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The Impact of Environmental, Social and Governance, Sustainable Financial Performance, Ownership Structure, and Composition of Company Directors on Tax Avoidance: Evidence from Indonesia

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ABSTRACT

The aim of the present study is to empirically estimate the impact of environmental, social and governance (ESG), composition of company directors, ownership structure and financial performance on tax avoidance. To achieve the study objectives, 114 companies listed on Indonesian Stock Exchange market are selected covering the data span over 2013-2020 period. Institutional ownership, female directors, ESG performance, return on assets and firm size are taken as the measures of ownership structure, composition of company directors, ESG and financial performance respectively. Empirical analysis is carried out using Fixed Effects Model as it is found as the appropriate estimation technique in Hausman test and Breusch-Pagan test. According to the study findings, EGS, ownership structure, composition of company directors all have significant and negative impact on tax avoidance. Among financial performance indicators, only firm size has negative and significant impact while return on assets has no significant effect on tax avoidance. The study recommends the firms or businesses to pay attention to ESG factors, institutional ownership and female directorship as these factors are found to have prominent role in improving tax avoidance behavior.

Keywords: Ownership Structure, ESG, Composition of Company Directors, Financial Performance, Indonesia
JEL Classifications: B26; G32; H26

1. INTRODUCTION

Tax is defined as the compulsory contribution that people made to state and is used for the welfare of general public. Taxes play crucial role in the state specifically in development, as taxes provide a major proportion of the income of state to finance all expenditures. Through tax laws and regulations, taxes play a significant role in regulating economic growth. The participation of community in financing the government administration and development of the country is illustrated by tax payments. Higher the proportion of tax revenues in the budget of a country, the higher is the community participation in the development of their country as taxes belong to community (Andesto, 2022; Chien et al., 2021; Zhang et al., 2023a). However, tax is considered as a burden on the corporation as it decreases net revenue that can be delivered to investors or shareholders as well as reinvested. Companies are often concerned about taxes because they have an impact on profitability and become a burden that prevents business expansion (Yopie and Elivia, 2022; Zhao et al., 2021). Tax avoidance actions, or so-called tax avoidance, are one of the challenges facing efforts to maximize tax income. Tax avoidance refers to decrease in tax collection that is carried out lawfully by making the best use of tax laws, such as deductions and exemptions as well as exploiting grey areas and loopholes in the current framework of tax laws (Andesto, 2022; Chien et al., 2021; Zhao et al., 2022). Tax avoidance is recognized as the behaviour of companies trying to minimize taxes

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by managing the tax obligation in a way that they benefit from loopholes in provisions of appropriate tax laws. This tax avoidance action does not violate actual tax laws but it is also against the objectives of the levy or taxation act. Practically, the behavior of tax avoidance is done by reducing the tax obligations amount that must be paid officially, whereas illegal behavoiur is known as tax evasion or embezzlement. Hence, tax avoidance is regarded as an illicit action to pay the least tax amount by the company. Tax avoidance is not against the law or illegal behavior, but it cannot be called a good activity and therefore is taken negative as it leads to severe state losses (Chien et al., 2021; Damayanty and Putri, 2021; Zhang et al., 2023b).

Tax avoidance has been a hot topic of discussion and is a concern for state since long period of time. Existing studies have identified certain characteristics of the companies as determinants of commence tax avoidance, namely, liquidity level (Chen et al., 2019; Chen and Zolotoy, 2014; Mahrani, 2019; Novita and Herliansyah, 2019), firm size (Nurlis et al., 2021; Oktrivina, 2022; Prabowo, 2020), ownership structure (Alkurdi and Mardini, 2020; Annuar et al., 2014; Dakhli, 2022; Hassan et al., 2022; Richardson et al., 2016) and profitability level (Aminah et al., 2017; Darsani and Sukartha, 2021; Prabowo, 2020; Wahyuni et al., 2019). Recently environmental, social and governance performance (ESG) is adopted by a number of stakeholders including management consulting investors and firms to recognize the overall CSR performance of a firm. ESG represents an evaluation of the social, governance and environmental practices of a firm and combination of the performance of the stated practices (Yoon et al., 2021). According to empirical data, CSR and a company's tax performance are directly related. ESG ratings are adopted and used to analyze the overall CSR performance generally since CSR cannot be quantified adequately. The ESG performance significance has been widely researched for different subjects than tax avoidance, such as portfolio performance (Bermejo Climent et al., 2021), firm value (Fatemi et al., 2018) and economic growth (Diaye et al., 2022). But the main goal of the study is to examine how ESG is related to tax avoidance because the rise in ESG investing, or sustainable investing, has also been accompanied by a rise in the scrutiny of businesses that use aggressive tax avoidance tactics (Maas, 2022; Nawaz et al., 2021; Vu et al., 2023a).

Similarly, ownership structure is also found to be significantly related to the firm's tax avoidance decisions (Dakhli, 2022; Haq et al., 2020; Shair et al., 2021). The ownership structure is defined as the ratio of ownership shares that each investor owns in a company or the equity composition hold by shareholders. Ownership structure in a company have various categories like insider ownership, institutional ownership, block holder ownership, group ownership, state ownership and family ownership (Muntahanah et al., 2021; Vu et al., 2023b). Particularly, the existing studies have widely examined the institutional ownership and tax avoidance relationship and provided misleading results. Some studies conclude that institutional ownership and tax avoidance have positive relationship (Alkurdi and Mardini, 2020; Ngadiman and Puspitasari, 2014). Like Khan et al., (2017) argued tax avoidance increases by increasing institutional ownership as it promotes tax shelters. Similarly, Jiang et al., (2021) argued that in Chinese companies, the tax avoidance behavior is likely to be promoted by increase in institutional owner's shareholdings by explaining the behavior or tendency of institutional owners towards realizing short term profits without paying any attention towards taxpaying obligations. However, some other studies posit that institutional ownership reduces tax avoidance. Institutional ownership is viewed as the crucial component of corporate governance enabling the effective oversight of tax avoidance-related management choices in order to minimize agency issues and keep track of managers' activities (Graham and Tucker, 2006). Such as, Ying et al., (2017), Widyastuti (2018) and Bird and Karolyi (2017) argued that companies having higher proportion of institutional owners are likely to have less tax avoidance behavior.

In addition, the role of composition of company directors in tax avoidance is insightful, because this relationship can either be negative or positive. The composition of company directors represents corporate governance, board size, female directors and male directors ratio etc. (Alkurdi and Mardini, 2020; Hao et al., 2020). Among all these, it is believed that female directors in company has profound effect on tax avoidance behavior (Hoseini et al., 2018; Lanis and Richardson, 2011). Female directors' active engagement in assessing managerial performance has drawn a lot of attention. Female directors always show full commitment do their best to balance socially responsible corporate behaviour (Jianjun et al., 2021; Prabowo et al., 2017). According to (Richardson et al., 2016) the greater ratio of female directors in a company enhances the firm's monitoring function. Similarly Chien (2023) and Kasirang et al. (2013) also argued that females are more conscious than males and therefore can perceive many risks about companies more accurately. Female representation has the ability to improve the efficiency and functions of boards in companies and can affect tax avoidance behavior (Boussaidi and Hamed, 2015; Mohsin et al., 2021; Zemzem and Ftouhi, 2013). However, there are many other studies which found that there exists no or positive relationship of female directors with tax avoidance (Anggraenia and Kurnianto, 2020; Vu et al., 2023b).

These conflicting views about different factors affecting tax avoidance motivated the researchers to reinvestigate the factors determining tax avoidance. Therefore, the main goal of the present research is to analyze the role of ownership structure, composition of company's director, ESG and financial performance on tax avoidance. For this purpose, the study considers the data for 114 manufacturing companies listed on Indonesian stock exchange over 2013-2020 period. The study chooses to study Indonesia because the tax avoidance in Indonesia is on rise in recent years. In Indonesia, an evidence of tax avoidance is provided by low tax compliance level indicated by current tax ratio (Chen et al., 2023; Dinh et al., 2022; Rusydi and Martani, 2014). According to the Ministry of Finance statistics, tax ratio in Indonesia was 10.7 percent, 11.5%, and 10.7% in years 2017, 2018 and 2019 respectively. Currently, the tax ratio of Indonesia is far below as compare to other ASEAN countries. The statistics of OECD reveal that in year 2017, the tax ratio in Malaysia was 13.6%, Philippines 17.5%, Thailand 17.6% and Singapore 14.1%. Over last 10 years, different companies in Indonesia were found to do tax avoidance

such as PT Adaro Energi evaded tax of worth 125 million dollars in 2009-2017 period (Tan et al., 2021). Another case happened in 2010 when PT Bumi Resources, PT Kaltim Prima Coal and PT Arutmin were culprit for tax evasion approximately to Rp 1.5 trillion, US$ 27.5 million and Rp 376 billion in 2008-2010 year (Ibrahim et al., 2021; Sadiq et al., 2023). Thus, it is important to investigate the important factors that can have significant role in encouraging tax avoidance behavior in Indonesian companies.

The current study has both theoretical and practical contributions. By recommending the establishment of links between tax avoidance and EGS, ownership structure, makeup of business directors, and financial performance, it contributes theoretically to the literature regarding tax avoidance particularly in Indonesian context. Previously, studies have analyzed the nexus between ownership structure, composition of business directors, financial performance and tax avoidance, but ignored the role of ESG in tax avoidance especially in the context of Indonesia. The empirical findings of the study answer issues regarding the impact of institutional ownership, return on assets, female directors, ESG, and firm size on tax evasion. Our findings provide practical implications that can be helpful to the practitioners and academic scholars who are looking to learn about tax avoidance mitigating strategies and their relationships with the factors mentioned above.

The remaining study is organized in the following arrangement: Section 2 gives review of the existing literature. Next section 3 provides variables, model specification, data and applied estimation methodology. Section 4 gives empirical results and their discussions. Conclusion and limitations are given in section 5.

2. REVIEW OF EXISTING LITERATURE

2.1. Ownership Structure and Tax Avoidance

It has been widely discussed in the existing literature that there exists direct relationship between ownership structure of the firms and their tax avoidance behaviour, however the conclusions are mixed (Moslehpour et al., 2022a; Nguyen et al., 2021; Phuoc et al., 2022). Like Dakhli (2022) estimated the role of institutional ownership in tax avoidance in the presence of CSR as mediating factor. The authors considered the data for 200 French companies over 2007-2018 period. Applying Structure Equation Modeling, it was concluded that a negative relationship was present between institutional ownership and tax avoidance and the relationship was partially moderated by corporate social responsibility. Alkurdi and Mardini (2020) analyzed the role of ownership structure and composition of directors in tax avoidance association in firms listed on Jordan stock exchange over the period from 2012 to 2017. Ownership structure was measured in three forms in this study: foreign ownership, institutional ownership and managerial ownership. Using OLS estimation approach, it was found that managerial and institutional ownership had negative impact on tax avoidance strategies, but forgein ownership helped in promoting tax avoidance strategies. In case of Indonesia, Zulma (2016) estimated the link between management compensation and tax evasion by considering the effect of family ownership over 2011-2014 period. According to the findings, management compensation was negatively associated with tax avoidance but family ownership tended to reduce the negative relationship between tax avoidance and management compensation. Gaaya et al., (2017) considered data for 55 Tunisian companies over 2008-2013 period to explore the nexus between family ownership and tax avoidance. The moderating role of audit quality was also considered by the authors. The authors used GLS estimation technique and the findings revealed the positive family ownership - tax avoidance nexus, and audit quality was found to curb this association significantly. Yopie and Elivia (2022) also attempted to explore the family ownership- tax avoidance nexus by considering the data for 158 companies over 2015-2019 period. In addition, the moderating role of audit quality was also estimated. The findings of panel regression analysis revealed that there was negative family ownership - tax avoidance relationship. However audit quality had no moderating impact on the association between tax avoidance and family ownership. Hence the hypothesis is developed as:

H1: A significant relationship is present between ownership structure and tax avoidance.

2.2. Composition of Directors and Tax Avoidance

Like ownership structure, existing literature also provides ambiguous findings regarding the composition of directors of the company and tax avoidance (Moslehpour et al., 2022b; 2022c; Quynh et al., 2022). Andesto (2022) analyzed the role of composition of the directors on tax avoidance by taking into consideration the data of 61 companies listed on stock exchange market of Indonesia over the period from 2009 to 2019. The impact of composition of the company's directors was found to be insignificant in the study (Idzniah and Bernawati, 2020). Anggraenia and Kurnianto (2020) estimated the role of size of board of directors and female directors in tax avoidance in Indonesia by considering the data of companies listed on Indonesian stock exchange over 2013-2017. The findings revealed that size of the board had positive impact while the effect of female directors was negative on tax aversion. Kusbandiyah (2021) explored the main determinants of tax avoidance including family ownership, forgein ownership and independent directors in Indonesian firms over 2012-2017 period. According to the findings, all of the determinants had insignificant impact on tax avoidance in Indonesian firms. Rakia et al., (2023) analyzed the moderating impact of female directors on tax avoidance and CSR nexus by considering 78 Malaysian firms' data over 2010-2017 period. The findings revealed that in the presence of female directors, there was negative relationship between tax avoidance and CSR. Using the data of western companies listed on USA's stock market, Cortellese (2022) studied the impact of gender composition of directors on tax aggressiveness over 2015-2019 period. The findings revealed that gender composition affected tax aggressiveness significantly only in three countries with varying impacts. In the USA and the UK, it had adverse impact while in Switzerland it had positive impact on tax aggressiveness (Lanis and Richardson, 2011; Liu et al., 2022). Hence the hypothesis is formulated as:

H2: A significant relationship is present between composition of directors and tax avoidance.

2.3. ESG Performance and Tax Avoidance

The performance of a firm in corporate social, environmental, and governance practices is measured by ESG performance. More specifically, the environmental performance of a company represents its initiatives to cut back on resource consumption and related emissions (Lan et al., 2022; Lin et al., 2022). The social practices of a company reflect its adherence to community relations, product responsibility, quality of employment, and respect for human rights. Last the responsibilities and rights of the firm's management is referred as corporate governance of the firm (Yoon et al., 2021). Empirically, a few studies are present that have analyzed the nexus between tax evasion and ESG like Yoon et al. (2021) studied the ESG performance- tax avoidance nexus by using data of Korean companies spanning over the period from 2011 to 2017. The authors observed a negative relationship between ESG scores and avoidance in the selected firms. Maas (2022) studied the nexus between ESG performance and tax avasion by considering the data of 1265 companies of 34 countries over 2011-2020 period. The findings indicated that ESG performance had negative impact on tax avoidance in the selected companies. Montenegro (2021) considered the data of OECD economies to analyze the nexus between CSR, ESG and tax evasion over 2004-2010 period and found no significant impact of ESG and CSR on tax evasion. Damayanty and Putri (2021) estimated the corporate governance and avoidance nexus in Indonesian firms over 2016-2018 periods. The findings of multiple regression analysis indicated no significant relationship between tax avoidance and corporate governance. Kovermann and Velte (2019) conducted a review study of 79 articles regarding corporate tax avoidance and corporate governance and found that corporate governance always promoted tax avoidance by the firms.

Hence, we formulate the third hypothesis of the study as:
H3: The ESG may impact tax avoidance significantly or insignificantly.

2.4. Financial Performance and Tax Avoidance

Similarly financial performance and tax avoidance nexus has extensively studied previously like, Wiratmoko (2018) estimated the role of financial performance in tax avoidance by considering the data of Indonesian and Malaysian companies over 2012-2016 period. The findings of multiple linear regressions revealed significant impact of debt ratio and return on assets ratio on avoidance. Akbar and Thamrin (2020) estimated the effect of firm size and return on assets on tax avoidance over 2015-2017 period. Multiple Linear Regression analysis findings indicate that return on assets and firm size had significant negative effect on tax avoidance. Ha and Quyen (2017) considered the data for 460 firms listed on Vietnamese stock market over 2009-2015 period to estimate the role of forgein ownership, firm size and debt ratio on tax avoidance. Findings of Feasible Generalized Least Square (FGLS) indicated that forgein ownership, size of the firms and debt ratio, all affected tax avoidance positively and significantly. Sandag et al., (2022) also studied the role of company size and returns on assets on tax avoidance in Indonesian firms over 2017-2019 period. The findings of Multiple Linear Regression model indicated that only company size had significant impact on tax avoidance. Dhahri (2020) took the data for Tunisian firms over 2012-2018 period to explore the nexus between firm performance and tax avasion. The authors used Fixed Effects Regression model that revealed that significant negative relationship was present between firm performance and tax avoidance in the companies.

Thus the hypothesis is formulated as:
H4: A significant impact of financial performance is present on tax avoidance.

2.5. Literature Gap

The review of literature existing so far revealed that there is an ambiguity regarding the role of ESG, financial performance, ownership structure and composition of company directors in tax avoidance. Some studies revealed the positive while others reveal the negative impact of these factors on tax avoidance behaviour. Also, there is ambiguity about the significance of the role of these factors in tax avoidance as evident from earlier studies. Hence, it necessitates a re-examination of the effect of the above-mentioned variables on tax avoidance (Hsu et al., 2023; Kamarudin et al., 2021). Second, there are many studies present in the literature that studied the nexus between ownership structure, composition of company directors and financial performance and tax avoidance by companies listed on Indonesian firms, but no study exists in the literature that tried to analyze the role of ESG in tax aversion which is a significant determining factor of tax avoidance (Chien et al., 2022; Chien et al., 2023a,b). Also, this research aims to fill in the gap by studying the role of ESG, ownership structure, composition of company directors and financial performance in tax avoidance in a single model that has never been explored earlier in the context of Indonesia.

3. EMPIRICAL ESTIMATION

3.1. Data

The quantitative research approach is used by the present study to carry out empirical analysis. The main goal of the study is to examine the relationship between the dependent and explanatory variables utilizing quantitative numeric data. The financial statements of companies listed on stock market of Indonesia are accessed to obtain the related data. The companies which do not meet the required criterion are eliminated and thus the remaining number of companies is 114. Time period of the study spans over 2013-2020 period (due to the availability of yearly financial statements).

For empirical estimation, the model of the study is formulated on the basis of Agency Cost Theory as:

$$TA = f\,(OSTR, DCOMP, ESG, ROE, FS) \quad (1)$$

The econometric form of the model is expressed as:

$$TA_{it} = \alpha_0 + \beta_1 OSTR_{it} + \beta_2 DCOMP_{it} + \beta_3 ESG_{it} + \beta_4 ROE_{it} + \beta_5 FS_{it} + \varepsilon_{it} \quad (2)$$

Where, TA shows tax avoidance, OSTR shows ownership structure, DCOMP indicates composition of company's directors,

ESG shows ESG performance, FS stands for firm size and ROE shows return on assets.

3.2. Operational Definitions of the Model Variables

3.2.1. Tax avoidance

The tax avoidance is the outcome or the dependent variable of the study denoted by effective tax rate (ETR). ETR is the ratio between total tax expenses and the pre-tax income. Literature provides evidence for ETR as dependent variable (Chau et al., 2022; Dyreng et al., 2008). There are several reasons for ETR being a suitable tax avoidance measure. ETR is an appropriate measure for the association between the total tax expenses, including the pre-tax income and deferred taxes (Bai et al., 2022; Rakia et al., 2023). The ETR has the potential to capture the tax reduction forms implied in tax laws loopholes and tax shelters (Salihu et al., 2014), either through illegal or legal policies. ETR possesses opposite impact on tax evasion, and as a result, corporate tax evasion is more prevalent, resulting in lower ETR values.

3.2.2. Ownership structure

Institutional ownership is measured by the shares owned by institutional investors divided by the number of shares issued (Jiang et al., 2021; Sunarto et al., 2021; Zaid et al., 2020).

3.2.3. Composition of company's directors

The composition of company's director is added as another main explanatory variable. The ratio of female over male directors is taken as the measure of composition of company's directors following (Hamdani et al., 2022).

3.2.4. ESG

ESG performance is the third main variable of the analysis. ESG performance comprises of four different scores derived from Refinitiv Eikon database. Social scores, environmental scores, and governance scores constitute ESG scores. The sum of all these scores is known as overall ESG score.

3.2.5. Firm size

Firm size is included to measure financial performance of the companies in the model. Empirical evidences exist for the firms that have larger size have more tax avoidances as compare small firms (Lanis and Richardson, 2012; Rakia et al., 2023). Therefore, firm size is taken as another main explanatory variable in analysis.

3.2.6. Return on assets

Return on assets is measured by the ratio between pretax income and total asset (Duong et al., 2022; Hsu and Chien, 2023; Rakia et al., 2023). It is a common practice by companies to carry out tax avoidance practices in order to improve performance. Therefore we add return on assets as a variable to estimate the effect of financial performance on tax avoidance.

For empirical estimation, Fixed Effects Model is used in the present study because F-test, Hausman test and Breusch-Pagan test provided the appropriateness of this model. Hence the study uses Fixed Effects Model to estimate the role of ESG, ownership structure, composition of company's director and financial performance on tax avoidance. Next, we conducted the normality, autocorrelation, and homoskedasticity tests to confirm that the errors are identical, independent and normally distributed for the fixed effects model.

4. EMPIRICAL ESTIMATION AND DISCUSSIONS

4.1. Descriptive Statistics

The descriptive statistic analysis is provided in Table 1 below. According to the statistics, among all of the data series, ESG performance has the highest average value, whereas the lowest mean value is possessed by ownership structure. The value of standard deviation is the highest for ESG performance and the lowest for firm size. Moreover, the highly significant statistics of Jarque-Bera test for normality indicate that series do not follow normal distribution.

4.2. Correlation Matrix

Table 2 illustrates the correlation matrix of all study variables. As a rule of thumb, 0.70 value or higher in correlation matrix reveals the problem of multicollinearity. The findings of the correlation indicate that some of the series have positive correlation whereas some series have negative correlation with tax avoidance. Since no correlation value is >0.70, it means multicollinearity problem is not present in the data. The variance inflation factors (VIF) is calculated to check the multicollinearity problem. The value of VIF indicate that problem of multicollinearity does not exist in our data set.

4.3. Results of Fixed Effects Model

Following Table 3 provides the findings of Fixed Effects Model. First, the findings indicate the significant and negative impact of institutional ownership on tax avoidance of the selected companies. Hence H1 is supported. Institutional owners prioritize acquiring additional advantages by minimizing prospective tax authorities' costs. The finding is in line with earlier studies like (Alkurdi and Mardini, 2020; Asalam and Kamilah; Dakhli, 2022). The finding is justifiable because institutions or businesses or firms generally possess more finances as compare to individuals. With more resources, it will be easier to exert control over management's actions, such as requiring them to accurately report financial statements so that the business can be controlled to adhere to tax laws and prevent management from evading taxes. This shows that institutional owners who pay more taxes have a better reputation, which increases their chances of getting promoted and advances their career.

Table 1: Descriptive statistics

Series	Mean	Min	Max	Std. Dev.	J-B Stats
TA	22.651	0	48.121	7.851	1.237***
OSTR	0.765	0	0.765	0.854	2.876***
DCOMP	0.198	1.32	49.98	1.733	3.740***
ESG	39.761	0	54.214	44. 063	4.817***
FS	8.901	6.771	11.098	0.717	4.735***
ROA	1.987	0.701	0.986	0.033	8.425***

***shows $P<0.05$.

Table 2: Correlation matrix

Series	TA	OSTR	DCOMP	ESG	FS	ROA	VIF
TA	1.00						1.32
OSTR	0.342	1.00					1.55
DCOMP	0.311	−0.554	1.00				1.44
ESG	−0.125	−0.431	0.155	1.00			1.39
FS	−0.652	0.212	−0.132	0.711	1.00		1.41
ROA	−0.516	0.351	0.299	0.281	−0.533	1.00	1.61

Table 3: Fixed effects model findings

Variables	Coefficient	Prob-values
OSTR	−0.287***	0.001
DCOMP	−0.444***	0.050
ESG	−1.124***	0.004
FS	−0.863***	0.002
ROA	−0.842	0.981

Where ***indicate significance at 1% level

The coefficient of the DCOMP is negative and statistically significant as shown in Table 3. This indicates that the higher proportion of female directors in the company, lower is the rate of tax avoidance. The result maintains our H2 which assumes that there is a significant impact of DCOMP on tax avoidance by the companies. There are several possibilities of this significant negative relationship between female director and tax avoidance relationship like several benefit accrue to the company having female directors on board. The company will adhere to applicable tax requirements more closely if it has more female directors as compare to male directors. The findings of our study comply with those of (Gul et al., 2011) positing that greater proportion of females on boards of directors as compare to male can instigate higher moral and ethical standards and improve decision making. Similarly Richardson et al., (2016) posit that female directors are more vigilant, careful risk averse, and possess higher ethics and moral values than male directors. Female directors with autonomous thought tend to be cautious when making judgments and can present more transparent information according to (Hoseini et al., 2018). The findings are confirmed by many other studies who concluded that presence of female directors is beneficial for companies (Anggraenia and Kurnianto, 2020; Oyenike et al., 2016; Zemzem and Ftouhi, 2013).

The findings of the study reveal significant negative impact of ESG performance on tax avoidance of manufacturing firms. The finding implies that firms having higher ESG performance avoid tax avoidance behavior. The finding is in line with earlier study (Lanis and Richardson, 2015; Maas, 2022; Ortas and Gallego-Álvarez, 2020; Sikka, 2013) who also concluded that good governance, social responsibility and environmental responsibility curb avoidance behavior. Finally, the study revealed that financial performance has mixed findings in terms of its impact on tax avoidance. Firm size is found to impact tax avoidance negatively. Thus the findings related to size of the firms posit that small firms are engaged more in tax avoidance activities as compare to large firms large. This is consistent with Gaaya et al. (2017) as this study supported the evidence for negative association between tax avoidance and firm size. However, this finding is not supported by Richardson et al., (2015) as they suggest that large firms are more anxious about market value and status loss and therefore they prevent tax avoidance activities. The study also finds that profitability has no significant impact with tax avoidance in line with the findings of Richardson et al., (2013), Faradisa and Fahlevi (2022), Wahyuni et al. (2019), Radiany et al., (2022) and Gaaya et al. (2017). In other words, it is found that return on assets has no significant role in tax avoidance behavior of the firms. A possible explanation is that companies with higher asset returns are less likely to participate in increased corporate tax evasion. The companies with high ROA tend to pursue proper planning for optimal tax collections and tend to avoid tax avoidance behavior. Therefore, there is no significant role of profitability in tax avoidance. However, the study of Nathania et al., (2021) is in contrast with our finding as it finds a significant role of ROA in tax avoidance.

5. CONCLUSION

The goal of current research is to estimate the role of ownership structure, composition of board of directors, ESG performance and financial performance in tax avoidance. For this purpose, the study considers the data of 114 manufacturing companies listed on Indonesian Stock exchange over the period 2013-2020. The empirical analysis is carried out using Fixed Effects Model that is proved to be valid in Breusch-Pagan test and the Hausman test. The study indicates that indicate that institutional ownership, female directors, firm size and ESG possess negative association with tax avoidance. In contrast, profitability is found to have no significant impact on tax avoidance of the firms. The study thus concludes that to curb tax avoidance practices in companies, institutional ownership, ESG factors, female directors and firm size can play significant and positive role. The study findings can have worthy implications for the companies concerned about tax avoidance practices. The optimal number institutional owners, female directors, improved EGS performance and larger firm size can have enabling effects in making companies more well-organized and efficient in making decisions and minimizing the tax avoidance activities. Moreover, the companies should focus on effective strategies to enhance taxpaying behavior.

Like many studies, there are a few limitations that must be addressed by future researches. The major limitation of the study lies in its sample size. The manufacturing companies listed in Indonesian stock market were the focus of the study and therefore the findings of the study are not generalizable. Future researches are recommended to expand the scope of the study by including companies belonging to different industries and adding other

relevant variables that also influence tax avoidance, such as audit committee, government ownership, managerial ownership, CSR, corporate investment decisions and the board of commissioners' characteristics. Future research should be done by considering longer time period to give more accurate and valid results. Other measurements of tax avoidance such as book-tax differences and Cash Effective Tax Rates can also be used by future studies. The following study may investigate the effects of cross-border tax evasion to learn more about tax avoidance strategies outside of Indonesia.

REFERENCES

Akbar, A., Thamrin, H. (2020), Analysis of effect of CAPR, DAR, ROA and SIZE on tax avoidance. Dinasti International Journal of Management Science, 1(5), 706-718.

Alkurdi, A., Mardini, G.H. (2020), The impact of ownership structure and the board of directors' composition on tax avoidance strategies: Empirical evidence from Jordan. Journal of Financial Reporting and Accounting, 18(4), 795-812.

Aminah, A., Chairina, C., Sari, Y.Y. (2017), The influence of company size, fixed asset intensity, leverage, profitability, and political connection to tax avoidance. AFEBI Accounting Review, 2(2), 107-120.

Andesto, R. (2022), The effect of the proportion of the independent board of commissioners and the structure of the board of directors and audit committee on tax avoidance and their impact on company value. Journal of Economics Finance and Accounting Studies, 4(1), 588-494.

Anggraenia, D.P.W., Kurnianto, S. (2020), The effect of board size and female directors on tax avoidance. International Journal of Innovation Creativity and Change, 13(8), 1127-1141.

Annuar, H.A., Salihu, I.A., Obid, S.N.S. (2014), Corporate ownership, governance and tax avoidance: An interactive effects. Procedia-Social and Behavioral Sciences, 164, 150-160.

Asalam, A.G., Kamilah, I.J. (2022), The Influence of Profitability, Leverage, and Institutional Ownership on Tax Avoidance (Study on Manufacturing Companies Listed on the Indonesia Stock Exchange (IDX in 2017-2020). In: Proceedings of the 3rd Asia Pacific International Conference on Industrial Engineering and Operations Management, Johor Bahru, Malaysia.

Bai, X., Wang, K.T., Tran, T.K., Sadiq, M., Trung, L.M., Khudoykulov, K. (2022), Measuring China's green economic recovery and energy environment sustainability: Econometric analysis of sustainable development goals. Economic Analysis and Policy, 75, 768-779.

Bermejo Climent, R., Garrigues, I.F.F., Paraskevopoulos, I., Santos, A. (2021), ESG disclosure and portfolio performance. Risks, 9(10), 172.

Bird, A., Karolyi, S.A. (2017), Governance and taxes: Evidence from regression discontinuity (retracted). The Accounting Review, 92(1), 29-50.

Boussaidi, A., Hamed, M.S. (2015), The impact of governance mechanisms on tax aggressiveness: Empirical evidence from Tunisian context. Journal of Asian Business Strategy, 5(1), 1-12.

Chau, K.Y., Lin, C.H., Tufail, B., Tran, T.K., Van, L., Nguyen, T.T.H. (2022), Impact of eco-innovation and sustainable tourism growth on the environmental degradation: The case of China. Economic Research-Ekonomska Istraživanja, 36, 2150258.

Chen, S.L., Su, Y.S., Tufail, B., Lam, V.T., Phan, T.T.H., Ngo, T.Q. (2023), The moderating role of leadership on the relationship between green supply chain management, technological advancement, and knowledge management in sustainable performance. Environmental Science and Pollution Research, 30, 56654-56669.

Chen, Y., Ge, R., Louis, H., Zolotoy, L. (2019), Stock liquidity and corporate tax avoidance. Review of Accounting Studies, 24, 309-340.

Chen, Y., Zolotoy, L. (2014), Stock Liquidity and Corporate Tax-Avoidance: The Tale of Two Tails. In: Paper Presented at the School of Accounting Seminar Series, Kensington, NSW, Australia.

Chien, F. (2023), The impact of green investment, eco-innovation, and financial inclusion on sustainable development: Evidence from China. Engineering Economics, 34(1), 17-31.

Chien, F., Chau, K.Y., Sadiq, M. (2023b), Impact of climate mitigation technology and natural resource management on climate change in China. Resources Policy, 81, 103367.

Chien, F., Chau, K.Y., Sadiq, M., Hsu, C.C. (2022), The impact of economic and non-economic determinants on the natural resources commodity prices volatility in China. Resources Policy, 78, 102863.

Chien, F., Hsu, C.C., Zhang, Y., Sadiq, M. (2023a), Sustainable assessment and analysis of energy consumption impact on carbon emission in G7 economies: Mediating role of foreign direct investment. Sustainable Energy Technologies and Assessments, 57, 103111.

Chien, F., Pantamee, A.A., Hussain, M.S., Chupradit, S., Nawaz, M.A., Mohsin, M. (2021), Nexus between financial innovation and bankruptcy: Evidence from information, communication and technology (ict) sector. The Singapore Economic Review, 1-22. https://doi.org/10.1142/S0217590821500181

Chien, F., Sadiq, M., Kamran, H.W., Nawaz, M.A., Hussain, M.S., Raza, M. (2021), Co-movement of energy prices and stock market return: Environmental wavelet nexus of COVID-19 pandemic from the USA, Europe, and China. Environmental Science and Pollution Research, 28(25), 32359-32373.

Chien, F., Sadiq, M., Nawaz, M.A., Hussain, M.S., Tran, T.D., Le Thanh, T. (2021), A step toward reducing air pollution in top Asian economies: The role of green energy, eco-innovation, and environmental taxes. Journal of Environmental Management, 297, 113420.

Cortellese, F. (2022), Does the gender composition of the board of directors have any effect on tax aggressiveness in western countries? Economics and Sociology, 15(1), 11-22.

Dakhli, A. (2022), The impact of ownership structure on corporate tax avoidance with corporate social responsibility as mediating variable. Journal of Financial Crime, 29(3), 836-852.

Damayanty, P. (2021), The Effect of Corporate Governance on Tax Avoidance by Company Size as the Moderating Variable. In: Proceedings of the 1st International Conference on Sustainable Management and Innovation, ICoSMI 2020.

Darsani, P.A., Sukartha, I.M. (2021), The effect of institutional ownership, profitability, leverage and capital intensity ratio on tax avoidance. American Journal of Humanities and Social Sciences Research, 5(1), 13-22.

Dhahri, T. (2020), Does the firm's performance influence tax avoidance? A study in the Tunisian context. International Journal of Business and Technology Studies and Research, 2(3), 13.

Diaye, M.A., Ho, S.H., Oueghlissi, R. (2022), ESG performance and economic growth: A panel co-integration analysis. Empirica, 49(1), 99-122.

Dinh, H.P., Tran, K.N., Van Cao, T., Vo, L.T., Ngo, T.Q. (2022), Role of eco-financing in COP26 goals: Empirical evidence from ASEAN countries. Cuadernos de Economía, 45(128), 24-33.

Duong, K.D., Hai Thi Thanh, T. (2022), Association between post-covid socio-economic development and energy-growth-environment Nexus from developing economy. International Journal of Economics and Finance Studies, 14(2), 247-270.

Dyreng, S.D., Hanlon, M., Maydew, E.L. (2008), Long□run corporate tax

avoidance. The Accounting Review, 83(1), 61-82.

Faradisa, F., Fahlevi, H. (2022), Do foreign ownership, profitability, and leverage influence tax avoidance Of Indonesian mining companies? Jurnal Ilmiah Mahasiswa Ekonomi Akuntansi, 7(4), 520-533.

Fatemi, A., Glaum, M., Kaiser, S. (2018), ESG performance and firm value: The moderating role of disclosure. Global Finance Journal, 38, 45-64.

Gaaya, S., Lakhal, N., Lakhal, F. (2017), Does family ownership reduce corporate tax avoidance? The moderating effect of audit quality. Managerial Auditing Journal, 32, 731-744.

Graham, J.R., Tucker, A.L. (2006), Tax shelters and corporate debt policy. Journal of Financial Economics, 81(3), 563-594.

Gul, F.A., Srinidhi, B., Ng, A.C. (2011), Does board gender diversity improve the informativeness of stock prices? Journal of Accounting and Economics, 51(3), 314-338.

Ha, N.T.T., Quyen, P.G. (2017), The relationship between state ownership and tax avoidance level: Empirical evidence from Vietnamese firms. Journal of Asian Business Strategy, 7(1), 1-12.

Hamdani, R., Shareza Hafiz, M., Koto, M., Marpaung, A.P. (2022), Female directors and firm performance: Evidence of family firm in Indonesia. Asian Journal of Economics, Business and Accounting, 22, 19-30.

Hao, W., Shah, S.M.A., Nawaz, A., Nawazc, M.A., Noman, S.M. (2020), The impact of CPEC on infrastructure development, a-double mediating role of project success factors and project management. Revista Argentina de Clínica Psicológica, 29(4), 737-750.

Haq, M.A.U., Nawaz, M.A., Akram, F., Natarajan, V.K. (2020), Theoretical implications of renewable energy using improved cooking stoves for rural households. International Journal of Energy Economics and Policy, 10(5), 546-557.

Hassan, N., Masum, M.H., Sarkar, J.B. (2022), Ownership structure and corporate tax avoidance: Evidence from the listed companies of Bangladesh. Polish Journal of Management Studies, 25(1), 147-161.

Hoseini, M., Gerayli, M.S., Valiyan, H. (2018), Demographic characteristics of the board of directors' structure and tax avoidance: Evidence from Tehran stock exchange. International Journal of Social Economics, 46(2), 199-212.

Hsu, C.C., Chau, K.Y., Chien, F. (2023), Natural resource volatility and financial development during Covid-19: Implications for economic recovery. Resources Policy, 81, 103343

Hsu, C.C., Chien, F. (2023), The impact of high economic growth and technology advancement on extensive energy production in China: Evidence using NARDL model. Environmental Science and Pollution Research, 30(1), 1656-1671.

Ibrahim, R., Sutrisno, T., Rusydi, M.K. (2021), The influence factors of tax avoidance in Indonesia. International Journal of Research in Business and Social Science (2147-4478), 10(5), 1-10.

Idzniah, U.N.L., Bernawati, Y. (2020), Board of directors, audit committee, executive compensation and tax avoidance of banking companies in Indonesia. Journal of Accounting and Strategic Finance, 3(2), 199-213.

Jiang, Y., Zheng, H., Wang, R. (2021), The effect of institutional ownership on listed companies' tax avoidance strategies. Applied Economics, 53(8), 880-896.

Jianjun, H., Yao, Y., Hameed, J., Kamran, H.W., Nawaz, M.A., Aqdas, R., Patwary, A.K. (2021), The role of artificial and nonartificial intelligence in the new product success with moderating role of new product innovation: A case of manufacturing companies in China. Complexity, 2021, 8891298.

Kamarudin, F., Anwar, N.A.M., Chien, F., Sadiq, M. (2021), Efficiency of microfinance institutions and economic freedom nexus: Empirical evidence from four selected ASIAN countries. Transformations in Business and Economics, 20(2b), 845-868.

Kasirang, A., Ekasari, K., Sidabalok, I., Fudjaja, L., Jusoff, K., Akhsan, F.N., Halimah, A.S. (2013), Gender dimension of ethnic bugis and makassar women empowerment. World Applied Sciences Journal, 26, 17-23.

Khan, M., Srinivasan, S., Tan, L. (2017), Institutional ownership and corporate tax avoidance: New evidence. The Accounting Review, 92(2), 101-122.

Kovermann, J., Velte, P. (2019), The impact of corporate governance on corporate tax avoidance-a literature review. Journal of International Accounting, Auditing and Taxation, 36, 100270.

Kusbandiyah, A. (2021), Determinants of Tax Avoidance of Public Listed Companies in Indonesia. Turkish Journal of Computer and Mathematics Education, 12(3), 592-601.

Lan, J., Khan, S.U., Sadiq, M., Chien, F., Baloch, Z.A. (2022), Evaluating energy poverty and its effects using multi-dimensional based DEA-like mathematical composite indicator approach: Findings from Asia. Energy Policy, 165, 112933.

Lanis, R., Richardson, G. (2011), The effect of board of director composition on corporate tax aggressiveness. Journal of Accounting and Public Policy, 30(1), 50-70.

Lanis, R., Richardson, G. (2012), Corporate social responsibility and tax aggressiveness: An empirical analysis. Journal of accounting and Public Policy, 31(1), 86-108.

Lanis, R., Richardson, G. (2015), Is corporate social responsibility performance associated with tax avoidance? Journal of Business Ethics, 127, 439-457.

Lin, C.Y., Chau, K.Y., Tran, T.K., Sadiq, M., Van, L., Phan, T.T.H. (2022), Development of renewable energy resources by green finance, volatility and risk: Empirical evidence from China. Renewable Energy, 201, 821-831.

Liu, Z., Lan, J., Chien, F., Sadiq, M., Nawaz, M.A. (2022), Role of tourism development in environmental degradation: A step towards emission reduction. Journal of Environmental Management, 303, 114078.

Maas, N. (2022), Moderating the Relationship between ESG Performance and Tax Avoidance. Master's Thesis Economics (MAN-MTHEC).

Mahrani, S. (2019), Corporate governance, profitability, and liquidity against tax avoidance in mining companies registered on the Indonesia stock exchange in 2012-2016. Research Journal of Finance and Accounting, 10(11), 68-78

Mohsin, M., Kamran, H.W., Nawaz, M.A., Hussain, M.S., Dahri, A.S. (2021), Assessing the impact of transition from nonrenewable to renewable energy consumption on economic growth-environmental nexus from developing Asian economies. Journal of Environmental Management, 284, 111999.

Montenegro, T.M. (2021), Tax evasion, corporate social responsibility and national governance: A country-level study. Sustainability, 13(20), 11166.

Moslehpour, M., Chau, K.Y., Du, L., Qiu, R., Lin, C.Y., Batbayar, B. (2022c), Predictors of green purchase intention toward eco-innovation and green products: Evidence from Taiwan. Economic Research-Ekonomska Istraživanja, 36, 2121934.

Moslehpour, M., Chau, K.Y., Tu, Y.T., Nguyen, K.L., Barry, M., Reddy, K.D. (2022b), Impact of corporate sustainable practices, government initiative, technology usage, and organizational culture on automobile industry sustainable performance. Environmental Science and Pollution Research,29(55), 83907-83920.

Moslehpour, M., Shalehah, A., Wong, W.K., Ismail, T., Altantsetseg, P., Tsevegjav, M. (2022a), Economic and tourism growth impact on the renewable energy production in Vietnam. Environmental Science and Pollution Research, 29(53), 81006-81020.

Muntahanah, S., Kusuma, H., Harjito, D.A., Arifin, Z. (2021), The effect of family ownership and corporate governance on firm performance:

A case study in Indonesia. The Journal of Asian Finance Economics and Business, 8(5), 697-706.

Nathania, C., Wijaya, S., Hutagalung, G., Simorangkir, E.N. (2021), The influence of company size and leverage on tax avoidance with profitability as intervening variable at mining company listed in Indonesia stock exchange period 2016-2018. International Journal of Business Economics and Law, 24(2), 132-140.

Nawaz, M.A., Seshadri, U., Kumar, P., Aqdas, R., Patwary, A.K., Riaz, M. (2021), Nexus between green finance and climate change mitigation in N-11 and BRICS countries: Empirical estimation through difference in differences (DID) approach. Environmental Science and Pollution Research, 28, 6504-6519.

Ngadiman, N., Puspitasari, C. (2014), Pengaruh leverage, kepemilikan institusional, dan ukuran perusahaan terhadap penghindaran pajak (tax avoidance) pada perusahaan sektor manufaktur yang terdaftar di Bursa Efek Indonesia 2010-2012. Jurnal Akuntansi, 18(3), 408-421.

Nguyen, C.H., Ngo, Q.T., Pham, M.D., Nguyen, A.T., Huynh, N.C. (2021), Economic linkages, technology transfers, and firm heterogeneity: The case of manufacturing firms in the Southern key economic zone of Vietnam. Cuadernos de Economía, 44(124), 1-25.

Novita, E.S., Herliansyah, Y. (2019), The effect of corporate governance mechanism, liquidity and company size on tax avoidance. Saudi Journal of Economics and Finance, 3(10), 366-373.

Nurlis, N., Indriawati, F., Meiliyah, A. (2021), Effect of Earning management and corporate social responsibility disclosure on tax avoidance with firm size as a moderating variable, survey on manufacturing companies listed on the Indonesia stock exchange. International Journal of Management Studies and Social Science Research, 3(3), 95-103.

Oktrivina, A. (2022), Profitability, leverage, firm size, and tax avoidance model relationship: A case of the manufacturing sector. Jurnal Riset Manajemen dan Bisnis, 7(2), 81-90.

Ortas, E., Gallego-Álvarez, I. (2020), Bridging the gap between corporate social responsibility performance and tax aggressiveness: The moderating role of national culture. Accounting Auditing and Accountability Journal, 33, 825-855.

Oyenike, O., Olayinka, E., Emeni, F. (2016), Female directors and tax aggressiveness of listed banks in Nigeria. In: 3rd International Conference on African Development Issues (CU-ICADI).

Phuoc, V.H., Thuan, N.D., Vu, N.P.H., Tuyen, L.T. (2022), The impact of corporate social and environmental responsibilities and management characteristics on SMES' performance in Vietnam. International Journal of Economics and Finance Studies, 14(2), 36-52.

Prabowo, I.C. (2020), Capital structure, profitability, firm size and corporate tax avoidance: Evidence from Indonesia palm oil companies. Business Economic Communication, and Social Sciences Journal, 2(1), 97-103.

Prabowo, M.A., Jamin, M., Saputro, D.J., Mufraini, A., Agustia, D. (2017), Female executive officers and corporate social responsibility disclosure: Evidence from the banking industry in an emerging market. Journal for Global Business Advancement, 10(6), 631-651.

Quynh, M.P., Van, M.H., Le-Dinh, T., Nguyen, T.T.H. (2022), The role of climate finance in achieving Cop26 goals: Evidence from N-11 countries. Cuadernos de Economía, 45(128), 1-12.

Radiany, M.A., Harjanti, W., Farhan, A. (2022), Relation beetween profitability, leverage, and firmsize on tax avoidance. Budapest International Research and Critics Institute Journal, 5(2), 12374-12382.

Rakia, R., Kachouri, M., Jarboui, A. (2023), The moderating effect of women directors on the relationship between corporate social responsibility and corporate tax avoidance? Evidence from Malaysia. Journal of Accounting in Emerging Economies, https://doi.org/10.1108/JAEE-01-2021-0029

Richardson, G., Taylor, G., Lanis, R. (2013), The impact of board of director oversight characteristics on corporate tax aggressiveness: An empirical analysis. Journal of Accounting and Public Policy, 32(3), 68-88.

Richardson, G., Taylor, G., Lanis, R. (2015), The impact of financial distress on corporate tax avoidance spanning the global financial crisis: Evidence from Australia. Economic Modelling, 44, 44-53.

Richardson, G., Taylor, G., Lanis, R. (2016), Women on the board of directors and corporate tax aggressiveness in Australia: An empirical analysis. Accounting Research Journal, 29, 313-331.

Richardson, G., Wang, B., Zhang, X. (2016), Ownership structure and corporate tax avoidance: Evidence from publicly listed private firms in China. Journal of Contemporary Accounting and Economics, 12(2), 141-158.

Rusydi, M.K., Martani, D. (2014), Pengaruh Struktur Kepemilikan Terhadap Aggressive Tax Avoidance. Simposium Nasional Akuntansi XVII.

Sadiq, M., Moslehpour, M., Qiu, R., Hieu, V.M., Duong, K.D., Ngo, T.Q. (2023), Sharing economy benefits and sustainable development goals: Empirical evidence from the transportation industry of Vietnam. Journal of Innovation and Knowledge, 8, 100290

Salihu, I.A., Obid, S.N.S., Annuar, H.A. (2014), Government ownership and corporate tax avoidance: Empirical evidence from Malaysia. Handbook on the Emerging Trends in Scientific Research, Proceedings Book of ICETSR, 2014, Malaysia.

Sandag, E.C., Rotinsulu, C.N.M., Tandiawan, V., Rinaldi, M. (2022), Profitability and company size have a strong influence on tax avoidance. Al-Kharaj Journal of Islamic Economic and Business, 4(2), 103-114.

Shair, F., Shaorong, S., Kamran, H.W., Hussain, M.S., Nawaz, M.A., Nguyen, V.C. (2021), Assessing the efficiency and total factor productivity growth of the banking industry: Do environmental concerns matters? Environmental Science and Pollution Research, 28(16), 20822-20838.

Sikka, P. (2013), Smoke and Mirrors: Corporate Social Responsibility and Tax Avoidance-A Reply to Hasseldine and Morris. Paper Presented at the Accounting Forum.

Sunarto, S., Widjaja, B., Oktaviani, R.M. (2021), The effect of corporate governance on tax avoidance: The role of profitability as a mediating variable. The Journal of Asian Finance, Economics and Business, 8(3), 217-227.

Tan, L.P., Sadiq, M., Aldeehani, T.M., Ehsanullah, S., Mutira, P., Vu, H.M. (2021), How COVID-19 induced panic on stock price and green finance markets: Global economic recovery nexus from volatility dynamics. Environmental Science and Pollution Research, 29, 26322-26335.

Vu, T.L., Paramaiah, C., Tufail, B., Nawaz, M.A., Xuyen, N.T.M., Huy, P.Q. (2023b), Effect of financial inclusion, eco-innovation, globalization, and sustainable economic growth on ecological footprint. Engineering Economics, 34(1), 46-60.

Vu, T.L., Phan, T.T.H., Sadiq, M., Xuyen, N.T.M., Ngo, T.Q. (2023a), Nexus of natural resources, urbanization and economic recovery in Asia: The moderating role of innovation. Resources Policy, 81, 103328.

Wahyuni, L., Fahada, R., Atmaja, B. (2019), The effect of business strategy, leverage, profitability and sales growth on tax avoidance. Indonesian Management and Accounting Research, 16(2), 66-80.

Widyastuti, T. (2018), The effect of corporate governance mechanism on tax avoidance: Evidence from manufacturing industries listed in the Indonesian stock exchange. The International Journal of Social Sciences and Humanities Invention, 5(10), 5003-5007.

Wiratmoko, S. (2018), The effect of corporate governance, corporate

social responsibility, and financial performance on tax avoidance. The Indonesian Accounting Review, 8(2), 241-253.

Ying, T., Wright, B., Huang, W. (2017), Ownership structure and tax aggressiveness of Chinese listed companies. International Journal of Accounting and Information Management, 25, 313-332.

Yoon, B., Lee, J.H., Cho, J.H. (2021), The effect of ESG performance on tax avoidance-evidence from Korea. Sustainability, 13(12), 6729.

Yopie, S., Elivia, E. (2022), The effect of corporate social responsibility, family ownership on tax avoidance: The effect of audit quality moderation. Indonesian Journal of Economics, Social, and Humanities, 4(1), 29-40.

Zaid, M.A., Abuhijleh, S.T., Pucheta Martínez, M.C. (2020), Ownership structure, stakeholder engagement, and corporate social responsibility policies: The moderating effect of board independence. Corporate Social Responsibility and Environmental Management, 27(3), 1344-1360.

Zemzem, A., Ftouhi, K. (2013), The effects of board of directors' characteristics on tax aggressiveness. Research Journal of Finance and Accounting, 4(4), 140-147.

Zhang, Y., Li, L., Sadiq, M., Chien, F. (2023a), The impact of non-renewable energy production and energy usage on carbon emissions: Evidence from China. Energy and Environment, https://doi.org/10.1177/0958305X221150432

Zhang, Y., Li, L., Sadiq, M., Chien, F.S. (2023b), Impact of a sharing economy on sustainable development and energy efficiency: Evidence from the top ten Asian economies. Journal of Innovation and Knowledge, 8, 100320.

Zhao, L., Chau, K.Y., Tran, T.K., Sadiq, M., Xuyen, N.T.M., Phan, T.T.H. (2022), Enhancing green economic recovery through green bonds financing and energy efficiency investments. Economic Analysis and Policy, 76, 488-501.

Zhao, L., Zhang, Y., Sadiq, M., Hieu, V.M., Ngo, T.Q. (2021), Testing green fiscal policies for green investment, innovation and green productivity amid the COVID-19 era. Economic Change and Restructuring, 1-22. https://doi.org/10.1007/s10644-021-09367-z

Zulma, G.W.M. (2016), Family ownership, management compensation, and tax avoidance: Evidence from Indonesia. The Indonesian Journal of Accounting Research, 19(1), 97-110.