Board of Commissioners Diversity and Financial Performance: A Comparative Study of Listed Mining Industry in Indonesia and Pakistan

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ABSTRACT
This research aims to obtain empirical evidence about the role of Board of Commissioners (BOC) diversity on financial performance. The independent variables tested in this research consisted of the characteristics of BOC (proportion of woman commissioners, age, educational background, nationality, tenure), while the dependent variable is return on assets (ROA) and the control variable is firm’s size measured by using the natural logarithm of total assets. The sample of this research consist of 28 mining companies listed in stock exchange of Indonesia and Pakistan from 2011 until 2015. This research is quantitative research which the sampling method is purposive sampling. Data of BOC were collected from annual reports. The analysis of this research is multiple regression analysis. The results of this research showed that only the educational background of BOC have positive impact on financial performance. The other characteristics of BOC (proportion of woman commissioners, age, nationality, tenure) have no effect on financial performance. This result shows that BOCs’ education is the relevant factor that caused them to be more rational in processing the information and taking action, thus they can understand and perform their duty and responsibility given to them.

Keywords: Board of Commissioners, diversity of commissioners, firm size, financial performance, return on assets (ROA).

1. INTRODUCTION
Mining business has significant role in supporting national economy. This sector provide important contribution on national Gross Domestic Products (GDP), export, source of income for central and local government, and open wide job opportunity. However, the golden era of mining now nears its end. The contribution of mining sector on national income keeps decreasing from year to year (Winzenried and Adhitya, 2014).

Jock O’Callaghan, the leader of Global Mining in Price water house Coopers states that 2015 is a year that full of challenges for global mining sector, because there was a decrease in commodity price of 25% compared to previous year. This condition affects mining companies in Indonesia and Pakistan, because most of their mining products are for exported. This is why mining companies have to try harder to increase their productivity,
several of them try hard to survive, followed by transfer of assets and business closure (Soda, E., 2016).

In the last five years, the role of Non-Tax National Income (from oil and natural gas also tend to decline. In 2012, the contribution of mining royalty on national budget is 16.8%, then in 2013 declined to 15.73%, in 2014 declined again to 15.53%, and dropped in 2015 to only 6.75%. (Pujiastuti, 2015). In 2015 there are no mining companies in Indonesia that has market capitalization higher than US$4 billion. The number in the lowest limit for a firm to be included in the global 40 biggest mining companies based on market capitalization. Besides have to solve the problem with the low commodity price, mining industry in Indonesia also have to experience the decrease in demand from China and other developing countries. This leads to significant decline in mining companies’ financial performance in Indonesia (Soda, E., 2016).

In the last few decades, there is an increase in public and academic interest on various ideas and mechanism of companies governance, among others are: Julizaerma M. K and Sori Z. M (2012), Liu, Y., Wei, Z., and Xie, F (2013), Van Ness et al. (2010), Marimuthu (2008), Ararat, Aksu and Cetin (2010), Mirza et al. (2012), Adnan et al. (2016), and El Charani (2014). Corporate governance mechanism will show that stockholder’s interest relies on management strategy and action (Burton 2000; Mallin 2001; Mueller 2006). Kim, Burns, and Prescott (2009) argue that in the Corporate Governance Theory, board structure has strong effect on the action taken and top management will be able to affect firm performance.

Financial performance is an indicator of financial condition of a firm which describes the achievement in certain period (Fahmi, I., 2011). Financial performance in this condition is affected by the policy taken by Board of Directors (BOD) and supervision performed by Board of Commissioners (BOC). This study focus on BOC because it has a duty to supervise and control the management (Zulfikar et al., 2017). The right skill is needed to perform this strategic role (Zahra and Pearce, 1989). This skill is stick to the demographic characteristics of board structure such as gender, functional background, education, ownership, and age (Golden and Zajac, 2001).

Research regarding BOC diversity has been performed by Darmadi (2011) who states that the proportion of young board members has positive relationship with market performance of a firm. Julizaerma M. K and Sori Z. M (2012), in their research show that there is positive relationship between gender diversity and return on assets. The research conducted by Marimuthu (2008) provides explanation that the demographic diversity has positive relationship with financial performance measured with return on assets.

This research focused on internal mechanism. The external mechanism of corporate governance is not included because it is related with the policy outside the firm. This research is a development of previous research conducted by Darmadi (2011) by adding the characteristics: education background, as performed by Adnan et al. (2016) and tenure that become the focus of Van Ness et al. (2010) research, which uses firm size as a control variable.

This research is important because mining companies have a very important role to move national economic wheels, as one source of national income and provide significant contribution for the community. Mining corporation financial performance will be related with corporate governance. The effective implementation of corporate governance will improve efficiency and economic growth (OECD Principles of Corporate Governance, 2004), as well as encourage the creation of healthy competition and conducive business climate (Indonesian National committee on Governance-KNKG, 2006). The result of this study is
expected to provide information for evaluation on the implementation of company corporate governance.

2. THEORETICAL REVIEW AND HYPOTHESIS DEVELOPMENT

Agency theory aligns the owner and manager interests in which usually inherent conflict arises between them (Fama and Jensen, 1983). One of the conflicts that may arise in agency relationship is the imbalance in information control that will leads to information asymmetry. Owner must ensure that managers do not perform opportunistic behavior and utilizing internal information and company resources for their own advantages. That is why a good monitoring mechanism is needed to align the interest from various parties in the company.

The monitoring mechanism mentioned in agency theory can be performed through corporate governance (El Charani, 2014). According to Herawaty (2008), corporate governance mechanism consists of two groups:

a. Internal mechanism is a mean to control firm using structure and internal process, such as BOD or BOC, managerial ownership, and executive compensation.

b. External mechanism is a mean to affect firm besides internal mechanism, such as controlling by market and level debt financing, legal regulation, investor, and public accountant.

Carter et al. (2003) highlight that the diversity in board structure has better effect on the management of monitoring function, because diversity will increase the independence of board structure. Board structure with diverse gender, ethnicity, or cultural background is likely to cause issues or questions that will not arise in the board with traditional characteristics. The diversity will cause the board structure to be more active. Based on the explanation above, we can see that agency theory has a relationship with corporate governance. Lückerath-Rovers (2010), Talke, Salomo, and Rost (2010), and Carter et al. (2003) show that gender diversity in board members will increase creativity and problem solving that is more intense. Women generally have detailed ideas regarding decision making process.

H1: There is a positive effect of proportion of women in BOC on firm performance (ROA).

According to the upper echelon theory (Hambrick and Mason, 1984), to make important decision in a firm such as setting strategic moves, one of the demographic characteristics, such as age, is an important factor that will affect decision making. Similar thing also expressed by Reed and DeFillippi (1990), Gilpatrick (2000), Zee and Swagerman (2009), Mahadeo et al. (2012), and Abdullah et al. (2013).

H2: There is a positive effect of BOC members’ age on firm performance (ROA)

The diversity in education background can be explained as a set of skills, knowledge and abilities, owned by team member as a function of their education background (Dahlin et al., 2005). Mahadeo et al. (2012) states that even there is lack of research facts, some of researchers already conclude that education background is an important consideration in assessing firm performance. Bhagat et al. (2010), Hambrick and Mason, 1984), Darmadi (2013), Carpenter and Westphal (2001).

H3: There is a positive effect of BOC members’ education background on firm performance (ROA)
Foreign member in the board has several advantages, among others are bringing international experience into the board, add external business, socio, and political connection (Masulis et al., 2012), shows the intention of an open firm with globalization and may affect in the decision making process (Ramaswamy and Li, 2001 and Ararat, Aksu, and Cetin, 2010), as well as increasing firm reputation in the market (Oxelheim and Randoy, 2003).

**H4:** There is a positive effect of BOC members’ nationality on firm performance (ROA).

The duration of a person as board member is a controversial issue that has attracted professional investor, regulator, and academics attention (Livnat et al., 2016). Another study that has focused on the board member tenure are, among others: Huang (2013), Coles et al. (2008), Musteen, Barker, and Baeten, (2006), Golden and Zajac (2001), Vafeas (2003), Hillman, Cannella, and Paetzold (2000), Barney (1991), and Kesner (1998). In line with the finding from Celikyurt, Sevilir, and Shivdasani (2012), that specific knowledge about the firm will be accumulated concomitant with the increase of their tenure. The selection of right decision will helps firm to take strategic steps that will lead to the increase in firm performance.

**H5:** There is a positive effect of BOC members’ tenure on firm performance (ROA).

### 3. RESEARCH METHOD

This study is a quantitative research. The samples are selected using purposive sampling, in which samples are selected based on certain criteria. The total samples in this research are 134 from both Indonesian and Pakistan mining industries. The data are secondary data, collected from annual report in the Indonesian Stock Exchange (IDX) and Pakistan Stock Exchange Limited in 2011-2015. The data are analyzed using regression method.

**The Proportion of Woman Member in the BOC (WOMAN)**

The proportion of woman commissioner in BOC is the representativeness of woman BOC members, both internal and independent. The proportion of woman member in the BOC will provide different perspective, experience, and opinion in the Corporate Governance practices (Lukviarman, 2004). The proportion of woman commissioner is computed by comparing the number of woman commissioner on the total number of BOC according to the study conducted by Marinova, Plantenga, and Remery (2010).

**The Age of BOC Members (AGE)**

Age is the duration in which a person lives, measured in unit time from chronological point of view, normal individual shows anatomy and physiological development (Nuswantari, 1998). According to Yan, L., Zhao, H., and Baron, R. A. (2007), the relationship between age and performance may become a more important issue in the future decades. To compute BOC member’s age, Abdullah et al. (2013) use dummy variable. The variable is graded 1 if the mean value of BOC member’s age is under 60 years (n<60), and graded 0 if the mean value of BOC member’s age is above 60 years (n > 60).

**Education Background of BOC Members (EDU)**

According to Dewey (1964) education is a process of experience. A qualified individual cannot be separated from education factor. A competent individual usually has high moral and has an ability to make ethical decision (Richmond, 2001). Education
background of BOC members in this study is classified into four parts, undergraduate degree (S1), master degree (S2), and doctorate degree (S3). The measurement is conducted by comparing the number of BOC members with master degree (S2) and doctorate degree (S3) with total number of BOC members, referring to Adnan et al. (2016).

**BOC Member’s Nationality (NAT)**
Nationality, in this research is defined as self-awareness as a citizen and characteristics of a country. Nationality of BOC members is measured using proportion of total foreign members divided with total members of BOC (Marimuthu, 2008). Foreign member is the member of BOC that do not come from the studied countries, so BOC members who are not Indonesian and Pakistani.

**BOC Member’s Tenure (TENURE)**
Tenure is the duration of a member to hold a position in firm board structure. Based on the study conducted by Kesner (1998), BOC will have enough knowledge regarding their firm if they have their position for about 3-5 years. Tenure in this study is measured using dummy variable. The variable will be graded 1 if there are BOC members with minimum 5 years tenure, and will be graded 0 if there are no BOC members with 5 years tenure.

**Firm Size (FIRM SIZE)**
Firm size is a scale used to determine the size of a firm (Sari, 2012). The indicator to show firm size is total assets. Mule et al. (2015) mention that large firm will be able to provide the best in term of profit, leading technology, and professional because it is controlled directly by market. In this study, firm size is measured using normal log of total assets owned by the firm (Lee and Chen, 2009).

**Financial Performance**
Financial performance is a result or achievement of a firm in performing its function in effectively and efficiently managing firm’s funds in a certain time period. The assessment in financial performance is a very important step in a firm because the result of this assessment will be used in making business decision. One of the indicators to measure financial performance is through profitability presented in financial report. Profitability is the final result of several policies and decisions (Brigham and Daves, 2002).

Mining corporation performance in this study is return on assets (ROA). ROA is one of profitability ratios used to measure firm effectiveness in generating profit using its total assets. This variable is used because it is the most effective variable in providing direct information regarding the result of resource allocation by firm in finding competitive advantage (Hull and Rothenberg, 2008), and is a measurement used to represent firm financial performance. This ratio is computed by dividing net profit with total assets (Ross et al., 2009).

The regression model used in this study is as follows.
\[
ROA = \alpha + \beta_1 \text{WOMAN} + \beta_2 \text{AGE} + \beta_3 \text{EDU} + \beta_4 \text{NAT} + \beta_4 \text{TENURE} + \beta_4 \text{SIZE} + e
\]

Notes:
- \(Y\) = Return on Assets
- \(\text{WOMAN}\) = The Proportion of Woman Members in the BOC
4. RESULT AND DISCUSSION

Descriptive statistic

The descriptive statistic below explains the frequency of data:

<table>
<thead>
<tr>
<th>Country</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indonesia</td>
<td>119</td>
</tr>
<tr>
<td>Pakistan</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>134</td>
</tr>
</tbody>
</table>

Based on table 1 total samples in this study are 134 annual report from Indonesian and Pakistan mining industries. The samples are 119 annual reports from Indonesia corporation and 15 annual reports from Pakistan.

Regression analysis

Regression analysis is conducted using enter method. The adjusted R^2 value is 0.066 or 6.6%. This means that 6.6% of the variation in financial performance can be explained by the five independent variables: the Proportion of Woman Members in the BOC, the Age of BOC Members, Education Background of BOC Members, BOC Member’s Nationality, BOC Member’s Tenure, and one control variable Firm Size, while the rest 93.4% are caused by other factors. The F value is 6.153 (p-value 0.003) with 5% significance, thus the regression model can be used to predict firm financial performance or in other words, the Proportion of Woman Members in the BOC, the Age of BOC Members, Education Background of BOC Members, BOC Member’s Nationality, BOC Member’s Tenure simultaneously affect the dependent variable, financial performance. The result of multiple regression analysis is presented in table 1.2.

The regression results show that there are only two variables that affect financial performance, Education Background of BOC Members (p-value 0.022) and firm size (p-value 0.006) and other variables have no effect. The proportion of woman members in the BOC has no effect on financial performance. This result is in line with Randoy et al. (2006), Kusumastuti et al. (2007), and Haslam et al. (2010). The analysis result does not support Konrad, Kramer, and Erkut (2008) in which woman members tend to have more courage in stating their opinion if there are three or more woman members in the board. This might happen because the proportion of woman members in the samples is very low, usually a company only has one or two woman member(s) in the BOC, thus their opinion has no effect in decision making.
Table 1.2
Result of Regression Testing

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t</th>
<th>Sig.</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>98.673</td>
<td>2.846</td>
<td>0.005</td>
<td>0.066</td>
</tr>
<tr>
<td>WOMAN</td>
<td>0.028</td>
<td>0.379</td>
<td>0.705</td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>2.244</td>
<td>1.094</td>
<td>0.276</td>
<td></td>
</tr>
<tr>
<td>EDU</td>
<td>0.070</td>
<td>2.322</td>
<td>0.022*</td>
<td></td>
</tr>
<tr>
<td>NAT</td>
<td>-0.041</td>
<td>-0.806</td>
<td>0.422</td>
<td></td>
</tr>
<tr>
<td>TENURE</td>
<td>-1.282</td>
<td>-0.685</td>
<td>0.495</td>
<td></td>
</tr>
<tr>
<td>LN_FIRM SIZE</td>
<td>-9.982</td>
<td>-2.791</td>
<td>0.006*</td>
<td></td>
</tr>
</tbody>
</table>

*significant at 5%

The age of BOC members has no effect on financial performance, thus hypothesis 2 is not supported. This result is in line with the study conducted by Randoy et al. (2006), and Kusumastuti (2007) that do not find the relationship between the ages of BOC members with performance. This might be caused by the structure of BOC in Indonesia and Pakistan that still dominated by members with 50 years old or older. Considering that strong business experience is expected to contribute in BOC member’s competence, it is no surprise that the board will be dominated with they who are 50 years old or older (Randoy et al., 2006).

Education background of BOC members affects financial performance, thus hypothesis 3 is supported. This result support Darmadi (2013), Carpenter and Westphal (2001), and Schroder, Driver, and Streufer (1967). BOC member with high education background has decent capacity in processing the information and deeper analysis on various situations and risks faced by their company. This will affect the perfect decision making and strategic planning for company.

BOC member’s nationality has no effect on financial performance, thus hypothesis 4 is not supported. This result contradicts the finding from Carter et al. (2003) and Oxelheim and Randoy (2003) who find positive relationship between nationality diversity in the composition of BOC. This finding supports Carter et al. (2003), Randoy et al. (2006), Rose (2007), and Darmadi (2011). Foreign member in the BOC does not show the experience of different point of view in the board structure. In other words, selecting foreign people as BOC members has no significant contribution on the company (Herdhayinta, 2014).

BOC member’s tenure has no effect on financial performance, thus the hypothesis is not supported. This result contradicts the finding from Coles et al. (2008) who find that BOC member with longer tenure will provide strategic advice for management, because they understand company needs better. We can assume that business knowledge and competence in the monitoring process needed by BOC can be polished by various other factors, for example personal ability in collecting and processing information rapidly, internal and external training that they joined in, and their sensitivity in reading the market, so that they can provide strategic recommendation.

Firm size has negative and significant effect on financial performance, thus hypothesis 6 is not supported. This finding does not support the finding from Shepherd (1972), Niresh and Thirunavukkarasu (2014) which mention that firm size is the main factor in determining profitability of a firm. This study supports the study conducted by Falope and Ajilore (2009) who states that firm size has negative effect on ROA. This might be caused by, larger companies do not always utilize and manage their resource effectively and efficiently.
Besides that, during 2012 – 2015 mining industries performance has decline as the result of the decrease of global oil price.

Independent sample t-test is used to determine if two samples with no relationship have different mean value.

Table 1.3

<table>
<thead>
<tr>
<th>Independent Sample t-test</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Levene’s Test for</td>
</tr>
<tr>
<td>Equality of Variances</td>
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<td></td>
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<tr>
<td>t-test for Equality of</td>
</tr>
<tr>
<td>Means</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>ROA</td>
</tr>
<tr>
<td>F    Sig</td>
</tr>
<tr>
<td>Equal variances assume</td>
</tr>
<tr>
<td>3, 247 0,074</td>
</tr>
<tr>
<td>Equal variances not</td>
</tr>
<tr>
<td>assume</td>
</tr>
<tr>
<td>-10,182 25,882</td>
</tr>
</tbody>
</table>

Source: processed secondary data (2016)

Based on the table above, P value (sig) is 0.074 > 0.05 thus the variant of both samples is the same. The sig. (2-tailed) is 0.000 in which < 0.05 thus there is difference between financial performance of Indonesian mining corporation and Pakistan mining corporation. The t-value is negative, this shows that the average financial performance of Indonesian mining industries is lower than the average financial performance of Pakistan mining industries. This is because of the sluggish mining market, global economic crisis in 2008-2009, election in 2001, and another decline in 2012 to 2014 (Winzenried and Adhitya, 2014).

5. CONCLUSION AND SUGGESTION

Based on the discussion above, the proportion of woman member in the BOC, the age of BOC members, BOC member’s nationality, and BOC member’s tenure have no effect on mining corporation performance in Indonesia and Pakistan. Education background of BOC members has positive effect on financial performance of mining industries in Indonesia and Pakistan. This might be caused by someone with high education level will be more rational in processing the information and taking action, thus they can understand and perform their duty and responsibility given to them. Firm size has negative effect on financial performance of mining industries in Indonesia and Pakistan. This shows that large assets ownership does not managed effectively and efficiently by the management to improve their financial performance. The result of t-test shows that there is difference in the average financial performance between Indonesian and Pakistan mining industries, with Indonesian mining industries having lower financial performance. This low average of financial performance is caused by the decline in commodity price and global demand.

Education background has a vital role in improving firm performance, thus it is expected that firms can be more selective in recruitment process, so that they can get the best candidate. Nationality is not always become a measurement in assessing one’s competence. Thus, in the selection process, foreign nationality should not get priority. Longer tenure has no significant contribution for the firm. These can become an evaluation material in General Meeting of Shareholders, so that they can determine the maximum tenure of BOC members.

This study limitation lies on the measurement of performance only with ROA, future study can use another proxy such as return on equity (ROE) or other market performance measurement and include other demographic characteristics of BOC members.
REFERENCES


