THE EFFECT OF PROFITABILITY, COMPANY SIZE, AND FEMALE DIRECTOR COMPOSITION ON TAX AVOIDANCE: EVIDENCE FROM INDONESIA

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ABSTRACT

Taxes are the primary source of revenue for the government to support the deficit of its budget. Hence, the government always tries to collect them. On the other side, companies as a taxpayer always attempt to legally and avoid taxes to enhance their profits. This research attempts to investigate and analyze the determinants of tax avoidance measured by effective tax ratio (ETR), i.e., profitability, size, and the female director composition (FDC).

The population of this research is the profitable companies becoming the LQ45 members, which are selected by a simple random sampling method. Additionally, this research uses the pooled-data regression model to examine the causal relationship between each determinant and tax avoidance.

Overall, after testing and discussing the hypotheses, this research shows ETR is negatively affected by profitability, company size, and female directors. In other words, the higher the profits, size, and FDC, the higher the company avoids paying taxes.

Keywords: company size, profitability, tax avoidance, the composition of female directors

INTRODUCTION

From time to time, taxes contribute to the revenue source of the Indonesian government. This contribution is above 75% of the total governance revenue between 2015 and 2018.

Year	Total Government	Tax	Portion	
	Revenue	Revenue		
2015	1,508,020	1,240,419	82.25%	
2016	1,555,934	1,284,970	82.59%	
2017	1,666,376	1,343,530	80.63%	
2018	1,943,675	1,518,790	78.14%	
Sources	The Control Cover	mmont Finar	noial Danart	

 Tabel 1. The portion of Tax Revenue with Total Revenue from 2015 to 2018

Source: The Central Government Financial Report (2015-2018)

Tax revenue functions to finance government expenditure for the development and routine activity budget (Simanjuntak & Mukhlis, 2012); therefore, the efforts of the government to collect taxes are all-out. However, the companies do not want to pay for them in the correct amount. Instead, they reduce taxes legally. This action is called tax avoidance (Pohan, 2013).

The determinants of tax avoidance are interesting to investigate; hence, many pieces of research are present. Based on the results of the previous study, at least, the three causes of tax avoidance exist. They are profitability (Aliani & Zarai, 2012a; Aliani & Zarai, 2012b; Kurniasih & Sari, 2013; Maharani & Suardana, 2014; Lanis, Richardson, & Taylor, 2015; Irianto, Sudibyo, & Wafirli, 2017; Rahimipour, 2017; Arianandini & Ramantha, 2018; Hoseini & Gerayli, 2018; Hazir, 2019), company size (Kurniasih & Sari, 2013; Irianto et al., 2017; Rahimipour, 2017; Rahimipour, 2017; Hoseini & Gerayli, 2018; Hazir, 2019), and the female director ratio (Aliani & Zarai, 2012b; Lanis et al., 2015; Rahimipour, 2017; Hoseini & Gerayli, 2018).

Unfortunately, the results of this study related to the effect of profitability, company size, and female director composition (FDC) on tax avoidance measured by the effective tax rate (ETR) are still contradictory.

- i. For the effect of profitability on the ETR, the results can be either positive (Aliani & Zarai, 2012a; Aliani & Zarai, 2012b; Maharani & Suardana, 2014; Lanis, Richardson, & Taylor, 2015; Rahimipour, 2017; Hoseini & Gerayli, 2018) or negative (Kurniasih & Sari, 2013; Arianandini & Ramantha, 2018; Hazir, 2019).
- ii. For the effect of the company size on the ETR, the results can be either positive (Hazir, 2019) or negative (Kurniasih & Sari, 2013; Irianto et al., 2017; Rahimipour, 2017; Hoseini & Gerayli, 2018).
- For the effect of the FDR on the ETR, the results can be either positive (Aliani & Zarai, 2012b; Rahimipour, 2017) or negative (Lanis et al., 2015; Hoseini & Gerayli, 2018).

This study appears due to these inconsistent results of these three determinants. Hence, the objective of this research is to get evidence of the effect of probability, company size, and female director composition on tax avoidance of the companies being the constituent of the LQ45 index.

THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

To create value for its shareholders, a company has to exhaust the possibilities of getting profits (Sucuahi & Cambarihan, 2016; Hatem, 2017). To realize it, the company avoids paying the tax for the government by effectively and efficiently planning tax (Pohan, 2013). The company with this tendency must be having a low value of effective tax rate (ETR) (Rahimipour, 2017). These logical statements get affirmed by Kurniasih & Sari (2013), Arianandini & Ramantha (2018), and Hazir (2019) by demonstrating the more profits the company gets, the lower ETR the company has. Based on this description, the formulation of the first hypothesis is as follows.

H₁: The company with high profitability tends to decrease ETR.

The large company has a complex transaction. Because of this reason, it still has a chance for this company to avoid tax (Rego, 2003). Besides, the tendency to legally decrease tax payment is due to the ability to hire a reliable tax consultant to make the lobby with the government representative related to the tax-cutting, the capability to hire the experts to organize cash flow to decrease the tax payment (Zimmerman, 1983). If these actions are successful, ETR will decrease as confirmed by Kurniasih & Sari (2013), Irianto et al. (2017), Rahimipour (2017), and Hoseini & Gerayli (2018). Based on this description, the formulation of the second hypothesis is as follows.

H₂: The company with big size tends to decrease ETR.

The composition of the females becoming directors is one of the board's governance topics (Aliani & Zarai, 2012b; Lanis, Richardson, & Taylor, 2015; Rahimipour, 2017; Hoseini & Gerayli, 2018). Related to tax avoidance, the study of Lanis et al. (2015) and Hoseini & Gerayli (2018) displays female directors do it; this condition happens when the ratio of female directors goes up in line with the decrease in ETR. Based on this description, the formulation of the third hypothesis is as follows.

H₃: The high composition of female directors tends to decreases ETR.

RESEARCH METHOD

The design of the study

This study employs quantitative design; hence, the purpose of this study is to statistically examine the research hypotheses, that are previously formulated as defined by Sugiyono (2012).

The definition of research variables

There are two types of research variables, i.e., dependent and independents. Acting as a dependent is tax avoidance, and some independents are profitability, company size, and female director position.

- i. Tax avoidance is measured by the effective tax rate (ETR) at the end of the year.
- ii. Profitability gets measured by return on equity (ROE) at the end of the year.
- iii. Company size is measured by the natural logarithm of total assets (LNTA) at the end of the year.
- iv. The female director composition (FDC) is measured by dividing the number of female directors by total directors at the end of the year.

Population and Sample

As mentioned in this study title, the population contains the profitable companies consistently becoming the constituent of the LQ45 index in the years 2015, 2016, 2017, and 2018; their sum is 30. Unfortunately, 9 of 30 companies do not have female directors. Therefore, the relevant number of companies to be the working population is 21.

By denoting Suliyanto (2009), the Slovin formula acts as the toll to get the total representative samples (n) of the working population (N) with a border of inaccuracy (e) of 10%. As a result, this research gets the total samples of $\frac{N}{1+Ne^{2}} = \frac{21}{1+21(10\%)(10\%)} = 17.35 \approx 17.$

Moreover, 17 companies are picked up by a simple random sampling method, and their names are as follows:

- 1. AKR Corporindo Tbk. (AKRA)
- 2. Astra International Tbk. (ASII)
- 3. Bank Central Asia Tbk. (BBCA)
- 4. Bank Mandiri Tbk (Persero) Tbk. (BMRI)
- 5. Bank Negara Indonesia (Persero) Tbk. (BBNI)
- 6. Bank Rakyat Indonesia (Persero) Tbk. (BBRI)
- 7. Bumi Serpong Damai Tbk. (BSDE)

- 8. Gudang Garam Tbk. (GGRM)
- 9. Indofood CBP Sukses Makmur Tbk. (ICBP)
- 10. Indofood Sukses Makmur Tbk. (INDF)
- 11. Jasa Marga (Persero) Tbk. (JMSR)
- 12. Kalbe Farma Tbk. (KLBF)
- 13. Lippo Karawaci Tbk. (LPKR)
- 14. Matahari Department Store Tbk (LPPF).
- 15. Media Nusantara Citra Tbk. (MNCN)
- 16. Telekomunikasi Indonesia (Persero) Tbk. (TLKM)
- 17. Waskita Karya (Persero) Tbk. (WSKT)

The method to analyze data

As the method for analyzing data, this study takes on the multiple regression model that mixes time-series and cross-sectional data. Moreover, this model can be looked at in the first equation.

 $ETR_{it} = \beta_0 + \beta_1 ROE_{it} + \beta_2 LNTA_{it} + \beta_3 FDC_{it} + \varepsilon_{it} \dots \dots \dots \dots \dots (Eq. 1)$

As a consequence, this model must achieve the test of some classical assumptions. According to Ghozali (2016), the requirements intended are as follows:

- Firstly, the residuals have to follow a normal distribution; this study uses the Kolmogorov-Smirnov test to prove it.
- Secondly, the error variances do not depend on the squared explanatory variables; this study utilizes the White heteroscedasticity test with the cross-term to prove it.
- Thirdly, the errors have to be random; this study uses a runs test to prove it.
- Finally, no strong correlation is between two independents variables; this study uses a correlation matrix to prove it. This condition means that multicollinearity does not exist.

RESULT AND DISCUSSION

This section presents the result of the classical assumption test (see Part A), the estimation of the regression model (see Part B), the hypotheses test (see Part C), and discussion based on the test result of hypotheses (see Part D).

A. The results related to the classical assumption test

Table 2 reports the normality test result by Kolmogorov-Smirnov including the asymptotic significance (2-tailed) of Z-statistic of 0.605. Since this value goes beyond the significance level (α) of 5%, the errors already track the normal distribution.

Description	Unstandardized errors
N	68
Kolmogorov-Smirnov Z	0.763
Asymp. Sig. (2-tailed)	0.605
Source: Modified Output of	IBM SPSS 19

 Table 2. Test result of Kolmogorov-Smirnov

Table 3 informs the White heteroscedasticity test result with the cross-term, including the probability of t-statistic for each regression coefficient. Since these values go beyond α of

5%, the variance of the error (ERROR²) does not depend on the independent variables; ROE, LNTA, FDC; their squared ones: ROE², LNTA², FDC²; and the cross-term ones: ROE*LNTA, ROE*FDC, and LNTA*FDC.

 Table 3. The White Heteroscedasticity Test Result

ERROR^2	=	f(ROE,	LNTA,	FDC,	ROE^2,	LNTA^2,	FDC^2,
ROE*LNTA	A, R	OE*FDC,	, LNTA*I	FDC)			

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	-0.483989	0.483120	-1.001799	0.3206
ROE	0.177364	0.176358	1.005704	0.3187
LNTA	0.067485	0.067303	1.002704	0.3202
FDC	0.181901	0.178657	1.018162	0.3128
ROE^2	-0.001521	0.010434	-0.145797	0.8846
LNTA^2	-0.002327	0.002347	-0.991626	0.3255
FDC^2	-0.037553	0.029099	-1.290503	0.2020
ROE*LNTA	-0.013668	0.012822	-1.065919	0.2909
ROE*FDC	-0.027052	0.063379	-0.426824	0.6711
LNTA*FCD	-0.011015	0.012396	-0.888588	0.3779

Source: Modified Output of E-Views 6

Table 4 shows the result of the runs autocorrelation test based on modes, including the asymptotic sig. (2-tailed) of Z-statistic of 0.862. Since this value goes beyond α of 5%, the errors are random; therefore, autocorrelation is not available.

Description	Unstandardized error
Test Value ^a	0.12003 ^b
Cases < Test Value	67
Cases >= Test Value	1
Total Cases	68
Number of Runs	3
Ζ	0.174
Asymp. Sig. (2-tailed)	0.862
a. Mode,	
b. There are multiple mo	des. The mode with the
largest data value is used	1.

Table 4. The Runs Autocorrelation Result

Table 5 exhibits the matrix of Pearson correlation to detect multicollinearity, including the relationship between ROE and LNTA of -0.355, between ROE and FDC of -0.231, as well as between LNTA and FDC of -0.265. All of these values are inferior to 0.850ⁱⁱ; hence, multicollinearity is not available.

Source: Modified Output of IBM SPSS 19

ⁱⁱ The cut-off value to prove the absence of multicollinearity is 0.85. Therefore, if the correlation between two independent variables exceeds 0.85, the multicollinearity exist, and vice versa (Widarjono, 2013).

	Variable	ROE	LNTA	FDC
ROE	Pearson Correlation	1	355**	231
	Sig. (2-tailed)		.003	.058
	Ν	68	68	68
LNTA	Pearson Correlation	355**	1	265*
	Sig. (2-tailed)	.003		.029
	Ν	68	68	68
FDC	Pearson Correlation	231	265*	1
	Sig. (2-tailed)	.058	.029	
	Ν	68	68	68

Table 5. The Pearson correlation matrix result

Source: Modified Output of IBM SPSS 19.

B. The result of the regression model estimation

The regression model used is based on pooling data. It means this model combines timeseries and cross-sectional data, where the estimation result is as follows.

Table 5. The estimation result of the regression model showing the effect of RO	E,
LNTA, and FDC on ETR	

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	В	Std. Error	Beta		
(Constant)	.711	.179		3.984	.000
ROE	090	.036	334	-2.493	.015
LNTA	031	.012	339	-2.505	.015
FDC	107	.055	254	-1.954	.055
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Source: Output of IBM SPSS 19.

C. The result of the hypothesis test

Each research hypothesis declares a negative effect (see section theoretical framework and hypothesis development). Moreover, each hypothesis becomes an alternative one. Comparing the sig. of t-statistic with a loosen α becoming 10% is compulsory to test the null hypotheses one, two, and three. Table 5 demonstrates that sig. value for ROE, LNTA, FDC is 0.015, 0.015, and 0.055, separately. Therefore, the rejection of each null hypothesis happens. Consequently, each alternative is acceptable.

DISCUSSION

This study succeeds in proving the negative effect of ROE, LNTA, FDC on ETR. The meaning of this effect is that greater profits, company size, female director composition, the higher tendency the firm has to avoid paying taxes.

1. This study confirms the study of Kurniasih & Sari (2013), Arianandini & Ramantha (2018), and Hazir (2019) related to the first negative effect. Their results conclude the companies with high profits tend to search for ways to avoid paying taxes. Additionally, without the profits, the company will not be trusted by the shareholders and creditors. Therefore, the company will face difficulty to get their funds if it needs to finance the prospective investment.

- 2. This study affirms the study of Kurniasih & Sari (2013), Irianto et al. (2017), Rahimipour (2017), and Hoseini & Gerayli (2018) related to the second negative effect. Their results conclude firms with large size tend to search for ways to avoid paying taxes. This happens because the large firm is able to hire a tax consultant and expert to arrange cash flow to legally decrease the amount of taxes.
- 3. This study verifies the study of Lanis et al. (2015) and Hoseini & Gerayli (2018) related to the third negative effect. Their results conclude firms with a high ratio of female directors to search for ways to avoid paying taxes. This tendency happens because females becoming the board of directors are flexible and able to negotiate. Therefore, they bravely take a risk to legally decrease tax payment.

CONCLUSION AND RECOMMENDATION

By denoting the discussion of hypotheses test, this research infers that companies with high profitability, size, and female board composition tend to decrease ETR. In other words, these companies legally avoid paying taxes for the government. Based on this conclusion, this research gives practical and theoretical recommendations.

- 1. Practically, this research suggests the Directorate General of Taxes should supervise the big companies to pay the taxes because of their avoidance tendency.
- 2. Theoretically, this research owns some limitations. The first limitation is the use of three determinants of ETR. To beat it, they can add some explanatory factors, like institutional ownership, the independent board of supervision, the supervisory board size, the board duality, the audit committee size, audit quality, director age and tenure, fiscal loss compensation, leverage, firm business risk, capital intensity, as well as growth opportunity. The second limitation is the use of companies forming the LQ45 index members. Alternatively, the next researchers can employ the firms of the member of the Kompas 100 index, as well as members of 50 leaders in market capitalization.

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