groups of people and ages. Human capital composition in the executive board can bring different expertise and experience to the enterprise; Social capital diversity on the board can help the corporation acquire diverse information and broader exposure. Boards provide benefits by enhancing contacts and networks with suppliers, customers, policymakers, social groups, and competitors. A culturally diverse board comprises a team with diverse values that influence the company's strategic decisions and fate. For example, New Oriental in China, confronted with the government's policy of eliminating all out-of-school training institutions, strategically shifted to transform its live-streaming sales industry by launching East Buy. The success of East Buy was facilitated by the personal upbringing and cultural knowledge of its lead anchor, Yuhui Dong, whose cultural insight in live-streaming resonated well with internet users. Although Dong Yuhui is not a member of the company's board of directors, the cultural diversity among employees has rejuvenated the organization. Culturally diverse boards have a significant impact on companies. Additionally, structural diversity within the board can enhance the quality of recommendations and decision-making processes by promoting independence. As a result of the importance of board diversity, an increasing number of researchers are focusing on this issue.

While culturally diverse boards can foster critical thinking and provide creative solutions to help firms thrive in competitive environments, they may also find it more challenging to reach consensus in the decision-making process, as board diversity can create communication difficulties and increase the likelihood of conflict within the board (Dodd et al., 2024). However, the dimensions of board cultural diversity have been under-examined, with only two papers in the sample literature discussing it. Dodd et al. (2024) and Frijns et al. (2016) use the identified country of ancestry to assign each director scores from the cultural framework by Hofstede (1984) in four dimensions: individualism, masculinity, power distance, and uncertainty avoidance. This study, therefore, incorporates social capital diversity and cultural diversity into the framework for analyzing board diversity, marking the most significant difference between this study and other review articles.

Table 2 also shows that in studies on board diversity, scholars have paid a lot of attention to gender diversity, followed by age, nationality, education, tenure and board independence. In contrast, research on board social capital diversity and board cultural diversity remains very limited.

Table 2
Category statistics on board diversity

	Demographic diversity					Human capital diversity						Social capital diversity				Cultural diver	Diversity of structura			
Author	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Talavera *et al*. (2018)		•																		
Sarhan *et al*. (2019)	•		•	•																
Knyazeva et al. (2021)																				
Liang *et al*. (2022)						•														
Amin *et al*. (2019)	•		•			•	•										•	•	•	•
Hatane *et al*. (2022)	•																			
Issa *et al*. (2021)	•			•			•													
Ozdemir (2020)	•	•	•					•	•		•									
Baker *et al*. (2020)																				
Upadhyay (2014)	•		•																	
Bonaparte *et al*. (2023)		•																		
Khatib *et al*. (2023)																				
Dong *et al*. (2023)	•																			
Khan and Baker (2022)	•	•		•			•		•		•									
Mgammal (2022)																				
Song *et al*. (2020)	•	•																		

Author	Demographic diversity					Human capital diversity					Social capital diversity				Cultural diver	Diversity of structura			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Shehata *et al.* (2017)	•	•																		
Behlau *et al.* (2024)																				
E-Vahdati *et al.* (2018)	•			•																
Zattoni *et al.* (2023)																				
Vafaei *et al.* (2015)	•																			
Ferraz *et al.* (2018)	•			•											•					
García-Meca *et al.* (2015)	•			•																
Aggarwal *et al.* (2019)	•	•					•		•									•		
Mihail *et al.* (2022)																		•		
Hosny and Elgharbawy	•			•			•	•	•			•								
Fidanoski *et al.* (2014)	•		•	•			•													
Pandey *et al.* (2023)	•	•				•		•	•											
Arnaboldi *et al.* (2020a)	•	•		•									•							
Khatib *et al.* (2021)																				
Fernandez-Temprano and	•	•		•			•		•											
Miller and Triana (2009)	•		•																	
Farag and Mallin (2017)	•																			
Amin and Nor (2019)	•		•														•	•		•
Khan and Subhan (2019)	•			•																
Vatavu (2019)	•	•																		
Reguera-Alvarado and	•			•																
Huang *et al.* (2023)											•									
Unite *et al.* (2019)	•																			
Muneza Kagzi and Mahua																				
Scholtz and Kieviet (2018)	•					•														•
Borghesi *et al.* (2016)	•		•																	
Kim and Yoon (2022)					•															
Khan et al. (2024)	•	•	•	•		•	•		•											
Kabara *et al.* (2022)	•						•													
Jubilee *et al.* (2018)	•																	•		
Halcro *et al.* (2021)	•	•		•														•		
Maturo *et al.* (2019)																				
Puntaier *et al.* (2022)	•	•		•																
Marinova *et al.* (2016)	•	•																		
Arnaboldi *et al.* (2020b)	•			•									•							
Mahadeo *et al.* (2012)	•	•				•												•		
Calabrese and Manello	•	•		•																

Author	Demographic diversity					Human capital diversity						Social capital diversity				Cultural diver	Diversity of structura			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Ahmad *et al.* (2021)	•																			
Yarram and Adapa (2023)	•																			
Estélyi and Nisar (2016)				•																
Agustia *et al.* (2022)	•	•		•			•		•											
Muneza Kagzi and Mahua	•	•					•		•											
Khan *et al.* (2022)	•	•					•	•												
Xie *et al.* (2023)																				
Rose (2007)	•			•		•														
Naghavi *et al.* (2021)	•																			
Arora (2022)	•																			
Olayiwola and Okoro	•																			
Amadi *et al.* (2023)	•																			
Chen and Dagestani (2023)	•	•		•		•													•	
Singh *et al.* (2023)	•																			
Khatib and Nour (2021)	•																	•		
Fayyaz *et al.* (2023)	•	•					•		•		•							•		
Drago and Aliberti (2018)																				
Herberger and Oehler	•	•																		
Gyapong *et al.* (2016)	•		•																	
Erhardt *et al.* (2003)	•		•																	
Beasy and Gale (2020)																				
Elmagrhi *et al.* (2018)	•		•																	
Farag and Mallin (2016)	•																			
El-Khatib and Joy (2021)	•																			
Ararat *et al.* (2015)	•	•		•			•													
Gul *et al.* (2016)			•																	
Buchwald and Hottenrott	•																			
Kramaric and Miletic		•		•		•														
Vairavan and Zhang (2020)			•																	
Wang *et al.* (2019)	•																			
Hassan and Marimuthu	•	•	•	•	•		•	•	•											
Gregory-Smith *et al.* (2014)	•																			
Rehman *et al.* (2023)	•																			
Büchner *et al.* (2014)	•	•								•										
Lawrence and Raithatha	•																			
Habtoor (2022)	•						•											•		
Qureshi *et al.* (2019)	•																			

Author	Demographic diversity					Human capital diversity						Social capital diversity				Cultural diver	Diversity of structura			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Maravelaki *et al.* (2019)	•																			
Lee *et al.* (2023)																				
Oldford *et al.* (2021)	•	•	•															•		
Tan *et al.* (2021)														•						
Baselga-Pascual and	•																			
Tampakoudis *et al.* (2022)	•																			
Dodd et al. (2024)																•				
Khan et al. (2023)	•							•												
Khaoula and Moez (2019)	•																			
Jedi and Nayan (2018)	•																			
Atay *et al.* (2023)	•																			
Kahloul *et al.* (2022)	•																			
Bouaine and Hrichi (2021)	•			•																
Eckbo *et al.* (2022)	•																			
Frijns *et al.* (2016)	•	•														•		•		
Kiptoo *et al.* (2021)								•												
Rehman *et al.* (2020)	•																			
Haron (2018)					•												•	•		
Reddy and Jadhav (2019)																				
Al Hameli *et al.* (2023)	•																			
Martinez-Jimenez *et al.*	•																			
Kilic and Kuzey (2016)	•																			
Schrand *et al.* (2018)	•																			
Bogdan *et al.* (2023)																				
Li *et al.* (2019)	•																			
Molla *et al.* (2021)																				
Lee (2023)	•																			
Arzubiaga *et al.* (2018)	•																			
Lu *et al.* (2022)																				
Amin *et al.* (2022)	•																			
Al-Issa *et al.* (2022)																•				
Alodat *et al.* (2023)	•																			
van Bommel *et al.* (2023)																				
Hazaea *et al.* (2023)																				
Tran *et al.* (2022)	•																•			
Nimer *et al.* (2023)	•																	•		
Nigam *et al.* (2022)	•																			

	Demographic diversity					Human capital diversity					Social capital diversity				Cultu ral diver	Diversity of structura			
Author	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
Bouteska and Mili (2022)	·																			
Jan *et al*. (2019)					·															
Mensah and Onumah	·																			
Felix and David (2019)	·																			
Proença *et al*. (2020)	·																			
Molinero-Diez *et al*. (2022)	·					·	·													
Laique *et al*. (2023)																				
Kusumastati *et al*. (2022)	·	·				·	·	·	·		·				·	·				
Sattar *et al*. (2023)	·																			
Horak and Cui (2017)	·																			
Mazzotta and Ferraro	·																			
Agyemang-Mintah and	·																			
Jabari and Muhamad	·																			
Total	1	3	1	2	4	1	1	8	1	1	5	1	2	1	2	4	4	1	2	3

A: gender, B: age, C: ethnicity, D: Nationality, E: Religious, F: education background, G: education Level, H: expertise, I: tenure, J: experience, K: Relations with the Government, L: network, M: Employee representatives, N: surname sharing, O: interlocking directors, P: Cultural diversity, Q: CEO duality, R: Board independence, S: Managerial Ownership/power levels, T: Board size.

Finally, empirical evidence on the relationship between board diversity and firm performance is still one-sided and inconclusive. Mixed empirical evidence suggests that board diversity is a double-edged sword that can have both positive and negative effects. Therefore, to better understand the relationship between board diversity and firm performance, scholars should further explore the effects of external factors, as well as potential moderators or mediators. Our literature review differs from other reviews in several ways. First, as far as we are aware, there is no study that builds a framework based on demographic characteristics, human capital, social capital, cultural diversity, and structural characteristics to assess the relationship between board diversity and firm performance. Second, this study offers an in-depth content analysis of the relationship between board diversity and firm performance according to the analytical framework. Third, we identify a research framework that integrates board diversity with ESG to promote corporate governance, sustainable development, and high-quality economic development. Fourth, we conduct a review of previous reviews and identify research gaps (Table 1).

Building on these premises, this review article aims to fill the research gaps in the literature by providing a systematic review of the relationship between board diversity and firm performance. Specifically, we aim to address three related questions: (i) what is the analytical framework for board diversity, (ii) thematic analysis of board diversity and firm performance, and (iii) future research directions.

The paper's structure comprises the following sections: Section 2 examines the methodologies utilized in the deliberative process, while Section 3 presents the findings of the Systematic Literature Review (SLR), encompassing the overall trends observed in previous studies, relevant theories in the literature, and the integrated framework for analysing board diversity and firm performance. Part 4 discusses future research directions, and the thesis is summarized in Part 5.

Data Source and Search Strategy

This study employed a systematic literature review methodology incorporating both qualitative and quantitative literature, as outlined by Nyantakyi et al. (2023). There are a number of reasons for using a systematic literature review for research: first, a systematic literature review will specify in detail the strategy for searching the literature and the databases to be searched, e.g. selecting high-impact databases. Secondly, a systematic literature review will also have a strict set of search terms and timeframes, which minimizes bias and ensures that the literature included is highly relevant to the research topic and of high quality. Third, such a review can provide a comprehensive view. It will try its best to cover all the relevant literature in a particular field, whether it is for or against a certain view. This helps the researcher to get a complete picture of the current state of research on the topic, the conflict of different viewpoints, and unresolved issues, among many other aspects. Fourth, compared with meta-analysis, which focuses on quantitative research, a systematic literature review is more suitable for studies where the concepts are not easily quantifiable or where there is insufficient quantitative evidence. Finally, a systematic literature review allows for the use of a hierarchy of evidence to assess the credibility of primary source studies, while also allowing researchers to focus on a particular research topic(Cronin and George, 2020).

The analysis was structured into the following thematic blocks: (1) trend analysis, (2) examination of theories applied in the literature, and (3) exploration of dimensions of Board diversity. The Web of Science database was selected because it includes more than 15,000 influential global journals and has gained international readership through its global interdisciplinary integration (Nyantakyi et al., 2023). The Web of Science accumulates extensive data and does not prioritize publishers in the data search process.

To assess the quantity of papers addressing board diversity and firm performance, prior research articles were thoroughly reviewed to gain a comprehensive understanding of the topic. Considering the various dimensions of board diversity, our literature screening did not solely focus on board diversity and its financial status or implications for firm performance. Instead, we selected studies that commenced with terms such as "board diversity," "diversity of board," "directors' diversity," or "diversity of directors." The inclusion and exclusion criteria were as follows (Figure 1): In the first step, the study searched the Web of Science database for "board diversity," "diversity of the board," "directors' diversity," or "diversity of directors," resulting in 811 documents. In the second step, after reading the abstracts, 161 articles not related to board diversity were eliminated, resulting in 650 remaining pieces of literature. In the third step, after reading the abstracts, the literature was classified into three categories: the first category focused on firm performance and board diversity; the second category focused on firm performance and non-board diversity; and the third category consisted of board diversity literature reviews. Subsequently, 497 articles from category 2 were excluded, leaving 152 articles. In the fourth step, three articles written in non-English languages were excluded, resulting in 149 articles. In the fifth step, after collecting and organizing the literature, nine articles that could not be obtained in full text due to access limitations were excluded, resulting in 140 articles.

After determining the final sample, the literature was categorized and counted by reading the full text and classifying it according to demographic characteristics, human capital, social capital, culture, and structure. The principles of categorization and coding are as follows: demographic characteristics with five codes (A, B, C, D, E) corresponding to gender, age, ethnicity, nationality, and religion; human capital with six codes (F, G, H, I, J, K) corresponding to education background, education level, expertise, tenure, experience, and relations with the government; social capital with four codes (L, M, N, O) corresponding to network, employee representatives, surname sharing, and interlocking directors. Cultural diversity is coded P, which mainly covers uncertainty avoidance, individualism, masculinity, and power distance; diversity of structural features is set as codes Q, R, S, T, corresponding to CEO duality, board independence, managerial ownership/power levels, and board size. Since manual classification may be biased, the identification of the relevant topics was verified by another researcher, and in cases of differing opinions, the two researchers reviewed the relevant literature and reached a consensus. These processes took place on 28 November 2023; the literature covers the time period 2003–2023. Figure 1 shows the graphical flow of the entire process.

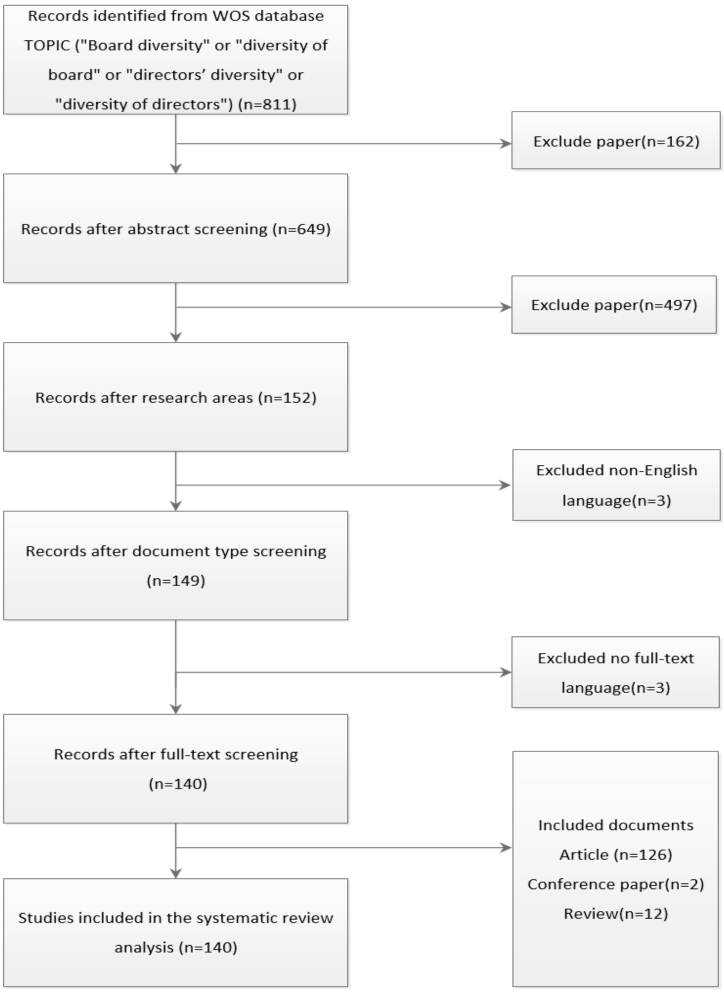

Figure 1 The process of retrieving documents

Result and Discussion

Year Analysis

The level of scholarly interest in a specific study topic can be determined by the quantity of publications. Figure 2 shows the number of articles addressing the topic of board diversity and its impact on firm performance. The first article was published in 2003, and the number has consistently increased each year, particularly between 2018 and 2023, when the number of publications rose from 18 to 32. In the period between January and November 2023, a total of 32 articles were published. he increasing number of publications indexed in the Web of Science database reflects a growing scholarly interest in exploring the correlation between firm performance and board diversity.

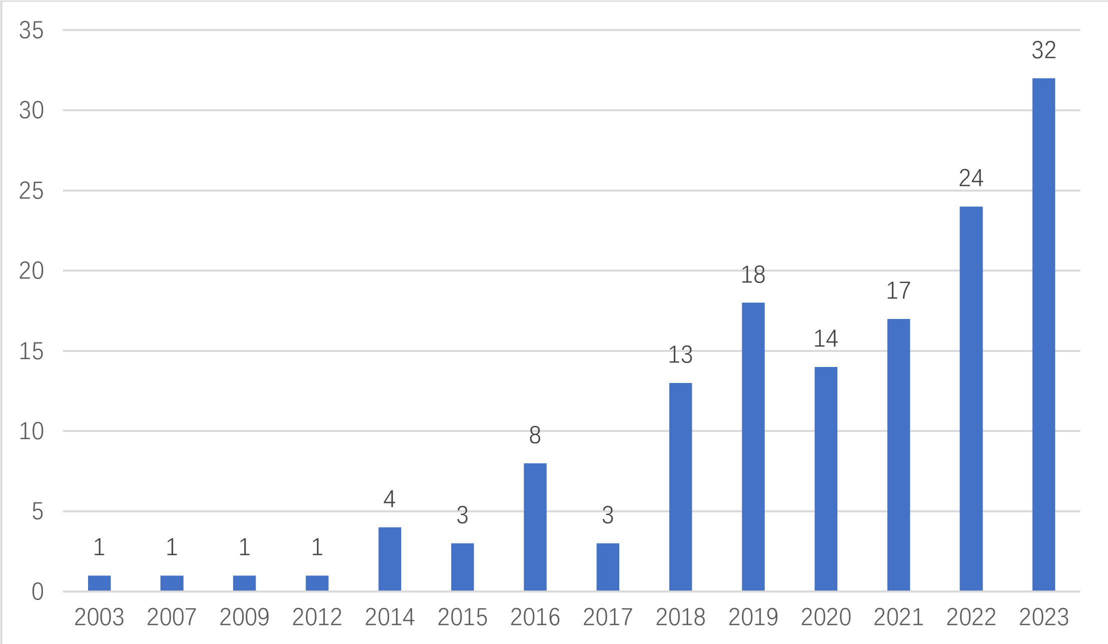

Figure 2 The number of articles published annually

Theoretical Analyses

Several theories are widely used in the areas of corporate financial results and board diversity. After examining the theoretical viewpoints of the papers (excluding review articles), it was discovered that a total of 14 distinct theories has been used to direct research on the correlation between firm performance and board diversity (Table 3). Among these samples, the majority of academics utilized numerous theories to bolster their study. However, it is worth noting that only 18 researchers did not rely on any theory to validate their claims. The utilization of agency theory was seen in 70 studies, resource-based theory in 58 studies, stakeholder theory in 24 studies, human capital theory in 13 studies, stewardship theory in 12 studies, and critical mass theory in 12 studies. The frequency of theories utilized in prior research emphasizes their importance to the findings. Thus, we will now provide a detailed explanation and analysis of the theories that have been used in more than 10 studies.

70 studies have used agency theory. The theory was formalized by Jensen (1976) based on principals (shareholders) and agents (managers) relationship. The agency theory, from information asymmetry between principals and managers, suggests that managerial decision-making may not always align with the interests of the company's shareholders, as managers possess privileged insider information, leading to conflicts of interest. As overseers of the company, boards of directors can bolster corporate governance and mitigate agency costs

through board diversification (Dong *et al*., 2023). Consequently, an increasing number of research institutions are employing agency theory to elucidate the influence of board diversity on firm performance.

The findings indicated that the theory was utilized in 58 sample studies. Resource dependence theory, proposed by Pfeffer (1978), which assumes that firms exist in an interdependent environment and need to be connected to the outside and access other resources in order to be successful. Barney (1991) outlines a set of characteristics, including being valuable, rare, difficult to imitate, and indispensable, that determine a resource's capacity to provide a competitive edge. The greater the difference among a corporate's board members, the better the corporate's ability to attract additional resources and improve performance. Hence, it is crucial for board directors of a corporation to possess a diverse array of characteristics, including gender, educational background, age, nationality, ethnicity, and experience. This diversity is essential for gaining a competitive advantage and improving overall firm performance (Agustia *et al*., 2022). However, diversity can lead to group conflicts, impacting efficiency and impeding communication, thereby affecting cooperation and diminishing performance (Hosny and Elgharbawy, 2022).

Stakeholder theory suggests that a company should be concerned not only with generating profits for its shareholders but also with the interests of all stakeholders, including owners, customers, employees, providers, government, environmentalists, and other groups and individuals affected by the company. This is based on the premise that without the support of stakeholders as a group, companies cannot survive (Freeman, 1984; Freeman, 2010). As the highest authority within a company, the board of directors is responsible for ensuring the interests of both internal and external stakeholders. One way to balance these interests is to appoint directors with different characteristics. (Khan and Baker, 2022). For example, Song et al. (2020) discuss that young members of the board are likely to generate creative ideas and be more willing to take risks in strategic changes, while older board members possess a wealth of work experience and managerial skills, enabling them to have an in-depth understanding of the market. This is conducive to making informed decisions that protect the interests of investors and shareholders.

According to Becker (2009), human capital theory emphasizes the skills and expertise of individuals within the firm. Directors with diverse experiences, skills, and educational backgrounds may contribute to a more diverse board of directors, thereby potentially generating more ideas. These ideas can influence the executive board decision-making (Issa *et al*., 2021), thereby potentially enhancing the overall firm performance (Farag and Mallin, 2017). For example, Bouaine and Hrichi (2021) argued that directors experienced in foreign strategies can assist in restraining firms' tax avoidance practices and shape their outcomes.
In stark contrast to agency theory, management theories view administrators as trustworthy and essential individuals (Fidanoski et al., 2014), , considering them self-regulated and diligent. As inside directors (or executive directors) spend their entire careers within the companies they manage, they possess a deeper understanding of the company's operations compared to outside directors, enabling them to make better-informed decisions. As a result, proponents of governance theory argue that better performance is associated with a higher proportion of inside directors, as they focus on maximising returns to shareholders. Additionally, stewarding theory suggests that managers are intrinsically motivated, and that

company directors, in their role as managers, prioritize the company's interests over their own (Kiptoo *et al*., 2021). Therefore, stewardship theory holds that the board directors play a supportive role, focusing on strategy formulation rather than strict control (Habtoor, 2022). Critical mass theory states that relative innovation can only be fostered when critical mass is reached for critical factors (Lu et al., 2022). Specifically, a small percentage of directors with specific characteristics (such as race, age, gender, tenure, nationality, etc.) will fully exert their influence on the board once a particular threshold is reached (Khatib et al., 2021). Amadi et al. (2023) confirm that augmenting the representation of women in management positions positively contributes to the improvement of CSR effectiveness, supporting the critical mass theory. According to critical mass theory, diverse gender structures on the board can improve firm performance, which depends on reaching critical mass (Herberger and Oehler, 2023). Gyapong et al. (2016) employed the critical mass theory to examine the effects of gender and ethnic diversity, finding that having three or more female directors is linked with a notable rise in company value.

Overall, a systematic review of the use of these theories reveals that agency, resource dependence, and stakeholder theories have become the three most popular theories in the study of board diversity and firm performance, and have shown a significant upward trend in the last decade. Meanwhile, the literature suggests that an increasing number of scholars are using multiple theories to explain their research, indicating that the use of multiple theories will gain further prevalence. Additionally, it was found that management theory and agency theory are fundamentally opposed. Agency theory suggests that managers, as agents of the company, may engage in behaviors that are detrimental to the company, while management theory posits that managers are the most familiar with the company's operations and that allowing them to manage the company can bring significant benefits to the company. In the future, more empirical studies are needed to prove the points about these two theories.

Table 3
Theoretical Views

Theory	Prior to 2010	2010-2015	2016-2020	2021-2023	Total
Agency	2	3	32	33	70
Resource dependence		4	25	29	58
Stakeholder	1	1	9	13	24
Human Capital			9	4	13
Stewardship		3	5	4	12
Critical mass			5	7	12
Upper echelons			3	6	9
Social identity			3	5	8
Social Psychological			5	2	7
Gender socialization			3	3	6
Legitimacy			4	0	4
Institutional theory			2	2	4
Contingency theory			2	1	3
Tokenism theory			1	1	2
Others		1	11	5	17
Total	3	12	119	115	249

Dimensions of Firm Performance and Board Diversity

This research provides a study intensively content parsing of the sampled literatures and categorizes the board diversity on firm performance impaction into five areas. (Figure 3): board demographic diversity, human capital diversity, social capital diversity, cultural diversity, and structural diversity. The diversity of the board's demographic characteristics encompasses gender, age, ethnicity, nationality, and religion; the diversity of social capital includes educational background, education level, expertise, tenure, and experience. Human capital diversity comprises educational background, education level, expertise, tenure, and experience, while social capital diversity involves relationships with the government, networks, employee representation, shared surnames, and interlocking directors. Cultural diversity encompasses individualism, masculinity, power distance, and uncertainty avoidance, while structural diversity includes CEO duality, board independence, management ownership/power levels, and board size.

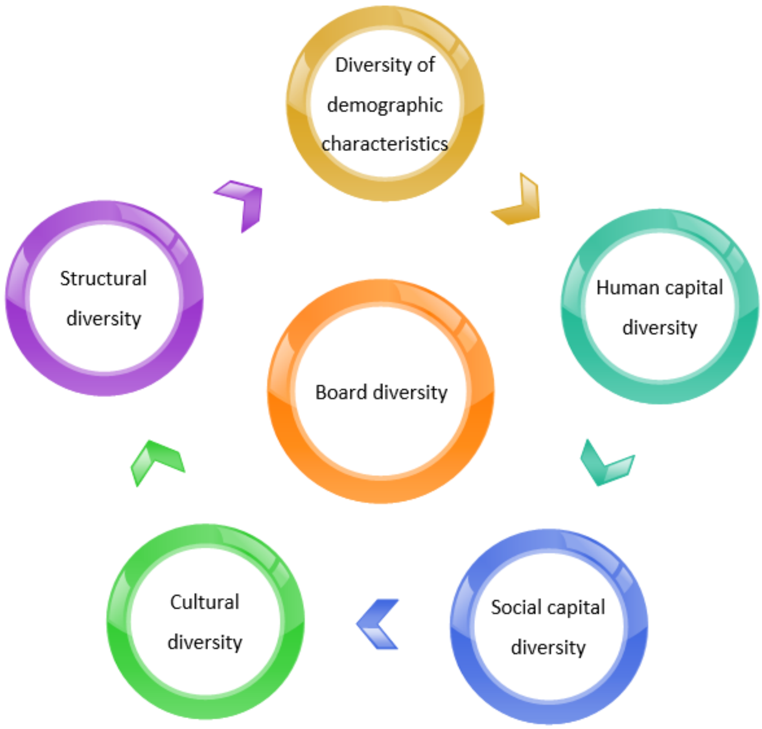

Figure 3. Dimensions of firm performance and board composition

Demographics Characteristics, Variety and Firm Performance of the Board of Directors

Population diversity is defined as "the number of different states of population distribution" (Blau, 1977). Population diversity typically includes gender, nationality, age and ethnicity (Ararat et al., 2015). Demographic characteristics are predominantly observable and thus are frequently researched. In total, 104 out of the 140 sampled studies (excluding literature reviews) incorporate gender into a diversity index. Age is the second most researched attribute, with 30 studies. Another significant demographic characteristic is nationality, while race and religion have also received equal attention.

The significance of gender diversity and human rights as integral components of the Universal Declaration of Human Rights has been widely recognized. The relationship between the demographic characteristics of corporate boards and firm performance has been extensively investigated (Oldford et al., 2021). According to agency theory, female directors contribute to enhancing firm performance by influencing corporate strategy to maintain a competitive edge (Alodat et al., 2023). However, some scholars, drawing on critical mass theory, argue that the positive correlation between gender diversity and financial performance lacks statistical significance (Hatane et al., 2022; Issa and Zaid, 2021). This is attributed to the impact of women directors on board efficiency and decision-making only becoming significant upon reaching certain thresholds, consequently affecting firm performance.

Age diversity is an important demographic attribute whereby individuals of different ages belong to different generations and hold varying values. Younger directors demonstrate superior information processing abilities and face fewer communication barriers, resulting in a positive correlation between their inclusion on the executive board and improved financial performance (Shehata et al., 2017). Conversely, older directors are more experienced and cautious in the industry, tending to exhibit greater risk aversion (Ararat et al., 2015; Puntaier et al., 2022). However, scholars with opposing views argue that age diversity creates challenges in meeting the needs of stakeholder groups (Khan et al., 2024). Additionally, the communication and trust issues stemming from the generation gap are not sufficiently addressed (Mahadeo et al., 2012).

In accordance with the resource dependence theory, the racial and national diversity among the board of directors enhances their ability to engage with the external environment and acquire resources. This, in turn, helps the company strengthen its competitive advantage and ultimately improve financial performance (Hosny and Elgharbawy, 2022). However, the diversity of nationalities on the board can be a double-edged sword, potentially leading to poor firm performance (E-Vahdati et al., 2018). This is because foreign directors may lack familiarity with local laws, regulations, and organizational processes, resulting in inefficiencies in supervision and operation.

Board members with diverse racial backgrounds can share unique information and ideas, foster strong relationships with company stakeholders, and create value for the company (Hassan and Marimuthu, 2018). Board members of different races can understand the preferences of people from their respective racial backgrounds, potentially contributing to increased company sales and improved profitability (Khan et al., 2024). Contrary to prior findings, Vairavan and Zhang (2020) suggest that board racial diversity does not directly influence business effectiveness and that ethnic minorities may risk marginalization in the boardroom, encountering challenges in acquiring social support.

Individuals' religious beliefs shape their values, and thus, religious diversity on boards impacts corporate governance. However, research on the impact of board religious diversity on firm performance is relatively limited compared to studies on age, gender, ethnic diversity, and nationality. Only four papers in the sampled literature explored the influence of board religious diversity on firm performance, with a predominant focus on the Islamic perspective. Kim and Yoon (2022) suggest that a high level of religious diversity positively affects enterprise value. However, they note that when religious diversity on the board surpasses certain thresholds, it becomes negatively correlated with firm value. In their research, Kim and Yoon (2022) specifically investigated the impact of Islamic diversity among board members on firm performance. They conclude that both religious and gender variety within Islamic board directors significantly enhance firm performance. Similarly, Haron (2018) concludes that the presence of Muslim employees has a substantial positive impact on optimizing firm performance. Additionally, Jan et al. (2019) explored sustainable business practices and corporate financial result within the Islamic Banking Industry sector, finding that robust Shariah governance leads to higher financial returns. Overall, based on these four studies, the existence of religious pluralism on the board of directors does not definitively guarantee a positive impact on firm performance.

Overall, previous scholarly research reveals that the outcomes regarding the influence of the board's demographic characteristics (religious, gender, ethnicity, age, nationality) on firm performance are inconclusive, highlighting the need for further investigation into the correlation between board demographic diversity and firm performance.

In summary, research on demographic diversity suggests that gender diversity, age diversity, ethnic diversity, and religious beliefs significantly influence firm performance. Female directors are able to consider stakeholders' interests more comprehensively due to their unique perspectives and communication skills. However, as illustrated by Sundarasen et al. (2024), the potential threshold effect of female directors on firm performance remains a topic for further discussion. Furthermore, there is still disagreement on whether the complexity of perspectives resulting from age diversity on the board of directors truly improves the firm's decision-making efficiency. t is crucial to recognize that potential differences across industries and regions require further attention. Additionally, the ethnicity and religious affiliation of the region where the organization operates should be a key consideration in understanding demographic diversity.

Board Human Capital Diversity and Firm Performance

Human capital relates to the expertise and abilities that individuals possess. With further research, the concept of human capital has expanded and refined to encompass a broad array of personal competencies, experiences, knowledge, and skills. Literature on board human capital diversity will focus on four aspects: education, expertise, tenure, and experience (Ozdemir, 2020).

Diversity in board education examines the impact of a director's level of education and educational background on a company's performance. Human capital theory suggests that an individual's level of education plays a crucial role in enhancing cognitive and productive capacity, thus contributing to organizational success (Issa et al., 2021). Boards with diverse educational backgrounds increase their capability to solve complex problems and improve financial performance (Khan et al., 2024).

Some companies prefer to employ highly educated directors, believing that they process information more rationally, avoid excessive risk-taking, and moderate board decisions (Hatane et al., 2022). Scholars holding the opposite view argue that hiring highly educated board members is costly and that this high cost is difficult to offset by the earnings they generate (Hatane et al., 2022). Less educated board members may possess work experience unavailable in higher education institutions and may bring practical skills to the corporate board. Therefore, the presence of highly educated directors does not necessarily correlate with improved bank performance (Issa et al., 2021).

Educational background refers to the fields of study individuals have pursued, including business, engineering, arts, management, science, law, accounting, and other disciplines (Khan et al., 2023). Based on resource dependency theory, individuals from varied educational backgrounds offer diverse knowledge, experiences, and information processing behaviors, which are valuable resources for firms seeking a competitive advantage (Khan et al., 2024). Board members from diverse disciplines can enhance board effectiveness, provide firms with a broader range of alternatives, and more accurately anticipate environmental changes and evaluate strategic options. Liang et al. (2022) underscore the importance of diversifying directors' professional backgrounds to enhance efficiency in resource allocation and board supervision. Conversely, scholars with opposing views argue that diversity in educational backgrounds among board members appears to have no effect on firm performance (Hatane et al., 2022). The diversity in educational backgrounds on boards leads to variations in professional experience and perspectives, which may trigger cognitive and decision-making conflicts (Fernandez-Temprano and Tejerina-Gaite, 2020; Khan et al., 2024). As a result, the decision-making efficiency and emergency response capabilities of the board are diminished, thereby negatively affecting the company's performance.

Boards should be staffed with various professionals to provide advisory services. This diversity of expertise can enhance firm performance, especially when dealing with external parties (Hosny and Elgharbawy, 2022). For instance, financial experts serving on the board can enhance the profitability of low and medium-performing companies while also tempering risk-taking within acceptable thresholds (Khan et al., 2023). In industry-specific investigations, insurers with a greater proportion of professional directors demonstrate superior performance compared to those with fewer professional directors (Kiptoo et al., 2021). Consequently, insurance firms should consider appointing more specialized directors to provide professional guidance aimed at improving financial performance. Tenure diversity reflects the varying lengths of time that members of the management board have served on the current board, typically measured by the number of years in a board position (Khan et al., 2024; Ozdemir, 2020). Diverse tenures among board members can result in varied network connections within an organization. For instance, longer-tenured board members often have a deeper understanding of the company's operations and possess broader experience, communication, and coordination skills (Hosny and Elgharbawy, 2022) due to their extensive interactions with employees across different departments. Shorter-term directors, in contrast, are often characterized by open-mindedness and dynamism, and are less likely to collude with management or act against shareholders' interests. Thus, pairing longer- and shorter-term board directors and structuring board tenure diversity has the potential to improve oversight of top management (Khan and Baker, 2022), facilitate the management of firm resources, and enhance firm value (Agustia et al., 2022) .

Boards with diverse experiences may generate varied perspectives and insights, thereby enhancing the efficiency of decision-making and oversight. Huang et al. (2023) focus on board experience diversity, particularly in the context of industry experience. Board members with industry experience bring greater rigor, diverse perspectives, and information to the firm. They can help the firm seize opportunities and identify risks in the industry (Kusumastati et al., 2022) and achieve growth in corporate value through corporate innovation (Huang et al., 2023). Similarly, Fayyaz et al. (2023) also investigated the influence of boardroom industry experience diversity on firm performance. However, their findings led them to conclude that board industry experience does not have a significant impact on firm performance. Possible reasons for this result are boards with diversified directors' industry experience may increase costs of coordination and communication, exacerbate contradictions, reduce board efficiency, and reduce company value.

In summary, the impact of board human capital diversity on firm performance lies mainly in the level of education, educational background, and the expertise and experience they possess. Members with higher levels of education are often perceived to be able to deal more rationally with the problems faced by the company. However, it has to be considered that there is a high cost to be paid to highly educated members, and whether this cost can offset the benefits they bring is still not uniformly determined in past studies. It is also interesting to note that the efficiency of board members' professionalism and the experience of longer tenure may alter the impact of education level. Therefore, there is a need to consider more comprehensively the impact of each factor of human capital on firm performance.

Diversity of Board Social Capital and Firm Performance

Social capital refers to the combination of actual or potential resources that an individual can access through a network of relationships. By analysing the content of the sample literature, we categorized board social capital diversity into the following dimensions: board-government sector relationships, board network diversity, board-other-firm relationships, board-employee relationships, and surname sharing among board members.

In China, where the government's dominance and allocation of resources often determine a firm's success or failure, the relationship with the government is a crucial factor in firm operations. Chen and Dagestani (2023) explored the moderating role of political diversity within the board of directors on the relationship between green initiatives—particularly in the laundry and marketing sectors—and corporate value in the Chinese context. The authors highlight political affiliations and connections with local committees as factors driving firms' adoption of "greenwashing" practices. They specify that these political ties entail managers or chairpersons having previously served in government departments (Chen and Dagestani, 2023). Consequently, when a firm's board members have government department experience, this significantly increases greenwashing's contribution to firm value. Similarly, Liang et al. (2022) examined the interplay between political affiliations and board diversity, revealing that this correlation can bolster firm performance. This enhancement occurs because directors with political connections, who play a central role in corporate decision-making, can help the firm secure resources and monitor managers.

Another aspect of board social capital diversity examined in this study is the board's external network (Hosny and Elgharbawy, 2022). The board's external network refers to the degree to which board members possess external connections within the institutional environment that link the company to the external environment. The findings indicate that there is no significant correlation between board network relationships and Tobin's Q and ROA. One plausible explanation is that the majority of FTSE 350 board members maintain strong and relatively unchanged connections. In a recent study, Arnaboldi et al. (2020a) found that employee representation is also seen as a dimension of boardroom diversity. The EBA (2017) document suggests that having employee representation on the board can serve as a beneficial means of augmenting diversity, as it introduces varied perspectives and insights into the inner workings of a company.

In another study, the sharing of surnames emerged as a novel dimension of boardroom social capital diversity. Surnames have the potential to cultivate strong social bonds. When individuals with shared last names interact or collaborate, they tend to foster greater social cohesion, promoting mutual understanding and cooperation. This, in turn, can reduce costs associated with coordination and monitoring, ultimately enhancing firm value. However, if multiple directors on the board share the same surname, they may form close alliances, making them less likely to challenge each other's views during decision-making. This mutual reliance or collusion could weaken the board's supervisory role and have a detrimental impact on firm value (Tan et al., 2021).

In the sampled literature, only two references explore the connection between the board of directors and other companies, examining interlocking directors (Ferraz et al., 2018) and busy directors (Kusumastati et al., 2022). Interlocking directors and busy directors typically involve one or more board members serving on the board of another company. Generally, two perspectives exist regarding the impact of board members' involvement with outside companies on a company's performance. One perspective is that such interlocking relationships are an important channel for firms to access external resources, facilitating resource sharing and mutual benefits, thereby improving their operational efficiency. Another perspective suggests that company directors would have more time and focus to devote to the company's affairs if they refrain from serving on boards of other companies. In the study by Ferraz et al. (2018), the authors identified a positive, albeit statistically insignificant, correlation between interlocking directors and firm profitability. Furthermore, Kusumastati et al. (2022) did not conduct a separate examination of the relationship between busy directors and firm performance, leaving uncertainty regarding the impact of board members serving on the boards of external firms on firm performance. This implies that the relationship between interlocking director diversity and firm performance remains unverified and warrants further investigation.

In summary, research on board social capital diversity suggests that the relationship between boards and government departments can lead to improved firm performance. In contrast, research on the impact of surname sharing and interlocking directors on firm performance remains inconclusive. Another interesting phenomenon is that the simultaneous inclusion of board-government sector relationships, board network diversity, board-other-firm relationships, board-employee relationships, and surname sharing among board members expands the board diversity dimension. This approach broadens the understanding of social capital diversity in board contexts.

Board Cultural Diversity

Culture, an abstract and broad concept, has not been precisely defined. It is often perceived as encompassing the intrinsic values of teams or individuals, which are difficult to change but have a subtle and significant effect on individuals and groups. Hofstede (1984) points out that culture is a collection of groups thinking patterns that distinguish between members of different groups. As people live in different environments and receive different social values, this results in different codes of behavior and values. One of the most influential analytical frameworks, the Hofstede Cultural Framework, was introduced by Hofstede (2001) to systematically depict various cultural disparities by delineating culture across four dimensions: uncertainty avoidance, individualism, masculinity, and power distance. The framework suggests that the cultural values of directors significantly influence individual behavioral values, beliefs, and preferences, which in turn influence strategic decisions of the Board of Directors and the enterprises' innovations. This occurs because culture expands the exchange of information, knowledge, and perspectives, thus enriching the company's informational resources. Culturally diverse boards of directors possess stronger advisory capabilities and offer creative and complementary insights that broaden managers' perspectives (Dodd et al., 2024). The findings suggest that cultural diversity among board members positively influences sales growth in highly competitive industries. However, in less competitive industries, cultural diversity among board members does not significantly or positively affect sales growth, and in some cases, may even have a negative effect.

The drawbacks of cultural diversity, often related to relational or emotional conflicts, include slower communication in culturally diverse teams, as noted by Frijns et al. (2016) . This can lead to misunderstandings and biases, resulting in disagreements during the implementation process and ultimately affecting efficiency and performance. Selvadurai and Dasgupta (2016) explored the influence of multicultural management teams on firm performance in small and medium-sized technology companies in Malaysia. They found that cultural diversity hindered communication between teams and customers as well as within the organization. This can lead to contrasting performances in situations of conflicting viewpoints, especially when the firm's management team is smaller and less capable. Frijns et al. (2016) suggest that the friction caused by cultural diversity outweighs its potential benefits. According to their findings, the diversity of national cultures in the boardroom negatively affects firm performance, as assessed by Tobin's Q and ROA.

In general, cultural diversity on boards reflects the fact that groups in different environments have different values and preferences. However, as discussed earlier, cultural diversity has different effects in different industries. At the same time, far less research has been conducted on board cultural diversity than on diversity of demographic characteristics or human capital diversity. Therefore, some interesting questions for the future still deserve to be investigated. For example, it would be interesting to explore demographic diversity and cultural diversity within specific contexts and specific industries.

Diversity of Board Structure and Firm Performance

Structural diversity, as defined by Behlau et al. (2024), specifically encompasses board independence, board size, leadership duality, and other attributes. Amin and Nor (2019) incorporated managerial ownership as part of board characteristics and measured it through the percentage of board shareholding. The distribution of power is an important component of board structure. This study further incorporates board power hierarchy diversity into the structural diversity framework, thus forming an analytical framework encompassing independence, leadership duality, size, and power hierarchy.

The dual role of chief executive officer (CEO) occurs when a board member serves as both chief executive officer and chairman of the board, as noted by Amin and Nor (2019). Management theory suggests that this dual role grants the executive officer full authority and greater discretion, promotes strong leadership and confidence, facilitates quick decision-making, solves challenging problems, and thus increases firm value. However, this positive effect only exists within the trade service industry, as highlighted by Amin et al. (2019). However, when the CEO is also the chairman of the board, the CEO's dual role can have a negative impact on accounting performance. Over-centralization of power in this scenario can reduce transparency in managerial decision-making, thereby undermining monitoring and enforcement functions (Tran et al., 2022). According to agency theory, a structurally diversified board of directors, particularly independent directors acting as outside directors, can play an effective monitoring role by overseeing management more effectively and limiting opportunistic behavior. Consequently, increasing the proportion of independent directors correlates with stronger management oversight and improved corporate governance practices, thereby enhancing firm performance (Fayyaz et al., 2023; Haron, 2018; Mihail et al., 2022). However, authors holding the opposite view argue that the relationship between independent director diversity and financial results is not significant (Halcro et al., 2021). Companies do not choose independent directors solely based on their potential contribution to firm performance, but rather to satisfy legal requirements. Consequently, simply pursuing a quota system may lead to the inertia of independent directors in the short term.

Managerial ownership refers to the composition of the body of individuals or groups that own and manage a company, which may affect its performance. Managerial ownership structure can be categorized into three types: director ownership, foreign ownership, and government ownership. A high concentration of ownership may lead the board of directors to prioritize their own interests over those of stakeholders. Amin et al. (2019) used 1 - (Shares held by the Board of Directors as a percentage of total shares) to denote managerial ownership, indicating that as the proportion of shares held by the board increases, so does the hierarchy of rights within the board. High concentration of power at the top can affect enterprise performance due to biased decision making. Amin and Nor (2019) used Shares held by the Board of Directors as a percentage of total shares to represent managerial ownership, and this positive effect of management ownership on performance only applicable to construction industry.

Chen and Dagestani (2023) integrate equity aggregation into the analytical framework of board diversity, as equity aggregation encourages the board to proactively disclose material information to ensure a balance of stakeholder interests. In this study, equity is specifically measured using the Herfindahl-Hirschman Index (HHI) of the top three shareholders. The authors demonstrate that equity aggregation can deter the use of greenwashing tactics to enhance firm value. However, there is limited research on board rights structure, and the effects of this diversity of rights hierarchies on enterprise performance remain unclear.

The optimal size of the board remains a subject of debate, representing a crucial aspect in designing corporate governance structures. Some argue that larger boards lead to better firm performance (Haron, 2018). Conversely, others advocate for reducing the number of board members, arguing that excessively large boards hinder control and decision-making, thereby negatively impacting firm performance (Amin et al., 2019). However, according to the resource dependence theory, larger boards are closer to the external environment, providing access to more resources and opportunities for enterprise growth, thus enhancing performance (Scholtz and Kieviet, 2018).

In summary, the scope of research on board structure diversity covers managerial ownership, independent director diversity, equity concentration, and board size. However, it is noteworthy that the impact of these dimensions of diversity on firm performance remains uncertain. This indicates that, despite extensive research on this topic, the outcomes may vary depending on factors such as institutions, industries, environments, and countries. In particular, with the global emphasis on sustainability, an increasing number of companies are disclosing ESG and sustainability reports. The structural characteristics of a company's board of directors play a critical role in determining its commitment to sustainability practices.

Future Research Agenda on Board Diversity and Firm Performance

The governance literature posits that a well-structured board effectively fulfills its oversight and service roles (Zattoni et al., 2023). However, scholars examining the relationship between board diversity and firm performance face diverse challenges and opportunities due to the complexity of board diversity. As discussed earlier, the growing global emphasis on sustainability highlights how board structure can significantly shape corporate governance mechanisms and ESG practices, ultimately affecting firm performance. Meanwhile, past research has primarily focused on agency theory, resource dependence theory, and stakeholder theory. Integrating additional theories into the analytical framework can provide a more comprehensive explanation for the research findings. For example, combining institutional theory with social psychology theory, or integrating human capital theory with management theory, can inspire innovative research approaches. Finally, different systems and industries can yield varied research outcomes. Expanding the research to include more industries, such as the medical, science, and technology sectors, can broaden the scope of the research. This study offers insights for future research to explore the implications of board diversity on firm performance through a systematic review.

Examining the Relationship between ESG, Board Diversity and Firm Performance

In recent years, heightened concerns about sustainable development across various societal sectors have propelled the concept of Environmental, Social, and Governance (ESG) into global consensus. International investors increasingly prioritize non-financial sustainability performance alongside financial metrics, viewing ESG as a means to augment value and bolster a company's financial result. As a pivotal governance mechanism, the diversity of the board of directors inevitably influences a company's ESG activities (Agustia et al., 2022). The intersection of board diversity, ESG, and corporate governance with firm performance has garnered considerable attention in the past decade. However, research amalgamating these areas is limited, and conclusions remain contentious (Fayyaz et al., 2023).

Dong et al. (2023) emphasize the importance of integrating ESG activities into the examination of board diversity and firm performance. However, their study focused exclusively on exploring the relationship between board gender diversity and firm performance. Similarly, Alodat et al. (2023) exclusively investigated the link between board gender variety, ESG, and firm performance. In contrast, although Fayyaz et al. (2023) examined factors such as board gender, tenure, independence, age, education, ESG, and expertise in relation to firm performance, they did not explore the relationship between board social capital diversity, cultural diversity, ESG, and firm performance. Hence, future studies could adopt the board diversity framework proposed in this paper to delve into the interplay among board diversity, ESG, and firm performance.

Toward a Broader Theoretical Framework

Current research primarily emphasizes the utilization of pertinent theories such as agency theory, resource dependence theory, and stakeholder theory in examining the correlation between board diversity and firm performance. However, if institutional and legitimacy theories and social psychological theories are combined, it can be found that different directors' social identities and states of mind can make different strategic decisions. At the same time, institutional and legitimacy theories provide valuable insights for understanding the policies of different countries. These frameworks enable corporate boards to make well-informed and effective decisions. Finally, the combination of human capital theory and management theory can give better guidance to company practices. This is because the development of a company essentially depends on the development of talent, especially the talent of the board members can significantly enhance the management capability of the enterprise, and improving the corporate governance and ultimately bringing good performance to the company. Overall, building a broader theoretical framework by combining theories from different fields can promote innovative research among scholars.

Developing Research Beyond Board Diversity and Firm Performance

This study focuses on examining the relationship between board diversity and financial performance, categorizing board diversity into five dimensions: demographic traits, human capital, social capital, cultural factors, and structural attributes for analysis. However, board diversity may also affect the dimensions of corporate innovation, financial distress (Ali et al., 2022), cost of debt, investment financing (Harjoto et al., 2018) and corporate risk. Therefore, Therefore, future research can analyze the relationship between board diversity and corporate innovation, corporate risk, and investment financing costs based on the five dimensions of board diversity proposed in this study.

Explore how Industry Affects the Relationship between Board Diversity and Firm Performance

Although there is literature in the sample literature that explores the role of industry influences such as (Amin and Nor, 2019; Amin et al., 2019; Issa et al., 2021; Ozdemir, 2020; Singh et al., 2023), there are still limited studies on these industries, especially in the medical and technology industries, so future research could try to extend to these industries.

Further Enrichment of the Methodology and Measurement of the Study

Most research on board diversity and financial performance relies on empirical analyses using secondary data from publicly listed companies, with limited studies utilizing primary data from small and medium-sized enterprises (SMEs). It would be highly valuable for future research to investigate the connection between board diversity, ESG, and firm performance in more SMEs, especially considering the recent concentration of ESG activities in medium and large enterprises. However, it is important to acknowledge that ESG activities will eventually extend to SMEs. Thus, future research focusing on the relationship between board diversity, ESG, and firm performance in SMEs holds significant importance. Although obtaining data on board diversity and ESG in SMEs currently poses challenges, scholars could benefit from analyzing and summarizing the measurement methods for each variable based on the framework provided in this study. Given the variety of methods for measuring board diversity, such an approach would be particularly useful.

Conclusion

This study constructs an analytical framework through a comprehensive review of literature on board diversity and firm performance. Specifically, it examines each review paper in the sample literature individually to identify any gaps. The analytical framework categorizes board diversity into demographic characteristics (e.g., gender, age, ethnicity, nationality, and religion), human capital (e.g., educational background, expertise, tenure, and experience), social capital (e.g., relationships with government, networks, and interlocking directors), and cultural and structural factors (e.g., cultural diversity, CEO duality, board independence, and board size). This methodological approach represents a novel undertaking not previously explored in existing studies. To develop this framework, a systematic literature review approach was adopted, and a comprehensive search was conducted on the Web of Science using various keywords ("Board diversity," "diversity of board," "directors' diversity," or "diversity of directors"), resulting in the final selection of 140 papers. This study synthesizes 14 prevalent theories supporting the relationship between board diversity and financial performance, highlighting six of them.

Additionally, this study suggests future research directions by proposing the integration of institutional theory, legitimacy theory, social psychology theory, human capital theory, and management theory to establish a more comprehensive theoretical framework for guiding scholars' investigations. Furthermore, the study highlights the opportunity to analyze the relationship between the five dimensions of board diversity (demographic characteristics, human capital, social capital, and cultural and structural characteristics) and firm innovation, risk, and financing costs. Lastly, based on the board diversity dimensions proposed in this study, it is recommended to explore the relationship between board diversity, environmental, social, and corporate governance factors, and firm performance, given the limited research on the interaction among these three dimensions.

The contributions of this study are as follows: firstly, it expands the research on the impact of multiple dimensions of board diversity on firm performance. Most of the past studies on the impact of board diversity on firm performance have focused on demographic diversity (e.g., gender, age, ethnicity, nationality, and religious affiliation) and human capital diversity (educational background, expertise, tenure, and experience). This study, on the other hand, constructs for the first time an analytical framework for analysing the impact of five dimensions of board diversity on firm performance based on demographic characteristics, human capital, social capital, culture, and structure, which will help researchers to understand the current research from a more comprehensive perspective and reduce the risk of biased findings due to the omission of a particular variable. Secondly, by analysing the theoretical content, this study finds that more theories can be incorporated into the research framework in addition to the commonly used agency theory, stakeholder theory, and resource dependence theory. For example, combining institutional theory with social psychology theory, or combining human capital theory with management theory helps to build a broader theoretical analysis framework. Thirdly, the five-dimensional framework for analysing board diversity constructed in this study can provide better insights and lessons for corporate governance and lead to better performance of corporate boards of directors and improved quality of decision-making leading to improved corporate performance.

Nevertheless, this study is subject to certain inherent limitations. Firstly, there is a possibility of oversights during the screening process of literature pertaining to board diversity. Secondly, the literature in the study was selected from a single website source and was not analyzed in conjunction with multiple websites, which may have introduced limitations to the analysis. Thirdly, during the content analysis of the entire sample, potential biases and omissions are inevitable, as the data were manually collected and analyzed by the authors. Fourthly, due to space and scope constraints, several areas, such as the measurement of board diversity and the resolution of endogeneity issues, have not been thoroughly addressed in this paper.

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