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GENDER DIVERSITY, FINANCIAL EXPERTISE, CEO DUALITY AND FIRM PERFORMANCE: EVIDENCE FROM INDONESIAN PUBLIC LISTED COMPANIES

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ABSTRACT

This study aims to examine gender diversity, financial expertise, CEO duality on company performance in Indonesia. The author uses panel data testing with three years starting from 2018 - 2020 using STATA software. Panel data testing was carried out by conducting three tests: common effect model, fixed-effect model, and random effect model, including the model selection test, namely the Chow test, the Hausmann test, and the Breusch pagan LM test. The author also tested by conducting factor analysis with principal component analysis to carry out a linear transformation to change from most of the original variables used (ROA & ROE), and make them correlated into a new set of variables (firm performance). The results of this study conclude that the gender diversity variable has no effect on firm performance, but the variables of financial expertise and CEO duality affect firm performance.

Keywords : *Gender Diversity, Financial Expertise, CEO Duality, Firm Performance, Principal Component Analysis.*

ABSTRAK

Penelitian ini bertujuan untuk meneliti keragaman gender, keahlian bidang finansial, dan dualitas CEO terhadap kinerja perusahaan di Indonesia. Peneliti menggunakan pengujian data panel dengan tiga tahun mulai dari 2018 - 2020 menggunakan software STATA. Pengujian data panel dilakukan dengan melakukan tiga tes: model efek umum, model efek tetap, dan model efek acak, termasuk tes pemilihan model, yaitu tes Chow, tes Hausmann, dan tes LM pagan Breusch. Penulis juga menguji dengan melakukan analisis faktor dengan analisis komponen utama untuk melakukan transformasi linier untuk berubah dari sebagian besar variabel asli yang digunakan (ROA & ROE), dan membuatnya berkorelasi menjadi serangkaian variabel baru (kinerja perusahaan). Hasil penelitian ini menyimpulkan bahwa variabel keragaman gender tidak berpengaruh pada kinerja perusahaan, tetapi variabel keahlian bidang keuangan dan dualitas CEO mempengaruhi kinerja perusahaan.

Kata Kunci : Keragaman Gender, Keahlian Bidang Keuangan, Dualitas CEO, Kinerja Perusahaan, Principal Component Analyst.



Introduction

The impact of the characteristics of the board of directors on company performance has received significant attention in the economic and financial literacy in recent times were increased research on this has been motivated by the cases of major financial scandals that occurred in the United States such as the cases of World com and Enron. Current global business practices, pay more attention to corporate governance in which indicators of the board of directors' characteristics are the most crucial part (Shukeri *et al.*, 2012). However, the problem that arises is whether the board's characteristics will affect the company's performance is still a question today. In Indonesia, several companies are operating successfully. However, some companies experience losses while macro and political conditions were considered constant. If viewed from the internal company, we can see the problem assumptions that cause the company to experience a loss or a poor firm performance. It was suspected that board characteristics play a role in the decision-making process and company operations. The characteristics of the board in this study are to use gender diversity, financial specialization, and CEO duality.

Several studies have shown that gender diversity can influence firm performance. Research results from Lückerath-Rovers *et al.* (2013) show that female directors' performance is better than the male gender in companies in the Netherlands. Research by Agyemang-Mintah *et al.* (2019) show that the presence of women on the board of directors of financial institutions in the UK has a positive and significant impact in the moments before the crisis in 2000 to 2006; however, after the financial crisis, it shows that the presence of female gender on the board of directors has no significant effect on company performance. Research by Isidro *et al.* (2015) shows that a more excellent gender representation of women on corporate boards in Europe can indirectly increase corporate value and company performance. Research conducted by Arayssi *et al.* (2016) also shows that the presence of women on the board of directors positively affects the company's risk and performance by promoting corporate investment through their social media. Research conducted by Kılıç *et al.* (2016) also shows that gender diversity has a relationship with company performance in Turkey even though the numbers are still relatively small. Research conducted by Solakoglu *et al.* (2016) shows that gender diversity affects companies' financial performance in the financial sector in Turkey.

In contrast to the results of other studies, according to Shukeri *et al.* (2012) that there is no relationship between gender diversity and CEO duality on company performance. Then research conducted by Darmadi (2013b)

shows that the representation of female gender directors' performance is not related to company performance. Based on the findings, it is also concluded that relatively small companies tend to be controlled by families regardless of gender. On the other hand, large companies provide a more significant opportunity to have female board members. The results of research by Hogan *et al.* (2019) concluded that gender and ethnic diversity have a lower impact on company performance of real estate companies.

Previous research has also examined the effect of financial specialization on firm performance. Research results from Darmadi (2013a), Rubin (2017), Sun *et al.* (2013), and Sun *et al.* (2015) show that directors who specialize in finance affect company performance. According to the results of their research, a BOD, CFO (chief financial officer), finance manager, or accounting manager who has expertise in finance or accounting such as study experience, practitioners, and CPA licenses will have an impact on company performance through financial analysis and appropriate decision making so that the increase in company performance can increase the earnings per share of the company.

The research results related to the impact of CEO duality on company performance (Hsu *et al.*, 2019; Rutledge *et al.*, 2016; Shrivastav *et al.*, 2016). They found that there is a negative relationship between CEO duality and company performance. By including the gender diversity variable, financial specialization and CEO duality are expected to become crucial corporate governance mechanisms that determine whether the company's performance is good or bad. However, there are also previous research results that show that CEO duality has a positive effect on company performance, where CEO duality can increase the resources needed by the company to improve company performance (Chang *et al.*, 2019; Duru *et al.*, 2016; Wijethilake *et al.*, 2019).

Can gender characteristics have such a significant impact on the organization that it improves performance?, Finkelstein *et al.* (1996) suggest two reasons why the board of directors' composition can affect the performance of a company. First, the board of directors has the most significant influence on strategic decision making in a company. Second, the board of directors also has a supervisory role in the company's operations, representing shareholders where they must respond quickly and appropriately to takeover threats and monitor the company's overall value. Given that each board member jointly determines the decision making on the board, the composition of the board of directors can affect the performance of a company.

The illustrate of diversity in the context of corporate governance is made up of the board members' composition and the combination of their qualities, characteristics of the board

members, and the different skills of each board member related to how the board member work (Van der Walt *et al.*, 2003). Therefore, the sex of board members is only one part of the diversity characteristic. This study only focuses on gender because gender is the most easily mapped or distinguished demographic characteristic compared to other characteristic indicators such as age, nationality, education, or cultural background.

Brown *et al.* (2004) argue that if good corporate governance does not result in increased performance, then the big question that arises is who occupies the company's board of directors? or how the board has no practical value in operating the company? Furthermore, does appoint women as councils have any effect, or is it just a symbolic meaning? So research on the existence of women on the board of directors is directly related to aspects of corporate governance, including the importance of a good relationship between management with directors and stakeholders, as suggested by stakeholder theory (Donaldson *et al.*, 1991) and resource dependency theory (Nienhüser, 2008; Salancik *et al.*, 1980).

Resource dependency theory considers the board on the company as an essential link between the internal company and the environment outside the company (external) and external resources on which the company depends on it. Using the board of directors as a stakeholder engagement mechanism will provide four advantages for the company (Nienhüser, 2008; Salancik *et al.*, 1980): first, it can provide useful information for the organization; second, able to provide a channel for communication purposes; third, the linkage is an essential step in obtaining commitment support from important environmental or external elements; and fourth, the linkage has value in legitimizing an organization. Based on the explanation of the theory and statement above, the research hypothesis proposed is **H₁**: Gender diversity on the board positively affects firm performance.

The next theory used in this study is to use the resource-based view (RBV) theory. Through RBV, companies can build sustainable competitive advantage through heterogeneous resources (J. B. J. J. o. m. Barney, 2001; Rubin, 2017). The RBV concept emphasizes that a company's competitive advantage based on resources and capabilities will last longer in running its business, rather than merely relying on product/market positioning. Resources in question are company resources in financial, human (labor), physical facilities, and knowledge. The RBV concept relies heavily on resources from unique, valuable, and difficult to replicate to create a competitive advantage.

In the RBV concept, the focus of attention is internal resources. According to J. B. J. J. o. m. Barney (2001), the success of an organization is determined by internal resources, which are grouped into three categories, namely:

1. Physical resources, including factory, equipment, location, technology, and raw materials.
2. Human resources, including all employees, along with their training, experience, intelligence, knowledge, skills, and abilities.
3. Organizational resources, including company structure, planning processes, information systems, patents, trademarks, copyrights, databases, and so on.

Based on the RBV theory above, namely that human resources in a professional and complete organization where the individual has the expertise, intelligence, knowledge, and experience with their work, will result in better productivity to improve organizational performance and execute various problems an objective. Not only that, but the policies issued are also better and objective because of the impact of the expertise of each individual who has better resources.

Managers who are at the top of their positions may be hired because of their superior abilities. According to Bhagat *et al.* (2010), this ability consists of characteristics that can be observed directly (for example, seen from their educational background and work experience) and can also be seen from characteristics that cannot be observed directly (for example, their leadership style, and skills). They argue that because the characteristics that cannot be observed directly are indicators that are relatively difficult to identify and measure, the characteristics that can be observed directly play an essential role in this. Hambrick *et al.* (1984) also state that observable characteristics are considered valid proxies for their cognitive orientation, values, and knowledge base, which can significantly influence decision-making and managerial behavior. Therefore, the level of education is often seen as a good proxy for measuring human capital, knowledgebase, or intellectual competence (Darmadi, 2013a; Hambrick *et al.*, 1984; Rubin, 2017; Sun *et al.*, 2015; Sun *et al.*, 2013). With this theory and the results of previous research, the second hypothesis proposed in this study is **H₂**: Financial specialization on the board positively affects firm performance.

The final theory used in this study is agency theory, which argues that the board of commissioners must be independent of the board of directors and management so that interest speculation does not occur (Brown *et al.*, 2004; Chang *et al.*, 2019; Donaldson *et al.*, 1991; Duru *et al.*, 2016; Hsu *et al.*, 2019; Jensen *et al.*, 1976; Shrivastav *et al.*, 2016). If there is a violation related to independence, it will harm company performance. This is because the board of commissioners, who also acts as the board of directors, can weaken the board of commissioners' potential to monitor the board of directors and management effectively and efficiently.

Conversely, there are several opinions from various organizational and management theorists who argue that CEO duality can also improve company performance based on the stewardship theory as described by J. Barney (1990) and Donaldson *et al.* (1991), whose theory is also part of the theory. The agency where this theory argues that management is not motivated by individual goals, but instead aimed at joint outcomes for the organization's benefit. This theory assumes that there is a strong relationship between individual goals and organizational success. The success of an organization is described by maximizing the interest of the group between principals and management. By maximizing the fulfillment of these groups' interests will maximize the interests of individuals in each of these groups of organizations.

Stewardship theory argues that non-financial factors such as intrinsic satisfaction from a company's achievements, external recognition of company performance, respect or appreciation from external parties and reputation for the company will motivate CEOs to increase the value of their companies by using a combination of identities with status as directors to manage company resources so much better. This is also consistent with the expansion or theory development of the resource dependency theory. Salancik *et al.* (1980) emphasized that the policies provided by dual leadership can increase the CEO's ability to react more quickly and respond to various symptoms in dynamic business processes and secure resources essential for the success of the company. Taken together, stewardship and resource dependency theories predict a positive relationship between CEO duality and firm performance. This has also been supported by the results of research conducted by Chang *et al.* (2019), Duru *et al.* (2016), Hsu *et al.* (2019), Shrivastav *et al.* (2016) dan Wijethilake *et al.* (2019). So based on the above statement, the third hypothesis proposed in this study is **H₃**: The duality of the CEO on the board positively affects firm performance.

Method

This study uses secondary data obtained from the Indonesia Stock Exchange (IDX). The data used are summary report data of listed companies and company annual reports for three years, for 2018 - 2020. The selection of years is based on the limit of data information availability. Disclosure of financial statements listed in the Summary Report of Listed Companies on the Indonesia Stock Exchange (IDX) in 2020. The study population was all companies listed on the Indonesia Stock Exchange for the non-financial services sector based on 2020. The non-financial services sector was chosen because of information, and The measurement criteria of financial reporting are easy to identify. In this study, the sample selection method uses a purposive sampling technique where the researcher selects a sample from the population-based on specific criteria below.

Table 1: Purposive Sampling

Criteria	Total
All non-financial service sector companies listed on the Indonesian stock exchange from 2018 to 2020	327 companies for three years
Companies that have not suffered losses for approximately three consecutive years	148 companies for three years
	981
	444

The dependent variable used in this study is the company's performance as measured using ROE and ROA (Duru *et al.*, 2016; Hogan *et al.*, 2019; Hsu *et al.*, 2019; Kılıç *et al.*, 2016; Lückerath-Rovers *et al.*, 2013; Rutledge *et al.*, 2016; Shukeri *et al.*, 2012; Solakoglu *et al.*, 2016). The test conducted in this study is different from how to test previous research; the dependent variable used in this study is the firm performance variable obtained by testing the principal component analyst (PCA) of return on assets (ROA) with return on equity (ROE). The use of the PCA method is a statistical technique that linearly changes the form of a set of original variables into a smaller, uncorrelated collection of variables representing information from the original set of variables (Dunteman, 1989). Meanwhile, according to Tabachnick *et al.* (2001), PCA is a statistical technique applied to a set of variables when the researcher is interested in finding which variables in the group are related to others. The ROE value is obtained by dividing the value of the company's net income by the value of the company's equity. The ROA value is obtained by dividing the value of its net income by the value of its total assets. The statistical analysis test tool used in this study is to use STATA 15.

Table 2: Variables Description

Variable Name	Variable Measurement
Firm Performance	: Obtained by testing the principal component analyst of return on assets (ROA) and return on equity (ROE) $ROA = \frac{EAT}{Total\ Asset} \quad ROE = \frac{EAT}{Equity}$
Gender Diversity (X_1)	: Composition of the number of gender women who serve as directors in the company's board of directors.
Financial Expertise (X_2)	: Dichotomy, score one if there is a director with a CPA status or a degree in finance/accounting or who has taken a master's education, 0 is the opposite.
CEO Duality (X_3)	: Dichotomy, score one if CEO doubles as BOD, value 0 otherwise.
Firm Size (X_4)	: Log natural value of the company's total assets.

Based on the table above, the independent variables used in this study are gender diversity, financial expertise, and CEO duality. The Gender diversity variable is measured using the proportion of female directors to the total number of directors (Agyemang-Mintah *et al.*, 2019; Arayssi *et al.*, 2016; Darmadi, 2013b; Hogan *et al.*, 2019; Isidro *et al.*, 2015; Kılıç *et al.*, 2016; Lückerath-Rovers *et al.*, 2013; Shukeri *et al.*, 2012; Solakoglu *et al.*, 2016). A dichotomy or

dummy variable measures the financial expertise variable and CEO duality variable (Chang *et al.*, 2019; Darmadi, 2013a; Duru *et al.*, 2016; Hsu *et al.*, 2019; Rubin, 2017; Rutledge *et al.*, 2016; Shrivastav *et al.*, 2016; Sun *et al.*, 2015; Sun *et al.*, 2013; Wijethilake *et al.*, 2019). The control variable used in this study is the company's size, which is proxied by the log value of the company's total assets. This variable was chosen because relatively large companies have more complex corporate governance than relatively small companies.

The following is an equation model that is formed:

$$\text{Firm Performance}_{i,t} = \beta_{0i,t} + \beta_1 \text{GD}_{i,t} + \beta_2 \text{FE}_{i,t} + \beta_3 \text{CD}_{i,t} + \beta_4 \text{FZ}_{i,t} + \epsilon_{i,t} \dots\dots\dots (1)$$

Firm Performance_{i,t} :

Principal component analyst result of the company i in year t

- $\beta_{0i,t}$: intercept
- $\text{GD}_{i,t}$: Gender Diversity of the company i in year t
- $\text{FE}_{i,t}$: Financial Expertise of the company i in year t
- $\text{CD}_{i,t}$: CEO Duality of the company i in year t
- $\text{FZ}_{i,t}$: Firm Size of the company i in year t
- $\epsilon_{i,t}$: Error

Result and Discussion

Table 3 shows the results of descriptive statistics from the balanced panel data for the research sample of 444 with 148 individuals for three years. The maximum value of the ROE variable is 1.849665, the minimum value is 0.0003745, and the mean value is 0.2585887. The mean value of the gender diversity variable is 0.7339865, and the mean financial expertise is 0.1486486, mean CEO duality is 0.1554054 with the same maximum and minimum value between the three variables.

Table 3: Statistic Descriptive

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	444	0.258589	0.148477	0.000375	1.849665
ROA	444	0.488603	0.141069	0.019353	1.360024
Gender Diversity	444	0.733987	0.269652	0	1
Financial Expertise	444	0.148649	0.356143	0	1
CEO Duality	444	0.155405	0.362699	0	1
Firm Size	444	28.63635	1.643246	24.56705	33.13405

The first step in testing the results in this study is testing the factor analysis with principal component analysis, these tests' results can be seen in Table 4 below.

Table 4 Principal Components/Correlation

Component	Eigenvalue	Proportion	Cumulative
Comp1	1.9319	0.9659	0.9659
Comp2	0.0681041	0.0341	1.0000
Rho score	0.9659		
Scoring Coefficients			
variable			Comp1
ROA			-0.7071
ROE			0.7071

It can be seen that only the first component/factor meets the criteria for eigenvalue (variant) of more than 1, which is 1.9319 and has a cumulative proportion of 0.96 (96%) of the total diversity. So it is concluded that to reduce the variable, it is enough only to use one component/factor. Based on the table above results, it can also be seen that the Rho value is 0.9659, meaning that ROA and ROE can explain 96% with the equation formed from the component values on the eigenvectors as follows: $-0.7071roa + 0.07071roe$.

After obtaining the value of the firm performance variable obtained from the results of the principal component analyzer, the next step is to perform a panel data regression test by testing the common effect model, fixed-effect model, and random effect model along with the model selection test, namely the chow test, the Hausmann test, and the Breusch pagan LM test. Table 5 below shows the panel data model selection test and table 6 shows the results of the panel data test.

Table 5: Panel Data Model Selection Test

Information		Score	Conclusion
Chow test	F score	3.8100	FEM
	prob	0.0000	
Hausmann test	Chi square	0.5000	REM
	prob	0.4779	
Breusch Pagan LM test	Chi bar square	100.1000	REM
	prob	0.0000	

Based on the results of the table above, it is concluded that the selected model from the chow test results is to use a fixed-effect model (Prob < 0.05). Then the Hausmann test concludes that the chosen model is the Random Effect Model (Prob > 0.05). The last model selection test is the Breusch pagan LM test, concluding that the panel data regression model was chosen the Random Effect Model (Prob < 0.05).

Table 6: Panel Data Regression Results

	Common Effect Model (Coefficient/Prob)	Fixed Effect Model (Coefficient/Prob)	Random Effect Model (Coefficient/Prob)
Cons / intercept	2.16124*	-3.820021	1.960588
Gender diversity	-0.5151127**	-	-0.5146454
Financial expertise	0.4834614***	-	0.4723274*
CEO duality	0.6898722***	-	0.6793212***
Firm Size	-0.0685224	0.1333976	-0.0614124
F	5.44***	4.02***	2.680815**
Adj R-Squared	0.0386	0.0003	0.0472
Number of Obs	444	444	444
Chow test		3.81***	
Hausmann test (chi ²)			0.50
Breusch pagan LM test (chibar ²)			100.10***

*** = significant at the level 0,01 (1%)

** = significant at the level 0,05 (5%)

* = significant at the level 0,1 (10%)

The table above shows the results of the three-panel data models, namely the common effect model, fixed-effect model, and random effect model, where of the three models that researchers use to conclude panel data regression testing is from the random effect model based on the conclusion of the Breusch pagan LM test.

The coefficient value of the gender diversity variable is -0.5146454, but it is not significant. The variable financial expertise has a coefficient value of 0.4723274, which shows a positive influence on the firm performance variable. Then, the CEO duality variable's coefficient value is 0.6793212, which shows a positive influence on the firm performance variable. The F score of the random effect model test result is 2.680815, which is significant at the level of 0.01. The Adj R² score shows a value of 0.0472, which means that the contribution of modeling in this study is only 4.47%; the rest is influenced by other variables outside the model used in this study.

Conclusion

Then for each of the independent variables used in this study, only two independent variables, including the control variable used in this study where these two variables do not affect firm performance, namely the gender diversity variable as the primary variable and the firm size variable as the control variable. The results of the research, which states that gender diversity does not affect firm performance, support the research that has been done previously by Hogan *et al.* (2019), Darmadi (2013b) and Shukeri *et al.* (2012). The results

of this study also do not support the research results of Lückérath-Rovers *et al.* (2013), Agyemang-Mintah *et al.* (2019), Isidro *et al.* (2015), Arayssi *et al.* (2016), Kılıç *et al.* (2016), and Solakoglu *et al.* (2016). This finding explains that the phenomenon of gender diversity is not appropriate in Indonesia. Many companies in Indonesia, especially the private sector, have directors and boards of commissioners classified as a family or that private companies in Indonesia are family companies. So the appointment of a leader or position tends to be a family decision and not because of the achievements of internal parties or seniors in the company.

The variable financial expertise has a significant positive effect on the firm performance variable with a coefficient value of 0.4723274. These results support previous research conducted by Darmadi (2013a), Rubin (2017), Sun *et al.* (2013), and Sun *et al.* (2015). CFOs from private industry or public companies have a professional responsibility to report their company's financial results accurately to increase profitability and stakeholder trust. The CFO that can help improve a company's fiscal performance through company improvement and efficiency is the company's desire for its human resources, through careful and precise analysis to provide fast and correct decisions in the decision-making process. So company leaders must consider hiring a CFO with quality and expertise in finance and accounting, such as practitioner experience and CPA license. Based on the RBV theory concept, human resources in an organization where there are professionals who have the expertise, intelligence, knowledge, and experience with their work will result in better productivity to improve organizational performance and carry out various problems objectively. Not only that, but the policies and decisions issued are also better and more objective because of the impact of the expertise of each individual who has better resources.

The results of this study also explain that the CEO duality variable has a significant positive effect on the firm performance variable. These results support the research that has been done previously by Chang *et al.* (2019), Duru *et al.* (2016), and (Wijethilake *et al.*, 2019) and does not support the results of research conducted by Hsu *et al.* (2019), Rutledge *et al.* (2016), and Shrivastav *et al.* (2016). From the results of this study, it is clear that there are multiple positions between the board of directors and the board of commissioners. This dependence occurs because the type of company is a family company in which the appointment of directors is also based on family. With this happening, it is expected that they will be able to provide strategic decisions and policies that will increase the company's competitive advantage to have a positive impact on the company's performance. The policy given by dual leadership can increase the CEO's ability to react more quickly and respond to various symptoms in dynamic business processes more quickly to secure resources that

are critical to the success of the company. The results of this study are relevant to the stewardship theory and the RBV theory used to predict a positive relationship between CEO duality and company performance.

Apart from the contributions made to this study, there are several limitations to the study. The dependent variable in this study was carried out by testing the principal component analyzer first by using only two variables, namely ROE and ROA. So for further research, to include additional variables in the PCA test. Then the next research is expected to try to measure the dummy variable to measure the gender diversity variable.

Referensi

- Agyemang-Mintah, P., Schadewitz, H. J. I. J. o. A., & Management, I. (2019). Gender diversity and firm value: evidence from UK financial institutions.
- Arayssi, M., Dah, M., Jizi, M. J. S. A., Management, & Journal, P. (2016). Women on boards, sustainability reporting and firm performance.
- Barney, J. (1990). The debate between traditional management theory and organizational economics: substantive differences or intergroup conflict? *Academy of Management Review*, 15(3), 382-393.
- Barney, J. B. J. J. o. m. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. 27(6), 643-650.
- Bhagat, S., Bolton, B. J., & Subramanian, A. (2010). CEO education, CEO turnover, and firm performance. *Available at SSRN 1670219*.
- Brown, L. D., & Caylor, M. L. J. A. a. S. (2004). Corporate governance and firm performance.
- Chang, K., Lee, J., & Shim, H. J. I. R. o. F. (2019). CEO duality and firm performance: Does economic policy uncertainty mediate the relation? , 19(4), 877-891.
- Darmadi, S. (2013a). Board members' education and firm performance: evidence from a developing economy. *International Journal of Commerce Management*.
- Darmadi, S. (2013b). Do women in top management affect firm performance? Evidence from Indonesia.
- Donaldson, L., & Davis, J. H. J. A. J. o. m. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. 16(1), 49-64.
- Dunteman, G. H. (1989). *Principal components analysis*: Sage.
- Duru, A., Iyengar, R. J., & Zampelli, E. M. J. J. o. B. R. (2016). The dynamic relationship between CEO duality and firm performance: The moderating role of board independence. 69(10), 4269-4277.
- Finkelstein, S., & Hambrick, D. C. (1996). *Strategic leadership: Top executives and their effects on organizations*: Citeseer.

- Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of management review*, 9(2), 193-206.
- Hogan, R., & Huerta, D. J. M. F. (2019). The impact of gender and ethnic diversity on REIT operating performance.
- Hsu, S., Lin, S.-W., Chen, W.-P., Huang, J.-W. J. T. N. A. J. o. E., & Finance. (2019). CEO duality, information costs, and firm performance. 101011.
- Isidro, H., & Sobral, M. J. J. o. B. E. (2015). The effects of women on corporate boards on firm value, financial performance, and ethical and social compliance. 132(1), 1-19.
- Jensen, M. C., & Meckling, W. H. J. J. o. f. e. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. 3(4), 305-360.
- Kılıç, M., & Kuzey, C. J. G. i. M. A. I. J. (2016). The effect of board gender diversity on firm performance: evidence from Turkey.
- Lückerath-Rovers, M. J. J. o. M., & Governance. (2013). Women on boards and firm performance. 17(2), 491-509.
- Nienhüser, W. J. m. r. (2008). Resource dependence theory-How well does it explain behavior of organizations? , 9-32.
- Rubin, S. J. (2017). The Relationship Between a CFO's Financial Expertise and Firm Profitability.
- Rutledge, R. W., Karim, K. E., Lu, S. J. J. o. A. B., & Economics. (2016). The effects of board independence and CEO duality on firm performance: evidence from the NASDAQ-100 index with controls for endogeneity. 18(2).
- Salancik, G. R., & Pfeffer, J. J. A. o. M. j. (1980). Effects of ownership and performance on executive tenure in US corporations. 23(4), 653-664.
- Shrivastav, S. M., & Kalsie, A. J. I. J. o. C. G. (2016). The relationship between CEO duality and firm performance: An analysis using panel data approach. 15(2).
- Shukeri, S. N., Shin, O. W., & Shaari, M. S. J. I. B. R. (2012). Does board of director's characteristics affect firm performance? Evidence from Malaysian public listed companies. 5(9), 120.
- Solakoglu, M. N., & Demir, N. J. M. D. (2016). The role of firm characteristics on the relationship between gender diversity and firm performance.
- Sun, L., Johnson, G., Rahman, F. J. I. J. o. L., & Management. (2015). CFO financial expertise and corporate governance concerns.
- Sun, L., Rakhman, F. J. I. J. o. L., & Management. (2013). CFO financial expertise and corporate social responsibility.
- Tabachnick, B. G. J. B. A., & et, B. B. (2001). & Fidell, LS (2001). Using multivariate statistics. 31, I.

-
- Van der Walt, N., & Ingley, C. J. C. G. A. I. R. (2003). Board dynamics and the influence of professional background, gender and ethnic diversity of directors. *11*(3), 218-234.
- Wijethilake, C., & Ekanayake, A. J. S. R. J. (2019). CEO duality and firm performance: the moderating roles of CEO informal power and board involvements.