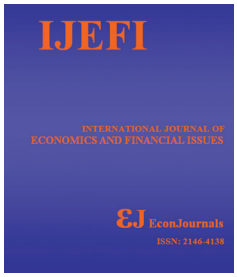


International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2024, 14(5), 1-9.

Do Board Size, Female Directors and Ownership Dispersion Influence Financial Performance of Cooperatives? An Analysis Using Upper Echelons Theory

Kamaruzzaman Muhammad[1], Erlane K. Ghani[1]*, Azleen Ilias[2], Mohd Adha Ibrahim[3], Nurul Nazlia Jamil[3], Nazratul Aina Mohamad Anwar[3], Fazlida Mohd Razali[4]

[1]Faculty of Accountancy, Universiti Teknologi MARA Cawangan Selangor, Malaysia, [2]College of Business and Administration, Universiti Tenaga Nasional, Malaysia, [3]Faculty of Economics and Business, Universiti Sains Islam Malaysia, Malaysia, [4]Accounting Research Institute, Universiti Teknologi MARA, Malaysia,*Email: erlanekg@uitm.edu.my

Received: 02 April 2024 **Accepted:** 11 July 2024 **DOI:** https://doi.org/10.32479/ijefi.16776

ABSTRACT

This study employs the upper echelons theory to examine the factors that influence the financial performance of cooperatives in Malaysia. Specifically, three factors are selected in this study, namely board size, female directors, and ownership dispersion, in relation to the financial performance of the cooperatives in Malaysia. In this study, a content analysis was performed on 145 cooperatives' annual reports. This study shows that the number of board members has no effect on the financial performance of the cooperatives, indicating that a small board with knowledgeable members can also outperform a larger board with less expertise. This study also shows that female directors do no impact on the financial performance of cooperatives. Finally, this study demonstrates that the disbursement of members in the cooperatives has no effect on their financial performance. The findings in this study provide a relevant perspective on the financial performance of cooperatives that can help regulators understand and provide proper guidance to the cooperatives. This study also provides empirical evidence on the relationship between board size, female directors, ownership dispersion, and the financial performance of the co-operatives, adding to the financial reporting literature.

Keywords: Board Size, Female Directors, Member Size, Upper Echelons Theory, Financial Performance
JEL Classifications: G39, G40

1. INTRODUCTION

Cooperatives play a crucial role in improving the socio-economic circumstances of their members and communities (Ngamjan and Buranasiri, 2020). Cooperatives are business structures that emerge when market failures prevent the provision of necessary products and services at a reasonable cost and satisfactory quality (Owolabi et al., 2022), originally established in rural areas (Mat Jusoh and Abdullah, 2019). The cooperative society also plays a crucial role in promoting economic growth in Malaysia. Founded in 1922, the co-operative aimed to ensure the welfare of rural communities. Over the years, it has continued to expand its operations and is still active today (Mahazril et al., 2012). The Commission of Cooperative Malaysia, also known as Suruhanjaya Koperasi Malaysia, which is under the Ministry of Domestic Trade, Cooperatives, and Consumerism, is responsible for regulating cooperatives in Malaysia. A cooperative society is a legally registered organisation under the Co-operative Societies Act 1993 whose main purpose is to promote its members' economic interests in accordance with cooperative ideals. The Cooperative Societies Act 1993 outlines the procedures for registration as well as the rights, privileges, and other relevant issues affecting cooperatives.

The cooperative society should accelerate its performance to support its members.

In Malaysia, the main purpose of a cooperative in the past was to address the financial difficulties of the local people in Tanah Melayu. On June 28, 1922, the Cooperative Act came into effect, and on July 21, 1922, "The Federated Malay States Posts and Telegraphs Cooperative Thrift and Loan Society Limited" became the first credit-based cooperative (Othman, Mansor & Kari, 2008). Due to the implementation of the National Cooperative Policy (NCP) 2011-2020, the cooperative sector has experienced significant growth within 5 years. Reports indicate that 25% of Malaysians participate in cooperatives, underscoring the sector's significant contribution to the country's direct tax revenue. The NCP's establishment aims to promote cooperative economic growth, strengthen control, monitoring, and governance, and ultimately increase public confidence in the cooperative movement's role as a major contributor to Growth Domestic Product (Mat Jusoh and Abdullah, 2019). Although the cooperative sector in Malaysia has improved significantly, there are often uncertainties and debates about cooperative governance, especially in relation to financial performance (Rajaratnam et al., 2009).

There were concerns about its shortcomings, particularly in the areas of administration, finance, and member participation. To address these weaknesses, the financial performance of cooperatives plays a crucial role in determining their ability to support their members and the overall sustainability of the cooperative itself. Every single cent earned through investment in cooperatives not only supports the well-being of individual members but also contributes to the overall development of the economy. Financial reporting includes financial performance because it provides valuable information to shareholders, especially for their financial success. Co-operatives need to maintain their financial stability to ensure their long-term sustainability (Zelhuda et al., 2017). If the financial performance of cooperatives is not strong, it may affect their ability to serve their members effectively, and subsequently, they would not be able to contribute significantly to the economic growth of the country (Tekeste et al., 2014). In other words, if a cooperative has a better return on assets (ROA), it indicates that the cooperative is effectively using all its assets to generate net income (Owolabi et al., 2022). Nevertheless, a limited number of studies have been conducted to analyse the factors that influence the financial performance, namely ROA, of cooperatives in Malaysia.

One could, however, pose a question. What factors influence Malaysian cooperatives' financial performance? This study aims to answer this question, contribute to the existing literature, aid registrar cooperatives in understanding the factors influencing their financial performance, and subsequently assist them in developing strategies, policies, and ways to improve their financial performance. This study aims to focus on directors' characteristics. The findings of this study will assist regulators in improving existing guidelines and strategies for cooperative sustainability. The next section, Section 2, provides a comprehensive literature review. Section 3 explains the research design used in this study, while Section 4, presents the results and discussion. The last section, Section 5, concludes this study.

2. LITERATURE REVIEW

Financial performance refers to the objective assessment of a business's financial strength based on empirical measurements. It is crucial for the ongoing survival of any organisation. Every firm strives to maintain its status as a going concern, which necessitates the consistent generation of positive returns (Owolabi et al., 2022). Financial performance evaluates the monetary results of a company's actions by assessing how well the company achieves its financial goals (Hraeja, 2021). The financial performance of cooperatives is demonstrated through consistent reporting of profits, increasing members' savings, meeting members' loan requests, improving returns on assets, and providing favourable returns to members on their deposits and patronage (Mahzril et al., 2012). As business models, they are created by their members in response to the market's inability to provide necessary products and services at reasonable costs and satisfactory quality (Beranova and Basovnikova, 2014). The present kinds of cooperatives originate from a corporate concept that is divided among investors, management, and consumers, each pursuing their own interests.

Studies have shown that a company's management is one of the aspects that can have an impact on financial success (Besar et al., 2017). This study proposes the upper echelons theory as a theoretical viewpoint that sheds light on the impact of managerial qualities on financial performance. This theory posits that a manager's background attributes can predict strategic decisions and the level of organisational performance (Hambrick and Mason, 1984). Board size is considered one of the criteria of the upper echelons hypothesis (Putri et al., 2021) and is likely to have a significant impact on financial performance. The size of the board of directors plays a crucial role in determining the effectiveness of corporate governance mechanisms (Dalton et al., 1999). Although adding additional directors to the board improves its ability to monitor, the disadvantages of larger groupings, such as increased costs due to ineffective communication and decision-making, may outweigh the benefits (Vito and Trottier, 2022). Lipton and Lorsch (1992) argue that a larger board may have difficulties in coordination due to the many possible interactions between group members and the problem of free-riding. It is recommended that the maximum number of board members be limited to 10, with a recommended size of eight to nine. Previous studies suggest that the size of a company's board of directors may have an impact on the level of corporate governance and the success of the organisation. Yermack (1996) demonstrates that companies with smaller boards tend to have higher market value compared to companies with larger boards. In addition, he finds that companies exhibit favourable, atypical stock returns during periods when they announce a reduction in the size of their board of directors. In the same vein, Eisenberg et al. (1998) show a negative correlation between the size of the board of directors and the success of Finnish companies.

On the other hand, a number of studies indicate a favourable correlation between board size and performance, which is explained by resource dependence theory (Kiel and Nicholson, 2003; Yammeesri and Herath, 2010; García-Sierra and Sánchez Castillo, 2023; Nehemia and Lenkoe, 2023; Khan et al., 2020).

According to the resource dependence hypothesis, these studies suggest that larger boards provide more expertise and information, which leads to an enhanced ability of management to make effective business decisions and improve organisational performance. For example: Rashid (2018) suggests that the announcement of corporate governance in Bangladesh has attached great importance to the size of the board of directors. It is uncertain to what extent the findings of the study on board size and performance in the western world can be applied to companies in Bangladesh. The presence of an insufficient number of competent independent directors suggests that companies may rely on larger boards to have access to the external environment to reduce uncertainty and increase performance. In addition, most family businesses tend to appoint family members to their boards, which may hinder the recruitment of competent independent directors for the corporate boards in Bangladesh. Based on these characteristics, larger Bangladeshi boards have the potential to provide significant economic resources to companies. Consistent with resource dependence theory, this study hypothesises that larger boards will lead to improved firm performance. Therefore, the first hypothesis is as follows:

H1: There is a positive relationship between the size of the board and financial performance of cooperatives in Malaysia.

A group of studies has examined the impact of female board members on organisational performance (Al-Gazzar and Khlefa, 2024; Monteiro et al., 2024; Abdullah et al., 2024; El Dessouky, 2023; Buchdadi et al., 2023). Mace (1971) argues that a diverse corporate board improves monitoring and strengthens board independence. Adams and Ferreira (2009) demonstrate that the presence of female board members increases board effectiveness. In particular, they find that female board members have a higher attendance rate, increase the attendance of male board members, and are more inclined to take on monitoring roles in the audit process. In addition, they are more likely to hold CEOs accountable for underperformance. According to Letendre (2004), female directors are able to stimulate dynamic conversations in the boardroom, which leads to better decision-making. Kramer et al. (2006) found that female board members are more willing than male board members to address difficult issues in the boardroom that others would be reluctant to tackle. Several empirical studies have shown a strong and positive correlation between gender diversity and organisational performance (Francoeur et al., 2008; Paoloni et al., 2023; Haq et al., 2023; Ul-Haq et al., 2023; Inneh et al., 2024). The results of this study suggest that female board members are associated with a higher market value premium. This is due to the fact that female board members play a crucial role in effectively monitoring and ensuring the efficiency of the board. However, previous studies show an inverse correlation between the proportion of female board members and performance (Adams and Ferreira, 2009; Al-Gazzar and Khlefa, 2024). Studies suggest that female board members may be appointed to the board as a symbolic gesture, which may lead to their contributions being devalued (Besar et al., 2017).

Furthermore, Rose (2007) claims that female board members from unconventional backgrounds naturally adopt the viewpoints of the majority of traditional board members during the socialisation process. As a result, they are unable to realise their full performance potential. The corporate governance message in Bangladesh lacks guidelines for gender diversity on the boards of companies. Female board members in some family-run companies in Bangladesh are often selected based on family connections. Typically, the founders, owners, or directors include their wives and daughters on the boards, often with the intention of strengthening the family's voting power or control (Uddin and Choudhury, 2008). According to Uddin and Choudhury (2008), it is not necessary for family members to have extensive business knowledge, skills, or educational qualifications. To understand the impact of female board members on organisational performance, the cultural perspective must also be considered. According to the Bureau of Labour Statistics (2022), the female labour force participation rate has increased from 23.9 percent in 1999 to 31.5 percent in 2009. The literacy rate of women is also on the rise, an indication that the national women›s development policy focuses on strengthening the role of women. This is reflected in the growing number of women represented in the national parliament and the civil service of Bangladesh. Although gender inequality still exists in Bangladesh, it is expected that women board members will demonstrate their competence through effective monitoring and improvement of corporate performance (Rashid, 2018). Based on the above, this study hypothesises the following:

H2: There is a significant positive impact of proportion of female directors on the financial performance of cooperatives in Malaysia.

A body of the financial reporting literature has examined the correlation between ownership dispersion and the financial performance of a company. Multiple studies have investigated the effects of ownership distribution on many elements of a company's operations, governance, and financial results. For example: Shleifer and Vishny (1997) examine the impact of ownership structure, such as the number of shareholders, on corporate governance and performance. They emphasise that having a widely distributed ownership structure might result in less influence over management, which may have a detrimental effect on the success of the company. Demsetz and Lehn (1985) did more study on the relationship between dispersed ownership and business performance. In their study, they examine the correlation between the ownership structure and the success of the company. They discovered a correlation between ownership dispersion and business performance. This implies that companies with more dispersed ownership structures may have difficulties aligning the interests of management and shareholders, leading to negative effects on firm performance.

Morck et al., (1988) conducted a study to examine the impact of ownership concentration on market value and business performance. Their study shows that increased ownership concentration may result in improved firm performance since it creates greater incentives for efficient management. The findings of their study indicate that having a widely distributed ownership structure would directly and adversely affect the financial performance of the company. These studies indicate that the number of shareholders and the overall ownership arrangement

may have a detrimental and substantial impact on a company's success. Based on the above discussion, this study presents the following hypothesis:

H3: There is a negative relationship between the size of the members and financial performance of cooperatives in Malaysia.

3. RESEARCH DESIGN

3.1. Sample Study

This study selects cooperatives in Malaysia. In 2022, the total number of cooperatives in Malaysia will be 14,627. The cooperatives may be categorised into nine operational sectors, namely: banking, credit, agricultural, housing, industrial, consumer, construction, transportation, and service. The final samples were obtained from many secondary data sources particularly the annual reports. The sample comprises the 170 leading cooperatives in Malaysia. As a result of incomplete data, the presence of outliers, and the exclusion of cooperatives that are primarily focused on women, this study had to exclude 25 cooperatives, leaving a final sample size of 145 cooperative-year observations. The final sample is presented in Table 1.

3.2. Research Instruments and Data Collection

This study uses content analysis as its research instrument. Cross-sectional data was used in this study. The data for this study was collected over a period of 12 months. This data is the result of a 1-time data collection on a statistical unit, namely board size, gender composition, number of shareholders, total shareholders' funds, total assets, total income, and main activities of 145 cooperatives in Malaysia for the year 2022. In using cross-sectional data, our focus is not on how the data changes over time but rather on the current and accurate opinions of respondents on a particular topic. Cross-sectional data is different from both time series and panel data. Time series data is a collection of data points recorded over a period of time for a specific unit. In contrast, panel data (or time series cross-sections) refers to data from multiple units recorded over multiple time periods.

3.3. Variable Measurements

The dependent variable in this study was measured using ROA. ROA is a recognised measure of a company's success in terms of its ability to generate income from its assets. The metric used is the ROA. Palepu et al., (2016) suggest that it provides valuable information on both the effectiveness of operations and asset management, thus serving as a holistic indicator of financial success. The independent variables in this study include the size of the board of directors, the presence of female board members, and the size of the membership. The choice of board size has a significant impact on the functioning of the board and, thus, on the performance of organisations (Coles et al., 2008). It is assumed that large boards include people with different educational qualifications, professional experience, and skills, as well as a wide range of perspectives. This diversity increases the quality of management decision-making. The inclusion of a woman on the board is in line with the prevailing trend to promote good corporate governance, which stipulates that women should make up at least 30% of the total board. The issue of gender diversity on boards is particularly topical, given the ongoing trend in Europe to improve the representation of women on corporate boards. The theoretical literature supports the idea of gender diversity. From an agency theory perspective, a diverse board would create a balanced environment where no one person could exert too much influence on decision-making (Gorman and Ward, 2020).

Table 1: Sample collection

	n
Data collected	170
Data excluded:	
Premier cooperatives and outliers	(6)
Cooperatives specific related to women	(2)
Missing information	(17)
Final sample used	145

The last independent variable in this analysis is the ownership dispersion. It functions as a valuable indicator of the distribution of ownership, which has important consequences for corporate governance, agency expenses, market perception, and the regulatory framework-all of which may influence the success of a company. Agency theory posits that the division of ownership and power inside companies may result in conflicts of interest between managers and shareholders (Al-Faryan, 2024). The presence of a greater number of owners might worsen these agency concerns as it becomes more challenging for scattered shareholders to properly coordinate and supervise management.

The size of the cooperatives was measured using the natural logarithm of the total assets as a control variable. When doing research on business performance, it is common to use the size of a company, often defined by its total assets, as a control variable. This helps to consider the possible influence of company size on the findings (Dang et al., 2018). Large corporations often possess a higher abundance of resources, have more influence in the market, and engage in a wider range of business activities. Consequently, they often experience distinct patterns of performance compared to smaller enterprises. Through the process of controlling for company size, researchers are able to separate and analyse the impacts of other independent variables on firm performance. This ensures that the findings obtained are not influenced by the inherent benefits or disadvantages associated with the size of the organisation. This control enhances the precision of comparing firms of varying sizes and facilitates a deeper comprehension of the elements being examined.

Table 2 provides a concise overview of the factors examined in this study. When using the absolute number as a variable such as board size, number of members, and cooperative size (measured by total assets) in a regression analysis, it is beneficial to calculate their natural logarithm (log transformation) for normalisation, linear relationship, and reducing heteroscedasticity, and better interpretability between data.

3.4. Study Model

Several studies have employed multivariate regression analysis as a common model to study the correlation between several elements and an organisation's performance. This statistical methodology

Table 2: Variables of the study

Variables	Indicators	Operationalization	References
Dependent	Return on Asset (PERFORMANCE)	ROA=Income/Assets	Rashid et al., (2008)
Independent	Board Size (BSIZE)	The natural logarithm of the total number of the directors	Coles et al., 2008
Independent	Female Directors (FEMALE)	Proportion of female directors to the total board of directors	Letting et al., (2012)
Independent	Number members (MEMBER)	The natural logarithm of the number of the members	Letting et al., (2012)
Control	Cooperative Size (COOPSIZE)	The natural logarithm of the assets	Letting et al., (2012)

enables researchers to examine hypotheses on the impacts of numerous independent variables on a dependent variable while also accounting for possible confounding factors. This study examines the impact of three independent factors on cooperative performance. These variables include board size (BSIZE), female directors (FEMDIR), and the number of shareholders (MEMBER). Cooperative performance is assessed by the ROA. The regression model used in this study is a multivariate model.

$$PERFORMANCE=\alpha+\beta1\ BSIZE+\beta2\ FEMDIR+\beta3\ MEMBER+\beta4\ COOPSIZE+\varepsilon$$

In order to guarantee strong and dependable outcomes, the model used the cooperative's size (COOPSIZE) as the control variable. In the model, α represents the intercept, while $\beta1$, $\beta2$, $\beta3$, and $\beta4$ represent the coefficients that measure the influence of each independent variable and control variable on cooperative performance. The ε is the residual component that accounts for the unexplained variability in cooperative performance by the model. The hypotheses were evaluated by analysing the statistical significance and the size of the coefficients $\beta1$ and others. For instance, a substantial positive $\beta1$ suggests that a larger board size is linked to enhanced cooperative performance, providing support for hypothesis H1. The model incorporates cooperative size as a control variable to account for variables that might potentially impact performance, thereby isolating the precise impact of the ownership structure. This strategy improves the accuracy of the conclusions drawn from the study, making the results stronger and more applicable to many situations.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 3 shows the descriptive statistics of the types of cooperatives selected in this study. This study shows that 145 cooperatives were selected, and most of the cooperatives are credit provision (40%), followed by petrol station operators (24%), and agriculture (11%). In this study, there are also cooperatives involved with property development (12%), retail and wholesale (8%), and pawnshops (2%), and the remaining 9% consist of cooperatives related to other service provisions.

In terms of the characteristics of the cooperatives, this study shows that the minimum number of board members is 3, and the highest number of board members in the cooperatives is 15. Similarly, this study also shows that the minimum number of male directors on the board is 3 and the maximum number of male directors on the board is 15. Whereas, there are cooperatives that do not have female directors, and there are cooperatives that have a maximum number of five female directors. Such results indicate that the minimum number of female directors in a cooperative is 0.10 (10%) and the maximum number of female directors in a cooperative is 0.57 (57%), as shown in Table 4.

Table 3: Types of cooperatives

Types of cooperatives	n	%
Agriculture activities	16	11
Credit provision	58	40
Pawnshops	3	2
Petrol station operator	35	24
Property developer	12	8
Retails and wholesales	8	6
Other service provisions	13	9
Total	145	100

Table 4: Characteristics of cooperatives

	Minimum	Maximum	Mean	SD
BSIZE	3	15	10.79	2.51
Male	3	15	9.59	2.74
Female	0	5	1.20	1.41
FEMDIR	0.10	0.57	0.11	0.14
MEMBER	13	264,645	8,438	25,091
Shareholders fund	371,000	572,708,000	45,037,166	73,387,480
Assets	2,159,000	1,130,548,000	88,760,117	168,773,103
Income	1,387,000	305,087,000	17,966,959	31,116,755

This study also shows that in terms of the number of cooperative members, the minimum number is 13, while the maximum number is 264,645, indicating that the sizes of the cooperatives are significantly different. The mean for the number of cooperative members is 8,438. In terms of the shareholder fund, the minimum value of the fund is RM371,000, and the maximum value of the fund is RM572,708,000. The mean value of the shareholder fund is RM45,037,000. This study also shows that the minimum value of the assets in the cooperatives is RM2,159,000, whereas the maximum value of the assets in the cooperatives is RM1,130,548,000. In terms of income, the minimum value of income in the cooperatives is RM1,387,000, and the maximum value of the shareholder fund is RM305,087,000.

Table 5 presents the descriptive statistics of board size in detail. The board size in this study is divided into five categories. As shown in Table 5, most of the cooperatives have a board size between 9 and 11, representing 43.4%. This is followed by cooperatives that have a board size of between 12 and 14 board members (37.9%) and a board size of between 15 and 17 board members (10.3%). Only two cooperatives have a board size of 3 to 5 board members (1.4%), while 10 or 6.9% of the cooperatives have a board size of 6 to 8 board members.

Table 6 presents the descriptive statistics of female directors in the cooperatives. Surprisingly, despite the best practices of the Malaysian Code of Corporate Governance to have at least 30% of the board members be female, this study shows that 40% of the cooperatives do not have female directors. This study also shows that 42 cooperatives have female directors in between 11% and 20% of the board composition, compared to 18 cooperatives that have 21-30% female directors. Only 18.6% of the total cooperatives have more than 30% female directors in their board composition.

4.2. Pearson Correlation

Table 7 displays the results of the Pearson correlation analysis, which quantifies the magnitude and direction of the linear association between pairs of variables. The Pearson correlation coefficient, represented by the symbol r, varies between −1 and +1. A score of +1 signifies an ideal positive linear correlation, indicating that if one variable rises, the other variable increases in direct proportion. On the other hand, a value of −1 indicates a complete negative linear correlation, meaning that a rise in one variable is directly associated with a corresponding drop in the other. A score of 0 indicates the absence of a linear correlation between the variables.

The correlation matrix displays the r values for each variable pair, together with P-values that indicate the statistical significance of the observed correlations. A P-value below 0.05 signifies statistical significance, indicating that the observed association is very unlikely to have happened by chance, with a probability of less than 5%. Correlations that are close to −1 or +1 indicate strong and meaningful linear links, which should be further investigated. On the other hand, correlations that are close to 0, even if statistically significant, signal that the variables are not linearly connected. Nevertheless, a substantial correlation does not establish causality but rather indicates a connection between the variables. In essence, the Pearson correlation analysis offers a basic comprehension of the linear relationship between variables, acting as a foundation for more intricate statistical studies. Table 7 displays the outcomes of Pearson correlations.

Table 5: Board size

BOD Size	Cooperatives	
	Number	Percent
3-5	2	1.40
6-8	10	6.90
'9-11	63	43.40
12-14	55	37.90
15-17	15	10.30
	145	100.00

Table 6: Female directors

Female directors	Cooperatives	
	Number	Percent
0%	58	40.00
9%-10%	15	10.30
11%-20%	42	29.00
21%-30%	18	12.40
31%-40%	4	2.80
41%-50%	2	1.40
51%-60%	6	4.10
	145	100.00

Table 7: Pearson correlations results of variables

	Log BSIZE	FEMDIR	Log MEMBER	Log assets
ROA	-0.005	0.017	-0.531**	-0.698**
Sig. (2-tailed)	0.949	0.840	0.000	0.000
Dependent variable: ROA				

**. Correlation is significant at the 0.01 level (2-tailed)

4.3. Regression Results

A regression analysis examines the impact of each independent variable (BSIZE, FEMDIR, and MEMBER) on the dependent variable (ROA), while also considering the influence of other predictors in the model, namely COOPSIZE. The initial values of BSIZE, MEMBER, and COOPSIZE have been converted to their respective natural logarithms. Performing a regression analysis with variables that have been converted to their natural logarithms involves following the same fundamental procedures as conducting a regression analysis with variables that have not been changed. The Model Summary table, shown in Table 8, serves as the first reference point, presenting the R2 and corrected R2 values. These numbers indicate the extent to which the independent variables in the model can account for the variation in the dependent variable. Table 8 indicates that the R2 of 0.493 indicates that 49.3% of the variability in the dependent variable is explained by the independent variables, suggesting a moderate model fit.

The ANOVA table, namely Table 9, provides a clear indication of the overall significance of the regression model. The presence of a substantial F-statistic ($P < 0.05$) in this table demonstrates that the model accounts for a considerable portion of the variation in the dependent variable, beyond what would be anticipated by random chance.

Table 10 displays the unstandardized coefficient (B), standard error, t-value, and significance level (P-value) for each independent variable. The unstandardized coefficient is the anticipated alteration in the dependent variable when the predictor variable changes by one unit while keeping all other variables constant.

Table 10 shows that the coefficient for board size (log BSSIZE) is −0.190 ($P > 0.05$). This suggests that a 1% increase in board size, as a result of the logarithmic transformation, is linked to a 0.19% decline in the ROA of the cooperatives, provided all other variables remain constant. The coefficient value for female directors (FEMDIR) is −0.199, with a $P > 0.05$. This indicates that a 1% increase in female directors is connected with a 0.199% decline in the ROA of the cooperatives. Similarly, the analysis of member size (log MEMBER) reveals a coefficient value of −0.067 ($P > 0.05$), indicating that a 1% increase in cooperative members is related to a 0.067% decline in the ROA of the cooperatives. The significance level aids in determining the statistical significance of these associations, often considering $P < 0.05$ as significant. Given that the P-values of all independent variables in this study exceed 0.05,

Table 8: The model summary

R	R Square	Adjusted R square	Std. error of the estimate	Change statistics				
				R square change	F change	df1	df2	Sig. F change
0.702[a]	0.493	0.479	0.86959	0.493	34.075	4	140	0.000

[a]Predictors: (Constant), log assets, log BSIZE, FEMDIR, log MEMBER, Dependent Variable: ROA

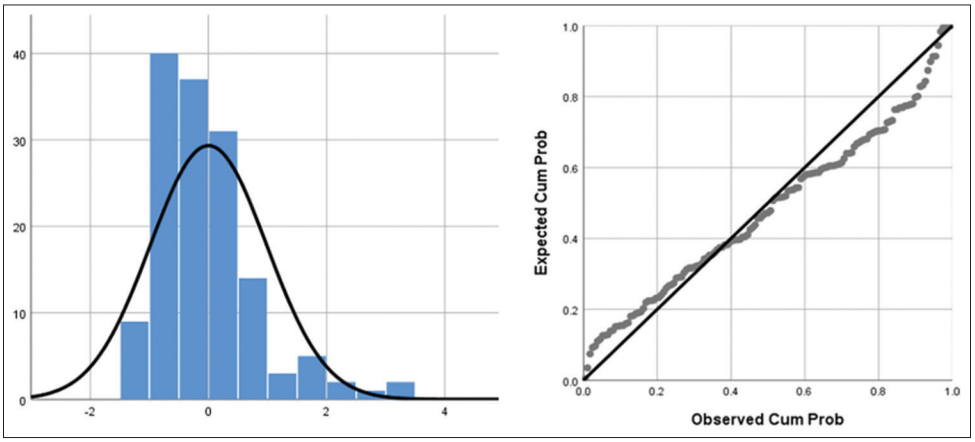
Table 9: ANOVA

	Sum of squares	df	Mean square	F	Sig.
Regression	103.07	4	25.77	34.07	0.0000
Residual	105.87	140	0.76		
Total	208.93	144			

Table 10: Coefficients

	Unstandardized coefficients		Standardized coefficients	t	Sig.	Collinearity Statistics	
	B	SE	Beta			Tolerance	VIF
(Constant)	11.607	1.218		9.526	0.000		
Log BSIZE	−0.190	0.280	−0.041	−0.678	0.499	0.990	1.010
FEMDIR	−0.199	0.536	−0.022	−0.371	0.711	0.995	1.005
Log MEMBER	−0.067	0.061	−0.092	−1.093	0.276	0.510	1.959
Log assets	−0.562	0.074	−0.637	−7.590	0.000	0.514	1.946

Figure 1: Histogram and normal P-P plot of regression of the residuals



it can be concluded that none of the relationships are statistically significant. Therefore, H1, H2, and H3 are deemed invalid.

The findings of this study reveal a dearth of effective governance methods in Malaysian cooperatives, which may be attributed to many issues. One such explanation is the lack of comprehensive understanding among cooperative members and leaders about the concepts and advantages of effective corporate governance. This lack of awareness might result in opposition to embracing such methods. Furthermore, smaller cooperatives may have limitations in terms of the financial and human resources required to establish and sustain comprehensive governance systems. Additionally, they may not have access to the necessary knowledge and skills for implementing effective governance strategies. Furthermore, the legal environment overseeing cooperatives in Malaysia may not be as rigorous or conducive in terms of enforcing sound governance standards compared to other corporate organisations. This might lead to a decreased focus on governance improvements.

This study also shows that a mere 18.6% of the cooperatives have a board composition where female directors make up more than 30%. Traditionally, males have primarily occupied leadership positions in cooperatives, establishing a precedent that still impacts present-day behaviour. Altering these deeply ingrained tendencies takes intentional and continuous effort. Several cooperatives may have a deficiency in policies and support structures that actively encourage gender diversity and inclusion. These initiatives include gender quotas, flexible working conditions, and tailored leadership development programmes specifically designed for women. Moreover, the dearth of female leaders in cooperatives might engender a detrimental loop because the absence of prominent role models dissuades additional women from trying to assume leadership roles. The presence of women in leadership positions has the potential to serve as a source of inspiration and motivation for other women, encouraging them to embark on similar paths.

In addition, the collinearity diagnostics revealed the presence of multicollinearity, which occurs when predictors are strongly

associated with one another, leading to probable distortion of the findings. This is indicated by high Variance Inflation Factor (VIF) values, generally exceeding 10. As seen in Table 10, the VIF value for all variables is below 10, suggesting the absence of any multicollinearity concerns. Moreover, diagnostic tests are essential for verifying the accuracy of the regression model. The Residuals Statistics table and accompanying plots, such as residual plots or histograms, aid in evaluating the assumptions of linearity, normalcy, homoscedasticity, and the lack of multicollinearity. The residual plot in Figure 1 shows that the residuals are randomly distributed along the horizontal axis. This indicates that the assumption of homoscedasticity is supported, meaning that the variance of the residuals is constant. This supports the dependability of the estimated model.

5. CONCLUSION

This study investigates the elements associated with financial performance by using the upper echelons theory. Through the use of content analysis on a sample size of 145, this study demonstrates that the characteristics examined, including board size, presence of female directors, and ownership dispersion, had no impact on the financial success of cooperatives in Malaysia. This may be linked to the fact that cooperatives are member-driven organisations characterised by a more democratic and less hierarchical decision-making process, in contrast to standard companies. The democratic style of decision-making within the organisation might weaken the direct impact of board size on financial success since decisions are often taken jointly by the membership. Furthermore, the efficacy of a board is often determined by the abilities, background, and proficiency of its members rather than the mere quantity of directors. A compact board comprising proficient and erudite members has the potential to outperform, or perhaps surpass, a bigger board with less experience.

This study also demonstrates that the presence of female directors has no impact on the financial success of cooperatives. Cooperatives often function based on democratic ideals, wherein decisions are collaboratively determined by the members. This collaborative strategy has the potential to diminish the impact of any one director, regardless of their gender, on financial performance. The influence of gender diversity on financial success may have a lasting effect that is not immediately evident. Short-term financial indicators may not fully include the wider advantages of having female directors, such as greater governance, improved risk management, and a bolstered reputation.

Finally, this study demonstrates that the ownership dispersion inside cooperatives does not have an impact on the financial success of those cooperatives. The degree of member involvement and participation might vary considerably. The financial success of cooperatives may be significantly influenced by the level of active member involvement and their contributions to decision-making and operations, rather than just the sheer number of members. Increased participation may enhance decision-making and optimise resource allocation. An expanded membership base might result in a broader range of demands and priorities among members. Managing these varied interests may be difficult and may weaken the emphasis on financial achievement. Smaller cooperatives may have an advantage in tailoring their strategy to better meet the unique requirements of their members.

This study is not without limitations. First, the data was collected based on content analysis. Hence, there are limited number of directors' characteristics that can be extracted from the content analysis. Future study can used other forms of data collection such as the questionnaire. The questionnaire will be used to collect data relating to the directors' characteristics. This instrument is necessary since the annual reports of the cooperatives are not readily available to the public and therefore, will not allow the researchers to determine the characteristics of the directors in the annual report. The second limitation is the number of data collected in this study. Increasing the sample may be able to increase the generalisability of the findings of such study.

This study makes a timely contribution to the understanding of financial performance from the perspective of cooperatives which can assist the regulators to improve existing guidelines and strategies. In addition, the findings of this study would provide empirical evidences on the relationships between the directors' characteristics and financial reporting of the cooperatives and subsequently, adds to the existing accounting literature.

REFERENCES

Abdullah, S.N., Aziz, A., Naz, F., Zahra, K. (2024), Board independence, women directors and firm performance in Malaysian small-cap firms. Journal of Social Economics Research, 11(2), 228-249.

Adams, R.B., Ferreira, D. (2009), Women in the boardroom and their impact on governance and performance. Journal of Financial Economics, 94(2), 291-309.

Al-Faryan, M.A.S. (2024), Agency theory, corporate governance and corruption: An integrative literature review approach, Cogent Science Sciences, 10(1), 2337893.

Al-Gazzar, H.M., Khlefa, Y. (2024), Corporate board gender diversity and corporate financial: A literature review. Journal of Management Research, 42(2), 1-27.

Beranova, M., Basovnikova, M. (2011), Components of the financial performance of agricultural enterprises. Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunesis, 59(7), 57-68.

Besar, S.S.N.T., Ali, M.M., Ghani, E.K. (2017), Examining upper echelons managers' characteristics on financial restatements. Journal of International Studies, 10(4), 179-191.

Buchdadi, A.D., Suherman, S., Mahfirah, T.F., Usman, B., Kurniawati, H. (2023), An assessment of female executives' influence on bank performance in Indonesia based on critical mass theory. International Journal of Management and Sustainability, 12(1), 26-43.

Bureau of Labour Statistics. (2022), Women in the Labor Force: A Databook, BLS Reports. Available from: https://www.bls.gov/opub/reports/womens-databook/2021/home.htm

Coles, J.L., Daniel, N.D., Naveen, L. (2008), Boards: Does one size fit all? Journal of Financial Economics, 87(2), 329-356.

Cooperative Societies Act. (1993), The Commissioner of Law Revision, Malaysia.

Dalton, D.R., Daily, C.M., Johnson, J.L., Ellstrand, A.E. (1999), Number of directors and financial performance: A meta-analysis. Academy of Management Journal, 42(6), 674-686.

Dang, C., Li, Z., Yang, C. (2018), Measuring firm size in empirical corporate finance. Journal of Banking and Finance, 86(1), 159-176.

Demsetz, H., Lehn, K. (1985), The structure of corporate ownership: Causes and consquences. Journal of Political Economy, 93(1), 1155-1177.
Eisenberg, T., Sundgren, S., Wells, M.T. (1998), Larger board size and decreasing firm value in small firms. Journal of Financial Economics, 48(1), 35-54.
El Dessouky, N.F. (2023), Post COVID-19: The effect of virtual workplace practices on social sustainable development policy. International Journal of Public Policy and Administration Research, 10(1), 1-13.
Francoeur, C., Labelle, R., Sinclair-Desgagn, B. (2008), Gender diversity in corporate governance and top management. Journal of Business Ethics, 81(1), 83-95.
García-Sierra, J., Sánchez Castillo, D. (2023), Women in management: Decision-making process under psychosocial pressing. Journal of Management World, 2023(3), 29-38.
Gorman, L., Ward, A. (2020), The Hampel Report, Encyclopedia of Sustainable Management. Germany: Springer Nature.
Hambrick, D.C., Mason, P.A. (1984), Upper echelons: The organisation as a reflection of its top managers. Academy of Management Review, 9(2), 193-206.
Haq, M., Ali, A., Ahmad, I., Sajjad, W. (2023), Religiosity, gender attitudes and women's labor market participation. Nurture, 17(1), 29-39.
Hraeja, R.A. (2021), Evaluating the financial performance of public sector units using the traditional budgeting perspective. Akkad Journal of Contemporary Accounting Studies, 1(3), 182-195.
Inneh, E.G., Ayoola, T.J., Olasanmi, O.O., Fakunle, I.O., Ologunde, O.A. (2024), Does the strength of women in the upper echelon influence earnings quality? The application of critical mass theory. International Journal of Applied Economics, Finance and Accounting, 18(2), 270-281.
Khan, R., Xinxin, J., Kong, Y., Cobbold, E.Y. (2020), Socio-economic factors of empowerment in developing countries. Asian Journal of Economics and Empirical Research, 7(2), 159-170.
Kramer, V.W., Konrad, A.M., & Erkut, S., & Hooper, M.J. (2006), Critical mass on corporate boards: Why three or more women enhance governance, Wellesley, MA: Wellesley Centers for Women.
Kiel, G.D., Nicholson, G. (2003), Board composition and corporate performance: How the Australian experience informs contrasting theories of corporate governance. Corporate Governance: An International Review, 11(3), 189-205.
Letendre, L. (2004), The dynamics of the boardroom. Academy of Management Perspectives, 18(1), 101-104.
Letting, N.K., Aosa, E., Machuki, V. (2012), Board diversity and performance of companies listed in Nairobi Stock Exchange. International Journal of Humanities and Social Science, 11(2), 172-182.
Lipton, M., Lorsch, J. (1992), A modest proposal for improved corporate governance. Business Lawyer, 59(1), 59-77.
Mace, M.L. (1971), Directors: Myth and Reality. Boston: Harvard Business School Press.
Mahazril, A.Y., Hafizah, H.A.K., Zuraini, Y. (2012), Factors affecting cooperatives' performance in relation to strategic planning and members' participation. Procedia-Social and Behavioural Sciences, 65(1), 100-105.
Mat Jusoh, Y.H., Abdullah, M (2019), Audit committee of cooperatives in Malaysia: Level of competency. e-Academia Special Issue GraCe, 8, 217-225.
Monteiro, A.P., Cepeda, C., da Silva, A.F. (2024), Does the workforce and sustainability reports strengthen the relationship between gender diversity and sustainability performance reporting? Administrative Sciences, 14(6), 105.
Morck, R., Shleifer, A., Vishny, R.W. (1988), Management ownership and market valuation: An empirical analysis. Journal of Financial Economics, 20(1), 293-315.
Nehemia, N.M., Lenkoe, N.M. (2023). The impact of South African culture on the work-life balance of women in leadership positions. International Journal of Innovative Research and Scientific Studies, 6(2), 212-226.
Ngamjan, P., Buranasiri, J. (2020), An investigation of the factors influencing the financial performance of agricultural cooperatives in Thailand. Pertanika Journal of Social Science and Humanities, 28(3), 2343-2358.
Othman, A., Mansor, N. & Kari, F. (2014), Assessing the performance of co-operatives in Malaysia: an analysis of co-operative groups using a data envelopment analysis approach, 20(3), 484-505.
Owolabi, S.A., Ajike, E., Awoyemi, A.T. (2022), Corporate governance and return on assets of selected cooperative societies. International Journal of Research Publications, 101(1), 140-180.
Palepu, K.G., Healy, P., Peek, E. (2016), Business analysis and valuation: IFRS edition. United States: Thomson Learning.
Paoloni, P., Lombardi, R., Principale, S. (2023), The impact of gender diversity on corporate social responsibility knowledge: Empirical analysis in European context. Journal of Knowledge Management, 27(9), 2484-2498.
Putri, K.W, Rustiarini, W., Dewi, P.S. (2021), Board characteristics and financial restatement. Journal of Finance and Banking, 25(3), 492-508.
Rajaratnam, S.D., Noordin, N., Said, M.S.A., Juhan, R., Mohd Hanif, F. (2009), Factors influencing the performance of cooperatives in Malaysia: A tentative framework. Malaysian Journal of Co-operative Management, 5(1), 43-63.
Rashid, A. (2018), Board independence and firm performance: Evidence from Bangladesh. Future Business Journal, 4(1), 34-49.
Rashid, A., De Zoysa, A., Lodh, S., Rudkin, K. (2010), Board composition and firm performance: Evidence from Bangladesh. Australasian Accounting, Business and Finance Journal, 4(1), 76-95.
Rose, C. (2007), Does female representation influence firm performance? The Danish evidence. Corporate Governance: An International Review, 15(2), 404-413.
Shleifer, A., Vishny, R.W. (2012), A survey of corporate governance. Journal of Finance, 52(2), 737-783.
Tekeste, B., Muthyalu, M., Azmera, G. (2014), A study on financial performance of multipurpose co-operative unions of Tigrai Region, Ethiopia. International Journal of Community and Co-operative Studies, 1(1), 15-26.
Uddin, S.N., Choudhury, J. (2008), Rationality, traditionalism and the state of corporate governance mechanisms: Illustrations from a less-developed country. Accounting, Auditing and Accountability Journal, 21(4), 1026-1051.
Ul-Haq, J., Arif, M., Hye, Q.M.A., Visas, H., Cheema, A.R. (2023), Unleashing the potential: Exploring the relationship between trade liberalization and female labor force participation in Pakistan. Nurture, 17(2), 60-68.
Vito, J.S., Trottier, K. (2022), Literature review on corporate governance mechanisms: Past present, and future. Accounting Perspectives, 21(2), 207-235.
Yammeesri, J., Herath, S. (2010), Board characteristics and corporate value: Evidence from Thailand. Corporate Governance, 10(3), 279-292.
Yermack, D. (1996), Higher market valuation of companies with a small board of directors. Journal of Financial Economics, 40(2), 185-211.
Zelhuda, S., Abdul G.I., Suraya, M., Md Faruk, A. (2017), Determinants of agricultural cooperative performance using financial ratio. International Journal of Business and Technopreneurship, 7(3), 385-396.