

# **Board Diversity and Firm Performance: Evidence from Indonesia**

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# **Abstract**

This study aims to examine the impact of b oard diversity of company's board of commissioner and board of director on the financial performance. This study was motivated by two factors. Firstly, there is limited number of studies associated to board diversity existence on company performance, especially in Indonesia. Secondly, the diverse board is not mandatory for companies in Indonesia as developing country, which means there is no obligation for companies to make a diverse boardroom. In this study, the board of diversity consist of board gender, board nationality and board age, while the firm performance is proxied by Return on Asset, Return on Equity and Tobin's Q. This study used purposive sampling and the samples comprise all manufacturing and banking companies listed on Indonesia Stock Exchange during 2016-2017. By using independent t-test, this study found only the existence of foreign board members for both Board of commissioner and Board of Director which has impact on company performance. Meanwhile, the board gender and board age have inconsistent result on company financial performance. This study provides new insight for regulator and practitioner on the need of diverse board as a way to improve performance and enable them to manage the complexity within the company..

Keywords: board of commissioner, board of director, gender, performance

#### **INTRODUCTION**

Board diversity has become a global phenomenon in today's business entities. As an emerging issue in Corporate Governance, board diversity becomes one of the important categories to set up the rules for the board composition. As the result, many companies are attracted to set the policies for diversity at the top management level. According to a research from Ernst and Young (2009), The board group with greater diversity have a tendency to perform better rather than a homogeneous groups. If it is managed properly it will help the management to produce more innovative business decisions (Catalyst, 2006). The companies with well-managed diversity can lead to more innovation, independence and good governance (Thomas and Elly, 1996). Numerous studies acknowledge that diverse board initiate strategic changes more effectively to increase the exchange of ideas and lead to better performance. Diverse board should represent a balanced composition of different background, value system and experiences.

Board diversity is becoming a focal point in several countries. Yet, the issue is still rarely address for developing economies. Many countries are attempt to promote equal opportunities in boardroom table. For example, Norway is the first country that has a gigantic promotion of gender diversity for women proportion in public companies which must consist 40% of the board members and it is applied since 2003. In the beginning of 2000, many scholars conduct studies to investigate the impact of diversity on company performance. In developed countries such as the US (Erhardt, Merbel and Shradel, 2003), Netherland (Diepen, 2015), Spain (Meca, Sanchez and Ferrero, 2014). There is also many researches done in developing countries such as Indonesia (Darmadi, 2011), Brazil (Fraga and Silva, 2012) and Nigeria (Ujunwa, Nwakoby and ugbam, 2012).

Researchers have identified the inconsistent result from prior researches. Such as a study from erthard et al. (2003) found board diversity measure in term of Ethnic and gender are positively associated with Return on Asset and Return on Equity which indicate to have an impact on overall organization. Meca et al. (2014) also reveal the same result for gender diversity which improve the performance while nationality have no impact and inhibits it. They indicate those result appeared cause by different background and human capital owned by women and foreign minorities. On the contrary a study conducted by Ujunwa et al. (2012) using panel data of 122 Nigeria firms conclude that board gender showed negative result on performance, meanwhile nationality and ethnicity are positively impact in predict the performance. The diverse result influence by weak corporate governance and unfavorable macroeconomic environment in Nigeria.

This study therefore aims to fill the gap and improve understanding associated with the impact of board diversity existence in company. Researchers was chose Indonesia to conduct the study, as the world fourth largest country by population and have rapid economic growth with the largest emerging market economies in recent years. This study is important because researchers seek to include the other aspect that differ from most prior studies and it is chosen for several reason. First, Indonesia adopted two tier board system for company board structure which means there is a separation between supervisory board and

management board as an organ that responsible for company as a whole. According to a study from Benzemar et al. (2013) indicate dual board is more effective and may create additional challenges associated with working relationship in both boards. Second, most of previous studies only focus on board gender as the aspect on their study, this study added more aspects such as board nationality and board age in order to gain more representative result of board diversity existence in company. Third, this study using ROA, ROE and Tobin's Q to measure the performance instead of just using one of them in order to observe the impact for each different measurement and to enrich the findings. Fourth, most studies have focused on measurement using tool such regression analysis, this study explore the performance measurement using Independent t-test, it aims to see how is the impact for company which have diversity and do not have diversity on their boardroom table. Five, this study investigate manufacturing and banking companies in Indonesia, as these two industries are growing rapidly in business activities and have the most crucial role in boosting economic growth in Indonesia.

#### THEORITICAL FRAMEWORK AND HYPOTHESIS

There are two theoretical foundation used to support this study that have been taken from economic and organization research. The theoretical foundation include are agency theory and resource dependence theory. The theoretical basis will explain in the following table.

Theoretical basis	Contribution
Agency theory	Berle and means (1932)
	Jensen and Meckling (1976)
	Fama and Jensen (1983)
Resource dependence theory	Emerson (1962)
	Pfeffer and Salancik (1978)

Agency theory focus on relationship between principal (shareholder) and agent (manager) that include delegating some authorities. The purpose of agency theory is to solve the principal-agent problem, where principal employ the agents to carry out their wishes and ensure the managers act in the best of the company. The reason is because they have specialized knowledge that can save the principal a lot of time. The agent knows more about the situation rather than principal. On the other side, it could be danger for the shareholder if the managers may not act in the shareholder's best of interest. The shareholders can solve this problem by establishing controls to limit the effect of the divergence of interest. The board of director and board of commissioner can bring a lot of skill into the organization. Usually the board member can be appointed from people who coming from different background and different experiences.

Resource dependency theory links the firm and its outside resources. It is a bridge between company and the outside resources. Company surely needs the resources from the outside. According to the rule of resource dependency, the boards can provide resources like information, capabilities, access to key constituents (e.g., suppliers, buyers, public policy) and capital to a firm that will decrease the uncertainty (Gales & Kesner, 1994). The organization's need to require resources and these leads to the development of exchange relationship or

network governance between organization. Resource dependency theory dictates and mandates that organization seeks to control those resources. The idea of Resource dependence theory is by hiring the boards where they have skill, abilities and knowledge which they bring in doing their job and in doing the business. Therefore, they are able to facilitate in dealing with uncertainty. The boards may have a lot of contacts with other companies and they are also able to connect companies together. Therefore, the boards are able to see which companies can collaborate, share resources, bring solution to the organization and to confront the uncertainty. The board members who coming from different background, have different experiences and point of view are really helpful to improve the decision making quality, to overcome the uncertainty as well as to improve their performance. Resource Dependence theory suggests that diversity in boardroom holds the potential to improve the information provided by the board to managers due to the unique information held by diverse directors (Ferrero et al. 2015). It is also suggest that board composition (i.e the number of proportion of insider and outsider) is very vital to a firm and if a firm only has fewer number of outsider on their boardroom table are less likely to be success (Gales & Kesner, 1994). Both agency theory and resource dependence theory are the pillars upon which to understand how a decision made by management ( Mudambi and Pedersen, 2007).

# **Board Gender**

Gender diversity is the most discussed topic lately. Since there are many countries already introduce quoted system for women representation on board(). The purpose is to reduce all forms of discrimination and increase the role of women in the economic field. Women become a consideration on board because they have several advantages for company performance. According to Catalyst (2006) the benefits such as; First, the presence of women on board can strengthen a company's ability to recruit and retain women and minorities, they also send a powerful message to the employees. Second, women usually have a different type of leadership so could help the board in term of decision making. Third, tapping into a broader pool of qualified candidates, diverse boards may enhance board independence and also help steer management toward more productive approaches in an increasingly diverse business environment. So, having women on board allows company to do something completely different.

Several studies already examine the effect of women representation on board and found inconsistent answer. Such as a study from Julizaerma and Zulkarnain (2007), they found a positive association exist between gender diversity and Firm performance. Meanwhile, a study from Darmadi (2011) finds there is a significant negative relationship on performance. He suggests a call for the encouragement of equal opportunity for all group of employees, including women, based on their competencies and contribution to the organization. A research from Shabbir (2018) using 705 Italian listed companies also reveal the presence of women on corporate board does not influence the firm performance since nearly two-third of Italian companies are family controlled.

A research from the Center for Governance Institution and Organization of the National University of Singapore (NUS Business School) Shown in 2012, a percentage of women on

board in Indonesia hits 11.6%. Although this number is not as big as other developed countries such as Norway (40%) and Europe (17%). yet Indonesia is leading in Asia. In addition Indonesia is mainly family control companies which make this study unique in some circumstances

In the light of above review, the following hypothesis offered is:

- H1a There is a significantly difference of performance between company that have women representation and not have women in Board of Commissioner
- H1b There is a significantly difference of performance between company that have women representation and not have women in Board of Director

# **Board Nationality**

The term of nationality diversity is quite though since every people have different views about the value of nationality. Yet, this issue is mostly discussed in many developed countries. There are several benefits by employ foreign nationals such as first, they are distinctly possible to bring various perspectives to bear on specific issues, as they draw upon their different life experiences (Estelyi and Nisar, 2016). Second, it may also produce competitive advantages to the firm in term of global networks, commitment to shareholder rights and managerial entrenchment avoidance (Oxelheim and Randoy, 2003). However, the existence of foreign nationality on boardroom may increase the probability of cross-cultural communication issue. It is because there is a probability of a communication breakdown among different group member, which may result in each member offering a radically different interpretation and suggestion of a problem situation (Estelyi and Nisar, 2016).

There is only small amount of previous research found related to this term, such as from Ujunwa et al. (2012) found that board nationality and board ethnicity are positive in predicting firm performance. It is supported by Estelyi and Nisar (2016) found diverse nationalities are positively and significantly associated with shareholder heterogeneity and the firm's international market operations. Meanwhile Darmadi (2011) found that foreign nationals have no influence on either accounting or market performances.

Nationality diversity can have a positive or negative impact according to those researches. It cannot firmly state the relationship between nationality diversity and firm performance since there are some advantages and disadvantages by the presence of foreign members on performance, so the second hypothesis of this study is:

- H2a There is a significantly difference of performance between company that have foreign members and not have foreign members in board of Commissioner.
- H2b There is a significantly difference of performance between company that have foreign members and not have foreign members in board of Director

# **Board Age**

Age diversity means different type of ages within a business environment. Age is demographic sub-variable which has non-direct affect to individual's behavior (Gibson, 1996). Age more likely to become a dominant factor in shaping someone's characteristics and become a consideration to increase company performance. Age also considered to represent the experience and risk appetite that a person has (Johnson et al. 2013). Each board member

has different age will bring different type of leadership and problem solving style to the boardroom and also it can improve efficiency and exchange of perspectives and information.

According to Platt and Platt (2012) older members have a lot of experience and wisdom to deal with situations that threaten companies and more often avoid the risk because they have more to play safe than innovating. While younger members tend to have higher abilities for new processes, lower willingness to accept the status quo, and less interest in a stable career (Cheng et al. 2010)

Until recently, Indonesia does not has any policy yet to regulate maximum and minimum age of board of commissioner and board of director. However, there is a The Regulation of Minister of Labor R.I Number: Per.02 / Men / 1993 About Normal Retirement Age and Limit of Maximum Pension Age For Participant Regulation of Pension Fund. Under the provisions of Article 2, paragraphs 1 and 2, the normal retirement age for the participants is 55 (fifty five) years. In the case that the worker is still employed by the Entrepreneur after reaching the age of 55 (fifty five), the maximum retirement age limit shall be 60 (sixty) years. However, these rules apply only to participants of the Pension Fund Regulations.

There are several studies that examine the relationship between age diversity and company performance. A research from Darmadi (2011), he used a sample of 169 Indonesia companies and finds that there is a significant positive influence between board member with the age less than 50 measured by Tobin;s Q and a significant negative influence using ROA. Engelen et al. (2012) found a hyperbolic relationship between age diversity and the performance of company in Netherland. This means that age diversity will increase company performance, but only until a certain point. From that point, more age diversity will decrease company performance. It is align with study from Dagson and Larsson (2011) which found that age diversity significantly affects firm performance if measured by ROA, while Tobin's Q shows the opposite. Diepen (2015) found a negative and non-linear relationship between directors from 41 till 50 years old on company performance which measured by ROA, ROE and Tobins Q. From the results of some previous researches, there are different conclusions to the financial performance. However, this study will refer to the previous research of Darmadi (2011) who conducts the research in 169 companies in Indonesia and finds that the proportion of the young members in the boardrooms of the Indonesian listed firms is relatively high. Thus, the hypothesis for this third study is:

- H3a There is a significantly difference of company performance between company that have young members and old members in Board of Commissioner
- H3b There is a significantly difference of company performance between company that have young members and old members in Board of Director

#### **RESEARCH METHOD**

This study was conducted in Indonesia and took manufacturing and banking industry listed in Indonesia Stock Exchange. We conduct Independent t-test to investigate diversity impact on company performance. The final data were analyzed using dummy variable. Where the presence diversity were marked as 1, while no presence of diversity on board were

marked as 0. The diversity existence include uch as presence of women, presence of foreign member and presence of young board member. In this study the age diversity was divided into two, the age from 55 years old and less is consider as young member and above 55 years old is consider as old member. Then, all the data will linked to the financial performance of each companies.

This study used secondary data obtained through the empirical data from company that is listed on the official website of Indonesia stock exchange (idx.co.id). Our initial data comprise 280 manufacturing companies and 86 banking companies. After exclude all incomplete data and data that used foreign currency, there were 136 manufacturing companies and 76 banking companies used for further study. The financial performance using in this study are Return on Asset (ROA), Return on Equity (ROE) and Tobin's Q.

#### **RESULT AND DISCUSSION**

**Table 1. Proportion of Diversity Exitence on Board** 

BOC	BOD		
Wo	men		
30%	62%		
49%	67%		
For	eign		
26%	30%		
28%	33%		
≤ 55 years old			
20%	70%		
14%	69%		
	30% 49% For 26% 28% ≤ 55 ye 20%		

In the table 1 showed the different proportion of diversity existence on the board. For Manufacturing companies, women representation is greater in board of director rather than board of commissioner. Align with foreign nationality member and young board member where greater percentage appear in board of director. Banking companies also reveal the same conclusion as manufacturing companies where diverity existence is greater in board of director rather than board of commissioner. It can be as an indication where board of director is more diverse than board of commissioner.

# **Normality Test**

Normality test has been done by using kolmogorov-smirnov and the aim is to see whether the data are normally distributed and the result shown below:

**Table 2. Normality Test Result** 

Companies	Unstandardized Residual					
Manufacturing Companies	ROA	ROE Tobin				
Kolmogorov-Smirnov Z	,736	1,246	,743			
Asymp. Sig (2-tailed)	,650 ,09		,639			
Banking Companies						
Kolmogorov-Smirnov Z	,610	,971	,970			
Aymp. Sig (2-tailed)	,851	,303	,304			

From the table above it can be concluded all the data are normally ditributed since all the data shown already met the requirement of kolmogorov-smirnov.

# **Hypothesis Testing**

# **Descriptive Analysis**

The descriptive analysis is used to describe the dimension of diverity investigated and the measurement. In this study, there are three dependent variables such as ROA, ROE and Tobin's Q and six independent variables such as X1 = presence of women (BOC); X2 = Presence of foreign nationality members (BOC); X3 = presence of young board member (BOC); X4 = presence of women (BOD); X5 = presence of foreign nationality members (BOD); X6 = presence of young board members (BOD) for both manufacturing and banking companies. To explore the result for independent t-test is divided into two parts such as mean (avarage) of each measurement proxies and the independent t-test.

Table 3. Percentage of Company Performance-Board of Commissioner Board of Commissioner

	Board of Commissioner								
	Women	No Women	Foreign	No	≤ 5.	5 > 55			
				Foreign	years	years			
					old	old			
			ROA						
Manufacturing	3,61	2,30	2,14	4,38	0,56	3,4			
Banking	1,26	1,60	0,59	1,74	1,45	1,43			
		ROE							
Manufacturing	3,80	3,40	8,32	1,93	0,4	4,73			
Banking	6,01	8,50	1,16	9,4	7,92	7,13			
		Tobin's Q							
Manufacturing	1,17	0,87	1,17	0,90	1,09	0,93			
Banking	1,06	1,08	1,00	1,10	1,06	1,07			

The table shown the comparison of financial performances of companies between the one that have diversity and do not have diversity on the board of commissioner. That's reveal that in manufacturing companies ROA, ROE and Tobin's Q is high for companies that have women on their board. A high ROA is also appear for companies that have no foreign nationality member, while the companies that have foreign nationality member showed high ROE and Tobin's Q. In age diversity, companies have high ROA and ROE when dominated by old member, it is an opposite of Tobin's Q, where the value of Tobin's Q is high when dominated by young members.

In banking companies ROA, ROE and Tobin's Q is high when they have no women on their board, and this result is totally different in manufacturing companies. A consistent result of high ROA, ROE and Tobin's Q also shown for companies that do not have foreign nationality members on their board. Align with age diversity where high ROA and ROE appear for companies that have young board member except for tobin's Q. Tobin's Q is high for companies that have old members on board.

**Table 4. Percentage of Company Performance-Board of Director** 

	Women	No Women	Foreign	No Foreign	≤ 55 years old	> 55 years old
			RO	OA		
Manufacturing	2,74	2,69	3,30	2,50	2,68	2,77
Banking	1,42	1,47	1,26	1,52	1,30	1,67
		ROE				
Manufacturing	2,90	3,96	5,64	2,78	2,53	5,55
Banking	7,31	7,01	5,40	8,15	6,60	8,35
			Tobi	n's Q		
Manufacturing	0,94	0,98	1,14	0,90	1,02	0,86
Banking	1,06	1,10	1,02	1,10	1,06	1,09

For board of director of manufacturing companies, high ROA is exist for companies that have women representation, meanwhile high ROE and Tobin's Q are appear for companies that do not have women on the board. In nationality diversity, ROA, ROE and Tobin's Q is consistently high for companies that have foreign nationality members on board. Quite different form nationality diversity, ROA and ROE is high for companies that have old member except for Tobin's Q, it is high for companies that have young board members.

In banking companies, ROA and Tobin's Q showed a high result for companies that do not have women representation, while ROE is high for companies for companies that diversifying their board with women existence. A high ROA, ROE and Tobin's Q are consistenly high for companies that do not have foreign natioanlity members. Align with age diversity, ROA, ROE and Tobin's q are high for companies that have old member on the board

From those overviews, it is clearly explain that there is a significant difference both manufacturing and banking companies if they have a presence of women, foreign nationality member and young member on the boardroom. In order to proved whether the differences is statistically tested. Researchers also look at the second output which is independent sample t-test.

# Independent t-test

There are two steps in this test, first, decision rule for levene's test, if  $P \le 0.05$  means the variance are significantly different and should interpret the equal variances not assumed value for t, while if P > 0.05 means the variances are not significantly different, and should interpret the equal variance assumed result. Second, decision rule for assessing, if  $P \le 0.05$  means the test is significant, while if P > 0.05 means that the test is not significant.

Table 5.

		Board of Commissioner				Board of Director			
	Manufacturing	Levene's	Test	Test for E	quality of	Levene	's Test	Test for Eq	uality of
		Equality of Variances				Equality of Variances		Means	
		(X1- presence of women)				(X4-presence of women)			
		F	Sig	t	Sig.(2-tail)	F	Sig	t	Sig.(2-
									tail)
ROA	Equal variances assumed	1,821	,180	-1,206	,231	,260	,611	-,048	,961
11071	Equal variances not assumed			-1,120	,268			-,049	,961
DOE	Equal variances assumed	9,200	,003	-,162	,871	1,157	,285	,423	,674
ROE	Equal variances not assumed			-,129	,898			,435	,664
Tobin's Q	Equal variances assumed	,001	,982	-4,194	,000	1,062	,305	,645	,520
Tobin's Q	Equal variances not assumed			-4,205	,000			,622	,536

		X2- p	X2- presence of foreign member				X5- presence of foreign member			
ROA	Equal variances assumed	,789	,377	-1,953	,054	1,299	,257	-,699	,486	
NOA	Equal variances not assumed			-1,740	,091			-,639	,527	
ROE	Equal variances assumed	,001	,980	-2,308	,023	,163	,688	-1,036	,303	
KUE	Equal variances not assumed			-2,533	0,14			-1,119	,235	
Tobin's Q	Equal variances assumed	,010	,923	- <i>3,437</i>	,001	2,741	,101	-3,100	,003	
TODIII'S Q	Equal variances not assumed			-3,495	,001			-2,791	,008	
		Х3-	X3- presence of young member			X6- presence of young member				
ROA	Equal variances assumed	,830	,365	2,476	,015	4,558	0,35	,075	,941	
NOA	Equal variances not assumed			2,284	0,29			,087	,931	
ROE	Equal variances assumed	2,983	,087	1,740	,085	1,369	,245	1,170	,245	
KOL	Equal variances not assumed			1,463	,154			1,288	,201	
Tobin's Q	Equal variances assumed	1,378	,243	-1,971	,052	6,875	,010	-2,091	,039	
1001113 Q	Equal variances not assumed			-1,788	,083			-2,347	,021	

Independent t-test is very important in this study as it investigate and showed whether there is a significantly difference between the existence of independent variables and its impact on dependent variables. Based on the independent t-test presented in the table, some variables have significant result on company performance that is measured by ROA, ROE and Tobin's Q. However some variables also posses insignificant result on the performance. As presented in the table, the existence of women on board of commissioner and board of director in manufacturing companies showed insignificant result, because none of the variables are met the requirement of levene's test and test for equality of means where the value is supposed to be less than 0,05. Align with the result produced by banking companies, none of the variables are significant. This result is supported by a study from Julizaerma and Zulkarnain (2012), they found the insignificant result of women representation on the firm performance, they posses that it may be because the small number of women on the boardroom. Prior study done by Wang and Clift (2009) conclude the same result where they assumed that very few women on the sample which lead to weak relationship between gender diversity and performance.

On the contrary, the existence of foreign member in board of commissioner of manufacturing and banking companies are showed significant result. This is supported by findings of Estelyi and Nisar (2016), nationality diverity is found to have positive relationship on company performance. However, the insignificant result occured in board of director for both industries, except for tobin's Q of board of director in manufacturing companies. It may be occur because the different number of foreign board member. The insignificant result is supported by a study from Salim darmadi (2012) that nationality diversity have no influence on company performance. In manufacturing companies, the percentage of foreign member is 15,7 % for board of commissioner and 18% for board of director. In banking companies, the percentage of foreign member on board of commissioner is 13,2 % and in board of director is 10,3%. According to those values, we also conclude to not only rely on the percentage, because a great percentage it does not reflect a significant result. The result may be influence by several factors that need to be studied deeply.

Meanwhile, the existence of young board member have inconsistent result. In board of commissioner of manufacturing companies, the results are found significant if measured by ROA and Tobin's Q, while in board of director the only significant result is tobin's Q. On the other hand, none of the result are sigificant in banking companies. We argue that the result is influence because some of companies in Indonesia is family-controlled. This is supported

by study from Engelen et al. (2012), find the age diversity and company performance is having hyperbolic relationship, which means only until a certain point that age diverity will increase the performance.

#### Conclusions

This study showed whether there is a significantly difference between board diversity existence on company performance. Most of the previous research are using regression and mostly have been done in developed country like the UK, Netherland and the US. After going through the data collection, data sorting, data analysis and the interpretation of the analysis of significant differences between the independent variables such as gender, nationality and age diversity and dependent variables are ROA, ROE and Tobin's Q. The mixed result are found in manufacturing and banking companies.

There are two theories used in this study, the agent theory and resource dependent theory. From those theories, the positive and significant result are expected. In reality, the result were as not expected. The variety of result were found in both board of commissioner and board of director in manufcaturing and banking companies, where some of the variables are found to having significant result and some of them are found to have insignificant result. The variety of result occured may be influence by the two-tier board system adopted by Indonesia, where there is a comparison between management board and supervisory board.

#### Limitation and Future Research

The research sample period is too short which is only two years (2016-2017). Also the limitation of the data accessability. Not all the data needed are available in the annual report and there was not enough time to actively look at the gaps in the data. For example, some board member's age are unknown, but the is no much time to contact the companies to gather the details information. For future research, we suggest to take more time to gather and analyze the information. In addition, this study only took several characteristics of board members, which only examines the gender, nationality and age of board member and the performance only measured by ROA, ROE and Tobin's Q. So, future research are expected to add more characteritics of board member and add more proxies of measurement to enrich the findings.

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