

Firm Traits, Corporate Governance and Tax Avoidance: Evidence from Listed Banks in Bangladesh

Tania Haque^{1*}, Syed Zabid Hossain² and Md. Maniruzzaman³

Abstract

Tax avoidance is one of the tactics used by firms to reduce their tax burden to the government lawfully. This study strives to determine if corporate governance (CG) and firm attributes significantly influence such tax avoidance attitude of firms. This study looks at a sample of 34 banks listed on the Dhaka Stock Exchange. Profitability, firm size, leverage, and capital intensity are used to describe firm-specific characteristics, whereas board size and board independence are used to quantify corporate governance (CG). The analysis is based on secondary data gathered from the audited annual reports of the selected banks, which cover the period 2014-2023. The study has used a two-step system GMM panel model estimator to estimate its trend. Accordingly, it is evident from the study findings that firm features and CG practices have significantly influenced tax-avoidance practices of the DSE-listed banks. The study found that profitability has a positive effect on tax avoidance, while board size, board independence, and capital intensity have negative impacts on tax avoidance. Based on these findings, the study suggests enhancing corporate governance structures and carefully considering firm traits in order to effectively control and monitor tax avoidance techniques in the banking industry. This study sheds light on corporate tax avoidance, which can inform regulatory reforms and further academic research and learning.

Keywords: Tax avoidance, Firm traits, Corporate governance, Banking industry, Bangladesh.

1. Introduction

Taxes are a direct and enduring source of funding for all countries, irrespective of whether they are developed, emerging, or underdeveloped. To support good governance, development, and the provision of infrastructure for the welfare of the people of Bangladesh, the private sector, both individuals and corporations, must make a mandatory contribution to the state purse. Taxes are also an efficient means of building its internal resources and a tool for addressing income disparities (Tjan, 2024). More specifically, in an emerging country like Bangladesh, taxes are the primary source of government revenue, and corporate taxes account for at least 67% of total revenue (NBR, 2023). However, in Bangladesh, the Tax-to-Gross Domestic Product (GDP) ratio in 2023 was 7.7%, the lowest among all South Asian nations, despite a large number of

¹ PhD Fellow, Institute of Bangladesh Studies, University of Rajshahi, Rajshahi 6205, Bangladesh; E-mail: tania438834@hum.kuet.ac.bd * Corresponding author

² Professor, Department of Accounting and Information Systems, University of Rajshahi, Rajshahi 6205, Bangladesh; E-mail: syed6205@gmail.com

³ Associate Professor, Department of Accounting and Information Systems, University of Rajshahi, Rajshahi 6205, Bangladesh E-mail: rubelais82@ru.ac.bd

registered taxpayers. As well, the overall budget deficit of Bangladesh in the fiscal year 2022–2023 was 5.5% of GDP (Government of Bangladesh, 2022).

According to the IMF, to promote economic growth, countries should aim for a tax-to-GDP ratio of at least 12% (Gasper *et al.*, 2016). The World Bank also suggests that tax revenues should be above 15% of GDP to support economic growth and eliminate poverty. Bangladesh has the highest average tax rate in South Asia. However, its tax loss is 30.2% of GDP, which is equal to BDT 842 billion (Moazzem *et al.*, 2023). According to the 2023 State of Tax Justice report, Bangladesh has been suffering an annual loss of \$387 million owing to tax avoidance by both individuals and corporations. Bangladesh has been losing around 1.5% of its overall tax revenue, which is higher than the regional average. Mainly, tax avoidance is carried out by corporate taxpayers because they aim to maximize profit and shareholders' wealth (The Daily Star, 2023). To maximize their profits, companies must engage with limits on their expenses, particularly taxes paid to the government, which could boost their after-tax earnings. As a result, firms strive to find tax avoidance techniques to reduce the amount of taxes paid (Mkadmi & Ali, 2024).

Tax avoidance, in this study, is the legitimate use of the tax system to lower one's owed tax by methods that are either within the letter or at least within the scope of the law. Although businesses employ a variety of strategies to avoid taxes, accounting techniques are the most widely used ones (Contractor, 2016). Additionally, firms use estimation to raise costs as well as allowances to reduce their taxable income. However, Bangladesh needs to collect more than BDT 2,000 billion in tax revenue to match the regional average of about 14%. Therefore, determining the elements influencing tax avoidance is essential to Bangladesh's ability to grow sustainably (Hossain *et al.*, 2024).

Surprisingly, a considerable number of studies have not yet been done focusing on firm features and tax avoidance in developing nations, and Bangladesh is no exception. The main point is the lack of consistent findings on tax avoidance literature in Bangladesh. Thus, to fill the gap, this study aimed to investigate how firm traits and CG influence tax avoidance tactics in the context of the banks listed on the Dhaka Stock Exchange (DSE) in Bangladesh. Based on the available prior studies, CG can also influence tax avoidance tactics in addition to company-specific attributes. By doing this, the government of Bangladesh could expand the tax base to fulfil its mandate and prevent economic crisis. Policy planners, academics, researchers, professional managers, and shareholders will also gain from this study. To provide a more comprehensive picture of the dimensions of firm characteristics and CG, the study has used several proxies. With a ten-year time frame (2014–2023), this study provides a current picture of tax avoidance in Bangladesh. The remaining sections of this study present a review of relevant literature, theories linked to this study, research design and methodology, followed by the analysis and interpretation of the findings, concluding remarks, limitations, and policy implications.

2. Theoretical Framework

This study has applied two theories which are the Agency Theory (Ross, 1973; Jensen & Meckling, 1976) and the Stakeholder Theory (Freeman, 1984). Ross introduced agency theory, which addresses the principal-agent dilemma in financial terms. The research

article by Jensen & Meckling (1976) revealed the dilemma between the principal and the agent. The principal hires an agent and delegates tasks and authority to them. Agents may sometimes behave in the best interests of their principal due to the ownership and control split. Diverse interests can lead to conflicts. The agency theory explains how the conflict between agents and principals affects tax decisions. Most agency theorists believe company governance has a role in tax avoidance. Another type of agency problem arises in the account due to tax avoidance and is known as resource diversion or managerial opportunism (Desai and Dharmapala, 2009). They contend that intricate tax avoidance schemes can provide management with the means and excuses for opportunistic managerial practices, including related-party transactions, earnings manipulation, and other resource diversion activities. To put it another way, managerial diversion and tax avoidance may work in tandem (Desai & Dharmapala, 2009).

Stakeholder theory concerns moral and ethical issues in company operations. A firm's ethical accountability helps to protect the interests of its stakeholders. Furthermore, stakeholder theory relates a company to its customers, suppliers, employees, shareholders, communities, and other interested parties in the organization. Moreover, stakeholder theory states that a corporation should create value for all stakeholders, not just shareholders. The premise of stakeholder theory is that, in addition to shareholders, corporations should pay special attention to other elements of society due to the firm's growth and its insightful impact on society. On the one hand, corporations emphasize their social duty. At the same time, they engage in tax avoidance methods, resulting in complex relationships and scenarios regarding whether tax avoidance strategies provide value.

3. Literature Review

According to the volume of tax studies, tax avoidance is deliberately lowering taxable income through tax planning. It may occur in several ways, including raising depreciation rates, using derivative instruments, hybrid monetary securities, and deferring tax payments on offshore earnings (Malik & Munir, 2024). Mainly, accrual accounting and tax laws work as the foundation for tax avoidance strategies. Due to accrual accounting rules, a firm can take advantage of current tax-timing options by delaying income and accelerating expenses, such as depreciation, to lower current tax expenses. Examining Tax Laws, businesses may reduce their tax burden by using tax credits, as research and development expenses, tax deductions, tax holidays, or other tax benefits (Zolt, 2015).

Corporate tax avoidance is more prevalent in developing nations like Bangladesh, due to poor governance, preferential taxation policies and informal economic activity.

3.1 Firms' Traits and Tax Avoidance

Firm traits are operational and financial characteristics or indicators that influence a company's internal and external decisions. Researchers, academics, and policymakers have strived to investigate the relationship between corporate tax avoidance and the firms' various attributes using a variety of proxies. In this study, we have used four variables to proxy company traits that calculate firm profitability in terms of return on assets (ROA), firm size, leverage, and capital intensity.

One of the common traits of a firm is its profitability, because one of the leading motivations for businesses to manage their taxes is to increase their profitability. The effect of profitability on corporate tax avoidance has been examined in some earlier studies (Hossain *et al.*, 2025; Susanto, 2022). Susanto, for example, investigated the relationship between a firm's characteristics and its tax aggression. It is clear that firm characteristics, as measured by profitability, had a significant impact on tax avoidance using data from manufacturing companies registered on the Indonesian Stock Exchange between 2012 and 2015. According to Chytis *et al.* (2018), firm profitability may positively and strongly lead to tax avoidance. However, few studies discovered a negative correlation between corporate tax avoidance and business success (Rani *et al.*, 2018; Tanko, 2020).

Firm size is one of the most essential elements in determining a firm's tax avoidance actions. According to Dyreng *et al.* (2008), smaller businesses have higher tax rates in comparison to bigger one and Rego (2003) thinks that though big firms are subject to more scrutiny, they also have more resources and incentives to avoid taxes and could use efficient accounting techniques to lower their effective tax rate and had greater freedom for prudent tax planning. According to Minnick and Noga's (2010) research, firm size has a positive impact on taxes when using GAAP ETR as a measure of tax avoidance. But the authors found no significant effect when using cash ETR as the measurement technique.

Higher debt in the financial structure may also impact a company's tax avoidance practices. Minnick and Noga (2010) opined that firms with greater leverage may use the interest expenses of their debts to lower their taxable income. According to Badertscher *et al.* (2013), debt financing has a tax advantage, and as such, firms with more leverage should not pursue tax planning. Badertscher *et al.* found that leverage has a positive effect on tax avoidance as assessed by GAAP ETR, despite a good number of studies confirming that leverage has no noticeable impact on tax avoidance (Taylor & Richardson, 2013; Minnick & Noga, 2010).

Wang (2011) claimed that firms with a high level of capital intensity can create options to increase tax dodging costs through accelerated depreciation and by strategically finding assets. Huang *et al.* (2016) found that, in a sample of S&P 500 companies, capital-intensive enterprises engage in higher tax avoidance actions, which is consistent with Wang (2011). According to Ribeiro *et al.* (2015), capital intensity has a positive and significant impact on the degree of tax avoidance by firms listed on the London Stock Exchange (LSE) between 2010 and 2013. According to the authors, capital-intensive businesses might benefit from short-term book disparities caused by various depreciation techniques.

3.2 Corporate Governance and Tax Avoidance

Desai and Dharmapala (2006) have attempted to clarify the connection between tax avoidance and corporate governance. They argued that corporate governance can control tax avoidance, which in turn impacts firm value. Agency Theory posits that tax avoidance involves the actions of management, as managers try to maximise utility by

manipulating the firm's financial performance. More stringent supervision and incentives for good governance will reduce bad practices, which in turn will also reduce corporate tax avoidance practices. A corporation's corporate governance is influenced by its BoDs, and internal governance views the BoDs as the primary means of exerting actual control over management. Hence, this study employed two proxies of corporate governance, namely board size and board independence.

An important company trait impacting corporate tax avoidance is board size. There may be a correlation between rising tax avoidance and increases in board size. According to Hoseini et al. (2019), the increase in the members on the company Board would increase the amount of Tax Avoidance. This was due to the council's financial incentives to take advantage of legal and accounting loopholes to minimize tax payments. As tax avoidance improves earnings, directors could profit from it. Hence, a larger board size could increase the likelihood of tax avoidance with the increased hunger for incentives (Armstrong *et al.*, 2015).

Due to their independence and lack of direct financial interest in the business, independent directors are expected to offer a more reliable monitoring system. According to Salihu and Kawi (2021), a larger proportion of independent directors on the board results in fewer tax avoidance activities for the companies. Additional evidence is offered by Lanis *et al.* (2013), who mentioned that independent directors enhance the firms' tax behavior. However, some previous studies have also found a positive association between tax avoidance and the proportion of board independence (Fama, 1980). However, the disparities in the outcomes can be ascribed to the distinct socioeconomic and economic circumstances of the individual samples.

4. Methodology

4.1 Sample

The research utilizes panel data from 34 Bangladeshi DSE-listed banks from 2014 to 2023. From the audited annual reports of the sample banks, we gather information from 340 (34*10) observations. Bangladesh currently has 36 banks listed on the DSE. However, NRB Bank has been listed with DSE since 2024, and as such, we exclude this Bank from the study samples. We also exclude another bank from the sample owing to its negative equity value during the study period.

4.2 Description of Variables

Corporate tax returns are confidential and unlikely to be made public; thus, the only way we can estimate them is by utilizing a range of empirical proxies based on publicly accessible data (Yee *et al.*, 2018). To measure tax avoidance, this study used two measurement tools to confirm the robustness of the findings: the book-tax difference (BTD) and the current effective tax rate (ETR). The formula of BTD is as follows (Rashid *et al.*, 2023)

$$BTD_{it} = \frac{(NIBT - \text{taxable income})_{it}}{\text{Lagged total assets}}$$

Here,

NIBT = net income before tax or pre-tax income of bank *i* in time period *t*

Taxable income = current tax expense/ tax rate of bank *i* in time period *t*

Lagged total assets = One-year lagged assets calculated as $Assets_{t-1}$

Banks with a greater degree of tax avoidance have a larger LTD.

The ETR is calculated as follows (Nafti *et al.*, 2020):

$$ETR_{it} = \frac{\text{Tax Expense}_{it}}{NIBT_{it}}$$

As the higher ETR shows less tax aggressiveness, ETR is multiplied by -1 to generate an increasing metric of tax avoidance (Lanis & Richardson, 2018).

The study employ six independent variables: profitability (ROA), firm size (FSize), leverage (LEV), capital intensity (CINT), board size (BSize), and board independence (BI). ROA is calculated as the ratio of net profit to total assets, which provides information on the effectiveness of management and the efficiency of assets (Malik & Munir, 2024). Firm size is the natural logarithm of total assets, and the ratio of total liabilities to total assets is termed as leverage (Rashid *et al.*, 2023). Capital intensity is measured with the formula of net property, plant and equipment (PPE) divided by lagged total assets (Lanis *et al.*, 2013). The number of members on the board (BOD) is the board size, and board independence will be determined as the proportion of independent directors to all serving directors (Rashid *et al.*, 2023).

Table 1: List of Variables, Proxies, Formula and Sources

Variables	Proxies	Measurement	References Used
Independent Variable: Firm Traits and CG	Return on Assets (ROA)	Net profit/ Total assets	Hossain <i>et al.</i> (2025); Munir & Malik (2024); Rani <i>et al.</i> (2018)
	Firm Size (FSize)	The natural logarithm of total assets	Rashid <i>et al.</i> (2023); Hossain <i>et al.</i> (2025); Hoseini <i>et al.</i> (2019)
	Leverage (LEV)	Total liabilities/ Total assets	Taylor & Richardson (2012); Rashid <i>et al.</i> (2023); Rahman & Khan (2017)
	Capital Intensity (CINT)	Net property, plant and equipment (PPE)/ Lagged total assets	Wahab & Holland (2015); Taylor & Richardson (2012); Ha Oahn (2021)
	Board Size (BSize)	The number of members on the BoD	Ha Onhn (2021); Hossain <i>et al.</i> (2025); Malik & Munir (2024)
	Board Independence (BI)	Number of independent directors/ Total number of board of directors	Halioui <i>et al.</i> (2016); Minnick & Noga (2010); Nafti <i>et al.</i> (2020)
Dependent Variable: Tax Avoidance	Book-Tax Difference (BTD)	$\frac{EBIT - \text{Taxable income}}{\text{Lagged Total Assets}}$	Yee <i>et al.</i> (2018); Salihu & Kawi (2021); Desai & Dharmapala (2009)
	Effective Tax Rate (ETR)	Tax Expense/ NBIT	Tanko (2020); Susanto (2022); Wang (2011)

4.3 Empirical Model

This study employed the Generalized Method of Moments (GMM) regression technique to measure the effects of firm traits and corporate governance factors on the tax avoidance practices of the firms. Because as a dynamic model, the GMM method yields a more accurate estimate in comparison to static panel data models, this is because, in contrast to the static model, GMM successfully manages simultaneity, time-invariant unobserved heterogeneity, omitted variable bias and potential dynamic endogeneity by using lagged dependent variables (in this case, ETR and BTD) as independent variables. This study preferred the system-GMM over the first-differenced GMM since the first-difference method is ineffective with small sample sizes, and system-GMM yields more accurate estimation results because it employs more instruments and combines regressions in levels and first differences (Levine *et al.*, 2002). The data were analyzed using STATA statistical software.

Specification of the System GMM model to test the affinity between tax avoidance, firm traits and corporate governance is as follows:

$$Y_{it} = \alpha_0 + \beta_1 Y_{it-1} + \beta_2 ROA_{it} + \beta_3 FSize_{it} + \beta_4 LEV_{it} + \beta_5 CINT + \beta_6 BSize + \beta_7 BI + \beta_8 FFE DUMMY_{it} + \beta_9 YEAR DUMMY_{it} + \varepsilon_{it}$$

Where, Y denotes the dependent variables of the *i*th bank at time period *t*, as ETR and BTD for tax avoidance and Y_{it-1} represents the one- year lagged variables (e.g., ETR_{it-1} , BTD_{it-1}); $\alpha = \text{constant}$; β_1 to β_9 are the coefficients of the variables; ε_{it} = error term. FFE the firm fixed effect dummy and the YEAR dummy is the time fixed effect dummy. The time (year) fixed effects capture the time trend effects throughout the years taken into consideration and the firm fixed effects to account for the heterogenous unobserved components across the firms. The model's output can be skewed if these dummy variables are removed (Desai & Dharmapala, 2009).

5. Empirical Results and Discussion

5.1 Descriptive Statistics

Table 2 presents the summary statistics of 340 observations on 34 banks. Those observations include the mean, standard deviation, minimum and maximum of all variables considered in this study from 2014 to 2023. The table shows that the mean value of the current ETR (multiplied by -1) is -0.445 with a minimum value of -0.598 and a maximum value of -0.274. It shows that the DSE-listed banks in Bangladesh have been paying, on average, about 44 percent tax on their current income. BTD has an average value of -0.248, with a minimum value of -0.683 and a maximum value of 0.214. The standard deviations of ETR and BTD are 0.098 and 0.316, respectively, indicating a significant variation in tax avoidance amounts among banks.

Among the independent variables, the average value of profitability on assets over the period is 0.818, ranging between 0.335 and 1.37. A high standard deviation of 0.339 suggests that ROA is quite volatile. Also, the range indicated a volatile feature.

Table 2: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Minimum	Maximum
ETR	340	-0.445	0.098	-0.598	-0.274
BTD	340	-0.248	0.316	-0.683	0.214
ROA	340	0.818	0.339	0.335	1.37
FSize	340	12.516	0.417	11.878	13.069
LEV	340	0.926	0.018	0.894	0.953
CINT	340	-4.115	0.362	-4.689	-3.586
BSize	340	2.643	0.268	2.197	2.996
BI	340	0.185	0.056	0.118	0.282

Source: Compiled by the researcher from STATA output

The mean value of firm size is 12.516, suggesting that most banks are fairly large. The mean value of leverage shows that banks rely heavily on debt to finance their operations, with approximately 92.6 percent of their funding coming from debt. The negative mean of capital intensity (CINT) suggests that the property, plant, and equipment (PPE) of these banks are quite small in relation to their total assets, indicating a lower reliance on physical assets. To address skewed data and facilitate interpretation, the logarithm of capital intensity was utilized. Additionally, the logarithm of board size, which serves as a proxy for corporate governance, was employed to reduce variability and improve interpretability and comparability. The average proportion of independent directors on the board is 18.5%, based on a mean value of 0.185, which is another indicator of corporate governance.

5.2 Correlation Matrix and VIF

The pairwise correlation matrix in Table 3 displays the affinity between independent and dependent variables. Kennedy suggests that multicollinearity may become an issue if the correlation between two or more independent variables is higher than 0.80 (Kennedy, 1998). Table 3 shows that ETR and BTD are positively correlated and exceed 0.80 at a 1% significance level. But it is not supposed to pose any multicollinearity problem since these two variables have not been used in the same model.

Table 3: Pearson Correlation Matrix

Variables	ETR	BTD	ROA	FSize	LEV	CINT	BSize	BI
ETR	1							
BTD	0.872 ^{***}	1						
ROA	0.373 ^{***}	0.308 ^{***}	1					
FSize	-0.163	-0.177 ^{***}	-0.395 ^{***}	1				
LEV	-0.201	-0.183 ^{***}	-0.604 ^{***}	0.474 ^{***}	1			
CINT	-0.051	0.029	-0.018	-0.070	-0.140 ^{***}	1		
BSize	-0.108	-0.071	0.037	-0.265 ^{***}	-0.232 ^{***}	0.096 [*]	1	
BI	-0.122	-0.119 ^{**}	-0.004	0.322 ^{***}	0.179 ^{***}	-0.059	-0.357 ^{***}	1

Source: Compiled by the researcher from STATA output

Note: Significance level: ***1%, **5% and *10%.

Table 4: Variance Inflation Factor (VIF)

Variables	VIF	1/VIF
ROA	1.72	0.582
FSize	1.47	0.678
LEV	1.88	0.532
CINT	1.04	0.961
BSize	1.22	0.822
BI	1.25	0.800
Mean VIF	1.43	

Source: Compiled by the researcher from STATA output

Table 4 displays the values of VIF and the values of tolerance, measured by 1/VIF. Data may suffer from multicollinearity issues if the VIF value is more than 10 and the 1/VIF value is less than 0.10. Although some of the researchers opine that the VIF value should be less than 5 to acclaim that the data has no serious multicollinearity problem (Rahman & Khan, 2017). Results from the table confirm that there is no multicollinearity in our dataset as the VIF values are between 1.04 and 1.88, which are less than 2 and the tolerance values are greater than 0.10. So, we can move to further analysis.

5.3 Model Estimation Results and Discussion

Table 5 shows that the GMM estimators are to decode the effects of firm traits and CG on the tax avoidance practices of firms in models 1 and 2, using 2 proxies (ETR and BTD) of tax avoidance. Our research backs the idea that by avoiding too many instruments to degrade the estimates, the number of groups in the GMM estimation should be greater than the number of instruments.

Table 5: Two-step System GMM Results

Variables	Model 1 (ETR)	Model 2 (BTD)
Lag of Dep. Var	0.402 ^{***} (0.072)	0.473 ^{***} (0.077)
ROA	0.081 ^{***} (0.081)	0.176 ^{**} (0.068)
FSize	0.021 (0.016)	0.033 (0.054)
LEV	0.097 (0.365)	0.683 (1.190)
CINT	-0.033 ^{**} (0.014)	-0.078 [*] (0.046)
BSize	-0.059 ^{***} (0.021)	-0.178 ^{**} (0.079)
BI	-0.226 ^{***} (0.087)	-0.508 (0.406)
Constant	-0.594 (0.386)	-0.996 (1.208)
Firms	34	34
Observations	340	340
Firm & Year effect	Yes	Yes
Prob > χ^2	0.000	0.000
Instruments	24	24
AR (1)	-3.24 ^{***}	-3.84 ^{***}
AR (2)	0.33	0.78
Sargan test	7.63	9.45
Hansen test	7.38	9.54

Note: Significance level: ***1%, **5% and *10%. Figures in parentheses indicate robust standard errors.

The results show that the inclusion of a dynamic panel data estimator and the addition of dynamism to the model are justified by the statistical significance of the one-period lag-dependent variable, ETR and BTD at the 1% level of significance in both models. Of the variables associated with firm characteristics, profitability and capital intensity have been demonstrated to influence tax avoidance behavior. Profitability shows a positive sign, indicating that the banks with higher profitability tend to have higher tax avoidance in the context of Bangladesh. This result is consistent with the findings of numerous prior Studies (Susanto, 2022). The bonus plan hypothesis suggests that management should look for methods to maximize firm financial performance by trimming costs, including tax expenses, which is supported by this study.

CINT is found to have a negative and statistically significant association with tax avoidance in both models, despite the fact that this outcome is unexpected. The findings show that Bangladeshi listed banks do not employ depreciation and investment-related tax planning provisions. Instead, businesses that invest more in PPE pay more in taxes and the result is supported by some existing studies (Feeny *et al.*, 2006; Plesko, 2003). Thus, the association yields a negative and significant result. However, the lack of a substantial correlation between firm size and leverage with tax avoidance suggests that firm size and leverage have no bearing on tax avoidance. The reason behind this may be that in a competitive and regulated market, the potential advantages of size are outweighed by operational inefficiencies, governance issues, and external economic factors, which is why firm size has little effect on tax avoidance in Bangladeshi banks. When it comes to leverage, managers may see debt as a burden on the operation of the business and decide to eliminate it rather than use it as a means of tax avoidance (Godfrey *et al.*, 2013).

The corporate governance variables, board size and board independence both produced adverse effects on tax avoidance, which are statistically significant. The negative sign for board size indicates that tax avoidance decreases with the increment in the number of board members. This result supports the idea put forward by Godfrey *et al.* that board members increase the wealth of majority shareholders by engaging in tunneling activities. The negative coefficient of board independence demonstrates that corporations with more independent directors are more likely to engage in less aggressive tax avoidance. Stated differently, a statistically significant decrease in tax avoidance activity is linked with increased board independence, assuming all other factors remain constant, and prior studies supported these findings (Halioui *et al.*, 2016).

Lastly, as Table 5 illustrates, the Hansen J and Sargan test estimates are insignificant across both models. The test estimates imply that the instruments are appropriately defined and that the model used is valid. According to the table, the Arellano–Bond AR(1) and AR(2) estimations are significant and insignificant, respectively, indicating that there was no correlation between the lagged tax avoidance variables and the error terms in the model. As a result, the two-step GMM approach is valid and has provided uniform outcomes for firm characteristics, corporate governance and tax avoidance.

6. Conclusion

This study demonstrates a strong positive correlation between profitability (ROA) and tax avoidance. The agency theory and the stakeholder theory support the above findings because managers can apply tax avoidance to increase their compensation and to meet targets or improve reported performance. Besides, shareholders can benefit from increased post-tax income; they might use a certain amount of tax avoidance, but not too much, as this could raise legal and reputational issues. On the contrary, capital intensity, board size and board independence display a significant negative impact on tax avoidance practices. Fixed investments in Bangladesh could not be advantageous for banks. In other words, the applicable tax code depreciation for samples would have exceeded the accounting depreciation. Given that tax avoidance in Bangladeshi banks is negatively impacted by board size and independence, it is likely that more rigorous scrutiny and a greater emphasis on compliance are the reasons why larger boards and more independent directors are associated with reduced risky financial behaviors, such as aggressive tax avoidance. In contrast, firm size and leverage have little bearing on tax avoidance. The information obtained through this study might help regulators to start amending laws to reduce tax avoidance and increase the legitimacy of organizations. Learners, teachers, and researchers will also gain insight from this research, as it explains the corporate features that engage in tax avoidance. The study findings may be a focal issue for scholars and academicians to further research on this particular issue.

This study has some limitations. It has considered only the listed banks, not all commercial banks in Bangladesh, due to the lack of reliability of data. Furthermore, this study considered only DSE-listed banks, and as such, future studies may include non-bank financial companies and non-financial companies. Future studies may include several additional proxies for better capturing corporate features and variables relevant to corporate governance. Besides, moderating variables, such as board gender diversity and ownership structures, can be of interest to investigate their impact on the relationship between firm traits and tax avoidance.

References

- Armstrong C. S., Blouin, J. L., Jagolinzer, A. D. and Larcker, D. F. (2015), Corporate Governance, Incentives, and Tax Avoidance, *Journal of Accounting and Economics*, 60(1), pp. 1-17, DOI: 10.1016/j.jacceco.2015.02.003.
- Badertscher, B. A., Katz, S.P. and Rego, S.O. (2013), The Separation of Ownership and Control and Corporate Tax Avoidance, *Journal of Accounting and Economics*, Vol. 5, pp.228–250. <https://doi.org/10.1016/j.jacceco.2013.08.005>.
- Bangladesh, G. (2022), Budget speech 2022-2023, Ministry of Finance, Government of the People's Republic of Bangladesh, Dhaka.
- Chytis, E., Tasios, S. and Gerantonis, N. (2018), Tax Avoidance and Corporate Governance Attribute: Evidence from Listed Tax Avoidance and Corporate Governance Attributes: Evidence from Listed Companies in Greece. 15th International Conference on Enterprise, Systems, Accounting, Logistics and Management, 24-26 June, Kefalonia, Greece. Available at <https://www.researchgate.net/publication/326128323>.
- Contractor, F. J., (2016), Tax Avoidance by Multinational Companies: Methods, Policies, and Ethics. *Rutgers Business Review*, 1(1), September, Available at SSRN: <https://ssrn.com/abstract=3005385>.

- Desai, M. A. and Dharmapala, D. (2006), Corporate Tax Avoidance and High Powered Incentives, *Journal of Financial Economics*, 79(1), pp.145–179. <https://doi.org/10.1016/j.jfineco.2005.02.002>Get rights and content.
- Desia, M. A. and Dharmapala, D. (2009), Corporate Tax Avoidance and Firm Value. *The Review of Economics and Statistics*, 91(3), pp. 537-546.
- Dyren, S. D., Hanlon, M. and Maydew, E. L. (2008), Long-run Corporate Tax Avoidance, *Accounting Review*, Vol. 83, pp.61–82. <https://doi.org/10.2308/accr.2008.83.1.61>.
- Fama, E. F. (1980), Agency Problems and the Theory of the Firm. *Journal of political Economy*." 88(2), pp. 288-307. <https://doi.org/10.1086/260866>.
- Freeman, R. E. (1984), Strategic Management: A Stockholder Approach. Pitman.
- Feeny, S., Gillman, M., & Harris, M. N. (2006). Econometric Accounting of the Australian Corporate Tax Rates. *Accounting Research Journal*, 19(1), pp. 64–73. <https://doi.org/10.1108/10309610680001004>.
- Gaspar, V., Jaramillo, L., and Wingender, P. (2016). Tax capacity and growth: Is there a tipping point?, (IMF Working Paper No. 2016/234). *International Monetary Fund*. <https://doi.org/10.5089/9781475558173.001>.
- Godfrey, I., Hodgson, A., Tarca, A., Hamilton, J. and Holmes, S., (2013), Accounting Theory, 7th ed., John Wiley and Sons, New York.
- Halioui, K., Neifar, S. and Abdelaziz, F. B. (2016), Corporate Governance, CEO Compensation and Tax Aggressiveness, *Review of Accounting and Finance*, Emerald Group Publishing Limited, 15(4), pp. 445-462, November. DOI: 10.1108/RAF-01-2015-0018.
- Hossain, M. S., Ali, M. S. and Fung, C.Y. (2024), Tax Avoidance and Tax Evasion: Current Insights and Future Research Directions from an Emerging Economy, *Asian Journal of Accounting Research*, 9(3), <https://doi.org/10.1108/AJAR-09-2023-0305>.
- Hossain, M. S., Islam, M. Z., Ali, M. S., Saifuddin, M. and Fung, C. C. L. (2025), The Nexus of Tax Avoidance and Firms Characteristics – Does Board Gender Diversity have a Role? Evidence from An Emerging Economy., *Asia-Pacific Journal of Business Administration*, 17(2), DOI: 10.1108/APJBA-10-2023-0521.
- Hoseini, M., Gerayli, M. S. and Valiyan, H. (2019), Demographic Characteristics of the Board of Directors' Structure and Tax Avoidance, *International Journal of Social Economics*, 46(2), pp. 199-212, doi: 10.1108/ijse-11-2017-0507. DOI: 10.1108/IJSE-11-2017-0507.
- Huang, H. H., Lobo, G. J., Chong, W. and Hong, Z. (2016), Customer Concentration and Corporate Tax Avoidance. *Journal of Banking & Finance*, Vol. 72, pp. 184-200. <https://doi.org/10.1016/j.jbankfin.2016.07.018>.
- Jensen, M. C. and Meckling, W. H. (1976), Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3(4), pp. 305-360.
- Kennedy, P. (1998), A guide to Econometrics., Fourth Edition, The MIT Press, Cambridge, Massachusetts.
- Lanis, R., Richardson, G. and Taylor, G. (2013), The Impact of Board of Directors Oversight Characteristics on Corporate Tax Aggressiveness: An Empirical Analysis, *Journal of Accounting and Public Policy*, 32(3), pp. 68-88. <https://doi.org/10.1016/j.jaccpubpol.2013.02.004>.
- Lanis, R., & Richardson, G. (2018), Outside Directors, Corporate Social Responsibility Performance, and Corporate Tax Aggressiveness: An Empirical Analysis. *Journal of Accounting, Auditing & Finance*, 33(2), pp. 228-251. DOI: 10.1177/0148558X16654834.

- Levine, Andrew and Lin, Chien-Fu and James Chu, Chia-Shang, (2002), "Unit Root Tests in Panel Data: Asymptotic and Finite-Sample Properties," *JSERIAL Journal of Econometrics*, Elsevier, 108(1), May, pp. 1-24. DOI: 10.1016/S0304-4076(01)00098-7.
- Malik, M. S. and Munir, S. (2024), "The Nexus of Corporate Tax avoidance and Firm Performance with the Moderating Effect of Ownership Concentration and Board Independence: Evidence from Developing Economies." *Journal of Excellence in Management Sciences*, 3(1), pp. 26–44.
- Minnick, K. and Noga, T. (2010), "Do Corporate Governance Characteristics Influence Tax Management?" *Journal of Corporate Finance*, 16(5), pp.703–718. Available at SSRN: <https://ssrn.com/abstract=1851804>.
- Mkadm, J. E. and Ali, W. B. (2024), "How does tax avoidance affect corporate social responsibility and financial ratio in emerging economies?" *Journal of Economic Criminology*, Vol 5, September. <https://doi.org/10.1016/j.jeconc.2024.100070>.
- Moazzem., K. G., Habib, S. M. A and Fariha, C. (2023), "Corporate Tax Transparency Issues and Concerns in Bangladesh", Centre for Policy Dialogue (CPD), No. 43.
- Nafti, O. and Kateb, I. (2020), "Tax Evasion, Firm's Value and Governance: Evidence from Tunisian Stock Exchange." *Journal of Financial Crime*, 27(3), pp. 781-799. DOI: 10.1108/JFC-02-2020-0023.
- Oanh, Ha Qieu. "Corporate Tax Avoidance: Evidence from Vietnamese Non-Financial Listed Firms." PhD Thesis, Lincoln University, 2021, DOI: 10.1142/S0219091522500023.
- Plesko, G. A. (2003), "An Evaluation of Alternative Measures of Corporate Tax Rates." *Journal of Accounting and Economics*, 35(2), 201–226. [https://doi.org/10.1016/S0165-4101\(03\)00019-3](https://doi.org/10.1016/S0165-4101(03)00019-3).
- Rahman, S. M. K. and Khan, M. M. (2017), "Impact of Financial Leverage on Firm's Profitability: A Comparative Study between Listed MNCs and Domestic Companies of Bangladesh." *Journal of Business Studies*, University of Rajshahi, 10(1), pp. 92-112.
- Rani, S., Susetyo, D. and Fuadah, L. (2018), "The Effects of the Corporate's Characteristics on Tax Avoidance are Moderated by Earnings Management (Indonesian evidence)", *Journal of Accounting, Finance, and Auditing Studies*, 4(3), (2018), pp. 149-169. DOI: 10.56578/jafas040308.
- Rashid, M. H., Begum, F. and Hossain, S. Z. (2023), "Does CSR Affect Tax Avoidance? Moderating Role of Political Connections in Bangladesh Banking Sector." *Social Responsibility Journal*, 20(4), pp. 719-739. DOI: 10.1108/SRJ-09-2022-0364.R4.
- Rego, S. O. (2003), "Tax Avoidance Activities of U.S. Multinational Corporations", *Contemporary Accounting Research*, 20(4), pp.805–833. pp. 371-379. DOI: 10.2139/ssrn.320343.
- Revenue, N. B. (NBR), (2023), Report on Tax Expenditure in the Direct Tax of Bangladesh 2020-2021, NBR, Available at: https://nbr.gov.bd/uploads/publications/Tax_Expenditure_Report_2020-2021.pdf (accessed 7 February 2025).
- Ribeiro, A. I. M., Cerqueira, A. and Brandão, E. (2015) The Determinants of Effective Tax Rates: Firms' Characteristics and Corporate Governance, FEP Working Papers 567, *Universidade do Porto*, Faculdade de Economia do Porto.
- Ross, S. A. (1973), The Economic Theory of Agency: The Principal's Problem. *The American economic review*, 63(2), pp. 134-139.
- Salihi, A. I. and Kawi, F. (2021), Board Attributes and Corporate Tax Avoidance: An Explanatory Mixed Method Investigation. *Journal of Accounting and Taxation*, 13(4), pp. 291-303. DOI: 10.5897/JAT2021.0455.
- Simon Feeny, Max Gillman and Mark N. Harris, (2005), Econometric Accounting of the Australian Corporate Tax Rates: a Firm Panel Example., *Cardiff Economics Working Papers*, No. E2005/16, Cardiff University, Cardiff Business School, Cardiff.

- Star, T. D. (2023), State of Tax Justice 2023 report. <https://taxjustice.net/reports/the-state-of-tax-justice-2023/> (accessed on 21.06.2024).
- Susanto, L. (2022), Factors Affecting Tax Aggressiveness, *International Journal of Economic Research and Financial Accounting (IJERFA)*, 1(1), pp. 39-46.
- Tanko, U. M. (2020), The Moderating Effect of Profitability on the Relationship between Ownership Structure and Corporate Tax Avoidance in Nigeria Listed Consumers Goods Firms, *International Journal of Business and Technopreneurship*, 10(2), pp. 153-172.
- Taylor, G. and Richardson, G. (2012), The Determinants of Thinly Capitalized Tax Avoidance Structures: Evidence from Australian Firms, *Journal of International Accounting, Auditing and Taxation*, Vol. 22, pp. 12– 25. <https://doi.org/10.1016/j.intaccaudtax.2013.02.005>.
- Tjan, J. S. (2024). The Role of Tax Systems in Reducing Income Inequality: A Literature Review. *Advances in Taxation Research*, 2(1), pp. 50–64. <https://doi.org/10.60079/atrv2i1.290>.
- Wahab, N. S. A. & Holland, K. Tax Planning, Corporate Governance and Equity Value. *The British Accounting Review*, 44 (2), (2015), pp. 111-124, <https://doi.org/10.1016/j.bar.2012.03.005>.
- Wang, X. (2011), Tax Avoidance, corporate Transparency, and Firm Value. *American Accounting Association Annual Meeting*, Denver, Colorado, United States, August 6-10. DOI: 10.2139/ssrn.1716474.
- Yee, C. S., Sapiei, N. S. and Abdullah, M. (2018), Tax Avoidance, Corporate Governance and Firm Value in The Digital Era. *Journal of Accounting and Investment*, 19(2), pp. 160-175. DOI: 10.18196/jai.190299.
- Zolt, E. M. (2015), Tax Incentives: Protecting the Tax Base. *UN working paper*, April.