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Board Diversity and Firm Performance: An Analysis Based on ROA and ROE of Singapore Exchange Listed Firms

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Abstract: This study explores the impact of board diversity on firm performance, with a focus on companies listed on the Singapore Stock Exchange (SGX). Board diversity is examined across various dimensions, including gender, age, ethnicity, and professional background, to understand its relationship with key performance indicators such as Return on Assets (ROA) and Return on Equity (ROE). Using a quantitative research approach, the study analyzes data from 90 publicly listed firms, employing descriptive statistics, correlation analysis, and multiple regression techniques. The findings reveal that the direct correlation between board diversity and financial performance, particularly in terms of ROA and ROE, is not statistically significant in the studied sample. Despite the lack of direct significance, the research underscores the nuanced and multifaceted role of diversity in corporate governance, suggesting that its impact may be more complex and influenced by various contextual factors. The study concludes by recommending that companies continue to enhance gender diversity, balance age structures, tailor professional backgrounds to industry needs, and manage board tenure effectively to optimize corporate governance and support sustainable growth.

Keywords: Board diversity; Firm performance; Singapore Stock Exchange (SGX); Return on Assets (ROA); Return on Equity (ROE); Corporate governance; Sustainable growth

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1. Introduction

Firm performance refers to a company's ability to implement managerial, economic, and marketing strategies effectively to achieve its objectives. It serves as a critical measure for organizations to evaluate whether their strategies are practical, efficient, and aligned with the company's overarching goals and structure [1]. Furthermore, research suggests that the strategies companies adopt can either enhance or hinder their performance, influencing their long-term viability and success in a competitive market [2]. In today's globalized business environment, where market competition is increasingly intense, firm performance is a key determinant of a company's ability to sustain growth and achieve competitive advantage.

Board diversity, a critical factor influencing firm performance, is defined as the presence of individuals from various backgrounds, experiences, and perspectives on a company's board of directors [3]. This diversity encompasses dimensions such as gender, age, ethnicity, tenure, and professional background. Diverse boards are believed to contribute significantly to improved decision-making processes, risk management, and innovation, leading to better overall corporate governance and financial outcomes [4]. The rationale is that a board composed of members with varied perspectives is more likely to challenge the status quo, propose creative solutions, and consider a wider range of risks and opportunities.

Research has shown that gender diversity on boards, in particular, can positively impact firm performance by introducing unique perspectives and focusing on long-term sustainability and ethical governance [5]. Similarly, age diversity has been found to foster a balance between experience and innovation, which is crucial for strategic decision-making and optimizing asset utilization [6]. Ethnic diversity, on the other hand, enhances a company's cultural competence and market expansion capabilities, contributing to better resource allocation and financial performance [7].

Given these potential benefits, this study aims to investigate the relationship between board diversity and firm performance within companies listed on the Singapore Stock Exchange (SGX). By focusing on key performance indicators such as Return on Assets (ROA) and Return on Equity (ROE), this research seeks to provide empirical evidence on how different aspects of board diversity influence the financial performance of Singaporean firms. The findings of this study are expected to offer valuable insights for corporate governance practices, helping companies optimize their board composition to enhance performance and achieve sustainable growth.

2. Literature review

2.1. Importance of board diversity in corporate governance

Board diversity is essential in corporate governance since it improves the quality of the decision-making process and objectivity, which helps to bring new voices and meaningful ideas to the board. It offers a more significant opportunity for meaningful debates, enabling the board to develop great ideas for the company's growth. Research provides excellent depth into the positive impacts of board diversity on firm performance and corporate governance [8]. In this case, the research shows that board diversity has a positive effect on ROA and ROE [9]. Most of the research on this topic aims to identify the gaps in understanding how different forms of diversity can impact corporate governance and firm performance. However, the current studies have failed to focus on Asian firms, especially in Singapore. Therefore, this literature review aims to provide comprehensive data on Singapore Exchange Limited to explain how board diversity has affected the ROA and ROE of these companies.

2.2. Theoretical background

2.2.1. Resource dependency theory

The resource dependency theory is the theoretical foundation of the relationship between board diversity and corporate governance. In simpler terms, this theory suggests that diverse boards can provide critical external resources. It explains that in a complete supply chain, members of companies should depend on one another and cooperate to get higher performances [10]. It relies on the idea that firms depend on several resources to succeed and grow, guaranteeing that firms require strategic resources for survival. A diverse board exposes the company to different resources, which helps foster the growth of the company. Therefore, having a diverse board of directors means the firm has a more significant advantage in knowledge, perspectives, and experiences, which is an added advantage.

2.2.2. Cognitive diversity

Cognitive diversity, in simpler terms, refers to how people think, demonstrating unique perspectives about different topics being discussed. With cognitive diversity, it is possible to include different people through their problem-solving strategies and mental perspectives [8]. In this case, people can show their abilities to succeed in specific tasks and fully commit to their roles. Research shows that cognitive diversity is usually distributed differently among different populations, which exposes the need for corporate leadership to have cognitive diversity [8]. Therefore, cognitive diversity increases innovation and creativity in firms, creating a more significant opportunity for them to grow.

2.2.3. Mixed views

Academic studies on the impact of board diversity on firm performance are still controversial. Some researchers demonstrate the benefits of board diversity, while others expose the drawbacks. For instance, research by Duppati *et al.* discovered that board diversity impacts firm performance positively [11]. However, other researchers found no significant association between board diversity and ROA and ROE; for example, the research outcomes by Simionescu *et al.* found no significant relationship between the three elements [12]. However, the researchers discovered that board diversity positively impacts PER, an essential aspect of a firm's performance [12]. Therefore, the research concluded that gender diversity should be compulsory in all firms. This controversy highlights the need for further research in this area.

2.2.4. Gender diversity

Gender diversity on corporate boards is gaining more popularity in majority firms globally. Research has proven that gender diversity enhances corporate governance and decision-making processes [13]. The problems revolving around board gender diversity have attracted research interest in recent years because most research fails to explain whether it can be concluded that gender diversity positively impacts ROA. The major challenge in gender diversity is that women are less likely to be risk-takers, which is a disadvantage in management and in making significant decisions in a company. Additionally, countries may face cultural resistance in some regions, including in Asia [14]. Additionally, Post and Byron explained that there are higher chances of mixed results in less egalitarian societies. Companies are slowly adapting to gender diversity and including women in their boards of directors [15].

2.2.5. Age diversity

Age diversity is a critical aspect of board diversity because it combines the innovative mindset of young employees with the experience of older employees. Age diversity may positively impact a firm's performance because it promotes a diversity of skills, knowledge, experience, and relationships [16]. Age diversity also promotes diverse skills and perspectives, which are vital in a firm's decision-making process. Combining different ages will help ensure that the company has diverse traits [17]. Research also shows that age diversity is important because younger executives cause higher international diversification levels, which may lead to positive strategic change. This explains why most Asian companies prioritize having older men on the board because of their cultural resistance. Darmadi explored how age diversity positively impacts firm performance but needs to acknowledge the exact range of younger and older ages according to different research [17]. However, some researchers maintain that having older people on the board of directors is more beneficial to a company's performance than promoting age diversity because older people have more extraordinary experiences and are more likely to lead businesses better [18].

2.2.6. Ethnic diversity

For many decades, many countries have been skeptical about embracing racial diversity. In as much as different research explains the relevance of racial diversity on firm performance, Asian and European countries still have difficulty employing people from outside their continent because of solid cultural resistance. According to Carter *et al.*, ethnically diverse boards bring greater marketing understanding and creativity to the firm [7]. This is because ethnically diverse employees have many skills, offering enhanced ability to compete in diverse markets [19]. Some research identifies a positive correlation between ethnic diversity and ROE, specifically in dynamic industries [20]. It contributes to innovation and problem-solving [21]. However, it is essential to note that implementation differs at industry and context levels [22], and high diversity levels may cause significant challenges in oversight and communication.

2.2.7. Singapore context

Understanding the Singapore context of board diversity is crucial, as its implementation varies across firms. While gender diversity is rising, ethnic and age diversity remains underexplored. This knowledge equips us to navigate the complexities of board diversity in the Singaporean corporate landscape, fostering a more informed and knowledgeable approach to corporate governance and firm performance [14].

2.3. Hypotheses development

According to the studies, the following hypotheses are proposed to guide the research study.

(1) H1: Firms with higher gender diversity on their boards exhibit higher ROA and ROE.
This is supported by evidence linking gender diversity with improved governance and decision-making [13]. Boards with gender diversity are more likely to bring more terrific ideas and perspectives to the firms, improving the decision-making processes.

(2) H2: Firms with higher age diversity on their boards exhibit higher ROA and ROE.
Studies support this, explaining that firms that combine age-diverse workers on the board can gain more innovative and experienced perspectives for better performance [15]. For example, companies with young and old employees perform better because of a better decision-making process.

(3) H3: Firms with higher ethnic diversity on their boards exhibit higher ROA and ROE.
Supported by evidence explaining that ethnic diversity brings varied market insights and creativity to the firms [20]. Ethnic diversity can help improve the ability of the company to understand different aspects of their industry for better performance.

3. Research methodology

This study employed a quantitative research method, combining literature review and empirical analysis to investigate the relationship between board diversity and the performance of publicly listed companies on the SGX. The study encompassed a randomly selected sample of 90 listed companies to ensure the sample's representativeness and statistical significance.

3.1. Data collection methods

The data primarily came from secondary sources, including annual reports, the SGX database, and company websites. We collected the following key information (definition in **Figure 1**):

(1) Gender composition of board members

(2) Age distribution of board members

(3) Tenure of board members

(4) Work experience and professional background of board members

(5) Fields of expertise of board members

(6) Company financial performance indicators (e.g., ROA, ROE, market value growth rate)

(7) Company non-financial performance indicators (e.g., innovation capability, degree of internationalization)

To ensure the accuracy and comprehensiveness of the data, we spent 30 days using cross validation to compare and validate data from different sources.

Firm-level diversity measure	Definition
Gender	% of female directors
Board independence	% of independent directors (INED) **+ whether Chair is independent**
International experience	% of directors with global or international or **regional** experience
Industry expertise	Number of different industries' expertise represented on the Board
Domain experience	Number of different domain expertise represented on the Board
Age	Standard deviation of age
Tenure	Standard deviation of tenure
Cultural ethnicity	Number of different ethnicities represented on the Board

Figure 1. Definition of firm-level diversity measure

3.2. Data processing and analysis methods

The data processing steps include:

(1) **Data cleaning**: Removing incomplete or evidently erroneous data entries.

(2) **Outlier handling**: Identifying and addressing extreme values using the quartile method.

(3) **Variable transformation**: Converting some qualitative data into quantifiable indicators (e.g., diversity index).

The main analysis methods include:

(1) **Descriptive statistical analysis**: Understanding the basic distribution characteristics of board diversity and company performance among the sample companies.

(2) **Correlation analysis**: Initially exploring the relationship between various dimensions of board diversity and company performance indicators.

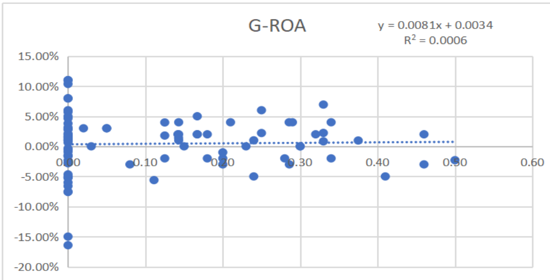
(3) **Multiple regression analysis**: Deeply studying the impact of board diversity on company performance while controlling for other factors that might influence performance.

Control variables include industry characteristics, company size, capital structure, and market competition level, to eliminate the interference of other factors on company performance and improve the reliability of the research results.

4. Key research findings

In exploring in depth how ROA and ROE are affected by multiple factors such as gender, proportion of independent directors, and international relations, we construct a complex and sophisticated analytical framework to uncover the potential interactions between these variables and their subtle effects on corporate financial performance. However, through rigorous statistical data and empirical analysis, our research results show that the correlation between the above three core factors and ROA and ROE has not reached the level of statistical significance in the selected research sample range.

Specifically, in terms of the gender dimension, although discussions on the relationship between gender diversity and enterprise performance have become increasingly heated in recent years, our research data show that after gender is included in the model as an independent variable, the *P*-values of both ROA (**Figure 2**) and ROE (**Figure 3**) are much higher than the traditional significance level (such as 0.05), reaching 0.822 and 0.861, respectively. This clearly indicates that the direct contribution of gender factors to the financial performance of firms in the current sample is not significant. This finding may imply that while gender diversity has potential benefits in terms of corporate culture, innovation capacity, and quality of decision-making, its impact on specific financial performance may be mediated or masked by more complex factors. It is also important to note that although female directors currently comprise 22.3% of board positions, they are predominantly concentrated in the legal field, limiting their influence on overall company development. To truly improve gender diversity, companies must not only increase the number of female directors but also diversify their professional backgrounds and ensure their actual influence in corporate governance.

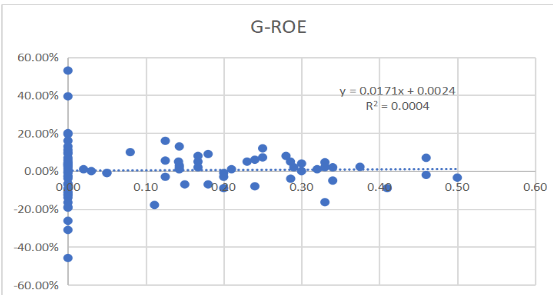


. reg performancemeasure1ROA Gender mktcap

Source	SS	df	MS		
Model	.00045301	2	.000226505	Number of obs =	88
Residual	.187479371	85	.00220564	F(2, 85) =	0.10
				Prob > F =	0.9025
Total	.187932381	87	.002160142	R-squared =	0.0024
				Adj R-squared =	-0.0211
				Root MSE =	.04696

performanc~A	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
Gender	.008092	.0357931	0.23	0.822	-.0630743	.0792583
mktcap	1.94e-06	4.92e-06	0.39	0.695	-7.86e-06	.0000117
_cons	.0027219	.006765	0.40	0.688	-.0107288	.0161726

Figure 2. G-ROA



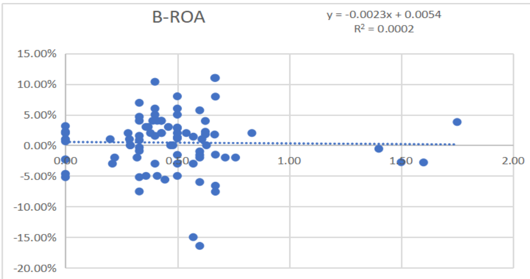
. reg performancemeasure2ROE Gender mktcap

Source	SS	df	MS		
Model	.004492706	2	.002246353	Number of obs =	88
Residual	1.39448972	85	.016405761	F(2, 85) =	0.14
				Prob > F =	0.8722
Total	1.39898242	87	.016080258	R-squared =	0.0032
				Adj R-squared =	-0.0202
				Root MSE =	.12808

performanc~E	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
Gender	.0171367	.0976181	0.18	0.861	-.1769543	.2112276
mktcap	6.62e-06	.0000134	0.49	0.623	-.0000201	.0000333
_cons	.0001467	.0184502	0.01	0.994	-.0365371	.0368306

Figure 3. G-ROE

Similarly, as an important part of the corporate governance structure, the increase of the proportion of independent directors is generally regarded as an important means to improve the efficiency of corporate supervision and the scientific nature of decision-making. However, our analysis results show that the *P*-values between the proportion of independent directors and ROA and ROE are 0.882 and 0.28, respectively, indicating that in the current sample, the change of the proportion of independent directors does not significantly affect the financial performance of enterprises (**Figures 4** and **5**). This may be related to factors such as the independence and professionalism of independent directors and the actual effect of their participation in corporate governance, or it may be affected by other more direct market or operational factors.




```
. reg performancemeasure1ROA Boardindependence mktcap

      Source |       SS           df       MS      Number of obs   =        88
-------------+----------------------------------   F(2, 85)        =      0.09
       Model |  .00038915         2  .000194575   Prob > F        =    0.9157
    Residual |  .187543231        85  .002206391   R-squared       =    0.0021
-------------+----------------------------------   Adj R-squared   =   -0.0214
       Total |  .187932381        87  .002160142   Root MSE        =    .04697

------------------------------------------------------------------------------------
performancemeas~A | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
------------------+-----------------------------------------------------------------
Boardindependence |  -.0023687   .0159156    -0.15   0.882    -.0340132    .0292758
           mktcap |   1.94e-06   4.93e-06     0.39   0.694    -7.85e-06    .0000117
            _cons |   .0047801   .0090909     0.53   0.600    -.0132952    .0228553
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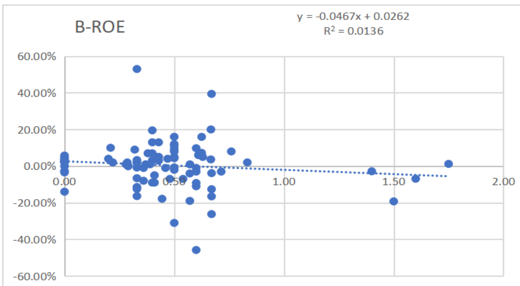
Figure 4. B-ROA

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. reg performancemeasure2ROE Boardindependence mktcap

      Source |       SS           df       MS      Number of obs   =        88
-------------+----------------------------------   F(2, 85)        =      0.72
       Model |  .023157442         2  .011578721   Prob > F        =    0.4919
    Residual |  1.37582498        85  .016186176   R-squared       =    0.0166
-------------+----------------------------------   Adj R-squared   =   -0.0066
       Total |  1.39898242        87  .016080258   Root MSE        =    .12722

------------------------------------------------------------------------------------
performancemeas~E | Coefficient  Std. err.      t    P>|t|     [95% conf. interval]
------------------+-----------------------------------------------------------------
Boardindependence |  -.0469133   .0431076    -1.09   0.280    -.1326228    .0387961
           mktcap |   6.78e-06   .0000133     0.51   0.612    -.0000197    .0000333
            _cons |   .0239885   .0246229     0.97   0.333    -.0249685    .0729455
------------------------------------------------------------------------------------
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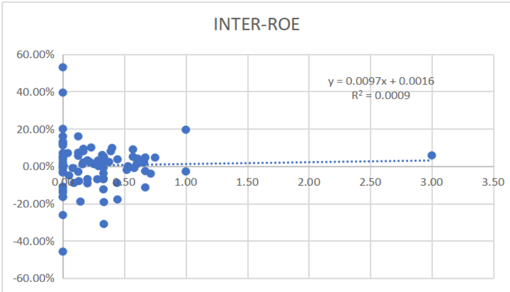
Figure 5. B-ROE

As for international relations, although multinational operations are increasingly common in the context of globalization, our study found that the correlation between international experience and ROA and ROE is also not significant (*P*-values of 0.708 and 0.813, respectively), see **Figures 6** and **7**. This may be due to the high complexity and uncertainty of the international market, the advantages and risks brought by the international experience of enterprises coexist, and its impact on the financial performance of enterprises may be lagging and non-linear, which is difficult to be directly reflected in the financial indicators in a short period of time.

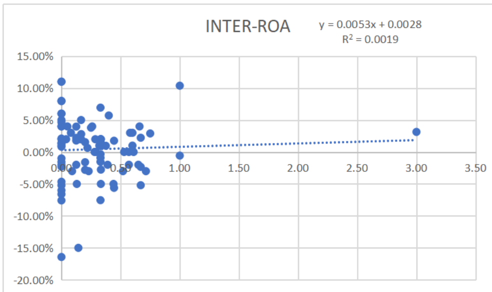


. reg performancemeasure2ROE Internationalexperience mktcap

Source	SS	df	MS			
				Number of obs	=	88
				F(2, 85)	=	0.15
Model	.004912452	2	.002456226	Prob > F	=	0.8611
Residual	1.39406997	85	.016400823	R-squared	=	0.0035
				Adj R-squared	=	-0.0199
Total	1.39898242	87	.016080258	Root MSE	=	.12807

performancemeasure2ROE	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
Internationalexperience	.0085032	.0357989	0.24	0.813	-.0626745	.0796809
mktcap	6.40e-06	.0000135	0.48	0.635	-.0000204	.0000332
_cons	-.0002264	.0175832	-0.01	0.990	-.0351865	.0347338

Figure 6. INTER-ROE



. reg performancemeasure1ROA Internationalexperience mktcap

Source	SS	df	MS			
				Number of obs	=	88
				F(2, 85)	=	0.15
Model	.000651016	2	.000325508	Prob > F	=	0.8629
Residual	.187281364	85	.00220331	R-squared	=	0.0035
				Adj R-squared	=	-0.0200
Total	.187932381	87	.002160142	Root MSE	=	.04694

performancemeasure1ROA	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
Internationalexperience	.0049276	.0131212	0.38	0.708	-.0211609	.0310161
mktcap	1.81e-06	4.93e-06	0.37	0.715	-8.00e-06	.0000116
_cons	.0022883	.0064447	0.36	0.723	-.0105255	.0151021

Figure 7. INTER-ROA

Additionally, we also examined the factors of industry specialty diversity and professional background diversity, and the results also showed that there was no significant relationship between them and ROA and ROE (**Figures 8** and **9**). This further emphasizes the diversity and complexity of corporate financial performance and the fact that it is difficult for a single factor to independently explain its changes. It is also worth noting that on average, each board contains 4.2 different professional backgrounds, covering fields such as finance, law, engineering, and management, with “other fields” accounting for 25%. This reflects the growing importance of emerging areas in corporate governance. To improve governance and market competitiveness, companies should focus on attracting and cultivating professionals in emerging fields such as digital technology, sustainability, and artificial intelligence.

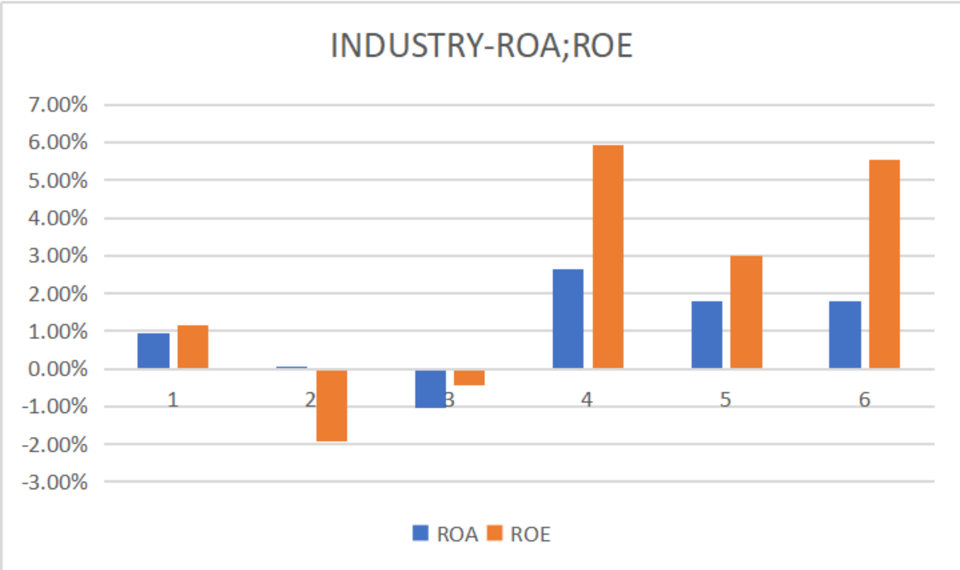


Figure 8. INDUSTRY-ROA;ROE

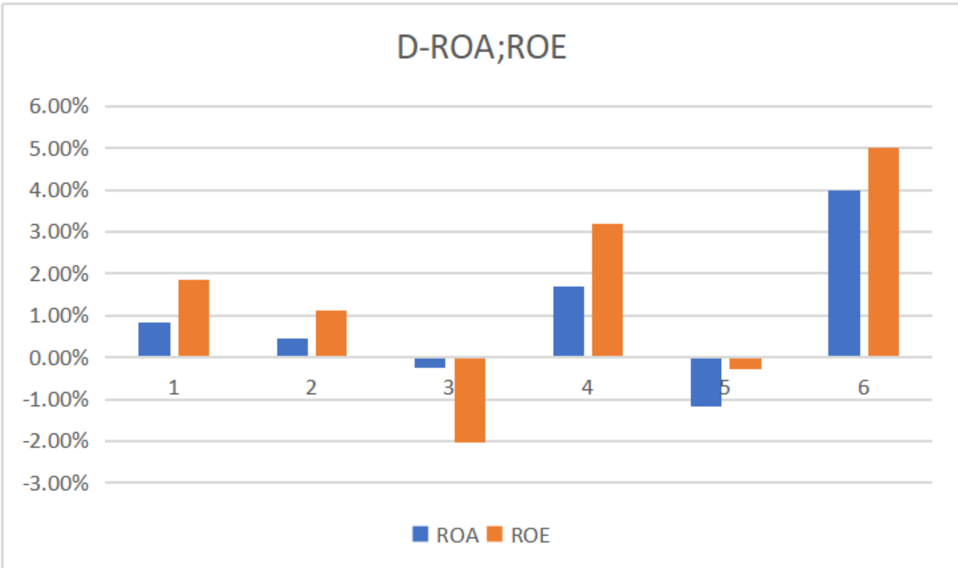


Figure 9. D-ROA;ROE

As for why these factors did not show a significant impact, we believe that the main reason is the limitation of the sample size. Small sample sizes may not adequately reflect the overall characteristics, resulting in unstable statistical results. At the same time, the timeliness of the data itself and the volatility of the market environment are also factors that cannot be ignored. Especially in the case of market depression, the overall operating conditions of enterprises are generally under pressure, and the marginal contribution of any single factor to the performance of the company may be covered up by market fluctuations.

In summary, factors such as gender, proportion of independent directors, international relations, and industry and professional diversity play an important role in corporate governance and strategic decisions, but their direct impact on ROA and ROE is not significant in a given sample and market environment. This reminds us that when evaluating business performance, we should consider multiple factors and recognize the decisive role of market feedback and the overall economic environment on business performance. Moreover, future studies can further expand the sample scope and use data over a longer time span to more fully reveal the complex relationship between these variables. At the same time, companies should continue to emphasize the diversity of professional backgrounds and the actual influence of female directors, pay attention to generational transitions in family-owned enterprises, balance board stability and innovation, and attract professionals from emerging fields to join boards. This will not only enhance governance structures but also position companies for sustainable growth in an increasingly complex and dynamic business environment.

5. Discussion

In the in-depth analysis of the complex picture of the relationship between board diversity and corporate performance, although this study did not directly verify the traditional hypothesis that diversity generally has a significant positive effect on corporate performance, it unexpectedly revealed the potential value and subtle influence of diversity in multiple dimensions, opening up a new perspective for future research and practice [8].

First, the discussion of gender diversity goes beyond simple quantitative statistics to deeper policy effects and social changes. The study found that gender diversity has a certain impact on corporate performance, which is not only a positive echo of the Singapore government's long-term commitment to gender equality policy, but also indicates that in a more open and equal governance environment, the unique perspective and leadership of female directors can bring hard-to-quantify value creation to the company. This suggests that further promoting the increase of the proportion of female directors is not only a response to social justice, but also a strategic choice to enhance the competitiveness and innovation ability of enterprises [13].

Second, the positive effects of age diversity, especially its contribution to market value growth, reveal an important governance principle: the balance between experience and vitality. Directors of different ages, with their own brand and experience accumulation, have formed valuable complementary knowledge and skills in the board of directors. The younger generation of directors brings innovative thinking and market acumen, while the senior directors protect the company with their deep industry insight and sound decision-making ability. This inter-generational synergy provides a solid guarantee for the long-term and steady development of the company.

Moreover, the significant impact of professional diversity, especially in technology- and innovation-intensive industries, highlights the strong link between industry characteristics and board composition. For such enterprises, which are highly dependent on innovation and technological progress, the board of directors with diversified professional backgrounds can gather wisdom and resources from different fields to provide diversified perspectives and solutions for corporate strategy formulation and technological breakthroughs. This finding emphasizes that enterprises should flexibly adjust the professional composition of directors according to their own industry characteristics and development needs, so as to maximize the advantages of diversity [23].

The complex performance of the diversity of tenure reveals the delicate balance between the stability and vitality of the board. Moderate term renewal can keep the board of directors' fresh blood and innovation ability, avoiding rigid thinking; Excessive replacement may destroy the continuity and stability of decision-making. Therefore, when managing board tenure, companies should seek to strike the right balance between stimulating new thinking and maintaining consistency in decision-making [24].

6. Conclusion and suggestions

To sum up, this study fails to fully verify the overall positive impact of board diversity on enterprises. Just as

SONY Corporation and the game industry have suffered huge losses due to the promotion of diversified culture, blindly making diversified changes for the sake of diversity is not a wise decision. The purpose of diversity is to allow more perspectives to enter the decision-making level, so the board of directors can be improved in the following ways.

(1) Paying attention to the balance of age structure: In the selection of board members, enterprises should take into account the balance of experience and vitality, to ensure that both the stable guidance of senior directors, and the innovative drive of new directors.

(2) Adjusting professional backgrounds according to industry characteristics: Especially for technology and innovation-driven companies, special attention should be paid to the diversity of professional backgrounds of the board of directors, and the construction of interdisciplinary board teams to cope with the rapidly changing market environment and technological challenges.

(3) Reasonable management of tenure diversity: Enterprises should develop a scientific tenure management system, which not only keeps the board of directors moderately updated to stimulate vitality, but also avoids the damage of excessive turnover to the continuity of decision-making.

Through the implementation of these measures, enterprises can make more effective use of the advantages of board diversity, optimize corporate governance structure, improve corporate performance, and achieve sustainable development.

Disclosure statement

The authors declare no conflict of interest.

References

[1] Taouab O, Issor Z, 2019, Firm Performance: Definition and Measurement Models. European Scientific Journal, 15(1): 93. https://doi.org/10.19044/esj.2019.v15n1p93

[2] Selvam M, Gayathri J, Vasanth V, et al., 2016, Determinants of Firm Performance: A Subjective Model. International Journal of Social Science Studies, 4(7): 1662. https://doi.org/10.11114/ijsss.v4i7.1662

[3] Aggarwal R, Jindal V, Seth R, 2019, Board Diversity and Firm Performance: The Role of Business Group Affiliation. International Business Review, 28(6): 101600. https://doi.org/10.1016/j.ibusrev.2019.101600

[4] Ararat M, Aksu M, Cetin AT, 2015, How Board Diversity Affects Firm Performance in Emerging Markets: Evidence on Channels in Controlled Firms. Corporate Governance: An International Review, 23(2): 83–103. https://doi.org/10.1111/corg.12103

[5] Brahma S, Nwafor C, Boateng A, 2020, Board Gender Diversity and Firm Performance: The UK Evidence. International Journal of Finance & Economics, 26(4): 5704–5719.

[6] Abdullah SN, Ismail KNIK, 2013, Gender, Ethnic and Age Diversity of the Boards of Large Malaysian Firms and Performance. Jurnal Pengurusan, 38: 27–40.

[7] Carter DA, D'Souza F, Simkins BJ, et al., 2010, The Gender and Ethnic Diversity of US Boards and Board Committees and Firm Financial Performance. Corporate Governance: An International Review, 18(5): 396–414. https://doi.org/10.1111/j.1467-8683.2010.00809.x

[8] Carter DA, Simkins BJ, Simpson WG, 2003, Corporate Governance, Board Diversity, and Firm Value. Financial Review, 38(1): 33–53. https://doi.org/10.1111/1540-6288.00034

[9] Qian D, Waheduzzaman W, Khandaker S, 2021, Relationship of Board Diversity with Firm's Financial Performance: The Case of Publicly Listed Companies in China. Corporate Ownership and Control, 19(1): 229–240. https://doi.

org/10.22495/cocv19i1siart2

[10] Hillman AJ, Cannella AA, Paetzold RL, 2000, The Resource Dependence Role of Corporate Directors: Strategic Adaptation of Board Composition in Response to Environmental Change. Journal of Management Studies, 37: 235–255.

[11] Duppati G, Rao NV, Matlani N, et al., 2019, Gender Diversity Reporting, Performance, and Exogenous Shocks: Evidence from New Zealand. International Journal of Comparative Management, 52(2): 1–13. https://doi.org/10.1080/00036846.2019.1676872

[12] Simionescu LN, Gherghina SC, Tawil H, et al., 2021, Does Board Gender Diversity Affect Firm Performance? Empirical Evidence from Standard & Poor's 500 Information Technology Sector. Financial Innovation, 7(1): 52. https://doi.org/10.1186/s40854-021-00265-x

[13] Adams R, Ferreira D, 2009, Women in the Boardroom and Their Impact on Governance and Performance. Journal of Financial Economics, 94(2): 291–309. https://doi.org/10.1016/j.jfineco.2008.10.007

[14] Low D, Roberts H, Whiting R, 2015, Board Gender Diversity and Firm Performance: Empirical evidence From Hong Kong, South Korea, Malaysia and Singapore. Pacific-Basin Finance Journal, 35: 381–401. https://doi.org/10.1016/j.pacfin.2015.02.008

[15] Post C, Byron K, 2015, Women on Boards and Firm Financial Performance: A Meta-Analysis. Academy of Management Journal, 58(5): 0319. https://doi.org/10.5465/amj.2013.0319

[16] EmadEldeen R, Elbayoumi AF, Basuony MAK, et al., 2021, The Effect of the Board Diversity on Firm Performance: An Empirical Study on the UK. Corporate Ownership and Control, 18(3): 337–347. https://doi.org/10.22495/cocv18i3siart8

[17] Darmadi S, 2011, Board Diversity and Firm Performance: The Indonesian Evidence. Corporate Ownership and Control, 9(1): 450–466. https://doi.org/10.22495/cocv8i2c4p4

[18] Cheng L, Chan R, Leung T, 2010, Management Demography and Corporate Performance: Evidence from China. International Business Review, 19(3): 261–275. https://doi.org/10.1016/j.ibusrev.2009.12.007

[19] Andrevski G, Richard OC, Shaw JD, et al., 2011, Racial Diversity and Firm Performance: The Mediating Role of Competitive Intensity. Sage Journals, 40(3): 820–844. https://doi.org/10.1177/0149206311424318

[20] Miller TL, Triana MC, 2009, Demographic Diversity in the Boardroom: Mediators of the Board Diversity - Firm Performance Relationship. Journal of Management Studies, 46(5): 755–786. https://doi.org/10.1111/j.1467-6486.2009.00839.x

[21] Gul FA, Munir S, Zhang L, 2016, Ethnicity, Politics, and Firm Performance: Evidence from Malaysia. Pacific Basin Finance Journal, 40: 115–129. https://doi.org/10.1016/j.pacfin.2016.10.005

[22] Richard OC, Barnett T, Dwyer S, et al., 2004, Cultural Diversity in Management, Firm Performance, and the Moderating Role of Entrepreneurial Orientation Dimensions. Academy of Management Journal, 47(2): 255–266.

[23] Milliken FJ, Martins LL, 1996, Searching for Common Threads: Understanding the Multiple Effects of Diversity in Organizational Groups. Academy of Management Review, 21(2): 402–433. https://doi.org/10.5465/amr.1996.9605060217

[24] Nielsen S, Huse M, 2010, The Contribution of Women on Boards of Directors: Going Beyond the Surface. Corporate Governance: An International Review, 18(2): 136–148. https://doi.org/10.1111/j.1467-8683.2010.00784.x