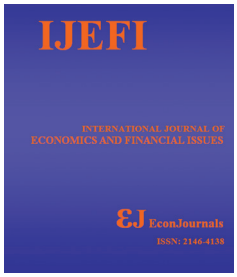

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The Effect of the Tax Planning to Firm Value with Moderating Board Diversity

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ABSTRACT

The purpose of this research is to analyze the impact activities tax planning (*TP*) to firm value with board diversity as moderating variable. The research was conducted for non-banking and financial firms in Indonesia stock exchange for 2010-2011. The results of this study are: Firstly, we found evidence of positive relationship between *TP* and firm value. Secondly, we found evidence that board diversity (*AGE* and *BSTUDY* of member director) could increase the positive influence of *TP* into firm value, except for *MINORITY* could decrease the positive influence of *TP* into firm value. Finally, the results of the sensitivity test with the full model and the full sample suggested that *TP* had robust positive effect in increasing firm value, then the moderating influence of board diversity (*BSTUDY* and *MINORITY*) on the relationship between *TP* and firm value was consistent but other variables of board diversity (*AGE*) are not consistent.

Keywords: Tax Planning, Firm Value, Board Diversity
JEL Classifications: E21

1. INTRODUCTION

This study is committed to investigate the relationship between tax planning (*TP*) and firm value with board diversity as moderating variable on Indonesia companies' context. Wahab and Holland (2012) examines relationship between shareholders valuation of corporate income and *TP* with corporate governance (CG) as moderating variable in U.K contexts. The authors documents are: First, they found evidence of negative significant relationship between the level of *TP* and firm value which is robust to controlling for CG. Second, they used the two moderating variables CG were institutional ownership (IOWN) and non-executive ownership (NED) to examine whether the relationship between firm value and TP. They found no significantly CG as moderating the relationship between firm value and *TP*.

Ernest and Young (2009) stated that a group with heterogenity (diversity) is more likely to have better performance rather than a group with the homogeneous, although those more profecient in its. In line these studies, that the group is diverse when managed properly will result more likely innovative business decisions rather than homogeneous groups (Catalyst, 2005). Another stream of research indicates that board diversity from mechanism CG. Empirical evidence that many researchers have examined boards diversity to firms value or firms performance such (Carter et al., 2003; Darmadi, 2010; Kusumastuti et al., 2007) and *TP* (Aliani and Zarai, 2012a).

Carter et al., (2003) that examined the relationship board diversity between firm values for fortune 1000 firms in context of US. They found significant positive relationship between the fraction of women and minorities on the board (as proxy from board diversity) and firm value, thus result consistency with Darmadi (2010); Kusumastuti et al., (2007) in context of Indonesia firms. The empirical studies about board diversity in the context of *TP* first time were done Aliani and Zarai (2012a). Aliani and Zarai (2012a) examined the effect of demographic gender diversity

on corporate *TP* in American firms of context. They found that gender diversity on the board was not significant and did not affect the *TP* in context of American firms. In the contrast in Tunisia firms context, the authors documented diversity on the board of directors significantly positive influence *TP* (Aliani and Zarai, 2012b).

Based on the previous studies Wahab and Holland (2012); Aliani and Zarai (2012a, 2012b); Carter et al., (2003); Darmadi (2010); Kusumastuti et al., (2007) have not been reseacrhed yet past study used board diversity as moderating variable on the relationship between *TP* and firm value. Thus, the current study aims to fill gap research by focusing on board diversity from CG mechanism as moderating on the relationship between *TP* and firm value in Indonesia firm of context. We used three characterstic of the board directors members as measured board diversity are age, minority (ethnics Chinese/Tionghoa), background education/study (*BSTUDY*). We also use method applied by Wahab and Holland (2012) for measurements firm value and *TP* variables.

This study has fourth contributes. Firstly, the extant literature that behaviors *TP* related to firm value on Indonesia based. Secondly, for CG mechanism literature by shown the potential moderating impact of the board diversity in the association between *TP* to firm value, which strategic tax decision related to minimum tax burdens. Thirdly, for our knowledge, we investigate relationship between *TP* and firm value with board diversity as moderating variable, which have not been researched yet in the past study. Prior researches Aliani and Zarai (2012a; 2012b); Carter et al., (2003); Kusumastuti et al., (2007); Darmadi (2010) only examined direct relationship between board diversity with firm performance or *TP*. Board diversity is interesting which characteristic people with multi ethnic, religious, culture. Finally, we alternative measurement board diversity with new perspectives, which board diversity are measured from board director Board of Management (BOM), while Indonesia is company law adopts two tiers board structures. According to law, corporate shall have two boards in their organizational structures, namely "dewan komisaris" Board of Commissioners (BOC) and "dewan direksi" BOM. Members of BOC and BOM are elected by shareholders in the shareholders general meeting (Darmadi, 2010). The earlier studies diversity view point from characteristic BOC as proxy board diversity such Darmadi (2010); Kusumastuti et al. (2007). This current study is measured board diversity from BOM caused *TP* related operational activities decision making strategies of BOM which to minimum tax burdens.

Our study used panel balance data of 442 firms listed on the Indonesia stock exchange (IDX) from 2010 to 2011. The statistical results provided from this study are: Firstly, we found evidence of positive relationship between *TP* and firm value. Secondly, we found evidence that board diversity (*AGE* and *BSTUDY* of member director) could increase the positive influence of *TP* into firm value, but for *MINORITY* could decrease the positive influence of *TP* into firm value. Finally, the results of the sensitivity test with the full model and the full sample suggested that *TP* had robust positive effect in increasing firm value, then the moderating influence of board diversity (*BSTUDY* and *MINORITY*) on the relationship between *TP* and firm value was consistent but other variables of board diversity (*AGE*) are not consistent.

The remainder of the paper consists of the following six sections. Section two provides previous research and hypotheses development. Section three describes our research model and research sample and other data used in our analysis. A description of the research results is presented in the fourth section. The fifth section provides the sensitivity analysis. Conclusions and suggestions from the research are set out in section six.

2. LITERATURE REVIEW

2.1. Association between TP and Firm Value

The previous research of *TP* has been viewed two perspective differences. Firstly, the traditional theory perspective view of the *TP* (or tax avoidance) is seen as leading to increase after tax earnings and therefore to be in the interest of shareholders, this is typically taken in valuation model/firm value (Desai and Dharmapala, 2009; Wahab and Holland, 2012; Desai and Dharmapala, 2006). *TP* activities that reduce transfer resources from shareholders to government should generally enhance shareholders wealth/firm value. Secondly, the agency theory perspective views of the *TP* suggest that *TP* can be complex and opaque and can possibly allow for managerial opportunism. *TP* can lead to a reduction in firm value when managers have both the opportunity to understate reported accounting profit and the incentive to reduce corporate income tax liability by understating taxable income or less transparency (Desai and Dharmapala, 2009; Wahab and Holland, 2012; Minnick and Noga, 2010; Desai and Dharmapala, 2006). The role of CG mechanism in *TP* thus can become important.

Wahab and Holland (2012) conducted research relationship between shareholders valuation of corporate income and *TP* with CG as moderating variable in UK contexts. The authors used the difference between a firm's current tax provision as disclosed in its annual financial statements and the (national) level of tax that would be payable if its profit before tax was subject to tax at the UK statutory rate to measure *TP*. The authors used two moderating variable CG mechanisms are Institutional ownership (IOWN) and non-executive ownership (NED) to examine whether affect the moderating variable CG of the relationship between *TP* and firm value. The authors have two empirical results: First, they found evidence of negative significant relationship between the level of *TP* and firm value which is robust to controlling for CG. Second, the author found no significantly CG as moderating the relationship between firm value and *TP*. This result supported by Desai and Dharmapala (2009) in contexts US firms. Desai and Dharmapala (2009) used institutional ownership as measured CG.

Desai and Dharmapala (2009), investigating the relationship between tax avoidance activities and firms value using a sample 862 US firms. In the research, tax avoidance is measured by book-tax gap while Tobin's Q is the proxy for the firm value. The authors used institutional ownership as measured CG. The authors found no direct significant relationship between tax avoidance activities and firm value. Further analysis the authors are split for the measuring of CG which is based on fraction of a company's share owned by institutional investors in which ratios of more than 60% are indicate of stronger governance institutions "high" and <60% are indicate weak governance institutions "low." They

found a significant positive effect of tax avoidance on firm value for well-governed firms. In other word, the author documented the relationship to be correlated with firms' CG. Therefore, the paper suggests that shareholders value *TP* activities by reference to both their magnitude and risk.

Wang (2010) examines the relation among tax avoidance, corporate transparency and firm value. The authors used cash effective rates and permanent book-tax difference to measured tax avoidance, which firm value as proxy by Tobin's Q using sample S and P 1500 firms in the period 1994-2001. They found positive significant relationship between tax avoidance and firm value.

Therefore, as there is general lack of published research that studies these relationship in Indonesia setting. Further research needs to be conducted to confirm the relationship using Indonesia data such (Chasbiandani and Martani, 2012; Permatasari and Martani, 2012). Chasbiandani and Martani (2012) commited research relationship between long run tax avoidance behavior and firm value. The authors used sample non-banking and financial firms in IDX for period 2010-2011. The authors used similary method by Dyreng et al. (2008) who measured long run tax avoidance, and firm value is proxed by Tobins' Q. They found that long run tax avoidance has a negative significant relationship between long run tax avoidance and firm value, this study suggest that firm with lower effective tax rate (ETR), has higher firm value.

Permatasari and Martani (2012) investigate the relationship between earnings management (*EM*) and *TP* practies toward earning informativeness. The authors used similary method applied by Ayers et al. (2009) who measure *TP* by current ETR (currETR). CurrETR is obtained from distribution of current tax current tax expense (CTE) and income before tax (pre tax book income). This researchers used samples of manufacturing companies listed in IDX for the year 2004-2009. The authors found that the commerical profit of companies performing *TP* was become less informative when it is compared to other companies which do not perform the *TP*.

The above previous studies concentrate on US or UK setting and the document mixed the directions of the association between *TP* activities with firm value. Therefore, based on the above – Mentioned mixed findings of previous studies, the extent of *TP* is presumed to be related to firm value in unpredicted directions. Thus, it is hypothesized (in alternative form) that:

Hypothesis 1 (H1): There is an association between *TP* activities and firm value.

2.2. The Relationship between *TP* and Firm Value by Moderating Board Diversity

Based on literatures of the previous studies, diversity follows two fundamental distinctions: The demographic and cognitive (Erhardt et al., 2003; Aliani and Zarai, 2012a). The research literature about group diversity can be viewed from two perspectives. First perspectives can be observable or measureable attributes of individuals as demographic characteristics, proxy variables such gender, age, race, ethnicity, minority, and nationality. Second perspective is non-observable variable or underlying attributes cognitive characteristics, proxy variables such as attitudes, values, beliefs (Kilduff et al., 2000; Aliani and Zarai, 2012a).

The previous studies about board diversity can be classified into two major stream of literatures. The first field of research focuses on studying the relationship between board diversity and firm performance or firm value. Several reseachers were committed to examine favorable characteristic board diversity to firm value or firm performance such gender, minority, race/ethnic, age, nationality as measured diversity (Carter et al., 2003; Darmadi, 2010; Erhardt et al., 2003; Kusumastuti et al., 2007; Kilduff et al., 2000). The second field of research concerning the effect of diversity to *TP* (Aliani and Zarai, 2012a; Aliani and Zarai, 2012b) or tax compliance (Torgler, 2006).

Carter et al. (2003) committed research on the relationship between board diversity and firm value for fortune 1000 firms. The author defined board diversity as the percentage of women, African, American, Asians, and Hispanics on the board of directors. They used Tobin's Q as measured firm value, thus also used control variables are size, industry and CG. They found significant positive relationships between the fraction of women or minorities on the board and firm value. The authors also found that the proportion of women and minorities on boards increases with firm size and board size, but decreases as the number of insiders' increases. Similar those results by Erhardt et al. (2003), found that the precentage of minority directors ethnic positively related to firm performace. Therefore, Kilduff et al. (2000) found that positive significant association between age heterogeneity and marketing performance.

In Indonesia case, the investigation of the relationship between board diversity and firm value or firm performance have been done by Kusumastuti et al. (2007); Darmadi (2010). Kusumastuti et al. (2007) examined the relationship between board diversity and firm value, using sample of 48 manufacturing companies listed at IDX in 2005. The authors used five variables as measured board diversity, there are: Women in board, minority race availability (Chinese/Tionghoa ethics), outsider directors, age and educational background from the member of directors. They defined age as the proportion of directors member whose age is 40 years or older. Educational background as proxy by the proportion of director member has background study the economics and business. Thus firm value is measured by Tobin's Q. The authors found negative significant association between minority race availability (Chinese/Tionghoa ethics) as proxy by board diversity and firm value, thus other variables such women in board, outsider directors, age and educational background from the member of directors are not significant related to firm value. They suggest that negative minority race availability (Chinese/Tionghoa ethics) related characteristic ethics Chinese are more likely families than firm value.

Darmadi (2010) examine the realtionship between diversity of board members and financial performance, using sample of 169 firms listed on the IDX. The author used three variable as the proxy board diversity, such gender, age and nationality. The author used the proportion of women, foreign nationals (nationalty) and board members of no more than 50 years old called "young member." Firm performance are measurement Tobins' Q and

return on asset. The author found three results: First, there is negative significant association between gender on board diversity and firm performance. Second, they found positive significant of the relationship between young member of board diversity and firm performance. Finally, they found no significant nationality association between nationality and firm performance.

Another stream committed research that the effect board diversity to *TP* or tax compliance. Aliani and Zarai (2012a), examined the effect of demographic gender diversity on corporate *TP*, using a sample 300 firms (S and P 500) on American firms for period 1996-2009. The author used gender as proxy demographic diversity, thus *TP* measured by ETR. They found that gender diversity on the board was not significant and did not have effect on *TP*. Aliani and Zarai (2012b) also investigated whether board directors attributes have an impact on corporate *TP* in developing countries, using sample of 32 companies listed on the Tunisia stock exchange. The author used four variable as measured board directors attributes are duality CEO, diversity on the board of directors (percentage of women directors), Independen director and board size. The author found that duality CEO and diversity on the board of directors significantly influence *TP*. Duality showed a negative relationship between ETR as measured *TP*. Therefore, diversity as measured by gender on the board of directors showed positive association.

Torgler (2006) committed research to examine religiosity as a factor that potencially affect tax morale, using the world values survey period 1995-1997 covering more than 30 countries at the invidual level. The authors used several variables such age, education level or background, gender, matrial status and employement status. The author argues that older people are more sensitive to the threats of sanctions and over the years have acquared greater social stakes. Some previous studies found that age increases the level of tax compliance (Vogel, 1974; Torgler, 2006). Education was related to tax payer's knowledge about the tax law. Better education tax payer are supposed to know how to assess the degree of complaince (Lewis, 1982; Torgler, 2006). The author found that positive significant association between more older people and tax compliance.

Several previous literatures such Desai and Dharmapala, 2009; Wahab and Holland, 2012, found inclusion that the impact CG mechanism as moderating variable on the realtionship between *TP* (or tax avoidance) and firm value. This current study will be used as new prespective form corporate governcance mechanism with board diversity. Accroding to Catalyst (2005); Ernest and Young (2009) that diversity helped corporations lead and manage sustainable, effective business strategies, role model employee opportunities, and enhance their reputation. If an organization is managed effectively, this diversity offers the flexibility and creativity we need to recover from the economic crisis and confront the many forces challenging.

The literatures presented above show the diversity that tends to generate new knowledge/innovation, the quality of decision-making board of directors, therefore this research will study the diversity of members of the board of directors for policy decisions related to *TP* acts. By knowing the characteristics of the board of directors, it is expected that they are more efficient in *TP* so that it gives impact on the increase in firm value. Board diversity is proxies by the proportion of the members board directors of 40-50 years old (*AGE*), the proportion of the member board directors of the Chinese ethnics (*MINORITY*) and the proportion of the member board directors which educational background (*BSTUDY*) majoring economics and business of the context of *TP* Indonesia; the author test a new framework to examine the effect of these studies on the relationship between *TP* and firm value when moderated by board diversity. To test the hypotheses related to the moderating effect of board diversity on the relationship between *TP* activities and firm value, the following hypotheses are be tested (in alternative form):

Hypothesis 2 (H2a): The effects of positive (negative) *TP* and firm value would be strengthened (weakened) by the magnitude of the proportion of the board member directors of 40-50 years old.

Hypotheses 2b (H2b): The effects of positive (negative) *TP* and firm value would be strengthened (weakened) by the large of the proportion of the board members directors of the Chinese ethnics in the company.

Hypotheses 2c (H2c): The effects of positive (negative) *TP* and firm value would be strengthened (weakened) by the magnitude of the proportion of the board members directors which education/study background in economics and business.

3. RESEARCH DESIGN

3.1. Empirical Model

The empirical analysis of this study based on previous studies (Wahab and Holland, 2012; Aliani and Zarai, 2012a; Darmadi, 2010; Kusumastuti et al., 2007; Carter et al., 2003). The initial Model I is to test the hypothesis examining the association between *TP* and firm value and related variable control. We estimate the following regression Model I.

$$MVE_{t+3month} = \beta_0 + \beta_1 TP_{it} + \beta_2 BVE_{it} + \beta_3 PBTI_{it} + \beta_4 EM_{it} + \beta_5 LEV_{it} + \beta_6 CAPINT_{it} + \beta_7 BDS_{it} + \beta_8 DUM\_IND_{it} + \varepsilon_{it}$$

(Model I)

Model II is to examine the association between *TP* and firm value and related variable control test including board diversity (*AGE*, *MINORITY* and *BSTUDY*). We estimate regression Model II:

$$MVE_{t+3month} = \beta_0 + \beta_1 TP_{it} + \beta_2 AGE_{it} + \beta_3 MINORITY_{it} + \beta_4 BSTUDY_{it} + \beta_5 BVE_{it} + \beta_6 PBTI_{it} + \beta_7 EM_{it} + \beta_8 LEV_{it} + \beta_9 CAPINT_{it} + \beta_{10} BDS_{it} + \beta_{11} DUM\_IND_{it} + \varepsilon_{it}$$

(Model II)

The third Model III tests whether the relationship between firm value and *TP* are moderated by board diversity. Model III is extended by inclusiring/inclusion the three moderating variables, *AGE*TP*, *MINORITY*TP* and *BSTUDY*TP* constructed by multiplying a firms *TP* variable by *AGE*, *MINORITY* and *BSTUDY* variables respectively.

$$MVE_{t+3\,month} = \beta_0 + \beta_1 TP_{it} + \beta_2 AGE_{it} + \beta_3 MINORITY_{it} + \beta_4 BSTUDY_{it} + \beta_5 AGE_{it}*TP_{it} + \beta_6 MINORITY_{it}*TP_{it} + \beta_7 BSTUDY_{it}*TP_{it} + \beta_8 BVE_{it} + \beta_9 PBTI_{it} + \beta_{10} EM_{it} + \beta_{11} LEV + \beta_{12} CAPINT_{it} + \beta_{13} BDS_{it} + \beta_{14} DUM\_IND1_{it} + \varepsilon_{it} \quad \text{(Model III)}$$

Similar to applied method in the previous study by Wahab and Holland (2012) who used the opening book value of equity as deflated for each of the three models. The models were estimated using EVIEWS economics software. The author used panel data; therefore econometric procedure consists of three steps. In the first step, the author checked the appropriate model of estimation. We have to test for the presence of individual effect of Indonesia firms. In the second steps, we checked whether the fixed effect or the random effect should be considered in estimating model parameters. The last step consists on estimating the coefficients of our variables. We also checked the heteroscedasticity by general least square or white heteroscedasity and check the multicolinearity by variance inflation factors.

3.2. Measurement Variables

Dependent variable is firm value. Firm value is proxy with market value equity ($MVE_{t+3month}$) consistency with Wahab and Holland (2012). *MVE* is measured 3 months after accounting year end to reflect the lag in disclosing annual financial statements to shareholders (Horton, 2008; O'Hanlon and Taylor, 2007; Wahab and Holland, 2012). Share price used is closing price share the end of March period year sample.

Independent variable is *TP*. Similar to Wahab and Holland (2012), *TP* is measurement in three steps: First, ETR was CTE exclude deferred tax expense (Dyreng et al., 2008) with pre book tax income (*PBTI*). Second, government tax rate (25%) minus ERT firms with *PBTI*. Finally, *TP* scaled with book value equity (*BVE*) t−1 or opening *BVE*.

Moderating variable has three proxies of diversity of board consists: Firstly, proportion of the board of director member of 40-50 years old (*AGE*). The author defined age of member directors as that 40-50 year old as on December 31, 2012. In Indonesia cases those age (40-50 years) are productive ages, this is a period of people to achieve and maintain satisfaction in their careers. The author argue earlier studies that older people are more likely sensitive to the threats of sanctions and over the years have acquired greater social stakes. Other reason, older people are more experience and knowledge in making business decision. However, many studies have found that age increases the level related with tax morale and firm performance (Torgler, 2006; Kusumastuti et al., 2007; Darmadi, 2010; Qureshi et al., 2014).

Secondly, Chinese/Tionghoa ethnics (*MINORITY*) are proportion of the board of director. The earlier studies show that minority is related to firm performance (Carter et al., 2003; Erhardt et al., 2003; Kusumastuti et al., 2007). In Indonesia cases Chinese or Tionghoa ethnics is minority race but have a big influence in the business. According to Suryadinata (2008), there are several factors to make Chinese ethnic successful in business; the success of the Chinese ethnic is driven by working ethos and high distinctive spirit of minorities. Thriftiness and the discipline are at the core of this philosophy. Business is also became a hallmark of life citizens of Chinese. Chinese as an ethnic minority have culture, which has been held in high esteem, it allows them to stand and succeed in running a business.

Finally, proportions of the board of directors have education/study background majoring economics and business (*BSTUDY*). We argue that education was related to tax payer's knowledge about tax law (Torgler, 2006). The knowledge/science of tax/taxation is commonly obtained from the School of Economics and Business. If members of the board of directors have education background economics and business are expected to be better in managing company effectively and efficiently especially in *TP* activities.

Base on the findings previous studies (Wahab and Holland, 2012; Aliani and Zarai, 2012a; Aliani and Zarai, 2012b; Desai and Dharmapala, 2009; Carter et al., 2003; Darmadi, 2010; Kusumastuti et al., 2007) we also used seven control variable are *BVE*, *PBTI*, *EM*, leverage (*LEV*), capital intensity (*CAPINT*), board directors size (*BDS*) and dummy variable for control specific industry (*DUM_IND*). The measurements above variables control used can be seen in the Table 1.

Table 1: Measurement variables

Variable	Description	Sign	Measurement
$MVE_{t+3\ month}$	Firm value	±	Market value of equity, we scaled by BVE_{t-1}
TP	Tax planning	±	(25%−ETR)**PBTI* *ETR=CTE/*PBTI*
AGE	Age	±	Proportion of the board member director 40-50th years of old
MINORITY	Chinese ethnics/Tionghoa	±	Proportion of the board member director of the Chinese/Tionghoa ethnics
BSTUDY	Background study/education	±	Proportion of the board member director which study/education background of economics and business
BVE	Book value equity	+	Natural logarithm from book value equity firm
PBTI	Pre book tax income	+	Profit before tax
EM	Earnings management		(PTBI−CFO)/total asset
LEV	Leverage	±	Long-term debt/total asset
CAPINT	Capital intensity	±	PPE/Total asset
BDS	Board director size	±	Natural logarithm a number board of directors serving on firms
DUM_IND	Industry dummy	±	Coded 1 for manufacturing industry, 0 otherwise
it	*i* firms on years *t*		
β_0	Intercept		
€	Error term		

25% government tax rate in Indonesia, ETR: Effective tax rate, CTE: Current tax expense, PTBI: Pre book tax income

3.3. Sample Data and Data Sources

This study employs a panel dataset of large sample listed on the IDX during 2 years period 2010-2011 restricted to non-banking firms and financial firms. The initial samples are 443 firms, but exclude banking and financial firms (81 firms), negative *BVE* is (15 firms), negative *PBTI* is (61 firms) consistency with Wahab and Holland (2012). While, the sample exclude, initial public offering is 23 firms, financial reporting with other rupiah currency is 21 firms. We also exclude firms is merger, takeover and accounting report more than 12 months are 8 firms, then annual report not complete are 6 firms. The final samples are 221 firms, and give a balance panel of 442 year end observations over the 2 years (2010-2011).

Financial statement and annual report data used are gathered from data-stream and the IDX. Industry classification used from the classification of industries base on Indonesia capital market directory. Board diversity is collected manually from annual report.

4. RESULTS AND DISCUSSION

4.1. Statistic Descriptive Analysis

Descriptive analysis for variables used in the study can be seen in appendix of Table 1. Resulted is Table 2 after winsorizing about variable outlier consist range ± 3 standard deviation consistency with Beatty and Weber (2003). Based on Table 2 the mean value for each variable includes its mean, maximum, minimum and standard deviation value. For instance, the mean of firm value or *MVE* of 9.060 billion rupiah currency and mean of *TP* of 11.80 billion rupiah currency. *TP* can be firstly detected from value of ETR for firms, the mean ETR of 23%. The result shows that value of ETR is below government rate (25%). The board diversity characteristics of the sample can be summarized as follows: The mean age of 53% (proportion age of board directors 40-50 years), minority of 48% (proportion Chinese/Tionghoa ethnics on board director member) and *BSTUDY* of 54%, it shows that the average education background of board directors members are economics or business.

4.2. Empirical Result

The results of the three models are reported in Tables 3 and 4. The first two models show a significant positive relationship between firm value and *TP* which is robust to controlling for board diversity in Model II (Table 3). The result supported hypothesis 1 and consistent to previous study which found significant positive association between *TP* activities or tax avoidance and firm value (Wang, 2010; Chasbiandani and Martani, 2012). We found positive relationship between firm value and *TP* in line with traditional perspectives. The significant variable controls are signed positive; it consists of *BVE* and *PBTI*. The variables control *EM*, *LEV* and *BDS* are negative significant, therefore variable control *CAPINT* and *DUM_IND* are not significantly. Thus, board diversity as variable control, we found MINORIY is negative significant the relationship between firm value, and the others variable *AGE* and *BSTUDY* are not significant, supported (Kusumastuti et al., 2007).

The Model III incorporates three moderating variables *AGE*TP*, *MINORITY*TP* and *BSTUDY*TP* to investigates the relationship between *TP* and firm value. The previous result shows positive significant relationship between *TP* and firm value. The interaction variable *AGE*TP* and *BSTUDY*TP* shows positive significant relationship between *TP* and firm value, the result support are H2a and H2c. Meanwhile, interaction variable *MINORITY*TP* show negative significant relationship between *TP* and firm value, the result is not support H2b. The found negative can be explaining with characteristic ethnics Chinese which are Bjerke (2000); Setyawan (2005); Suryadinata (2008): Firstly, power and autocracy, management Chinese ethnics tend autocracy and centralization of single man. Secondly, families', Chinese ethnics tend to be stronger families for hire employee or business networking. Finally, networking (Guanxi), Chinese ethnics are more likely to put networking on business as important them.

Table 2: Descriptive statistic

Variables	Mean	Maximum	Minimum	SD
$MVE_{t+3\ month}$ (Billion.Rp)	9,060.00	299,000.00	173.00	267,000.00
MVE_{t+3}/BVE_{t-1}	3.21	21.99	0.01	4.08
ETR	0.23	0.82	0.00	0.15
TP (billion Rp)	11.80	39.00	−36.00	65.40
TP/BVE_{t-1}	0.01	0.11	−0.10	0.03
AGE	0.53	1.00	0.00	0.29
MINORITY	0.48	1.00	0.00	0.30
BSTUDY	0.54	1.00	0.00	0.27
BVE (Billion Rp)	28,800.00	75,800.00	84.80	7,110.00
PBTI (Billion Rp)	769.00	25,800.00	0.97	2,460.00
$PBTI/BVE_{t-1}$	0.28	1.45	0.00	0.27
EM/BVE_{t-1}	0.02	1.21	−1.18	0.29
LEV	0.17	0.65	0.00	0.16
CAPINT	0.31	0.80	0.00	0.23
BDS	4.86	11.00	2.00	1.92
Sample (*N*)	442			

MVE: Market value equity, BVE: Book value equity, ETR: Effective tax rate, TP: Tax planning, EM: Earnings management, PBTI: Pre book tax income, BDS: Board director size, SD: Standard deviation, LEV: Leverage

4.3. Sensitivity Analysis

The primary Model I, II and III used *MVE* as measured firm value, we used alternative proxy by Tobin's Q, it has been used in some studies (Carter et al., 2003; Chasbiandani and Martani, 2012; Desai and Dharmapala, 2009; Darmadi, 2010; Kusumastuti et al., 2007). The Tobin's Q is computed by deflating, the amount of assets plus market value of common stock minus book value of common stock minus deferred tax expense, by book value of assets.

We used full sample and full model for analyzing sensitivity; meanwhile only Model I and II were consistent with primary model (Table 5). Therefore, there is significant positive relationship between *TP* and firm value which robust the controlling board diversity. When using Tobin's Q to examine Model III, we found the moderating influence of board diversity on the relationship between *TP* and firm value was inconsistent.

5. CONCLUSION AND SUGGESTIONS

The purpose of this research is to analyze the impact activities of *TP* to firm value with board diversity as moderating variable.

Table 3: Result regression the relationship between tax planning and firm value

Regression estimations Model I and II							
$MVE_{t+3month} = \beta_0 + \beta_1 TP_{it} + \beta_2 BVE_{it} + \beta_3 PBTI_{it} + \beta_4 EM_{it} + \beta_5 LEV_{it} + \beta_6 CAPINT_{it} + \beta_7 BDS_{it} + \beta_8 DUM\_IND_{it} + \varepsilon_{it}$							
$MVE_{t+3month} = \beta_0 + \beta_1 TP_{it} + \beta_2 AGE_{it} + \beta_3 MINORITY_{it} + \beta_4 BSTUDY_{it} + \beta_5 BVE_{it} + \beta_6 PBTI_{it} + \beta_7 EM_{it} + \beta_8 LEV_{it} + \beta_9 CAPINT_{it} + \beta_{10} BDS_{it} + \beta_{11} DUM\_IND_{it} + \varepsilon_{it}$							
Variables	**Model I**				**Model II**		
	Expected sign	**Coefficient**	***P* value**	**VIF**	**Coefficient**	***P* value**	**VIF**
TP (H1)	±	39.2503	0.0000***	1.0410	39.3477	0.0000***	1.0410
AGE	±	-	-		1.1962	0.1116*	1.1530
MINORITY	±	-	-		−1.6088	0.0345**	1.0520
BSTUDY	±	-	-		−0.3323	0.3723	1.1310
BVE	+	0.4780	0.0145**	1.5995	0.5098	0.0020***	1.6480
PBTI		15.0082	0.0000***	1.0352	15.0517	0.0000***	1.0530
EM	+	−5.4251	0.0000***	1.0556	−5.42696	0.0000***	1.0580
LEV	±	−5.4845	0.0023***	1.1606	−5.5112	0.0000***	1.1730
CAPINT	±	1.4453	0.2190	1.0653	1.3015	0.1348	1.0710
BDS	+	−1.1552	0.0765*	1.5712	−1.1566	0.0778*	1.6010
DUM_IND	±	−0.7604	0.2021	1.1367	−0.6133	0.1556	1.1970
Constanta	≠	−11.6978	0.0139		−1.2266	0.0144	
R^2 weighted			0.8345			0.8382	
R^2 unweighted			0.8224			0.8270	
Adjusted R^2			0.8337			0.8315	
F-test Sign (*F*-statistic)			0.0000***			0.0000***	
N			442			442	
Results of Haustmant test			Random			Random	

***Significance of level 1%.**Significance of level level 5%. *Significance of level 10%, BVE: Book value equity, Dependent variable Model I and II are $MVE_{t+3\ month}$. Independent variable: TP. Board Diversity are: *AGE*, *MINORITY* and *BSTUDY*. Control variables are: BVE, *PBTI, EM, LEV, CAPINT, BDS* and *DUM_IND*. Measurement of each variable: $MVE_{t+3\ month}$=*MVE/*BVE_{t-1}, *TP*: (25%-ETR)**PBTI, AGE*: The proportion of the board member directors 40-50th years old, *MINORITY*: The proportion of the board member director Chinese/Tionghoa ethnic. *BSTUDY*: The proportion of the board member director which education/studies background economics and business. BVE_t: Natural logarithms of *BVE*, *PBTI: PBTI*$_t$/BVE_{t-1}, *EM:* (*PBTI*–CFO)/BVE_{t-1}, *LEV*: Long-term debt/total asset, *CAPINT*: PPE/Total asset, *BDS*: Natural logarithm of number board of directors serving on the firms. *DUM_IND1*: Coded 1 for manufacturing industry and 0 otherwise. The result Haustmant test used random effect, BVE: Book value equity, ETR: Effective tax rate, TP: Tax planning, EM: Earnings management, PBTI: Pre book tax income, BDS: Board director size, VIF: Variance inflation factors, LEV: Leverage

Table 4: Result regression the relationship between tax planning and firm value with board diversity as moderating

Regression estimations Model III				
$MVE_{t+3\ month}=\beta_0+\beta_1 TP_{it}+\beta_2 AGE_{it}+\beta_3 MINORITY_{it}+\beta_4 BSTUDY_{it}+\beta_5 AGE_{it}*TP_{it}+\beta_6 MINORITY_{it}*TP_{it}+\beta_7 BSTUDY_{it}*TP_{it}+\beta_8 BVE_{it}+\beta_9 PBTI_{it}+\beta_{10} EM_{it}+\beta_{11} LEV+\beta_{12} CAPINT_{it}+\beta_{13} BDS_{it}+\beta_{14} DUM\_IND1_{it}+\varepsilon_{it}$				
Variables	**Expected sign**	**Coefficient**	***P*-value**	**VIF**
TP	±	34.9414	0.2275	1.2886
AGE	±	3.2672	0.1450	1.1669
MINORITY	±	−2.1421	0.2664	1.0695
BSTUDY	±	−3.2138	0.1346*	1.1561
*TP***AGE*	(H2a) +	106.9873	0.0070***	5.7082
*TP**Minority	(H2b) +	−260.6764	0.0000***	3.4379
*TP***BSTUDY*	(H2c) +	179.4269	0.0001***	5.6197
BVE	+	0.7026	0.2876	1.6181
PBTI	+	11.8569	0.0000***	1.7152
EM	-	−3.8153	0.0000***	1.1997
LEV	±	−8.8643	0.0268**	1.1450
CAPINT	±	5.2048	0.1486	1.0609
BDS	±	−1.8032	0.1754*	1.6225
DUM_IND1	±	-	-	
Constanta		−15.8986	0.6504	
R^2			0.9590	
Adjusted R^2			0.9131	
P (*F*-statistic)			0.0000***	
N			442	
Result Hausmant test			Fixed	

***Significance of level 1%.**Significance of level level 5%. *Significance of level 10%. Dependent variable Model III is $MVE_{t+3\ month}$. Independent variable: TP. Board Diversity are: *AGE*, *MINORITY* and *BSTUDY*. Control variables are: *BVE, PBTI, EM, LEV, CAPINT, BDS* and *DUM_IND*. Measurement of each variable: $MVE_{t+3\ month}$=*MVE/*BVE_{t-1}, *TP*: (25%-ETR)**PBTI, AGE*: The proportion of the board member directors 40-50th years old, *MINORITY*: The proportion of the board member director Chinese/Tionghoa ethnic. *BSTUDY*: The proportion of the board member director which education/studies background economics and business. BVE_t: Natural Logarithms of *BVE*, *PBTI*: *PBTI*$_t$/BVE_{t-1}, *EM*: (*PBTI*–CFO)/BVE_{t-1}, *LEV*: Long-term debt/total asset, *CAPINT*: PPE/Total asset, *BDS*: Natural Logarithm of number board of directors serving on the firms. *DUM_IND1*: Coded 1 for manufacturing Industry and 0 otherwise. The result Haustmant test used fixed effect, BVE: Book value equity, ETR: Effective tax rate, TP: Tax planning, EM: Earnings management, PBTI: Pre book tax expense, BDS: Board director size, VIF: Variance inflation factors, LEV: Leverage

Table 5: Result sensitivity analysis of the relationship between tax planning and firm value with board diversity as moderating

Result of sensitivity analysis with Tobin's Q of all Model Tobin's Q=$\beta_0+\beta_1 TP_{it}+\beta_2 AGE_{it}+\beta_3 MINORITY_{it}+\beta_4 BSTUDY_{it}+\beta_5 AGEit*TP_{it}+\beta_6 MINORITY_{it}*TP_{it}+\beta_7 BSTUDY_{it}*TP_{it}+\beta_8 BVE_{it}+\beta_9 PBTI_{it}+\beta_{10} EM_{it}+\beta_{11} LEV+\beta_{12} CAPINT_{it}+\beta_{13} BDS_{it}+\beta_{14} DUM\_INDIit+\varepsilon_{it}$							
Variable	**Expected sign**	**Model I**		**Model II**		**Model III**	
		Coefficient	***P*-value**	**Coefficient**	***P*-value**	**Coefficient**	***P*-value**
TP	+	1.2878	0.1109	1.3725	0.0937*	3.9274	0.0682*
AGE	+			−0.0954	0.3345	−0.1642	0.4757
MINORITY	±			0.4044	0.0957*	0.4885	0.0579
BSTUDY	+			0.1525	0.2320	0.1782	0.4116
*TP*AGE*	+					3.0790	0.1698
*TP*MINORITY*	+					−4.1433	0.0839*
*TP*BSTUDY*	+					−4.4942	0.0852*
PBTI	+	−0.0368	0.3176	−0.0428	0.1235	−0.0814	0.0604*
EM		−0.0018	0.4845	0.0002	0.9973	0.0118	0.4047
LEV	+	−0.2988	0.1883	−0.2956	0.3822	−0.2836	0.4010
CAPINT	±	0.0370	0.8900	0.0794	0.7672	0.1025	0.7024
BDS	±	−0.1284	0.1861	−0.1014	0.4832	−0.0818	0.5717
C		0.5550	0.0215**	0.2765	0.3684	0.2328	0.4498
R^2			0.9205		0.9218		0.9232
Adjusted R^2			0.8370		0.8373		0.8380
P (*F*-statistic)			0.0000		0.0000		0.0000
N			442		442		442
Result Haustman test			Fixed		Fixed		Fixed

***Significance of level 1%.**Significance of level level 5%. *Significance of level 10%. Dependent variable Model I, II and III are Tobin's Q. Independent variable: *TP*. Board Diversity are: *AGE*, *MINORITY* and *BSTUDY*. Control variables are: *BVE, PBTI, EM, LEV, CAPINT, BDS* and *DUM_IND*. Measurement of each variable: $MVE_{t+3month}=MVE/BVE_{t-1}$, *TP*: (25%-ETR)**PBTI*, *AGE*: The proportion of board member directors 40-50th years old, *MINORITY*: The proportion of the board member director Chinese/Tionghoa ethnic. *BSTUDY*: The proportion of the board member director which education/studies background economics and business. *PBTI*: $PBTI_t/BVE_{t-1}$, *EM*: $(PBTI-CFO)/BVE_{t-1}$, *LEV*: Long-term debt/total asset, *CAPINT*: PPE/Total asset, BDS: Natural logarithm of number board of directors serving on the firms. *DUM_IND*1: Coded 1 for manufacturing industry and 0 otherwise. The result Haustman test used fixed effect, VIF: Variance inflation factors, BVE: Book value equity, ETR: Effective tax rate, TP: Tax planning, EM: Earnings management, PBTI: Pre book tax expense, BDS: Board director size, LEV: Leverage

The research is conducted for non-banking and financial firms in IDX for 2010-2011. The results of this study are: Firstly, we found evidence of positive relationship between *TP* and firm value. Secondly, we found evidence that board diversity (*AGE* and *BSTUDY* of member director) could increase the positive influence of *TP* into firm value, except for *MINORITY* could decrease the positive influence of *TP* into firm value. Finally, the results of the sensitivity test with the full model and the full sample suggested that *TP* had robust positive effect in increasing firm value, then the moderating influence of board diversity (*BSTUDY* and *MINORITY*) on the relationship between *TP* and firm value was consistent but other variables of board diversity (*AGE*) are not consistent.

This study is several shortcomings and opens up opportunities for other researchers to develop this further research. There are several caveats that can be overcome by further research. First, the sample population is still limited to the years of 2010-2011. Future studies may expand the sample by extending span time of sample taking. Therefore, further studies are needed to compare the condition existing Indonesia with other countries that have better business climate. Second, the variables used in this study cannot fully explain *TP*. Therefore, further research can explore *TP* component such permanent and temporary differences, as well as Cash ETR. Third, board diversity such *AGE*, *MINORITY* and *BSTUDY*. Therefore, further research can explore other board variable such Age can be measure by average age of member board directors, gender, level education background as proxy *BSTUDY*, nationality as proxy minority, gender and experience or tenure.

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