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## Gender Diversity Effect on Tax Avoidance and Firm Risk

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**Abstract.** The purpose of this study was to examine the effect of gender diversity on firm risk with tax avoidance as a mediating variable in manufacturing companies listed on the Indonesia Stock Exchange (IDX). This study used SPSS version 20.0 to process the data. The sample of this research is 51 manufacturing companies listed on the IDX using multiple regression panel data. This study uses financial statement data for the 2015 – 2019 period. The findings of this study are (1) there is a negative effect of gender diversity on tax avoidance; (2) there is a negative effect of gender diversity on firm risk; (3) there is a positive effect of tax avoidance on firm risk; (4) Gender diversity has an influence on firm risk through tax avoidance. The limitations of this study are as follows: the research sample is only in manufacturing companies listed on the Indonesia Stock Exchange with a limited number of samples because during the observation period there are companies that are losing, suspending, and delisting. Therefore, this research suggests that (1) Further research can expand the scope of the research sample or compare it with companies in other industrial sectors. (2) Further research can increase the number of other variables, such as Corporate Social Responsibility by using the Blau-Index measurement (1975) so that the measurement can be more detail and constructive. (3) Further research can use other samples in Asean countries by comparing the success rate of anti-corruption disclosure in ASEAN countries. The practical implications include the following: (1) the role of gender diversity in the company is very necessary for implementing Good Corporate Governance (GCG) thus a healthy company will be created so that the company's risk does not occur in the future. (2) the role of the government is needed in making policies so that companies do not do tax evasion. The originality of the research includes this study, which is the first to analyze gender diversity on firm risk through tax avoidance.

**Keywords.** Gender Diversity, Tax Avoidance, Firm risk

### 1. Introduction

Motivated by the growth and the company's sustainability, managers must be able to choose the company's strategy in overcoming all risks that will occur. Managers must be able to take and choose the risks that may occur, determine the decisions in the company that can provide significant implications for the performance, growth, and survival of the company. The company's strategy must be made to overcome the risks that will occur in the long term. The company's risk-taking is determined from internal factors or company characteristics and external factors related to conditions that affect the company from outside [1].

Stock investment in the capital market is classified as a high-risk investment, because the nature of the commodity is very sensitive to changes that occur in macroeconomic fundamentals, both changes that occur abroad and changes that occur within the industry and the company itself. These changes have the potential to increase or decrease the stock price of companies whose shares are actively traded on the exchange. The high volatility of stock prices on this exchange reflects the high systematic risk of the stock, which in turn is high in systematic risk. The level of systematic risk for each company, as a result of changes in macroeconomic conditions, is highly dependent on the internal conditions of each company. Financially healthy companies will have low systematic risk, but companies that are not in good financial condition will have high systematic risk. If the company has a high systematic risk, it will be difficult for the company to develop its business, so that its performance will also be affected.

The percentage of female leaders in Indonesia in a company in 2017 based on a research report released by Grant Thornton, experienced a very significant increase of 36% from 2016. As many as 46% of women in Indonesia managed to occupy the top leadership or senior management of the company. The research was conducted in 36 countries through interviews with 5,500 CEOs (Chief Executive Officer) managing directors, chairman, or other senior executives from various industrial sectors. These results put Indonesia in the second-largest position in the world in terms of women's leadership after Russia which has a proportion of 47% then in the third position and so on is occupied by Estonia, Poland, and the Philippines with a proportion of 40% each. Grant Thornton said in detail that the most senior management positions held by women leaders in Indonesia were CFO positions with a proportion of 20%, then COO (14%), CIO (8%), and CEO (6%). (web: [beritasatu.com](http://beritasatu.com), 2018).

The presence of women on the board of directors is a manifestation of the diversity of the board. Board diversity is one sign that a company has good governance because it will make the company more profitable in making decisions [2]. The involvement of women in the company's board of directors and the board of commissioners reflects that there is no discrimination in the company, meaning that the company provides an opportunity for anyone to become part of the company's board, so that the reputation and value of the company to investors will increase [3].

The selection of managers who run the company affects the company's decisions. This is related to the choice of gender who will lead the company [4]; [5] [6]. In Tunisian banks, gender has an emotional bias on the credit risk of Tunisian bank management [7]. Gender equality created at the institutional level in Spain where the head of the company is a woman implies a positive influence on the financial performance of a company [8]. There is a difference in risk preference between male and female CEOs of companies in Vietnam where there is a characteristic coefficient value of 58% of the gender gap in the risk index [9]. Based on this, the selection and gender gap affect the company's risk.

Many companies in Indonesia do tax avoidance based on a survey conducted by IMF investigator Ernesto Crivelly in 2016, reanalyzed by the UN University using the International Center for Policy and Research (ICTD) database, and the International Center for Taxation and Development (ICTD) on companies in 30 countries. Indonesia is ranked 11th out of 30 countries with losses of around US\$6.48 billion due to companies that do tax evasion [10].

The phenomenon of tax avoidance practices by companies in Indonesia can be seen in the decline of tax revenues achievement from 2013-2019 where the average realization of state revenues is only 88%. The percentage of tax revenue achievement is triggered by the number of companies that do tax avoidance. Tax is a burden on the company because it can reduce net income. Therefore, tax avoidance is a way for companies to reduce their tax payments to the

state treasury [11]. Companies take advantage of loopholes in tax regulations as one of the legal actions in tax avoidance to reduce the tax burden owed [12].

Tax avoidance can increase the firm risk for several reasons [13]. First, tax avoidance increases uncertainty concerning future tax payments, either through increased uncertainty about challenges by tax authorities, transactions that result in tax savings, or the continuation of tax laws (e.g., research and development on tax credits) that provide tax benefits. [14]. If tax payments are a significant component of the company's cash flow, then uncertainty about the number of corporate tax payments can lead to uncertainty about the company's overall cash flows. Second, the level of tax avoidance can be the main indicator of the company's investment risk apart from other influences, such as the volatility of the company's cash flows. This will occur if the company's dependence on unqualified investments is associated with the entry of risky investments. For example, a reduction in corporate tax rates may reflect the investment increase in countries that use low tax rates to offset high investment risks in their respective countries. Finally, tax evasion activities can add to the complexity of a company's financial statements and disclosures, thereby reducing transparency and increasing uncertainty about a company's future cash flows. These low tax rates tend to be more enduring than high tax rates and the commonly used tax avoidance measures will affect the company's overall risk in the future [13].

Based on the description above, it is very necessary to research the effect of gender diversity on firm risk with tax avoidance as a mediating variable. The purpose of this study is to determine whether: 1) gender diversity affects tax avoidance; 2) gender diversity affects firm risk; 3) gender diversity affects firm risk through tax avoidance.

## 2. Theoretical Review

### 2.1. Firm risk

According to [15], risk is a form of uncertainty about a situation that will occur later with decisions taken based on a consideration [16]. According to [17] risk is divided into 2 types, namely [18]; [16] systematic risk and unsystematic risk. Proxy measurement of firm risk (firm risk) in this study is a systematic risk measurement using a single index model. The single index model of is [19]; [20]; [21]; [22]:

$$R_i = \alpha_i + \beta_i \times R_m + \varepsilon_i, \dots\dots\dots (4)$$

- $R_i$  : return of the i-th stock profit
- $\alpha_i$  : The rate of profit of stock i which is not affected by changes stock market i
- $\beta_i$  : Beta of the i-th stock
- $R_m$  : Return of the i-th stock market profit
- $\varepsilon_i$  : residual error which shows the residual risk of the i-th stock

After getting the beta value, then correcting the bias that occurs in the beta of securities due to asynchronous trading. Asynchronous trading referred here is a trade that occurs because there are several securities that have not traded for some time or it can also be said if some securities are only traded in the morning, the price is then carried until the market is closed, which then the price is used to calculate the market index, on that day.

As a result, for these securities, the price in period t is the previous price which was the last price traded, not the price of the result of trading in period t. As a result of this asynchronous trading, the bias will be greater with the increasing number of securities that are not actively

traded so that the market index price in a certain period is formed from the prices of the securities of the previous period.

To correct the bias in asynchronous trading, three methods can be used, namely the Scholes Williams method, the Dimson method, and the Fowler Rorke method. But in this study the method that will be used is the Fowler Rorke method. This is because the Fowler Rorke method is the most appropriate beta bias correction method for the Indonesian capital market with lag and lead.

According to [23], the Dimson method which only adds up the multiple regression coefficients without giving weights will still give a biased beta. This method adds weight to the bias so that the resulting beta is unbiased. In addition, this method is very appropriate for return data that are normally or not normally distributed. The calculation steps using this method are as follows [23]. By using the multiple regression equation Dimson model as follows:

$$R_{i,t} = \alpha_i + \beta_{i-1}.RM_{t-1} + \beta_{i0}.RM_t + \beta_{i+1}.RM_{t+1} + \varepsilon_{it}$$

1. To obtain a serial correlation of market index returns with market index returns of the previous period, a regression equation is used using the following formula:

$$RM_t = \alpha_i + \rho_1.RM_{t-1} + \varepsilon_{it}$$

2. Calculate the weight used:

$$W_i = \frac{1 + \rho_1}{1 + 2\rho_1}$$

3. Calculate the correction beta of the i-th security which is the sum of the multiple regression coefficients with weights, the equation is as follows:

$$B_i = W_1\beta_{i-1} + \beta_{i0} + w_1\beta_{i+1}$$

The advantage of this method is that the beta generated by the Fowler Rorke method when faced with less lead and lag time will be able to display results that are in accordance with the fluctuations in stock market returns.

## ***2.2. Gender Diversity***

Gender diversity in a company described as the proportion of women and men in running a company [24]. The number of women who decide to work is driven by a number of reasons, including the desire of women to be independent, especially economically and the expansion of job opportunities that absorb female workers [24]. When the welfare of a family has not been able to meet the needs of the family, there will be an incentive for family members to enter the labor market, including women. Some women also choose to work for their own benefit.

Measurements in this variable refer to research models [25], [26], [27] and [28] which state that the main measure of gender diversity is the proportion female directors on the board [4], where gender diversity was measured using the Blau-Index.

$$B_i = 1 - \sum_{i=1}^2 P_i^2$$

i = 1, 2 is the number of gender categories

Pi = Proportion of each category

### 2.3. Tax Evasion

The definition of tax avoidance according to [29] is tax savings that arise by utilizing tax provisions that are carried out legally to minimize tax obligations. In addition, another definition of tax avoidance is a way to avoid paying taxes legally by taxpayers by reducing the amount of tax owed without violating tax regulations or in other terms looking for regulatory weaknesses [30].

The measurement of tax evasion is by looking for Book Tax Different (BTD), ie accounting profit is measured as income before tax and taxable income is measured as income for the fiscal year. Here estimated taxable income is a proxy for fiscal year income, not actual taxable income. Due to the confidentiality of the company's taxable income data, this study uses data on estimated taxable income which is calculated following the method of [31] and [32]. Estimated taxable income is calculated by inverse calculation using the real tax burden and calculating the tax amount. In the following equation, the residual ( $\varepsilon$ ) is a proxy for tax avoidance:

$$\frac{BTD_t}{ASSET_{t-1}} = \alpha_0 + \alpha_1 \frac{TA_t}{ASSET_{t-1}} + \varepsilon$$

BTD = income before tax - estimated taxable income;

estimated taxable income = tax expense / corporate tax rate

TA = total accruals (net income minus operating cash flow net income)

ASSET = total assets year n-1

$\varepsilon$  = residual value as tax avoidance

### 2.4. Company Age

According to [33], the age of the company can show that the company still exists and is able to compete. According to [34] age in a company is part of the documentation that shows what is and will be achieved by the company. [16] defines the age of the company as the beginning of the company carrying out operational activities so that it can maintain the company's going concern or maintain its existence in the business world.

Company age is measured from the initial date of the company's listing on the IDX until the time of this study. The calculation of the age of the company carried out in the research conducted by [35] is carried out using the formula:

$$\text{Company Age} = \text{Year of Research} - \text{Year n (Year of rights issue on IDX)}$$

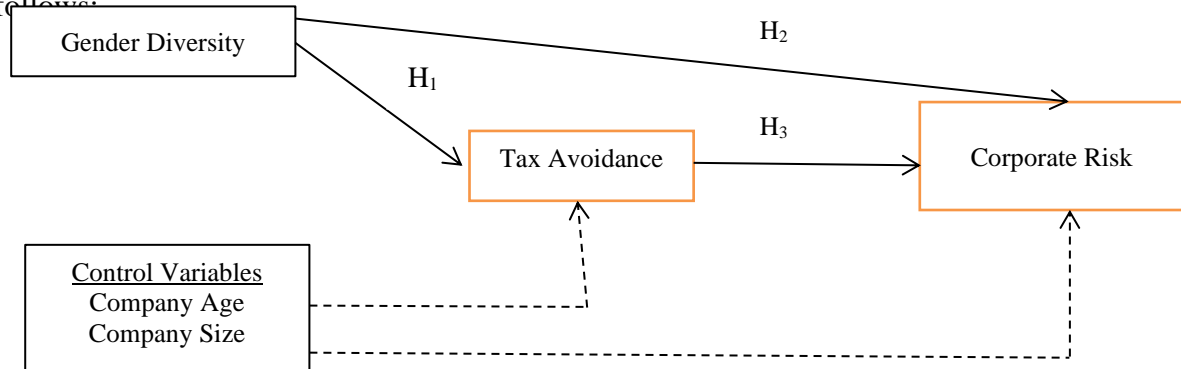
### 2.5. Firm Size

According to [36] company size is the size of the company seen from the amount of equity value, sales value or asset value. Furthermore, the size of the company according to Scot in [37] defines organizational size as a context variable that measures the demands of the organization's services or products. According to [38] company size is a set of well-defined policies that must be implemented by companies that compete globally.

According to [18] suggests that the measurement of company size variables is based on total assets. According to [39] the size of the asset is used to measure the size of the company, the size of the asset is measured as the logarithm of total assets. The value of total assets is usually very large compared to other financial variables, therefore the asset variable is refined into Log Assets or Ln Total Assets.

### 2.6. Research Framework

Based on the theory that has been described, the framework of thought in this study is as follows:



### 2.7. The Effect of Gender Diversity on Tax Avoidance.

The Center for Tax Policy and Administration states that one of the factors that can affect tax compliance is gender. [40] stated that differences in attitudes between men and women are not only influenced by biological differences, but also by differences in characteristics. Women with feminine characteristics are considered to be more risk averse than men with masculine characteristics [41]; [40]; [42]; [43].

The presence of women in top management positions is considered to have a positive influence on company performance. [44] stated that a female director would work better in controlling and monitoring activities and in handling management reports. Another study found a positive relationship between gender diversity of board members, board monitoring, and earnings quality. Research [44]; [45]; [46]. [47] shows that a firm that has a female CFO (Chief Financial Officer) has a higher accrual quality.

Previous research has found that the presence of women on the board can reduce the possibility of tax aggressiveness [48]; [49]. Previous research has stated that gender diversity has a negative effect on tax avoidance [50]; [51]; [52]; [53]. However, several studies have found that female board members have no effect on tax aggressiveness [54]; [55]. [56] found that individual executives play an important role in determining the level of tax avoidance of a company. [56]. [57] stated that the factors that influence tax avoidance and compliance on individual taxpayers also apply to corporate taxpayers [58]; [48]; [49] shows that the presence of female board members can make companies less tax aggressive. [59] stated that gender diversity has a positive effect on tax avoidance. The nature of women who are more likely to avoid risk can influence decisions made by the board of directors to become more tax-abiding decisions.

Based on the description above, the hypotheses related to the relationship between gender and tax avoidance are:

H1: Gender diversity has a negative effect on tax avoidance.

### 2.8. The effect of gender diversity on firm risk.

The presence of women on the board of directors is a manifestation of the diversity of the board. Board diversity [49] is one sign that a company has good governance because it will make the company more profitable in making decisions [2]. The involvement of women in the

company's board of directors and the board of commissioners reflects that there is no discrimination in the company, meaning that the company provides an opportunity for anyone to become part of the company's board, so that the reputation and value of the company to investors will increase [3].

Gender is the roles, behaviors, activities, and attributes that a society attaches to men and women. According to gender theory, women tend to be more risk-averse than men. This is due to the nature of women who tend to be more emotional than men, and women are more likely to feel nervous (worry) and fear in anticipating a failure [41]. The gender diversity of executives in a company is evidence of the implementation of good corporate governance which has a very large role in changing the value of the company [60] in [61]. Gender diversity can increase the diversity of executive characteristics so that it is expected to provide alternative solutions to a problem that can ultimately prevent firm risk. This can be explained by attribution theory which states that every individual action in the executive is influenced by the nature, character and motivation so that it can explain a decision of the action.

Previous research [62] stated that gender diversity had a significant positive effect on firm risk, research [4][4] showed the effect of gender diversity had a negative effect on firm risk and research results [3] stated the existence of female members have no effect on firm value. [63] describes the relationship between board diversity and firm value in the context of agency theory and based on board relationships as a means of control and monitor for the company. The higher the gender diversity in a company, the greater the independence of the executives. Increasing the independence of the executive will reduce agency costs because of the decrease in supervisory costs that must be incurred by the principal. The decrease in agency costs will increase shareholder satisfaction so that it will reduce the company's risk. Therefore, the increase in executive gender diversity in the company will be negatively related to the company's risk.

Previous research revealed that the selection of managers who run the company affects the company's decisions. This is related to the choice of gender who will lead the company [4]; [6]. In Tunisian banks, gender has an emotional bias on the credit risk of Tunisian bank management [7]. Gender equality created at the institutional level in Spain where the head of the company is a woman implies a positive influence on the financial performance of a company [8]. There is a difference in risk preference between male and female CEOs of companies in Vietnam where there is a characteristic coefficient value of 58% of the gender gap in the risk index [9]. Research [64]; [65]; [62] states that gender diversity has a significant negative effect on firm risk. Research [51] shows the effect of gender diversity has a positive effect on firm risk and research results, [28] gender diversity does not affect firm risk as well, meanwhile [3] states that the presence of female members has no effect on company value. In a company where this diversity involves women who are careful, it will reduce the risk of the company.

Based on the description above, the hypotheses related to the relationship of gender diversity to firm risk are:

H2: Gender diversity has a negative effect on firm risk.

### ***2.9. The effect of tax avoidance on firm risk.***

Tax avoidance is all the ways that companies do to reduce taxes. Tax avoidance is a decision that must be taken by top management in leading the company. The practice of tax avoidance opens up opportunities for corporate leaders to behave in tax avoidance for the purpose of short-term profits and result in the company's risk in the future.

The company's risk level reflects the company's executive policies included in the risk taking or risk averse category, the greater the company's risk indicates that the company's executives are risk taking, on the contrary, the smaller the company's risk indicates that the company's executives are risk averse. The effect of corporate tax avoidance on firm risk is that if the management policy in managing the company wants to reduce the tax burden, the management dares to avoid tax by reducing profits and this will have an impact on the company's risk.

Indications of the high practice of tax avoidance (tax avoidance) by taxpayers as happened to companies in Germany [66]. One of the external factors that has a large enough influence on firm risk is the issue of taxation [4]; [67]; [13]. Tax avoidance is everything a company does that results in a reduction in corporate taxes [68]. The practice of tax avoidance opens opportunities for managers to be opportunistic for short-term profit goals which are likely to harm shareholders in the long term [69] which has an impact on the company's risk in the future.

Tax avoidance carries risks according to research [14]. Research [70] states that tax revenue has an effect on investors' assessment of firm risk and research [71] states that tax avoidance has a positive effect on firm risk. Then research [72] states that tax avoidance has no effect on firm risk. Based on the description above, the hypotheses related to the relationship between tax avoidance and firm risk are:

H3: Tax avoidance has a positive effect on firm risk.

### 3. Research Methodology

The method used in this study is causal quantitative method. This study aims to examine the independent variable Gender diversity effect on firm risk as the dependent variable, mediated by the variable of tax avoidance. The population in this study are manufacturing companies listed on the Indonesia Stock Exchange for the period 2015 – 2019. The sampling process in this study uses the Purposive Sampling method. Purposive sampling is a sampling method with certain considerations or criteria or special selection by the researchers themselves. The sample criteria in this study are: 1) manufacturing companies listed on the Indonesia Stock Exchange during 2015 – 2019; 2) Companies disclosing Good Corporate Governance (GCG); 3) Companies not listing during the observation period; 4) Companies having complete data regarding measurement variables in the 2015 – 2019 financial statements. The sample selection process based on the criteria is as follows:

**Table 1**  
**Result of Sample Selection Procedure**

Criteria	Amount
Number of manufacturing companies listed on the IDX from 2015 -2019	143
Number of companies that do not disclose <i>good corporate governance</i> (GCG)	(0)
Number of companies that were delisted during the 2015-2019 period	(3)
The number of companies that does not have complete data	(14)
Number of Companies that suffered lost during the 2015 – 2019 period	(75)
The remaining number of companies that are sampled	51

Number of years of research	5
Number of companies data observations for 5 years	255

Source : Processed Data (2021)

This study consists of one dependent variable, namely the company's risk which is measured using the Beta formula. While the independent variable in this study, namely gender diversity will be measured using content analysis. In addition, the mediating variable in this study, namely tax avoidance, will be measured using Book Tax Different (BTD). The data analysis technique used in this research is quantitative analysis using statistical software, namely SPSS 20.0. The data analysis that will be carried out in this study is descriptive statistical analysis, coefficient of determination test (R<sup>2</sup>), simultaneous parameter significant test (F test), individual parameter significant test (t test), and Sobel test.

#### 4. Results and Discussion

##### 4.1. Statistical Test Results (Descriptive Statistics)

**Table 2**  
**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
RP	255	-73.66	154.97	1.80	15.73
PP	255	-0.94	0.39	0.02	0.10
KG	255	0,00	0.50	0.17	0.16
UMP	255	1,00	38	22.47	8.88
UP	255	12.41	30.64	22.58	5.62

Source: Processed Data (2021)

The Company's risk has an average value of 1.80 and a standard deviation of 15.73. A standard deviation that is greater than the average value, indicates that the data used in the Firm risk variable has a large data distribution because the standard deviation is greater than the average value, so that the data deviation on the Firm risk variable can be said to be not good. This shows that the Company's Risk data can be said to be heterogeneous data.

Tax Avoidance has an average value of -0.02 and a standard deviation of 0.10. The standard deviation that is greater than the average value, indicates that the data used in the Tax Avoidance variable has a large data distribution because the standard deviation is greater than the average value, so that the data deviation in the Tax Avoidance variable can be said to be not good. This shows that the Tax Avoidance data can be said to be heterogeneous data.

Gender diversity has an average value of 0.17 and a standard deviation of 0.16. A standard deviation that is smaller than the average value indicates that the data distribution of the Gender Diversity variable is small or there is no large enough gap from the lowest and highest Gender Diversity or referred to as homogeneous data.

Company age has an average value of 22.47 and a standard deviation of 8.88. The standard deviation which is smaller than the average value indicates that the distribution of data from the variable age of the firm is small or there is no large enough gap between the lowest and the highest firm age or is referred to as homogeneous data.

Company size has an average value of 22.58 and a standard deviation of 5.62. A standard deviation that is smaller than the average value indicates that the distribution of data from the variable firm size is small or there is no large enough gap between the lowest and highest firm size or referred to as homogeneous data.

#### 4.2. Analysis of the Effect of Gender Diversity on Tax Avoidance (Structural Model 1)

**Table 3**  
**Structural Model Regression Results 1**

No	Notation	Prediction	Koef.	T-stat	Sig.
1	(const)	+	0,015	2,991	0.003*
2	KG	-	-0,050	-8,520	0,000*
3	UMP	+	0,001	6,693	0.000*
4	UP	-	-0,001	-2,754	0.007*
R Square		0,402	F-Statistic		34,249
Adjusted R <sup>2</sup>		0.390	Prob ( F-Stat)		0.000
Variabel Dependen : Penghindaran Pajak (PP)			Variabel Independen: 1. KG : Keragaman Gender Variabel Kontrol: 1. UMP : Umur Perusahaan 2. UP : Ukuran Perusahaan		
Sig : * 1 % ** 5 % *** 10%					

Source: Processed Data (2021)

Based on table 3, the regression model can be formulated as follows:

$$PP = - 0,050 KG + 0,001 UMP - 0,001 UP + \varepsilon_1$$

The value of R Square (R<sup>2</sup>) is 0.402, indicates that Gender Diversity affects Tax Avoidance by 40.2%. The significance value of the F test of 0.000 indicates that Gender Diversity has a significant effect on Tax Avoidance with Company Age (UMP) and Company Size (UP) as control variables. The significant value of the t-test is 0.000, so it can be concluded that the results of the hypothesis regression test indicate that gender diversity has a negative effect on tax avoidance with 0.000 (<0.01).

Company age as a control variable has a significant effect on Tax Avoidance. Company Age with Sig. 0.000 (< 0.01), this indicates that the age of the company can be a good controller for tax avoidance. Where it can be concluded that manufacturing companies listed on the IDX for the 2015-2019 period which have an average Company Age of 22.47

years, this shows that the older the age of the company, the more experience the company has to evade taxes with the aim of paying small taxes.

While the size of the company with a value of Sig. 0.007 (< 0.01), this indicates that company size can be a good controller for tax avoidance, where the size of manufacturing companies listed on the Indonesia Stock Exchange for the 2015-2019 period has an average value of 22.58. This means that the average size of manufacturing companies listed on the IDX has a large average company size, so the company tends not to do tax evasion.

#### 4.3. Analysis of the Effect of Gender Diversity and Tax Avoidance on Firm risk (Structural Model 2)

**Table 4**  
**Structural Model Regression Results 2**

No	Notasi	Prediksi	Koef.	T-stat	Sig.
1	(const)		3,013	3,123	0.002*
2	PP		4,129	2,420	0,017**
3	KG	-	-2,437	-2,165	0,032**
4	UMP	-	0,02	0,958	0.340
5	UP	-	-0,100	-2,968	0.003*
R Square		0.128	F-Statistic		5,974
Adjusted R <sup>2</sup>		0.106	Prob ( F-Stat)		0,000
Variabel Dependen : Resiko Perusahaan (RP)			Variabel Independen:		
Sig :			1. KG : Keragaman Gender		
* 1 %			Variabel Moderasi		
** 5 %			1. PP : Penghindaran Pajak		
*** 10%			Variabel Kontrol:		
			1. UMP : Umur Perusahaan		
			2. UP : Ukuran Perusahaan		

Source : processed data by researcher by using SPSS 23.0 (2021)

Based on table 4, the regression model can be formulated as follows:

$$RP = - 2,437KG + 4,129PP + 0.020UMP - 0.100UP + 2$$

The value of R square (R<sup>2</sup>) of 0.128 indicates that gender diversity and tax avoidance affect the company's risk of 12.8%. The significance value of the F test of 0.000 indicates that gender diversity and tax avoidance have a significant effect on firm risk together. The significant value of the t-test is 0.032, it can be concluded that the results of the hypothesis regression test indicate that gender diversity has a negative effect on firm risk with 0.032 (<0.05). The significant value of the t-test is 0.017, it can be concluded that the results of the hypothesis regression test indicate that tax avoidance has a positive effect on firm risk with 0.017 (<0.05)

Company age as a control variable has no significant effect on Firm risk. Company Age with Sig. 0.340 (> 0.10), this indicates that Company Age cannot be a good controller for Firm risk. Where it can be concluded that manufacturing companies listed on the IDX for the 2015-

2019 period which have an average Company Age (UP) of 23 years, this shows that the larger the age of the company, the company cannot be used as a force to run its business so it will be more careful in managing company so that the company's risk can be minimized.

Company Size as a control variable has a significant effect on Firm risk. Company Size with Sig. 0.003 ( $< 0.01$ ), this indicates that Company Size can be a good controller for Firm risk. Where it can be concluded that manufacturing companies listed on the Indonesia Stock Exchange for the 2015-2019 period which have an average Company Size (UP) of 22,602, indicate that the larger the size of the company measured by total assets, the more the company has the power to run its business so it will be more careful in managing the company so that the company's risk can be minimized.

#### ***4.4. Analysis of the Effect of Gender Diversity on Firm risk Through Tax Avoidance***

Testing the indirect effect of Gender Diversity on Firm risk through Tax Avoidance as a mediating variable was carried out using the Sobel Test (Kline, 2015). The calculation results can be seen in Table 5 below:

**Table 4.5**

#### **Partial Test (t Test) The Effect of Gender Diversity on Firm risk through Tax Avoidance**

Hipotesis	$t_{hitung}$	$t_{kritis}$	Result
KG $\rightarrow$ PP $\rightarrow$ RP	-2,325	-1,96	Accepted

Source: Processed data 2021

Based on the calculation results, the t-count value for Gender Diversity is -2,325. The statistical value of the t-test obtained is in the area of rejecting  $H_0$ , which is smaller than critical = -1.96 (t-count = -2.325  $<$  -1.96), then the decision was taken to reject  $H_0$ . So it can be concluded that the results of statistical tests show that Gender Diversity has an effect on Firm risk through Tax Avoidance.

The magnitude of the influence of Gender Diversity on Firm risk through Tax Avoidance is  $(-0.546 \times 0.179 \times 100\%) = -9.77\%$ . So Gender Diversity has an indirect effect through Tax Avoidance of -9.77% on Firm risk.

Based on the previous results, Gender Diversity has a significant effect on Firm risk, the direct effect is  $(-0.160 \times 100\%) = -16.0\%$ . While Gender Diversity has a significant effect on Firm risk through Tax Avoidance, the indirect effect is -9.77%. Because the indirect effect is greater than the direct influence, it is prioritized to use the relationship between Gender Diversity to Firm risk through Tax Avoidance.

## **5. Discussion**

### **The Effect of Gender Diversity on Tax Avoidance**

Tax avoidance is all the ways that companies do to reduce taxes. Tax avoidance is a decision that must be taken by top management in leading the company. Gender diversity in top management can influence the decision to take or not to take tax evasion. The diversity of women in top management positions is considered to have a positive influence on company performance because of their prudent nature.

The effect of gender diversity on tax avoidance in 51 manufacturing companies listed on the IDX is studied because there are 62.7% or about 32 companies whose boards of directors are women. Women with feminine characteristics are considered to be more risk averse than men with masculine characters. This includes the risks associated with tax evasion. Women who have a careful nature in making decisions will also have an effect on making decisions not

to avoid tax evasion. The nature of women who are more likely to avoid risk can influence decisions made by the board of directors to become more tax-abiding decisions. Therefore, in manufacturing companies listed on the Indonesia Stock Exchange, gender diversity affects the decision not to avoid tax.

The results of this study are in line with research conducted by [73]; [51]; [52]; [53] stating that gender diversity has a negative effect on tax avoidance. This study is not in line with research [59] which states that gender diversity has a positive effect on tax avoidance.

### **The Effect of Gender Diversity on Firm risk**

The influence of gender diversity on firm risk in 51 manufacturing companies listed on the IDX is studied because there are 62.7% or about 32 companies whose boards of directors are women. The presence of women on the board of directors is a manifestation of the diversity of the board. The diversity of boards in manufacturing companies listed on the IDX is one sign that the company has good governance because it will make the company more careful in making decisions because women have a nature that tends to be more risk averse than men. Women tend to be more emotional than men and women are more likely to feel nervous (worries) and fear in anticipating a failure so that firm risks can be avoided. So with the existence of gender diversity in the company where this diversity involves women who are careful, it will reduce the risk of the company. In addition, gender diversity can increase the diversity of executive characteristics so that it is expected to provide alternative solutions to a problem that can ultimately prevent firm risk.

The results of this study are in line with research conducted by [64]; [4]; [65]; [74]; [62] Gender diversity has a negative effect on firm risk. This study is not in line with research [51] which states that gender diversity has a significant positive effect on firm risk and research [28]; [75] which shows there is no effect of gender diversity to firm risk.

### **The Effect of Tax Avoidance on Firm risk**

In 51 manufacturing companies on the IDX with 255 years of observation, 160 companies or 62.7% did not evade taxes. Tax avoidance can actually open up opportunities for managers to reduce profits so that the amount of tax is also small. But as many as 160 years of observation the average company does not do tax evasion. This is because the company is worried about future firm risks.

The company's risk level reflects the decisions taken by the company's leadership, including in making decisions to avoid tax or not to avoid tax because this will have an impact on firm risk. Tax avoidance affects the company's risk because tax avoidance is the policy of the leadership in managing the company, wanting to reduce the tax burden, the leadership dares to do tax avoidance by reducing profits and this will have an impact on the company's risk. But in reality, the companies studied, namely manufacturing companies listed on the IDX, do not do things that can reduce profits so that the tax burden is small and this shows that companies do not avoid tax.

The greater [70] the beta value of a security, the greater the sensitivity of the security's return and that means the higher the risk of a company [76]. Judging from the average beta value in manufacturing companies listed on the IDX for the 2015-2019 period, it is 1.80, this means that the company's risk is low. So it can be concluded from this study that the companies studied do not avoid tax and this has an impact on the company's low risk because the average beta value is small.

The results of this study are in line with research conducted by [71] which states that tax avoidance has a positive effect on firm risk and research [70] which states that tax income affects investors' assessment of firm risk. This study is not in line with research [13] and research [72] which state that tax avoidance has no effect on firm risk.

## 6. Conclusions and Suggestions

### Conclusions

Based on the testing and results of data analysis that has been carried out, the conclusions of this study are as follows:

- a. Gender diversity has a negative effect on tax avoidance, which means that within the company if there is gender diversity, it will pressure not to do tax avoidance
- b. Gender diversity has a negative influence on firm risk, which means that if there is gender diversity in the company, it will reduce the company's risk
- c. Tax avoidance has a positive influence on firm risk, which means that if the company does not avoid tax, the company's risk in the future can be suppressed or decreased.
- d. Gender diversity has an influence on firm risk through tax avoidance. This means that tax avoidance can be used as an intervening variable.

### Suggestions

- a. Further research can expand the scope of the research sample or compare it with companies in other industrial sectors. Further research can use company samples for all industries because they have different characteristics.
- b. Further research can increase the number of other variables, such as Corporate Social Responsibility by using the Blau-Index measurement (1975) so that the measurement can be more detailed and constructive.
- c. Further research can use other samples in Asean countries by comparing the success rate of anti-corruption disclosure in Asean countries.

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