



The influence of gender diversity, proportion of independent commissioners, managerial ability, and company size on tax avoidance

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Abstract

Indonesia, which occupies the fourth position for the largest population in the world, has high hopes for the results of tax contributions. However, the self-assessment system implemented by the government opens the opportunity doors for individuals to commit fraud. Efforts to minimize the tax burden of corporate taxpayers by taking advantage of regulatory loopholes are known as tax avoidance efforts. The purpose of this study is to find out the impact given by gender diversity, the proportion of independent commissioners, managerial abilities, and firm size on tax avoidance in primary consumer goods sector companies for the 2015-2021 period. This research method is a quantitative method using panel data regression analysis. In this study, all samples were obtained by purposive sampling technique. Through this technique, 70 observational data were obtained from 10 samples of companies. This study obtained the results that there is a simultaneous influence of gender diversity, the proportion of independent commissioners, managerial abilities, and firm size on tax avoidance. Meanwhile, partially managerial ability and firm size variables have a positive effect on tax avoidance, while gender diversity and the proportion of independent commissioners do not affect tax avoidance.

Keywords: Company Size; Gender Diversity; Managerial Abilities; Proportion of Independent Board of Commissioners; Tax Avoidance.

Abstrak

Indonesia yang menduduki posisi keempat untuk jumlah penduduk terbesar di dunia memiliki harapan yang besar pada hasil iuran pajak. Namun dengan *self-assessment system* yang diterapkan oleh pemerintah membuka pintu peluang bagi para oknum untuk melakukan kecurangan. Upaya dalam mengurangi beban pajak badan oleh wajib pajak dengan memanfaatkan celah regulasi dikenal dengan upaya *tax avoidance*. Tujuan dari penelitian ini ialah untuk mengetahui dampak yang diberikan oleh diversitas gender, proporsi dewan komisaris independen, kemampuan manajerial, dan ukuran perusahaan terhadap terjadinya upaya penghindaran pajak (*tax avoidance*) pada perusahaan sektor barang konsumen primer periode 2015-2021. Metode penelitian ini ialah metode kuantitatif menggunakan analisis regresi data panel. Pada penelitian ini seluruh sampel diperoleh dengan teknik *purposive sampling*. Melalui teknik tersebut maka diperoleh 70 data observasi yang berasal dari 10 sampel perusahaan. Penelitian ini memperoleh hasil bahwa terdapat pengaruh secara simultan dari diversitas gender, proporsi dewan komisaris independen, kemampuan manajerial, dan ukuran perusahaan atas terjadinya upaya *tax avoidance*. Sementara itu secara parsial, variabel kemampuan manajerial dan ukuran perusahaan berpengaruh positif

pada *tax avoidance* sedangkan variabel diversitas gender dan proporsi dewan komisaris independen tidak memiliki dampak pada adanya upaya *tax avoidance*.

Kata Kunci: Diversitas Gender; Kemampuan Manajerial; Penghindaran Pajak; Proporsi Komisaris Independen; Ukuran Perusahaan.

INTRODUCTION

The abundant resources in Indonesia certainly have the potential to provide more benefits for the welfare of the nation. Efforts that can be made are through collection or withholding taxes. Based on LKPP 2015-2021 issued by the [Ministry of Finance \(2020\)](#) there is a trend indicating that the target of tax revenue that has been set is still unable to be realized. In 2020 the percentage of tax revenue only reached 91.50% of the target budgeted. The highest achievement occurred in 2018 at 93.86% and the lowest achievement in 2015 at 83.29%. According to [Santoso \(2021\)](#) in 2020 all sectors without exception experienced pressure due to Covid-19. Apart from the pressure due to the pandemic, the cause of not achieving the tax revenue budget in the previous year could be tax evasion by taxpayers ([Wijaya & Hidayat, 2021](#)). The attempts to control actions by companies as a taxpayer to be free from unwanted tax obligations are known as tax avoidance ([Pohan, 2009](#)). Various studies to identify the causal factors of tax avoidance have been done before. These factors include gender diversity ([Oyenike, Olayinka, & Emeni, 2016](#)), the proportion of independent commissioners ([Hudha & Utomo, 2021](#)), managerial ability ([Niawati, Maslichah, & Junaidi, 2020](#)), and company size ([Sadeva, Suharno, & Sunarti, 2018](#)). When compared with previous studies, this research tries to identify the link between internal company factors that simultaneously can partially trigger tax avoidance and have never been combined before. This linkage is in the form of tendencies that can arise if there is diversity in the board of directors or commissioners, managerial skills are sufficiently qualified, and companies large and sl in making tax avoidance.

The urgency of identifying the factors that cause tax avoidance is due to the opportunity for reduced state revenues that can be used as a source of financing for government programs in realizing the welfare of the Indonesian people ([Kurnia, Pratomo, & Raharja, 2021](#)). This research is still relevant and needs to be conducted because there are still inconsistencies in the results of previous studies and the phenomenon of tax avoidance in Indonesia still exists. For example, the alleged tax avoidance practice in 2017 was carried out by British American Tobacco (BAT) through PT Bentoel International Investama Tbk (RMBA) using an intra-company loan scheme so it is estimated that Indonesia's tax revenues disappeared by US\$2.7 million per year. Companies seek this only to avoid taxes by minimizing tax contributions and not to avoid taxes ([Panjalusman, Nugraha, & Setiawan, 2018](#)). When viewed from the other side, there are different interests between the government/tax authorities and taxpayers regarding this tax obligation. Differences in interests that occur on both sides have been developed into a theory called agency theory. This theory explains that all individuals involved in a relationship/contract will act for their welfare ([Dayanara, Titisari, & Wijayanti, 2019](#)). The government as the party that makes regulations seeks to optimize tax collection, while the taxpayer wants the tax burden to be as minimal as possible for the sake of maximum profit (profit-oriented) so that conflict of interest occurs and tax avoidance happens. This difference in interests then gives urgency to both parties. For the government can use the results of this research in determining tax regulations while for companies it can consider

variables that can encourage/inhibit tax evasion by managerial policies. Based on the results of previous studies, inconsistencies were found in the results of the research so the purpose of this study is to identify the simultaneous or partial effects of gender diversity, the proportion of independent commissioners, managerial ability, and company size on tax avoidance. In another case with the study by [Pratomo, Kurnia, & Maulani \(2021\)](#) using CETR/ETR, the BTD (Book Tax Difference) indicator in this study is expected to be able to contribute to identifying tax avoidance efforts through different perspectives. In addition, this study also identified the influence of a managerial ability on tax avoidance which was proxied by the DEA (Data Envelopment Analysis) model which was popularized by [Demerjian, Lev, & McVay \(2012\)](#) with the input cost of goods sold, selling and general administrative expenses, fixed assets/PPE, and intangible assets adjusted to the nature of business of the object of this study in the hope of being able to provide benefits and further consideration for company managers related to tax avoidance efforts. Based on the description of the problem above, the questions in this study include:

1. What is the simultaneous effect of gender diversity, the proportion of independent commissioners, managerial ability, and company size on tax avoidance efforts in primary consumer goods sector companies listed on the IDX for the 2015-2021 period?
2. What is the partial effect of gender diversity, the proportion of independent commissioners, managerial ability, and company size on tax avoidance in primary consumer goods sector companies listed on the IDX for the 2015-2021 period?

A previous study by [Hudha & Utomo \(2021\)](#) states that female directors tend to give their best effort to the company to offset the responsible behavior of male directors to the company, shareholders, and society. This effort is supported by the theory of feminism which advocates equality of rights and obligations between women and men in various aspects, one of which is within the scope of the company ([Winasis & Yuyetta, 2016](#)). The position of female directors in the company's structural position has a positive role in managing managerial performance. [Bernardi & Arnold \(1997\)](#) found that women have significantly higher average moral levels than men. Through the prudence possessed by a woman, she will tend to avoid risks, not rush, and be thorough so that women are also found to be able to help overcome more complex strategic issues ([Ben-Amar et al., 2013](#)). Thus, the presence of women on company boards has an influence where an increase in the percentage of female directors will have an impact on determining decisions, one of which is in determining decisions regarding corporate taxation ([Mala & Ardiyanto, 2021](#)). This statement is proven in studies by [Hoseini, Gerayli, & Valiyan \(2019\)](#) and [Hudha & Utomo \(2021\)](#) found that gender diversity negatively affects tax avoidance.

H: Tax avoidance is negatively affected by gender diversity.

Through POJK Number 33/POJK.04/2014 it is explained that when a company has a minimum number of three commissioners (more than two), then the proportion of independent commissioners is required to be at least 30% of the entire board of commissioners. The independence in question is where the commissioners do not have associations with majority shareholders, members of the board of directors, and other boards of commissioners ([Diantari & Ulupui, 2016](#)). This company structure is a form of internal control mechanism on the GCG concept where when the number of independent commissioners is more than 30% it will indicate that the governance

implemented by the company is good and is considered able to control management efforts in avoiding taxes (Ariawan & Setiawan, 2017). This means that the independent commissioners are tasked with supervising corporate governance with the hope that when there is no association between commissioners and management it will result in stronger governance. This statement is supported by the study of Wijayanti & Merkusiwati (2017) which proves the existence of a negative effect of the proportion of independent commissioners on tax avoidance.

H₂: Tax avoidance is negatively affected by the proportion of independent commissioners.

The definition of managerial ability refers to the ability of a manager to achieve organizational goals by maximizing profits through income earned as efficiently as possible (Demerjian, Lev, & McVay, 2012). About management's contribution to corporate governance, La'bi, Ng, & Lukman (2018) state that a manager with good skills can manage and encourage company resources to realize targets. In addition to its characteristics, managerial ability is closely related to the reputation of managers and companies. Francis *et al.* (2021) explained that with the potential reputation costs that must be incurred by companies that are directly proportional to managerial ability, it is expected that managers with more qualified abilities will have the motivation not to get involved in tax avoidance efforts. Another characteristic is that tax avoidance will be increasingly avoided because a more qualified understanding of the industry is possessed by managers who have more ability (Aristyatama & Bandiyono, 2021). Based on studies by Aristyatama & Bandiyono (2021) and Francis *et al.* (2021) resulted in a negative influence of managerial ability on tax avoidance efforts.

H₃ : Tax avoidance negatively affected by managerial ability.

When companies are classified as large-scale, these companies tend to have the ability to generate good and stable profits. Large profits, of course, lead to greater tax obligations to fulfil. This is because the value of the corporate tax burden comes from the profit value multiplied by the tax rate. When a company is classified as large-scale, the transactions that the company has will be more complex than that of a small-scale company (Oktamawati, 2017). Thus, the company will get a better income, then it is required to carry out better management than small-sized companies. Based on the development of agency theory, companies with large resources will use the power maximunly for the benefit of agents, such as for performance compensation to divert the corporate tax burden expected by the government (principal). Based on studies by Dewinta & Setiawan (2016) produces findings indicate that firm size has a positive effect on tax avoidance.

H₄ : Tax avoidance positively influenced by firm size.

METHOD

A regression analysis method with panel data and a quantitative approach was chosen in this study. Linear regression with panel data type was chosen because in this study the authors tried to identify the implications given by the independent variables in the form of gender diversity, the proportion of independent commissioners, managerial

ability, and company size on the dependent variable in the form of tax avoidance either simultaneously or partially in the goods sector. primary consumers (cross-section) on the Indonesia Stock Exchange in 2015-2021 (time series). This study chose a purposive sampling technique so that 10 samples were selected for 7 years. Thus, 70 observation data are obtained, but 15 extreme data must be removed from the observation data (outliers) so that the remaining 55 observation data are used in statistical testing. [Aristyatama & Bandiyono \(2021\)](#) by setting the primary consumer goods sector as the population according to the research phenomenon. Table 1 below is a description of the sample research criteria.

Table 1. Sampling Criteria

No	Sample Criteria	Amount
1	Primary consumer goods sector company listed on the Indonesia Stock Exchange	102
2	Companies in the primary consumer goods sector that are inconsistently listed on the Indonesia Stock Exchange for the 2015-2021 period	(41)
3	Companies in the primary consumer goods sector that did not publish audited annual financial reports consistently during the 2015-2021 period	(29)
4	Companies in the primary consumer goods sector that do not use Rupiah in presenting financial reports for the 2015-2021 period	(1)
5	Companies in the primary consumer goods sector that experienced losses during the 2015-2021 period	(10)
6	Primary consumer goods sector companies that did not disclose data for research over the period 2015-2021	(11)
Number of research samples		10
Research year		7
Total data in research		70

Tax avoidance

Tax avoidance can be interpreted as a planned effort carried out by tax subjects by exploiting weaknesses in tax provisions so that the tax burden can be legally minimized ([Finsiani, 2018](#)). However, when viewed from the other side, its legality also can provide an indirect threat. This legality does not place unscrupulous companies as suspects, but the impact of tax evasion on the state is real so it is necessary to know what factors are influencing it as a preventive form of tax avoidance. A previous study by [LGK Dewi \(2017\)](#) measured tax avoidance using the BTD (Book Tax Difference) indicator. According to [Sari & Purwaningsih \(2014\)](#), BTD is the difference in value contained in accounting profit and taxable profit in the financial statements. If fiscal profit is smaller than accounting profit and produces a positive BTB, it means that the company has a large BTB value and indicates higher tax avoidance efforts ([Pradhana & Nugrahanto, 2021](#)). The formula used by [Putri, Nazar, & Kurnia \(2018\)](#) in calculating BTB:

$$\text{BTB (Book Tax Differences)} = \frac{\text{Accounting profit} - \text{taxable profit}}{\text{total asset}} \quad (1)$$

Gender diversity

Diversity in the structure or composition of a board member which is interpreted as diversity includes variations in gender, nationality, age, board characteristics, educational background, and so on. In addition, there are natural differences between men and women ([Winasis & Yuyetta, 2016](#)). Based on this definition, it can be concluded that gender diversity is the diversity that is owned by each board by emphasizing the differences in masculinity and femininity that focus on social, cultural, and other aspects.

Gender diversity in the company's board of directors will have an impact on company performance. Measurement of gender diversity is carried out by comparing the number of female directors to the total number of members of the board of directors (Chatzi, 2020) and (Hudha & Utomo, 2021).

$$\text{Diversitas gender} = \frac{\text{Total of woman director}}{\text{Total of board of director}} \times 100\% \quad (2)$$

Proportion of independent commissioners

Based on Article 120 of Law Number 40 of 2007 it is explained that in the company's articles of association, a company can designate the portion of one or more independent commissioners. Through POJK Number 33/POJK.04/2014 which regulates public companies where if there are more than two commissioners in a company, then of the total number of the board of commissioners the portion of the board of independent commissioners is required to be at least 30%. The existence of this corporate organ is a form of GCG implementation in which one of the independent commissioners is responsible to public shareholders (Wijayanti & Merkusiwati, 2017). In this variable, diversity will be calculated by looking for a comparison of the number of independent commissioners to the entire existing board of commissioners (Hudha & Utomo, 2021).

$$\text{Proportion} = \frac{\text{Total of independent commissioners}}{\text{Total of board of commissioners}} \times 100\% \quad (3)$$

Managerial ability

Managerial ability is the ability of managers to generate income efficiently which is going to maximize company profits (Aristyatama & Bandiyono, 2021). Managers with higher abilities will be able to provide better results where managers are more capable of implementing superior business systems. Through an understanding of this better business system, managers are expected to be able to manage company resources such as assets, capital and labour to generate better income (Demerjian *et al.*, 2012). Measurement of managerial ability in the study by Demerjian, Lev, & McVay (2012), Akbari, Salehi, & Vlashani (2018), as well as Aristyatama & Bandiyono (2021) using the DEA (Data Envelopment Analysis) model. In this measurement, the limit for assessing efficiency is one (1) so the farther the result is from the limit value of efficiency, the lower the level of efficiency. Input and output weights are limited to remain positive with the assumption that each output and input has a value (not negative) so that the lower limit of efficiency is zero (0). The DEA equation used in research by Aristyatama & Bandiyono (2021) is:

$$\max \theta = \frac{SALES}{v1COGS + v2SGNA + v3PPE + v4INTAN} \quad (4)$$

In the second step, Aristyatama & Bandiyono (2021) separate the efficiency produced by DEA from the company's specific characteristics that can affect the value of company efficiency. The total efficiency of the entire company will be divided into company-owned and managerial efficiency which are then separated using the Tobit regression model. The residual value of this Tobit regression is the value of managerial ability (Demerjian, Lev, & McVay, 2012):

$$FE = \beta_0 + \beta_1 SIZE_{it} + \beta_2 MS_{it} + \beta_3 FC_{it} + \beta_4 AGE_{it} + \sum \phi YEAR_{it} + \varepsilon \quad (5)$$

Company size

According to [Sadeva, Suharno, & Sunarti \(2018\)](#), this measurement is used in classifying company scale based on total assets which are divided into large, medium and small-scale companies. Based on POJK 53/POJK.4/2017 it is stated that a company is classified as small if it has total assets of less than IDR 50,000,000,000.00. If the company's total assets are in the range of Rp. 50,000,000,000.00 to Rp. 250,000,000,000.00, it is classified as a medium-sized company. The larger assets that are had by the company, then it will be assumed that the larger size of the company, which of course will also be related to the amount of tax obligations that must be fulfilled. The formulation of company size indicators is:

$$UP = Ln (total\ asset) \quad (5)$$

Data analysis

The selection of analytical techniques was chosen by considering the amount and characteristics of the data, while the type of statistical analysis was chosen by considering the research objectives ([Winarno, 2013:158](#)). Because the amount of data is quite large and quantitative in nature, the statistical analysis technique was chosen in this study. The characteristics of the research data are then described through descriptive statistics. In addition, this study uses a multiple linear regression analysis model because the authors want to find out the relationship that exists between the independent variables and their effect on the dependent variable. The stages in multiple linear regression analysis begin with choosing the right type of regression model. These models include Common, Fixed, and Random Effect Models. The three regression models can be selected through Chow Test, Hausman Test, and Lagrange Multiplier Test.

RESULTS AND DISCUSSION

Descriptive statistics

Table 2. Descriptive statistics

	Tax avoidance (Y)	Gender Diversity (X1)	The proportion of Independent Commissioners (X2)	Managerial Ability (X3)	Company Size (X4)
Minimum	-0.0153	0.0000	0.3333	0.5954	27.2100
Maximum	0.0812	0.4000	0.5000	0.9210	32.8204
Means	0.0262	0.0985	0.3995	0.8106	29.8956
std. Dev.	0.0261	0.1305	0.0722	0.0949	1.4557

Through Table 2, the descriptive statistical values are shown by the lowest value (min), the highest value (max), the average value (mean), and the standard deviation of each variable with a total of 55 observational data in the 2015-2021 period. The mean which is greater than the standard deviation indicates that the data from the variables studied are homogeneous and the opposite condition indicates that the variable data is heterogeneous. Thus, it can be seen that heterogeneous data is only found in gender diversity, while the other four variables are homogeneous.

Classic assumption test**Multicollinearity test****Table 3. Multicollinearity Test**

	X1_DG	X2_PK	X3_KM	X4_UP
X1_DG	1.000000	-0.006546	-0.513550	-0.036634
X2_PK	-0.006546	1.000000	-0.225980	0.396534
X3_KM	-0.513550	-0.225980	1.000000	0.035361
X4_UP	-0.036634	0.396534	0.035361	1.000000

Through Table 3, it is shown that all coefficient values have a value below 0.85. In other words, there is no coefficient greater than 0.85, so there is no correlation between the independent variables, which means that the observation data meets the assumption of multicollinearity.

Heteroscedasticity Test**Table 4. Heteroscedasticity Test**

Heteroskedasticity Test: White			
F-statistics	1.219129	Prob. F(14,40)	0.3000
Obs*R-squared	16.44937	Prob. Chi-Square(14)	0.2867
Scaled explained SS	14.99123	Prob. Chi-Square(14)	0.3788

Table 4. show a probability value of 0.2867 which is greater than the 5% significance level and this means that the observation data is free from symptoms of heteroscedasticity and is suitable for use in looking at the influence of the independent variable on the dependent variable.

Panel data regression analysis**Panel data regression model selection**

Based on the three model selection tests, the chosen model is REM (Random Effect Model) and is the most suitable regression model for this study. The following is the regression result obtained.

Table 5. Regression Model Random Effect Model

Variables	coefficient	std. Error	t-Statistics	Prob.
C	-0.519932	0.137530	-3.780503	0.0004
X1_DG	-0.019865	0.040488	-0.490628	0.6258
X2_PK	-0.030867	0.050485	-0.611414	0.5437
X3_KM	0.120309	0.049377	2.436567	0.0184
X4_UP	0.015159	0.004726	3.207400	0.0023
Weighted Statistics				
R-squared	0.410315	Mean dependent var		0.004715
Adjusted R-squared	0.363140	SD dependent var		0.029858
SE of regression	0.023833	Sum squared residue		0.028401
F-statistics	8.697763	Durbin-Watson stat		1.483693
Prob(F-statistic)	0.000021			

Hypothesis test**Analysis of the coefficient of determination (R^2)**

Through Table 5. Adjusted R-squared has a value of 0.363140. This value means that the independent research variables in the form of gender diversity, the proportion of independent commissioners, managerial ability, and company size can explain the

occurrence of tax avoidance of 36.31%. This percentage also means that there are other variables outside of this study that can explain the tax avoidance of 63.69%.

Simultaneous test (F)

Through Table 5. Probability (F-Statistic) has a value of 0.000021 and is lower than the 5% significance level. Through these conditions, it can be proven that gender diversity, the proportion of independent commissioners, managerial ability, and company size jointly influence the occurrence of tax avoidance efforts.

Partial test (t)

Through the results of the partial test in Table 5, it can be shown that the influence of each independent variable on the dependent variable can be obtained so that conclusions can be obtained as follows:

1. The influence of the gender diversity variable on tax avoidance has a probability value of $0.6258 > 0.05$. The resulting coefficient value is -0.019865 . Thus, it can be concluded that the variable gender diversity does not affect the occurrence of tax avoidance. The results obtained are not in line with the research hypothesis.
2. The influence of the independent board of commissioners' proportion variable on tax avoidance has a probability value of $0.5437 > 0.05$. The resulting coefficient value is -0.030867 . Thus, the results prove that the independent board of commissioners' proportion variable does not affect the occurrence of tax avoidance. The results obtained are not by the research hypothesis.
3. The influence of the managerial ability variable on tax avoidance has a probability value of $0.0184 < 0.05$. The resulting coefficient value is 0.120309 . These results indicate that the managerial ability variable positively influences tax avoidance efforts. This effect is by the research hypothesis although in a different direction.
4. The influence of the firm size variable on tax avoidance has a probability value of $0.0023 < 0.05$. The resulting coefficient value is 0.015159 . These results can prove that the variable company size positively influences tax avoidance efforts. These findings are in line with and can prove the research hypothesis.

The effect of gender diversity on tax avoidance

Through Table 5, the coefficient value shows a negative direction, and the probability value of the gender diversity variable is $0.6258 > 0.05$. The results of the hypothesis test stated that gender diversity did not affect tax avoidance efforts. Based on the cross matrix in Table 6 below, it can be seen that the observational data with tax avoidance values above and below the average are dominated by data with gender diversity below the average. Thus, it can be interpreted that tax avoidance is not influenced by the gender diversity of company directors. High gender diversity is not the cause of decreased tax avoidance efforts because both male and female directors have professionalism and responsibility as boards of directors. This finding is similar to the results of and [Oyenike, Olayinka, & Emeni \(2016\)](#) where there is no influence exerted by the gender diversity of the board of directors due to the small number of female directors in the company. The few female directors can be seen from the average value of 9.8% so it can be concluded that the company's directors are still dominated by male directors. Related to agency theory which emphasizes that the principal reflected by the company owner will delegate corporate governance to experts/agents ([Arismajayanti & Jati 2017](#)), then the development of this theory is supported by [Mala & Ardiyanto \(2021\)](#) which explains that the selection of directors is not based on gender, but on professionalism.

Table 6. Cross Matrix of Tax Avoidance and Gender Diversity

Dependent Variable	Independent Variable		Total
	DG > 0.0985	DG < 0.0985	
TA > 0.0262	12 (44%)	15 (56%)	27
TA < 0.0262	12 (43%)	16 (57%)	28
Total	24 (44%)	31 (56%)	55

The effect of proportion of independent commissioners on tax avoidance

Through the findings in Table 5, the coefficient value shows a negative direction with a variable probability of $0.5437 > 0.05$. This study obtained the result that the proportion of independent commissioners did not affect tax avoidance efforts. Based on the cross matrix in Table 7 below, it can be seen that the observational data with tax avoidance values above and below the average are dominated by data with a proportion value of the independent board of commissioners below the average. Based on an average value of 39%, it means that the portion of independent commissioners in the company is quite low and still close to the specified minimum limit. If it is related to agency theory, the existence of independent commissioners is expected to be able to reduce conflicts of interest through prudence and transparency in managerial decision-making (Arismajayanti & Jati, 2017). But according to Boediono (2005), the addition of a board of commissioners from outside the company can be a mere form of formal compliance, while the main role is still held by the majority shareholder. The objectivity of an independent commissioner can be influenced by external interests or other external factors which causes the supervision of the performance of the directors to be lacking, including in tax supervision so the study by Lismiyati & Herliansyah (2021) also cannot prove that there is an influence exerted by the proportion of independent commissioners on tax avoidance.

Table 7. Cross Matrix of Tax Avoidance and Proportion of Independent Commissioners

Dependent Variable	Independent Variable		Total
	PK > 0.3996	PK < 0.3996	
TA > 0.0262	11 (41%)	16 (59%)	27
TA < 0.0262	14 (50%)	14 (50%)	28
Total	25 (45%)	30 (55%)	55

The effect of managerial ability on tax avoidance

Through the results in Table 5, the coefficient value shows a positive direction, and the probability value of the managerial ability variable is $0.0184 < 0.05$. This study obtained the results that managerial ability positively influences tax avoidance efforts. The positive influence can be illustrated by every increase that occurs in managerial ability will also increase the company's efforts to avoid taxes. Based on the cross matrix in Table 8 below, it can be seen that the observational data with tax avoidance values above the average are dominated by data with managerial ability values above the average. Meanwhile, the tax avoidance value below the average is dominated by samples with managerial ability values that are below the average. This can happen because competent managers can understand and take advantage of regulatory loopholes, including tax regulations (Niawati, Maslichah, & Junaidi, 2020). The results of testing this hypothesis are in line with the differences in interests described by agency theory. Differences in interests encourage capable managers to achieve higher corporate efficiency thereby increasing the company's tax avoidance efforts. The results in the form of the effect of

managerial ability on tax avoidance are in line with the author's assumptions on the hypothesis although with a different direction of influence and this finding is in line with the study by [Akbari, Salehi, & Vlashani \(2018\)](#) who found a positive effect of managerial ability on tax avoidance efforts.

Table 8. Cross Matrix of Tax Avoidance and Managerial Ability

Dependent Variable	Independent Variable		Total
	KM > 0.8106	KM < 0.8106	
TA > 0.0262	17 (63%)	10 (37%)	27
TA < 0.0262	13 (46%)	15 (54%)	28
Total	30 (55%)	25 (45%)	55

The effect of company size on tax avoidance

Through Table 5 the coefficient value shows the positive direction, and the variable probability value is 0.0023 < 0.05. This study obtained the result that company size positively influences tax avoidance efforts. The positive influence can be illustrated by every increase that occurs in the size of the company will also increase the company's efforts to avoid taxes. Based on the cross matrix in Table 9 below, it can be seen that the observational data with tax avoidance values above and below the average are dominated by samples with company size values below the average. Even though it is below average, the total assets owned by the company exceed IDR 50,000,000,000 and when referring to POJK number 53/POJK.4/2017 then it is classified on a medium scale so that it can also be concluded that tax avoidance is positively influenced by company size. About the agency theory, large-scale companies as corporate taxpayers will act as agents and have tax obligations regulated by the government (principal). The company's desire to obtain the maximum possible profit will be contrary to the nature of tax contributions which reduce company profits resulting in a conflict of interest. When a company is classified as a large company and has a lot of assets, the company has more ability to develop a tax scheme carefully [Sadeva, Suharno, & Sunarti \(2018\)](#) or obtain services from tax experts and consultants ([Dayanara, Titisari, & Wijayanti, 2019](#)). A similar relationship was also found in the study by [Dewinta & Setiawan \(2016\)](#) and [Sadeva, Suharno, & Sunarti \(2018\)](#) where the results of the study can prove that company size has a positive effect on tax avoidance.

Table 9. Cross Matrix of Tax Avoidance and Firm Size

Dependent Variable	Independent Variable		Total
	UP > 29.8955	UP < 29.8955	
TA > 0.0262	10 (37%)	17 (63%)	27
TA < 0.0262	13 (46%)	15 (54%)	28
Total	23 (42%)	32 (58%)	55

CONCLUSION

Through simultaneous hypothesis testing, according to the probability value (F-Statistic), it can be concluded that gender diversity, the proportion of independent commissioners, managerial ability, and company size simultaneously influence tax avoidance in primary consumer goods sector companies listed on the Indonesia Stock Exchange Period 2015-2021. Partial influence according to the probability value of the managerial ability and company size variables proves a positive influence on the occurrence of tax avoidance efforts while the probability value on the gender diversity

variable and the proportion of independent commissioners is unable to provide evidence of an influence capable of encouraging tax avoidance efforts.

Based on the results obtained, the theoretical implication is that managerial ability and company size can encourage tax avoidance efforts. Practically, the implications of this research can be utilized by companies that seek to minimize their tax burden by ensuring that the company's managerial skills have good capabilities so that they can take advantage of loopholes in tax regulations. Meanwhile, the government can increase its awareness of companies that have a large size, especially those with good quality human resources to prevent tax avoidance that is detrimental to the state. The research limitations are based on the short research period and only range from 2015-2021. This study also only aims to explain the influence given by gender diversity variables, the proportion of independent commissioners, managerial ability, and company size on tax avoidance. Through these various limitations, based on the coefficient of determination, the occurrence of tax avoidance efforts can only be explained by 36.31% of the dependent variable in this study while 63.69% of other factors can be explained by other variables outside the research variables.

Through the results obtained, the authors hope to be able to provide theoretical contributions to further researchers. Future research is expected to readjust in terms of the selection of input and output components in the DEA model based on the characteristics of the research object. In addition, future research can choose other indicators to measure variables and expand the scope of research both periodically and as an object of sample selection. Through these findings, it is also hoped that this research can contribute practically to companies and the government. The author hopes that the company will make wise use of managerial capabilities and increase the size of the company for the government, the authors suggest considering the influence of managerial ability and company size in the preparation of applicable regulations to be able to formulate the best policy for all related parties. In future research, it is also suggested to be able to re-examine the effect of gender diversity and the proportion of independent commissioners on tax avoidance efforts.

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