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Gender Diversity on the Board of Director and Firm Performance: Agency Theory Perspective

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Abstract:
Research aims: This paper provides a literature review on the influence of board of directors' gender diversity on financial and non-financial performance.
Design/Methodology/Approach: This research used the content analysis identified from previous studies based on the proxies employed. The article selection process was carried out from reputable international journals published in 2017-2020, resulting in 50 articles discussing board gender diversity and performance.
Research findings: This study's results are a conceptual model and future research developments. Research related to female directors and performance has been much carried out. Hence, future research suggests correlating female directors based on monitoring characteristics, human capital board, and demographics. The influence of gender diversity on non-financial performance is also rarely studied.
Theoretical contribution/Originality: Identification of gender diversity attributes associated with financial and non-financial performance
Practitioner/Policy implication: This study provides valuable information for policymakers or regulators to refine future corporate governance policies and increase understanding of the relationship between corporate governance practices and company performance as measured by financial and non-financial performance.
Research limitation/Implication: This study is based on only 50 articles in the last four years.
Keywords: Gender Diversity; Performance; Agency Theory

Introduction

Women's representation is one way to increase the effectiveness of the board of directors. Board gender diversity can partly offset the weaknesses of a firm's corporate governance systems. In this regard, agency theory argues that “the board of directors is central to a governance mechanism that can align the interest of principals (shareholders) and agents (managers).” According to Bennouri et al. (2018), female directors' monitoring functions and characteristic behaviors are different from men's.

The female director also brings a fresh perspective and a professional background different from the "old boy." In line with Ullah et al. (2019), Female directors' discipline management promotes corporate governance and decreases agency conflicts, resulting in increased company value.

Various arguments, however, are made against the possible benefits of female directors. The relationship between gender diversity and ethnic diversity is also debatable. According to Khan et al. (2020), women are more risk-averse than men; therefore, women's presence may persuade management to adopt too conservative strategies. The finding results by Ammer and Ahmad-Zaluki's study (2017) showed a significant negative relationship between female directors and the audit committee on the accuracy of revenue forecasts. Another study (Lim et al., 2019) revealed similar results, where gender diversification led to decreased company performance caused by tokenism issues and gender stereotypes.

On the other hand, agency issues occur in modern companies when managers do not operate in the best interests of shareholders (Fama & Jensen, 1983). Instead of offering a new viewpoint and encouraging better governance, female directors serve the founders' interests. As a result, it can be said that their involvement would not significantly impact the company's success. The female director is supposed to be included on the board because it only provides a signal that the organization respects the accomplishments of its women. The presence of female members on the board can only be viewed as a clear demographic indication. Therefore, in Indian corporate boards, gender diversity supports the value of token status theory, especially in a complete ownership scenario. Overall, the contribution of female directors to firm success may be undermined by gender inequality in favor of the tokenism status of female directors (Chauhan & Dey, 2017).

Apart from the different research results, the proxies for gender diversity of directors have also developed. Based on previous research, female directors' presence is associated with the monitoring attributes of female directors, including their existence as an independent director, membership on the committee board, and leadership position as chairman (CEO). In addition to monitoring attributes, female directors are also linked to the board's human capital based on (1) demographics, including education level, business education, and nationality, (2) relational board experience (tenure), access to other boards (multiple directors), and women board members' reputation.

Therefore, this paper explores studies conducted in 2017-2020 related to gender diversity for the board of directors and linked to financial and non-financial performance. From the paper selection, studies were chosen following this study's objectives. There were 50 internationally reputable journals collected to be reviewed and analyzed using content analysis. The collected papers were identified for the proxies used, hoping to reference future research development.

Literature Review

An agency relationship is a contract between the principal who uses the agent to carry out business activities and work for the principal's interests, including delegating decision-making authority to the agent (Jensen & Meckling, 1976). According to Jensen and Meckling (1976), the separation between the company's ownership and management will cause agency problems. There are differences in interests between the owner as of the principal and the manager as the agent. This agency problem is the main thing in company contracts. The contract states how the manager should do his job and how profits are allocated. The manager also has great control over the allocation of funds from investors. As Fama and Jensen (1983) stated, the manager will take on a project that provides greater returns to himself than the owner's benefit, such as making less profitable investments or entering into transactions with management affiliates (agents). This conflict of interest will trigger agency costs. According to Jensen and Meckling (1976), According to Jensen and Meckling (1976), agency costs emerge and are spent by the principal to monitor agent activity, namely to measure, observe, and manage agent behavior. Meanwhile, bonding costs are the agent's costs to establish and comply with a mechanism ensuring that the agent will act in the principal's interests. Furthermore, the residual loss is a sacrifice in the principal's decreased prosperity due to differences in the agent's decision and the principal's decision.

As a result, principals can mitigate interest divergence by giving suitable incentives to agents and incurring monitoring expenses to prevent the agent from engaging in anomalous behavior. Additionally, in some instances, the agent's payment for issuing resources (bonding costs) ensures that he will refrain from doing specific actions that might be detrimental to the principal or that the principal will be reimbursed if he does take such actions.

According to Shleifer and Vishny (1997), the agency's core problem is separating management and finance or ownership and control in more standard terms. An entrepreneur, or manager, raises funds from the right investors to use productively to generate returns on their funds. Managers need funds from investors because they do not have enough capital to invest. In this context, the agency problem refers to investors' difficulties in ensuring that their funds are not used for unprofitable projects.

As Eisenhardt (1989) put forward, agency theory is based on three assumptions: (1) beliefs about human nature (human assumptions), (2) organizational assumptions, and (3) information assumptions. The speculation about human nature represents that humans are selfish, have limited rationality, and dislike risk. Organizational assumptions mean conflict between corporate members, efficiency as a productivity criterion, and information asymmetry between principals and agents. Meanwhile, information assumptions indicate information as a commodity that can be bought and sold.

Agency theory is also concerned with solving two issues that may arise in a relationship with an agency. The first is agency concern that happens when (a) the principal's and the agent's desires or objectives clash and (b) confirming whether what the agent does. The issue here is that the principal is unable to prove that the agent has acted correctly. Second, when the principal and the agent have distinct attitudes towards risk, the risk-sharing issue arises. The point here is that the principal and the agent can prefer different action courses because of various risk preferences. Since the analysis unit is a contract that governs the relationship between the principal and the agent, the focus of agency theory is to determine the most efficient agreements governing principal-agent relationships with assumptions of human (e.g., personal interests, bounded rationality, risk aversion), organization (e.g., conflict of purpose among members), and information (for example, information as a commodity that can be purchased).

On the other hand, corporate governance is a mechanism for reducing agency problems. Jensen and Meckling (1976) stated that the separation between owner and manager would cause agency problems. Agency problems will raise issues related to company performance, such as company financial performance. The agency problem also increases agency costs, including monitoring costs and bonding costs. These agency problems can be overcome by applying corporate governance. Corporate governance is implemented through structures and mechanisms. The corporate governance structure is carried out through the board's design associated with its characteristics, namely women's proportion as directors.

Moreover, agency theory highlights the relationship between corporate governance and firm performance. In this case, gender diversity is considered a strategic company issue and affects corporate governance practices. Based on Terjesen et al. (2015), the board of directors' independence can be increased by gender diversity (i.e., more women directors on the board). According to (Luo et al., 2017), firms' corporate governance studies should focus on how individual mechanisms work and how the interaction of different mechanisms reduces agency problems. In other words, it should emphasize understanding how board gender diversity interacts with other mechanisms to improve corporate governance.

Liu et al. (2020) listed three reasons why gender diversity can enhance performance. First, female board diversity can help reduce the "group thinking" phenomenon, which arises in homogeneous communities (such as an all-male board) and is counterproductive to the objective evaluation of alternative viewpoints. Second, female directors are commonly considered hard-working and have a superior ability to communicate. In contrast to their male counterparts, they also appear to have greater degrees. This quality will enhance the entire board's decision-making capacity, thereby benefiting the organization's performance. Third, more diverse female directors' interests and social networks seem to translate into critical perspectives for different organizational stakeholders, producing valuable resources that eventually translate into corporate performance. According to Srinidhi et al. (2020), female directors have a greater incentive to implement governance-enhancing standards. Female directors, in comparison to male directors, are more talented and capable of challenging established standards.

Research Methods

This paper presents a literature review on the effect of director gender diversity on financial and non-financial performance. By using the content analysis, previous studies were identified based on the proxies used. The article selection process was carried out from reputable international journals published in 2017-2020. The first stage was collecting papers obtained from "Science direct" and "Emerald" science databases. The search was based on the keywords "female director," "women director," "gender diversity," combined with performance. The selection results yielded 50 articles discussing the gender diversity of the board of directors and its implications for performance as measured by financial performance and non-financial performance.

Results and Discussion

The following describes the content analysis for 50 journals for 2017-2020, obtained from the Science Direct and Emerald databases.

The presence of a female director based on monitoring

Based on previous research, the monitoring attributes used in the study included female independent directors, membership on the committee board, and leadership positions as chairman.

1. Woman as director

The new skills that female directors bring to the board of directors provide new perspectives and values that enable top managers to offer advice, lead to better decision-making in problem-solving, increase effectiveness and innovation, increase access to information (Bennouri et al., 2018). As board independence is related to board diversity, management can also be controlled more efficiently by diverse boards. Gender diversity is more likely to suggest critical thought and more efficient monitoring skills within the board of directors. Women are more adept than men at resolving ethical dilemmas. Additionally, the board's ability to supervise management is strongly dependent on critical oversight positions, such as independent directors and audit committee participation. According to (Zalata et al., 2019), female directors in monitoring roles reduce managerial opportunism. There are three reasons why female directors have an effect on performance (1) lowering negative news and the risk of falling stock prices (2) more quality resulting reports (3) can avoid possible violations of capital market laws and regulations (Ararat & Yurtoglu, 2020).

According to several studies, female directors have a negligible effect on performance due to tokenism concerns. Tokenism occurs for a number of reasons, according to (Chauhan & Dey, 2017), including the following: first, unobserved company characteristics, such as organizational structure. For symbolic purposes, family businesses are more likely to appoint female directors who are family members or closely associated individuals.

Female directors were approximately 31% less likely to attend board meetings than male directors, according to the report. The presence of women should be regarded as indicative of a specific demography. Second, tokenism arises in organizations with concentrated ownership; the presence of female directors is merely a validation of the token status theory's importance. Third, a male-dominated culture that values tokenism above performance can undercut the contribution of female directors to a company's performance.

According to the India Study, female directors were more likely to support the founder's aims. As a result, they are not actively involved in decision-making. The presence of a female director on a company's board of directors will have little effect on the company's performance. Our findings emphasize the importance of female directors' attendance and demonstrate that female director are less likely to be selected to any strategic committee. In general, research (Chauhan & Dey, 2017) bolsters the tokenism theory.

2. Women as independent directors

Contingent on Jensen and Meckling's (1976) agency theory, managers are usually opportunistic and selfish if left unchecked, generally pursuing their interests to the detriment of shareholders. Company executives need to be supervised and disciplined by independent, objective, and responsible outside directors to reduce agency problems. Independent directors are directors who have no business relationships with the company, managers, and controlling shareholders. Several studies have examined the influence of independent directors on performance. Research conducted (Bennouri et al., 2018) shows independent directors have a positive and significant effect on Tobin's Q. The role of independent directors is to monitor the company's management. Under the agency's theory, the board of directors is a governance mechanism that can align the interests of shareholders and managers. Independent female directors significantly affect performance, showing that investors trust female independent directors because they can conduct effective monitoring. More effective monitoring improves the company's control and contributes to the company's performance.

Sarkar and Selarka's (2021) research indicates that female independent directors have a beneficial effect on performance. However, the benefits of female directors are greatly diminished in family businesses, particularly when family members hold key managerial roles such as CEO and chairman. This adverse effect is more severe for independent female directors than it is for gray or executive directors. While the appointment of independent female directors raises the company's value, this benefit declines under family control and disappears entirely when family members hold critical management positions. In summary, this study's findings indicate that female directors are critical, and that family ownership and control are a moderator of the relationship between female directors and firm performance.

Loukil et al. (2019) conducted a study on the influence of gender diversity on stock liquidity. The results showed female independent directors had a positive impact on shareholder rights protections. Independent directors can play an influential role in preventing opportunistic behavior that benefits the interests of majority shareholders. Female independent directors improve the quality of corporate governance, improve more effective monitoring of managers and alter board communications to improve stock market liquidity. The results are the same as research conducted by Ararat and Yurtoglu (2020), which showed that female independent directors had a significant effect on performance as measured by financial performance.

The impact of independent female directors on financial performance as measured by ROA (Bennouri et al., 2018) revealed conflicting findings. Female independent directors had no discernible effect on financial performance as assessed by return on assets (ROA). Independent female directors' impact can be limited due to a lack of expertise about a company's business plan or restricted access to company information, impair monitoring efficacy. This is conceivable because the influence of independent female directors monitoring is less significant than the effect of inside directors providing recommendations. Small businesses, in comparison to large businesses, have a lower requirement for monitoring. The independence of female directors significantly reduced the positive correlation between female directors and performance.

3. Women membership on committee boards

Directors who sit on committees have an essential role in decision-making and monitoring managers. The presence of women on board committees is important to the company's performance (Bennouri et al., 2018). The Committee plays an important role in building stakeholder legitimacy. The Committee should have diverse members to be optimal in performing the functions of the board. For example, remuneration committees play a prominent role in monitoring and influencing CEOs by determining salary incentives—nomination committees to ensure that the necessary board skills and characteristics are present. Corporate governance and internal control committees focus on regulatory compliance (Groening, 2019). According to (Ararat & Yurtoglu, 2020), female directors who are more active in board governance through board committee members influence the company's value. The presence of female directors who are members of the controlling family is also associated with higher company values. According to (Green & Homroy, 2018), the increase in women's participation in corporate governance and decision-making with female directors on key committees has a positive and significant effect on the company's performance as measured by profitability. The economic impact of female representation on market-to-book value is more significant than the effect on ROA.

4. Woman as chairman of the Committee or concurrently chairman of the CEO

As Bennouri (2018) specified, the chairman's important role, the leadership style, and the board chairman's skills are critical to board effectiveness. The chairman's role is to create a cooperative environment among board members by adopting an efficient communication strategy that leads to board cohesiveness. Further, chairwomen are more likely to be democratic and interactive leaders than men, who are work-oriented and authoritative. It allows the female chairperson to improve the quality of board decision-making and consequently influence performance.

In this regard, psychological and management research has shown significant gender disparities in conservatism, risk tolerance, decision-making, and leadership styles. It is also argued that women prefer to embrace transformative and inclusive or participatory leadership styles. In contrast, men have seen the adoption of transactional and autocratic leadership models. Women also tend to be less assertive, risk-averse, and highly ethical (Gull et al., 2018).

The existence of female directors based on the human capital of the board

The human capital of the board is based on (1) demographics, including education level, business education, and nationality, and (2) experience (tenure), access to other boards (multiple directors), and women board members' reputations.

1. Demographics based on education level, business education, and nationality

In today's complex corporate climate, education has an impact on women in their jobs as directors, regardless of whether their educational background is in business. According to Bennouri (2018), individuals with and without a business education demonstrate a variety of decision-making styles. Additionally, women directors require business knowledge and abilities to fulfill critical positions (e.g., membership on various board committees) in organizations. In reality, the audit committee members' financial experience is critical to ensuring stated earnings. However, commercial experience, among other attributes, increases the likelihood of individual success and election to the board. Gull et al. (2018) argued that highly educated individuals can make better selections due to their cognitive capacity for processing and evaluating relevant information. Additionally, it is critical to evaluate the director's characteristics that enable him or her to handle boardroom diversity.

Regarding this, the majority of female directors have a history in business education. Likewise, nationality differentiates foreign and domestic female directors. According to Bennouri et al. (2018), foreign directors bring new skills and a broader network to the international market's board and knowledge. Nevertheless, the presence of foreign directors can also have a negative effect because it can hinder the monitoring function, where the quality of internal communication is lacking, and they are less familiar with local regulations. Several previous studies have examined the presence of women by looking at demographic factors among them (Bennouri et al., 2018) (Gull et al., 2018).

2. Demographics based on relational boards

Term of office/experience refers to the potential resources directors may have through their expertise, reputation capital, business, social ties, political connections, and influential network membership (Bennouri et al., 2018). In this case, female directors with their reputation will optimize their career opportunities, guard against takeover defenses, improve governance quality, market transparency, and enhance monitoring quality (Bennouri et al., 2018). According to Gull et al. (2018), directors improve their advisory skills by gaining experience, strengthening the board's decision-making capabilities. Several previous studies have investigated the existence of women related to their relationship (Bennouri et al., 2018); (Gull et al., 2018); (Arioglu, 2020).

The Influence of Gender Diversity on Financial Performance and Non-Financial Performance

1. Financial Performance
a. Accounting and Market Performance

Ahmadi et al. (2018) stated that women have better multitasking skills, risk management, and communication skills than their male counterparts. This ability makes women more competent and willing to take on different responsibilities simultaneously and better communicate and manage different situations inside and outside the company. Increasing women's council presence enriches board information, perspectives, debate, and decision-making. Apart from increasing corporate governance effectiveness, the literature has shown that gender diversity also enhances firm performance. Besides, accounting performance is based on ROA, ROE, profit margin, sales growth, asset growth, while market performance is based on Tobin's Q, stock market liquidity, and abnormal return. Measurement of accounting performance and market performance is shown in Table 1.

Table 1 Previous Research Gender Diversity and Financial Performance (Accounting Performance and Market Performance)

No	Author	Gender diversity measure	Performance measure	Key findings
1	(Bennouri et al., 2018)	Female director Independent female directors, Female committee membership, Woman chairperson, demographics and relational board attributes	ROE, ROA, Tobin's Q	Female directors had a positive impact on accounting performance measured by ROA and ROE. Meanwhile, female directors negatively influenced Tobin's Q. Independent directors of women also negatively impacted ROA and ROE while positively impacting Tobin's Q.
2	(Chauhan & Dey, 2017)	Female director Independent female director	ROA, Tobin's Q	Gender diversity had no significant effect in India.
3	(Liu et al., 2020)	Female director	ROA, ROE, ROS	Female director representation improved the company's performance by positively influencing corporate social responsibility (CSR).

Table 1 Previous Research Gender Diversity and Financial Performance (Accounting Performance and Market Performance) (cont')

No	Author	Gender diversity measure	Performance measure	Key findings
4	(Bjuggren et al., 2018)	Female director-owner-CEO	Profit margin	Women's leadership has a much more positive impact on the performance of family companies than non-family companies.
5	(Green & Homroy, 2018)	Female director Female director in committees	ROA	Female directors had a positive effect on performance. Representation of women on board committees also positively affected the performance.
6	(Ararat & Yurtoglu, 2020)	Female director The proportion of females in committees	ROA, market to book value	Female directors, who were members of the controlling family, were associated with higher corporate value and profitability.
7	(Stefanovic & Barjaktarovic, 2020)	Female director female in Executive board Gender of the president of the board of director	Net income, ROE, ROA, Equity to total asset	Gender diversity of the executive board positively impacted the bank's performance above the threshold level. It was observed only in banks where gender diversity was extended to more than one level of executive authority.
8	(Ahmadi et al., 2018)	Female director	ROA, ROE	Gender diversity had a significant effect on performance.
9	(Conyon & He, 2017)	Female director	Tobin's Q ROA	Directors had a more significant female positive impact on high-performing companies relative to low-performing companies.
10	(Garanina & Muravyev, 2020)	Female director	ROA, ROE, Tobin's Q, MBV	Diversity companies had higher market value and better profitability.
11	(Song et al., 2020)	Female director	Tobin's Q	Diversity had a positive and significant effect on performance.
12	(Sarkar & Selarka, 2021)	Female director Independent female director	Tobin's Q ROA	Female directors resulted in improved firm performance. This beneficial effect, however, was facilitated by independent female directors.
13	(Valls Martínez & Cruz Rambaud, 2019)	Female director Blau index Shanonn index	Tobin's Q	The increasing number of positive board women was associated with higher financial performance.
14	(Đặng et al., 2020)	Female director Blau index	ROA	Director had a positive and significant effect on the profitability.

Table 1 Previous Research Gender Diversity and Financial Performance (Accounting Performance and Market Performance) (cont')

No	Author	Gender diversity measure	Performance measure	Key findings
15	(Gulamhussen & Santa, 2015)	Female director, woman on the supervisory board, woman on the audit committee	ROA, ROE, NIMRG, OOIVG, NIEXP, LLR, IMPL, Tobin's Q, Z Score	Female directors had a positive influence on performance. The relationship between female presence and risk-taking was negative. The study also found that the market positively valued women on boards, supervisory boards, and audit committees.
16	(Martín -Ugedo et al., 2019)	Female director	ROA, Tobin's Q	The presence of women on the board had a positive impact on the company's performance. The study also uncovered that the dimension of "masculinity" had negative effects on performance.
17	(Noguera, 2020)	Female director	ROA, Tobin's Q	The presence of female directors gave a positive effect but only when they reached critical mass on the board, but female directors had no effect on the firm value.
18	(Vieira, 2017)	Female director	ROA, Market to Book ratio	Family firms were likely to have a lower proportion of independent members and higher gender diversity on boards than non-family firms. Family firm performance was positively related to ownership concentration and female directors.
19	(Ullah et al., 2019)	Female director, Female chief executive	Tobin's Q, ROA, ROE	Female directors and female CEOs could increase company value. Additional analysis showed that the influence of female directors and female CEOs on corporate values was more substantial on non-state-owned enterprises than on state-owned enterprises.
20	(Lim et al., 2019)	Female director Blau index Shannon index	Tobin's Q	Gender diversification caused the company's performance to decline, perhaps due to tokenism issues and gender stereotypes.
21	(Moreno-Gómez et al., 2018)	Women on the board, women on the top management team, women as CEO	ROA, ROE	Gender diversity was positively linked to subsequent business performance.

Table 1 Previous Research Gender Diversity and Financial Performance (Accounting Performance and Market Performance) (cont')

No	Author	Gender diversity measure	Performance measure	Key findings
22	(Lafuente & Vaillant, 2019)	Female director	ROA, Net intermediation ratio, Bad loan	The proportion of women as directors ranged between 40 and 60 percent, affecting economic performance and risk-oriented in financial companies.
23	(Horak & Cui, 2017)	Female director	ROE, sales growth, asset growth debt asset ratio, R &D	The firm with women on the board performed better in all three categories, except for return equity.
24	(Charles et al., 2018)	Female director	Tobin's Q	Board gender diversity had a positive and significant relationship for the eight lowest quantiles.
25	(O'Hagan, 2017)	Female director	EPS	The net effect proportion of women and having three or more women onboard resulted in higher EPS.
26	(Isola et al., 2020),	Female director	ROA, ROE	Female directors had an insignificant influence on the bank's performance.
27	(Srivastava et al., 2018),	Female director Female on the board committee Independent female director	ROA, COE (Cost of Equity)	Gender diversity contributed slightly more than 5.5 percent to the change in corporation COE but had a 45 percent influence on the company's ROA. The COE had a negative association with the presence of female directors on the board and their independence. By contrast, the extent of involvement of female directors on various committees was positively related to the ROA.
28	(Ammer & Ahmad-Zaluki, 2017)	Female directors on the audit committee at the IPO date	Accuracy forecast earning	More female directors in the audit committee caused more errors and were less accurate in earnings forecasts.
29	(Loukil et al., 2019)	Female director Independent female director Female inside director	Stock market liquidity	The female director had a positive and significant effect on stock market liquidity.
30	(Groening, 2019)	Female committee member	Abnormal return	The female director was financially beneficial, especially for companies with dual CEO and board seats and with few or no women on board committees and companies operating in industries with greater levels of competition.

b. Earnings Management and Financial Manipulation

Previous research has found that women are less tolerant of opportunistic conduct and are less concerned with self-interest, conformity, and general practice when making organizational decisions (Valls Martnez & Cruz Rambaud, 2019). Additionally, board competencies and conduct are critical elements in determining the quality of income and financial reporting in general. Women are more careful and less aggressive than men when it comes to financial decisions, and are less willing to take risks. They also move more decisively than men to increase the quality of their income, as they are more likely to lose their reputation and face prosecution. As a result, women will take a cautious approach to income management, given that it is an ethical issue (Gull et al., 2018). Additionally, earnings management often use discretionary accounting techniques to attain the appropriate reported earnings levels.

In the accounting literature, earnings efficiency is explored extensively and is an essential concern for stakeholders. Earnings standards demonstrate how declared earnings disclose the company's financial position to interested parties. For example, financial data are "misleading" based on reported income levels. In that case, the allocation of investors' resources may not be appropriate if they are based on management's financial reports (Healy & Wahlen, 1999). Regarding this, female directors influence changing norms on the board (Yang et al., 2019). Some studies conducted (Luo et al., 2017) on the association of manipulation activities, earning management (Gull et al., 2018), (Zalata et al., 2019), (Harakeh et al., 2019), (Arioglu, 2020), (Ammer & Ahmad-Zaluki, 2017), (Mnif & Cherif, 2020), and financial irregularities (Li & Li, 2020).

Table 2 Previous research Gender Diversity and financial performance (Earning Management and Financial Irregularity)

No	Author	Gender diversity measure	Performance measure	Key findings
1	(Gull et al., 2018)	Female director Independent woman director Audit committee memberships held by women director Education level of women directors Business education of women directors Multiple directorships held by women directors Tenure of women directors	Earning management	The female director reduced the earning management conducted by the manager. Attributes of business expertise and committee membership are key attributes that support effective earning management.
2	(Zalata et al., 2019)	female advisory directors monitoring female directors	Earning management	The female director held a monitoring role to reduce managerial opportunism.

Table 2 Previous research Gender Diversity and financial performance (Earning Management and Financial Irregularity) (cont')

No	Author	Gender diversity measure	Performance measure	Key findings
3	(Xing et al., 2021)	Female top manager, female CEO, female CFO, female director	Earning management, ROA	Women as top managers positively affect their profitability with the proportion of women on the board of directors associated with profit management. However, interactions between women resulted in a negative response from investors, a negative stock market reaction to the appointment of a top female manager.
4	(Harakeh et al., 2019)	Female directors, including executive and non-executive directors	Earning Management CEO incentive compensation	The negative relationship between female directors and profit management negatively affected female directors' presence on CEO incentive compensation.
5	(Arioglu, 2020)	Female director, Female audit committee director, Female busy director, Female expert director business group representative female directors unaffiliated female directors	Earning management	Female directors on a company's board have no discernible effect on management compensation. The number of female directors with certain characteristics, such as busyness, professional experience, and audit committee membership, was similar. Between the amount of female directors who are affiliated (unaffiliated) with the controlling business group and earning management, there is a negative (positive) correlation.
6	(Mnif & Cherif, 2020)	Female director Independent female director Female boardroom representation	Earning management	Female board directors have a significant effect on earning management remained constant for independent female directors
7	(Li & Li, 2020)	Female chairperson Committee audit	Financial irregularity	A female chairperson was more able to reduce financial irregularities than a male chair. Female chairmen could also further improve the quality of financial statements, including the quality of internal controls and the opinions of external auditors.

c. Risk

According to Khan et al. (2020), women are more risk-averse than men. Therefore, the presence of female directors will lead management to carry out strategies that are too conservative and thus make it less competitive. But the results showed women's presence on boards was not significantly associated with a higher or lower risk. According to Poletti-Hughes and Briano-Turrent Polety (2019), female directors also protect shareholder wealth by actively overseeing managers' decisions. Gender-diverse boards may be more effective in improving financial performance through risky strategic decisions. The inclusion of female directors is also an effective corporate governance mechanism in maximizing shareholder wealth achieved by increasing business risk. The results of the study found that women on corporate boards lowered the company's risk. This is in line with the common perception that women are more risk-averse. However, the results of the Poletti-Hughes and Briano-Turrent Polety (2019) study also found a significant negative association between risk and company performance. These results suggest that too much risk can also result in lower company performance. The results of this study show the board's diverse benefits go beyond ethical issues and deliver positive business outcomes.

The relationship between gender diversity, return, and rate of return is also explained by Nadeem et al. (2019). First-sighted female directors tend to avoid risk, make less risky investments, and ultimately become less competitive. An uncompetitive company will decrease the company's performance. The second view is that through the mechanism of group dynamics, female directors will moderate the company's risk, not by making risk-free investments but through reasoned decision-making, which can result in improved performance. The results showed a significant negative relationship between female directors and company risk. Risk negatively affects profitability and profitability. The expanded analysis provides enough support for the argument that gender diversity can lead to better group dynamics, so companies with female directors may be considered less at risk, can attract institutional investors, and eventually realize higher returns.

Table 3 Previous research Gender Diversity and Financial Performance (Risk)

No	Author	Gender diversity measure	Performance measure	Key findings
1	(Khan et al., 2020)	Female director	Credit risk dan profitability	The female director did not affect performance at Sharia banks.
2	(Poletti-Hughes & Briano-Turrent, 2019)	Female director Independent female director	Risk (Total risk, Venturing risk Performance hazard risk)	Independent female directors on the board were shown to increase the risk of venturing (i.e., in the hope of improving performance in the future).
3	(Nadeem et al., 2019)	Female director dan Blau index	Risk	Female directors were negatively related to risk.

2. Non-Financial Performance

The social position theory of gender differences indicates that gender roles determine perceptions and expectations about the characteristics of women and men. Women are also assumed to have standard features and attitudes, such as being relationship-oriented, kind, compassionate, caring, and sympathetic to the needs of others. Besides, female directors appreciate CSR-related activities more and favor CSR-related strategic decisions than their male counterparts, guided by female directors' internal values and desires (Liu et al., 2020). Boards with more excellent representation of women also lower the risk of impression management strategies on sustainability disclosures. Moreover, female directors are positively associated with more balanced and reliability (García-Sánchez et al., 2019). Caring ethics tend to be liked by women more than men's care and ethical behavior (Harjoto & Rossi, 2019). Researchers often focus on female men's differences in values, perceptions, skills, experience, professional background, and networking skills when connecting women with CSR-related issues. Rao and Tilt (2020) classify these differences into psychological value and a unique set of resources. Previous research has also linked gender diversity to non-financial performance, including using Corporate Social Responsibility (CSR) (Liu et al., 2020), (Issa & Fang, 2019), (Colakoglu et al., 2020), social performance (Alazzani et al., 2017); (Biswas et al., 2018), and measurement of non-financial performance, as follows:

Table 4 Previous Research Gender Diversity and Non-financial performance

No	Author	Gender diversity measure	Performance measure	Key findings
1	(Luo et al., 2017)	Female director	Manipulation activities	The higher female participation in director alignment was associated with a lower level of actual activity manipulation. This negative relationship was more robust when female directors had higher ownership.
2	(Srinidhi et al., 2020)	Female director	Process-oriented norm change, outcome-oriented norm change, Overall effectiveness proxy	Independent female directors were more effective in changing board norms (board processes) and improving governance (council output) than their male counterparts.
3	(Chen et al., 2018)	Female director	R&D Patent citation	Companies with female directors tended to invest more in innovation and get more patents and citations for R&D spending.
4	(García-Sánchez et al., 2019)	Female director	Sustainability reporting	Female directors significantly reduced risk management techniques related to sustainability disclosure. Additionally, female directors were connected with more balanced, comparable, and reliable information

Table 4 Previous Research Gender Diversity and Non-financial performance (cont')

No	Author	Gender diversity measure	Performance measure	Key findings
5	(García Lara et al., 2017)	Female independent director	Quality of accounting reports	Female directors provided stricter monitoring of the financial reporting process than male directors.
6	(Aggarwal et al., 2019)	Female director	Quality of sustainability reporting	Female directors reduced the risk of impression management strategies on sustainability disclosure.
7	(Harjoto & Rossi, 2019)	Female director	CSR	Female director has a positive effect on CSR
8	(Colakoglu et al., 2020)	Board gender diversity, board foreign diversity, board independence diversity	CSR	The presence of independent board members has a positive effect on CSR. Evidence supported that the ratio of female and foreign board members had no significant impact on CSR performance.

Conclusion

Based on previous research, female directors' development has broadened in terms of the proxies used. A female director's existence is associated with the monitoring attribute, including her presence as director, independent director, and position as chairman, chairman of the Committee, and CEO chairman. Female directors' existence is also associated with the attributes of the human capital of the board based on (1) demographics, including education level, business education, and nationality, and (2) relational board experience, comprising directors' experience (tenure), access to other boards (multiple directors), and women board members' reputation. Future research could also distinguish the influence of gender diversity boards on performance based on a country's culture that is still rarely studied.

Further, the influence of gender diversity on performance can be grouped into financial and non-financial performance. Most studies used financial performance proxies, consisting of ROA, ROE, Profit margin, Tobin's Q, stock market liquidity, and abnormal return. Several studies also link it to risk, earnings management, and other financial performance measures. Meanwhile, proxies for non-financial performance are Corporate Social Responsibility (CSR), social performance, and other indicators.

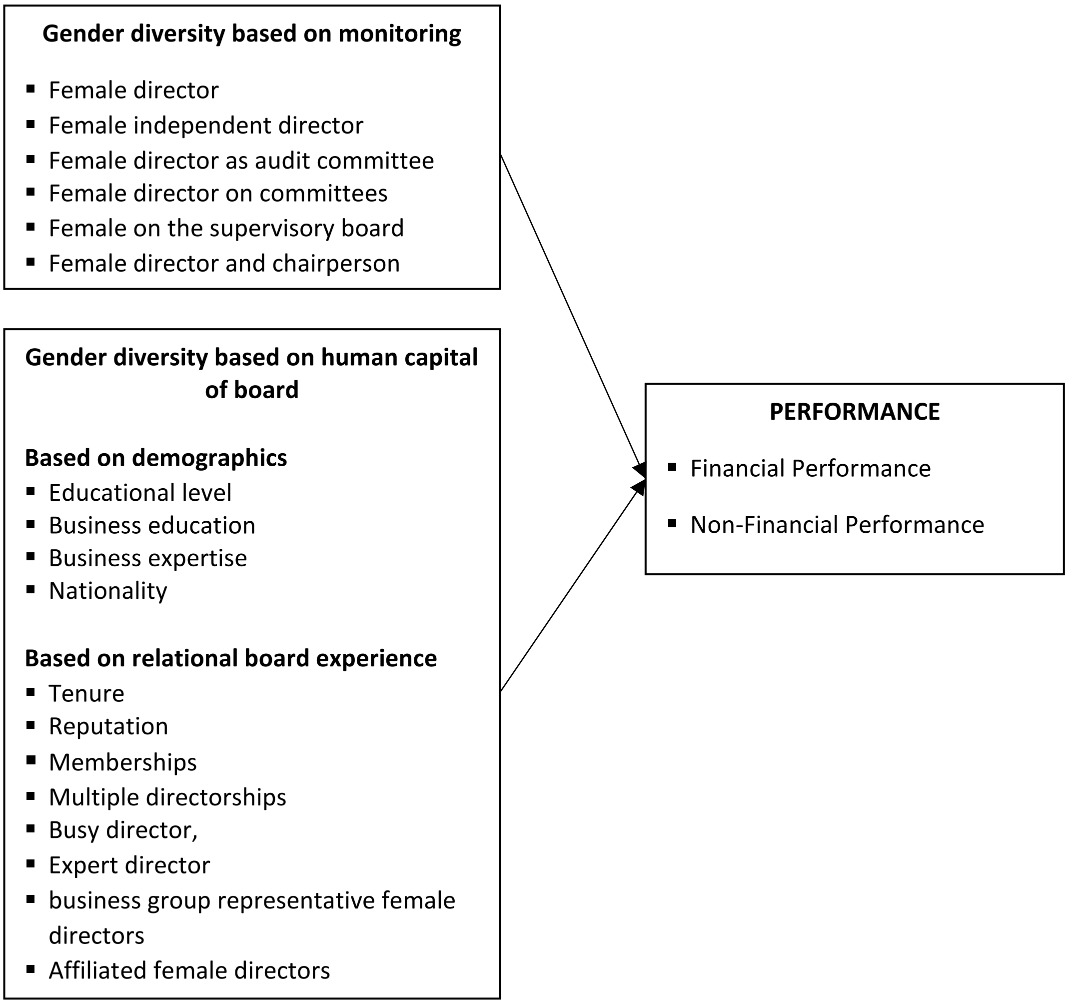

Figure 1 Conceptual models

Based on the analysis content, there have been many studies on board of directors' gender diversity. More specific research based on monitoring attributes, such as women's existence as independent directors, membership on the committee board, and leadership positions as chairman (CEO), are still open to be conducted. Besides that, a female director's existence is correlated with the attributes of the human capital of the board based on demographics, including education level, business education, and nationality. Female directors' presence is also linked to relational board attributes, covering experience (tenure), access to other boards (several directors), and reputation for female board members.

Based on this, future research should conduct gender diversity research more specifically. The existence of female directors can also be found in the characteristics of monitoring and human capital board (demographic and relational). The consequences of gender diversity can be based on non-financial performance, which is still rarely studied compared to financial performance.

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