

Government expectation and firm performance nexus in the context of a developing country: does non-mandatory disclosure matter?

A.E. Adegboyegun^a, O.E. Igbekoyi^a and I.J. Okon^{b*}

^aDepartment of Accounting, Adekunle Ajasin University, Akungba-Akoko, Nigeria

^bDepartment of Accounting, University of Ibadan, Nigeria

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ABSTRACT

In developing economies like Nigeria, where government expectations on firms intensify amid underdeveloped institutional frameworks, the performance implications of fiscal obligations and voluntary transparency remain poorly understood. This study investigates whether government expectations influence firm performance and whether non-mandatory disclosure moderates this relationship among 80 listed Nigerian firms from 2011 to 2023. Using panel data regression techniques—specifically fixed and random effects models, the study analyzes how fiscal pressure and voluntary environmental, social, and governance disclosures jointly shape firm performance. The findings reveal that higher government expectations are significantly and negatively associated with firm value, suggesting that increasing tax burdens diminish corporate performance. Contrary to theoretical assumptions, non-mandatory disclosure was also negatively associated with firm performance under fixed effects estimation, indicating that voluntary ESG transparency may be perceived as costly or symbolic rather than performance-enhancing in Nigeria's capital market context. More critically, the interaction between government expectations and non-mandatory disclosure shows a significant negative moderating effect, implying that the combination of tax pressure and voluntary disclosure jointly exacerbates performance erosion rather than mitigating it. These results suggest that without institutional support, investor maturity, and stakeholder awareness, even well-intentioned disclosures may backfire. The study recommends that firms embed ESG practices into core business strategy rather than treat them as compliance rituals, and that policymakers harmonize tax and disclosure policies to avoid disincentivizing transparency. Investors are encouraged to evaluate the strategic substance behind disclosures rather than their volume alone. Future research should explore sector-specific dynamics, stakeholder interpretations of voluntary disclosures, and cross-country comparisons to uncover when and how ESG transparency translates into sustainable firm value under fiscal constraint.

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1. Introduction

Across the globe, the evolving role of government in shaping corporate behavior continues to command significant attention in policy, academic, and industry circles. Governments are no longer seen merely as regulators or tax authorities but as active stakeholders influencing firm strategy, social responsibility, and long-term value creation (Li, Fung, & An, 2024). In both developed and developing economies, expectations placed on firms extend beyond fiscal compliance to encompass broader economic, environmental, and social contributions. This expanding scope has transformed the government-firm nexus into a critical determinant of firm performance. However, the impact of such expectations is neither uniform nor unidirectional. While in advanced economies, structured policies, market maturity, and robust institutions enable firms to align with government priorities and derive competitive advantage (Zou, Wang, & Modi, 2024), the scenario is less

* Corresponding author.
E-mail address: iddyokon22@gmail.com (I.J. Okon)

predictable in emerging regions where institutional voids and capacity constraints blur the boundaries between incentive and obligation.

In Africa, the intersection of state influence and corporate performance reveals a complex and often paradoxical terrain. Governments pursue socio-economic transformation agendas, but firms must navigate regulatory inconsistency, infrastructural limitations, and limited fiscal incentives (Okon & Clement, 2024). The Sub-Saharan African context amplifies these complexities, with firms operating under informal tax systems, inconsistent enforcement, and evolving disclosure norms. Although government expectations—particularly through taxation and development mandates—are intended to enhance national outcomes, empirical studies suggest their performance implications are mediated by firm-level governance, market perception, and strategic adaptability (Inneh, Ayoola, & Obokoh, 2025). Nigeria, as the region's largest economy, epitomizes this dynamic. Despite reforms in tax administration and sustainability regulation, firms often perceive governmental demands as compliance burdens rather than catalysts for performance enhancement.

The Nigerian business landscape provides a compelling case for re-examining the government expectation–firm performance nexus. With tax policies frequently updated and sustainability disclosures largely voluntary, firms are caught between external expectations and internal capabilities. Prior studies emphasize the fiscal aspect of government expectations using tax rates as proxies (Malik, Irfan, & Munir, 2025), yet the interplay between fiscal obligations and strategic responses like voluntary ESG disclosures remains underexplored. Most literature assumes a linear relationship between compliance and performance, overlooking contextual factors that could moderate or distort this linkage. Notably, few studies (Inneh, Ayoola, & Obokoh, 2025) interrogate whether voluntary, non-mandatory disclosures serve to mitigate or exacerbate the performance effects of government expectations—an omission that limits the theoretical and practical understanding of corporate-state dynamics in developing economies.

This study addresses these gaps by investigating the influence of government expectations, proxied by the income effective tax rate, on firm performance in Nigeria, and further examines whether non-mandatory environmental, social, and governance (ESG) disclosures moderate this relationship. By integrating signaling and agency theories, the research explores how firms strategically communicate their alignment with government priorities and whether such disclosures enhance or dilute the perceived value of compliance. This approach captures not only the economic implications of state-firm relations but also the communicative and perceptual dynamics that shape firm valuation in under-institutionalized environments. The objective is to provide nuanced insights into whether higher fiscal obligations suppress firm value, and if so, whether transparency through voluntary ESG reporting acts as a corrective mechanism or an additional cost.

Nigeria presents a unique institutional setting for this inquiry. Its corporate sector is diverse, spanning resource-intensive industries, service firms, and manufacturing entities, many of which are publicly listed and subject to varying degrees of governmental scrutiny. The country's disclosure infrastructure is still developing, and ESG reporting is primarily voluntary and inconsistently adopted. This heterogeneity offers a natural laboratory for understanding the contingent effects of government expectations and voluntary disclosures. Unlike more mature markets, where regulatory frameworks and investor responses are predictable, Nigerian firms must balance opacity, legitimacy pressures, and survival imperatives (Okon & Clement, 2024). The findings from this study, therefore, promise to offer generalizable insights for similarly situated developing economies while informing policy reform and investor strategy.

Theoretically, this research advances the discourse by bridging signaling theory—which posits that firms use voluntary disclosures to reduce information asymmetry—and agency theory, which highlights the principal-agent conflicts exacerbated by fiscal constraints. In doing so, the study contributes to the broader debate on how firms navigate institutional pressures in environments where market mechanisms are not fully efficient. By examining the moderating role of non-mandatory disclosure, the study also expands the understanding of ESG reporting as more than a standalone strategy—positioning it instead as a dynamic response to government-induced performance pressures. The expected implications are multi-dimensional: guiding policymakers on the unintended consequences of tax policy, informing corporate strategy on value-enhancing disclosure practices, and contributing to theoretical refinement in the areas of governance and performance measurement.

The remainder of the paper is organized as follows. The next section develops the conceptual foundations and synthesizes relevant empirical literature. This is followed by the methodological framework, detailing the data sources, variable measurements, and model specifications. The fourth section presents the empirical results and discusses their implications. The final section concludes the paper with practical recommendations, policy insights, and suggestions for future research.

2. Conceptual Clarification and Literature

2.1 Firm Performance

Firm performance is a multidimensional construct often used to evaluate how well an organization achieves its financial and strategic objectives. Inneh, Ayoola, and Obokoh (2025) define firm performance as the extent to which a company attains its operational, financial, and market goals, typically through the efficient deployment of resources. While this definition is broad and inclusive, it lacks specificity regarding which performance dimensions—such as profitability, market

share, or productivity—are most critical. The authors use return on assets (ROA) and return on equity (ROE) as their primary proxies. While these measures are widely recognized, they may not capture market perceptions or future performance expectations. Malik and Kashiramka (2024) argue that firm performance should also reflect long-term value creation and sustainability, integrating both financial outcomes and non-financial metrics such as ESG performance. This broadened conceptualization is timely, especially in light of increasing investor interest in sustainability. However, using ESG performance as a component of firm performance introduces subjectivity and potential measurement inconsistency, particularly across industries and countries. Their reliance on market capitalization and cost of debt as proxies may also conflate investor sentiment with firm fundamentals. We adopt Tobin's Q as the main proxy, due to its balance of market and asset perspectives, while incorporating Market Value Added (MVAD) for robustness, following the recommendation of Park et al. (2025) and Malik and Kashiramka (2024).

2.2 Government Expectation

Government expectations, in corporate governance literature, often refers to the fiscal and regulatory responsibilities imposed on firms by the state, such as taxation, employment standards, and compliance obligations. Li, Fung, and An (2024) define government expectation as the implied demand placed on firms to contribute to public goals through tax compliance, economic development, and social contribution. This definition appropriately emphasizes the developmental role of business but lacks a quantitative focus necessary for empirical modeling. Their use of government venture capital involvement as a proxy is suitable for startups but not generalizable to listed firms. Zou, Wang, and Modi (2024) describe government expectation in terms of intervention stringency and fiscal support mechanisms, particularly in periods of economic disruption. Their approach captures the dynamic and situational nature of government-firm relations but does not offer a consistent or measurable construct. They use government assistance programs as a proxy, which is context-specific and unsuitable for normal economic periods. Given these perspectives, this study adopts the definition provided by Shaikat Malik et al. (2025), viewing government expectation as the fiscal obligation imposed on firms by the state, best measured through the income effective tax rate (IETR). This proxy provides a quantifiable, comparable, and policy-relevant measure of how firms meet governmental financial demands.

2.3 Non-Mandatory Disclosure

Non-mandatory disclosure refers to the voluntary communication of information by firms beyond what is legally required, often encompassing sustainability, governance, and social responsibility practices. Malik and Kashiramka (2024) define non-mandatory disclosure as firm-initiated information sharing that enhances transparency on ESG performance without legal obligation. This conceptualization captures the strategic essence of voluntary reporting. Beleneși, Bogdan, and Popa (2021) conceptualize non-mandatory disclosure as a firm's commitment to non-financial reporting practices aligned with global sustainability goals. Their study relies on content analysis of sustainability reports, which improves transparency but may be limited by narrative subjectivity and lack of standardization. Nyahas et al. (2018) adopt a stakeholder-centric definition, framing non-mandatory disclosure as a tool for aligning firm communication with stakeholder expectations. Their proxy, a disclosure index based on stakeholder engagement content, reflects responsiveness but may overlook key structural ESG elements like emissions, labor practices, and governance. Considering the evolution of global reporting standards, this study adopts non-mandatory disclosure as the proactive, voluntary dissemination of environmental, social, and governance information by firms, following the Global Reporting Initiative (GRI 2021) framework. The chosen proxy is an ESG Index (ESGI), constructed based on GRI-aligned disclosure metrics. This approach addresses the critique of subjectivity by aligning with standardized guidelines, offers cross-firm comparability, and captures the multidimensional nature of voluntary transparency in modern corporate environments.

2.4 Theory and Hypotheses Development

Government expectations often operate within the framework of agency theory, which postulates that regulators act as agents to safeguard public interest by aligning the behaviors of corporate entities (principals) with socio-economic goals. In doing so, governments impose expectations through fiscal policies, sustainability mandates, and regulatory mechanisms that aim to enhance firm accountability and performance outcomes. When these expectations are perceived as credible and performance-driven, firms tend to respond with improved governance, innovation, and stakeholder trust, all of which can enhance financial performance. Conversely, overly burdensome or vague expectations may create compliance fatigue, strategic drift, or resource misallocations, thereby hampering firm productivity and profitability. Empirical literature from developed economies reveals a largely positive association between government expectations and firm performance. Zou, Wang, and Modi (2024) examined the role of government interventions in the context of COVID-19 and found that stringency measures and support programs in OECD countries significantly improved operational resilience and profitability, particularly among firms with digital infrastructure and agile governance systems. Similarly, Li, Fung, and An (2024) analyzed government venture capital funds in China and observed that financial support tied to social targets led to a dual improvement in both firm valuation and ESG performance. These studies reinforce the utility of strategic public-private synergy in shaping sustainable business outcomes.

In emerging and developing economies, there is also a growing body of evidence supporting the performance-enhancing effects of governmental alignment. For instance, Park, Lee, and You (2025) found that ESG-focused government pressure enhanced financial performance among politically connected private enterprises in China, particularly when state ownership was present. A similar result was found in Nigeria by Inneh, Ayoola, and Obokoh (2025), who noted that CEO political connections aligned with implicit government expectations led to better stock returns and earnings among listed deposit money banks. These findings suggest that government signals, when clear and stable, can positively influence firm behavior in developing markets as well. However, not all findings are positive. In contrast, some studies in developed economies suggest that government expectations can act as a constraint on firm performance. For instance, Malik and Kashiramka (2024), using Indian manufacturing firms, found that mandatory ESG-related governmental disclosure expectations increased the cost of capital, offsetting potential performance benefits. They argued that compliance complexity, reporting fatigue, and lack of internal capacity diluted the economic advantage of conforming to such expectations. This suggests that even performance-oriented regulation can create inefficiencies if not accompanied by adequate institutional support.

From the perspective of African economies, mixed results abound. Okon and Clement (2024) observed that government expectations embedded in gender diversity laws did not yield consistent financial improvements across Nigerian firms. Although some female-led boards improved strategic decision-making, others faced institutional resistance, underutilization of talent, and lack of stakeholder integration, ultimately leading to marginal gains. These findings emphasize the importance of contextual fit and organizational readiness in translating government policies into tangible performance outcomes. Interestingly, some studies have yielded inconclusive or conditional results. For example, Adegboyegun and Igbekeyi (2022) examined board diversity regulations in Nigerian manufacturing firms and reported that performance outcomes varied depending on the firm's size, sector, and board independence levels. Similarly, Shaukat Malik, Irfan, and Munir (2025) found that tax avoidance expectations imposed by regulators improved firm performance only when moderated by ownership concentration and board independence. These nuanced outcomes indicate that government expectations interact with firm-level attributes in shaping performance, rather than exerting a linear influence. In synthesizing the above, while government expectations can either empower or encumber firms, the direction and magnitude of their impact largely depend on contextual, institutional, and organizational readiness. The literature underscores the need for clarity, capacity-building, and strategic alignment in translating public goals into corporate value. Hence, we state the following hypothesis:

H1: *Government expectations have a significant and positive effect on firm performance.*

Anchored in signaling theory, non-mandatory disclosure (NMD) is understood as a strategic communication tool through which firms voluntarily reveal information to reduce information asymmetry and signal their competitiveness, transparency, and commitment to long-term value. Signaling theory posits that when firms disclose more than is required by regulation, they provide credible cues to investors, creditors, and stakeholders about their quality, governance, and prospects. This proactive disclosure behavior is often interpreted as a positive signal of financial soundness, risk management, and ethical conduct, which can drive firm value, investor confidence, and operational performance. Evidence from developed economies consistently supports the positive relationship between NMD and firm performance. He, Plumlee, and Wen (2019) found that voluntary disclosures by U.S. firms led to reduced cost of capital and enhanced firm valuation, especially when disclosures were consistent and verifiable. In the European context, Sjögren and Wickström (2019) reported that firms with extensive ESG-related voluntary disclosures achieved superior financial performance, attributing this to improved stakeholder trust and market legitimacy. These findings corroborate the theoretical argument that NMD functions as an efficient signal to capital markets, thereby reinforcing firm reputation and competitive advantage.

In developing markets, a similar trend of positive correlation is observed, albeit with contextual nuances. Beleneși, Bogdan, and Popa (2021), examining listed companies in Romania, found that increased narrative disclosure in annual reports led to higher stock returns and reduced volatility, especially in firms with weak mandatory reporting frameworks. In Nigeria, Nyahas et al. (2018) reported that managerial perceptions of stakeholder pressure significantly influenced voluntary disclosure levels, which in turn enhanced financial outcomes. Their study emphasized that when firms perceive reputational or regulatory risks in the absence of disclosure, they voluntarily adapt to manage stakeholder expectations more effectively. Nonetheless, contrary findings have emerged in some empirical contexts. Hawashe (2019) conducted a multi-sectoral study in Libya and found that the cost of preparing and publishing non-mandatory disclosures often outweighed the perceived benefits, particularly in firms with limited financial literacy or disclosure infrastructure. Similarly, Sumatriani et al. (2021) reported that despite high disclosure scores, many Indonesian firms did not experience performance improvements due to weak investor response and underdeveloped capital markets. These studies highlight that the signaling effect of NMD may be muted in environments where institutional trust or market maturity is low.

Negative outcomes were also observed in South Asia. Malik and Kashiramka (2024), analyzing Indian firms, revealed that while NMD increased transparency, it also inadvertently exposed firms to higher litigation risk and external scrutiny, thereby increasing operational and compliance costs. They argued that the effectiveness of disclosure depends not only on the content but also on stakeholder perception and the regulatory context in which the firm operates. These findings illustrate that more disclosure is not always better and that the effectiveness of NMD depends on stakeholder sophistication and market enforcement mechanisms. Mixed results have been reported in other emerging markets. For instance, Bui et al. (2018), in their bibliometric review of sustainable finance, noted that while voluntary disclosure tends to correlate positively

with firm performance in sectors like telecommunications and financial services, the effect is less pronounced in traditional sectors such as agriculture and mining. This suggests that sector-specific dynamics and stakeholder salience may influence how NMD translates into financial returns. The study calls attention to the importance of aligning voluntary disclosure with sectoral expectations and materiality. Overall, the relationship between non-mandatory disclosure and firm performance is largely positive across contexts. The literature suggests that while disclosure can be a powerful signal, its interpretation and efficacy are highly contextual. Hence, we hypothesize that:

H₂: *Non-mandatory disclosure has a significant and positive effect on firm performance.*

Framed within agency theory and signaling theory, non-mandatory disclosure plays a crucial moderating role in the relationship between government expectations and firm performance. While government expectations often create institutional pressure for firms to behave responsibly, such expectations alone may not translate into superior performance unless firms actively communicate compliance and transparency. Here, non-mandatory disclosures—such as ESG reports, CSR narratives, or sustainability disclosure function as credibility-enhancing signals. According to signaling theory, firms that voluntarily communicate alignment with policy goals stand out positively in the eyes of both regulators and stakeholders. From an agency perspective, voluntary disclosure helps reduce information asymmetry and demonstrate managerial alignment with broader societal objectives, thereby potentially enhancing firm performance. Empirical literature from developed markets supports this theoretical linkage. Park, Lee, and You (2025), in their study on Chinese private enterprises, found that firms facing high government expectations improved their market valuation only when they engaged in high-quality ESG disclosures. The study reveals that non-mandatory disclosure served as a critical filter—amplifying performance outcomes by making firms' alignment with government priorities visible and verifiable. Likewise, Malik and Kashiramka (2024), using panel data from Indian firms, reported that the positive effect of government environmental mandates on firm profitability was significantly stronger for firms with comprehensive voluntary ESG reports. Hence, we hypothesize that:

H₃: *Non-mandatory disclosure significantly moderates the relationship between government expectations and firm performance.*

3. Methods

We employ *ex-post facto* and longitudinal research designs. The *ex-post facto* research design becomes necessary because the panel data used is based on historical evidence. Similarly, the longitudinal research design was employed because the study extends beyond a single moment of time. The study is longitudinal covering a period of thirteen (13) years from 2011 to 2023 and it employs secondary data sourced from the related companies' annual financial reports for the periods and Nigerian Exchange Factbook. The study obtains data from secondary sources. The data were obtained from the selected companies' annual financial reports covering a period from 2011 to 2023. The information was accessed from the annual reports published on the companies' official websites as well as Nigerian Exchange Factbook. The 156 companies listed on the floor of the Nigerian Exchange Group (NGX) as of December 31, 2023, make up the study's population. This applies to listed companies in all industries, including construction, oil and gas, healthcare, services, natural resources, consumer goods, industrial goods, agriculture, financial services, conglomerate, and information and communications technology.

Table 1
Sample Size Determination

S/N	Sector	Population Size	Newly listed firms after 2009	Suspended Firms/Inactive as at 2023	Sample Size
1	Agriculture	5	1	0	4
2	Consumer Goods	22	2	7	13
3	Industrial Goods	17	1	9	7
4	Oil and Gas	12	1	5	6
5	Healthcare	10	2	3	5
6	Services	24	1	12	11
7	Natural Resources	5	1	2	2
8	ICT	9	2	5	2
9	Financial Services	40	3	16	21
10	Conglomerate	5	0	0	5
11	Construction	7	0	3	4
	Total	156	14	62	80

Source: Authors (2025)

The sample size for this study is 80 listed firms. The sample size was achieved after selecting firms that meet the selection criteria adopted. The criteria were introduced to eliminate firms that do not adequately meet the requirements of the study. The criteria are stated; thus, Firms that were incorporated after 2011, which is the base year of this study shall not be used in this study. This criterion caused the elimination of 14 firms. The second criterion is to eliminate firms that were suspended or not active as at the end of 2023, this disqualified 62 firms that fell into this criterion. Thus, only the key players and firms

that had all relevant data due to continuous existence were included in the sample. Table 1 shows a summary of the schedule of selection for determination of sample size.

3.1 Model Specification

Theoretically, we adopt a model that consolidates the assumptions of the stakeholder, agency, resource dependency and agency theories. The linkages of these theories are the obligation of discharge of corporate responsibilities to maximize stakeholders' wealth and promote global relevance. Thus, we employ the panel fixed and random effect regression and expresses corporate performance as a function of government expectation and to mitigate the potential bias arising from omitted factors, which may lead to endogeneity, the study incorporates control variables for firm size, board ownership as well as research and development disclosure as shown below:

$$TOBQ_{it} = \beta_0 + \beta_1 IETR_{it} + \beta_2 ESGI_{it} + \beta_3 (IETR \times ESGI)_{it} + \beta_4 BOWN_{it} + \beta_5 REDD_{it} + \beta_6 FSIZ_{it} + \mu_{it}$$

The equation expresses the econometric form of the model where corporate performance is proxied in terms of market-based measure of Tobin's Q and government expectation is proxied in terms of effective tax rate (IETR) and the moderator variable of non-mandatory disclosure is measured in terms of environmental, social, and governance disclosure index (ESGI).

where:

TOBQ	=	Tobin's Q
IETR	=	Effective Tax Rate
BOWN	=	Board Ownership
REDD	=	Research & Development Disclosure
ESGI	=	Environmental, Social, and Governance Disclosure Index
FSIZ	=	Firm Size
β_0	=	Constant
β_1 - β_6	=	Slope Coefficient
μ	=	Stochastic disturbance
i	=	i th company
t	=	time period

3.2 Measurement of the Variables

3.2.1 Dependent Variables

The primary dependent variable in this study is firm performance, which is measured using Tobin's Q (TOBQ). Tobin's Q is widely adopted in finance and accounting literature as a reliable indicator of how well a firm's market valuation aligns with its asset replacement cost (Park et al., 2025). This ratio captures both tangible and intangible value drivers and provides a forward-looking measure of firm performance. TOBQ is calculated as the ratio of the market value of equity plus total liabilities to the book value of total assets. This variable has been extensively utilized in prior empirical studies focused on corporate valuation and disclosure dynamics (Li et al., 2024; Zou et al., 2024). To reinforce the robustness of our findings, another alternative measure of firm performance is incorporated. Market Value Added (MVAD) quantifies the difference between the market value of a firm and the capital contributed by investors. MVAD is a strategic performance metric that emphasizes value creation beyond book capital and has been used to complement traditional accounting-based indicators (Abdulfattah et al., 2022).

3.2.2 Independent Variable

The central independent variable in this study is government expectation, which is proxied by the Income Effective Tax Rate (IETR). IETR is computed as the ratio of total income tax expense to pre-tax income. It reflects the actual tax burden faced by firms and serves as a meaningful indicator of how governmental fiscal policies manifest at the corporate level (Shaukat Malik et al., 2025). The use of IETR is consistent with existing literature that explores the relationship between tax avoidance, fiscal compliance, and firm-level outcomes (Lanis & Richardson, 2012; Park et al., 2025).

3.2.3 Moderating Variable

Non-mandatory disclosure is operationalized using the Environmental, Social, and Governance Index (ESGI), developed in accordance with the Global Reporting Initiative (GRI) 2021 framework. The GRI 2021 guidelines provide a comprehensive structure for sustainability reporting and have been globally adopted for assessing transparency and accountability in ESG dimensions (Belenesi et al., 2021; Malik & Kashiramka, 2024). ESGI in this study is constructed by assigning weighted

scores to firm-level disclosures across environmental, social, and governance dimensions, with each score normalized on a scale from 0 to 1. A higher ESGI score indicates more extensive and detailed disclosure practices. This approach provides a structured and internationally recognized basis for evaluating non-mandatory disclosures, ensuring comparability and credibility in the measurement of voluntary sustainability reporting (Park et al., 2025).

3.2.4 Control Variables

To mitigate omitted variable bias and isolate the effects of the main predictors, several firm-level control variables are included. Firm Size (FSIZ) is measured as the natural logarithm of market capitalization, which controls for the scale effect in firm operations and is frequently employed in disclosure and performance studies (Malik & Kashiramka, 2024; Adegboyegun & Igbekoyi, 2022). Larger firms tend to have greater visibility, more structured governance, and higher institutional pressures, all of which may influence both disclosure and valuation. Board Ownership (BOWN) represents the percentage of shares held by board members and is included to capture the influence of internal governance structures on strategic decisions and transparency behavior. Prior studies suggest that board equity stakes may impact risk appetite, disclosure choices, and alignment of interests with shareholders (Jensen & Meckling, 2019; Haija & Alrabba, 2017). Finally, Research and Development Disclosure (REDD) is a dummy variable that takes the value of 1 if a firm discloses R&D activities and 0 otherwise. This variable accounts for a firm's innovation orientation and its willingness to reveal non-mandatory strategic information, which may serve as a signal to investors and regulators (Anton et al., 2021; Jung & Kwak, 2018). Collectively, these control variables are essential to ensuring the internal validity of the regression models and improving the explanatory power of the estimated relationships.

4. Results and Discussion

4.1 Descriptive Statistics Analysis

We begin our analysis with the descriptive statistics presented in Table 2, which provide an initial understanding of the characteristics of the variables under investigation. The firm's performance, measured by Tobin's Q (TOBQ), has a mean value of 2.01 and a standard deviation of 2.11. This suggests that, on average, the market performance of the firms marginally exceeds their replacement cost, implying a moderate valuation from investors. However, the wide range between the minimum value of 0.38 and the maximum of 12.69 reflects a high level of dispersion in market valuation, potentially driven by firm-specific characteristics or macroeconomic factors during the period. Similarly, Market Value Added (MVAD) exhibits a mean of 0.21 with a standard deviation of 1.29, and a broad span from -12.06 to 11.85, further underscoring the variation in shareholder wealth creation across firms. In the case of the independent variable of Government expectations, measured by Income Effective Tax Rate (IETR), the result reveals a mean of 3.43 and a high standard deviation of 17.61, with values ranging from -4.40 to 31.34. The low average suggests that firms pay relatively minimal tax compared to their profits before tax, which may indicate the prevalence of aggressive tax planning. The widespread indicates significant inconsistency in firms' tax obligations, possibly influenced by differing tax incentives, industry classifications, or the effectiveness of tax avoidance strategies. For the moderating variable, the mean score for Non-Mandatory Disclosure, proxied by the ESG Index (ESGI), stands at 0.29 with a standard deviation of 0.16, and values ranging between 0 and 0.90. This reveals a generally low level of voluntary environmental, social, and governance disclosures among listed firms, though some firms are notably proactive in sustainability reporting. This variation may be associated with firm size, ownership orientation, or external stakeholder pressures. For the control variables, board ownership (BOWN) displays a mean of 15.64 with a large standard deviation of 22.11, suggesting that while on average boards hold around 16% of firm shares, ownership structure varies significantly, with some boards holding close to full control and others having none. This wide disparity could have governance implications, influencing strategic decisions and, potentially, firm value. The mean value for Research and Development Disclosure (REDD) is 0.17, with a standard deviation of 0.38, and a minimum and maximum value of 0 and 1, respectively. This indicates that only a small portion of firms disclosed R&D information, which may suggest limited strategic emphasis on innovation or a culture of non-mandatory disclosure aversion within the sample firms. Lastly, Firm Size (FSIZ), measured as the natural log of market capitalization, has a mean of 6.90 and a standard deviation of 0.99, with values ranging from 3.38 to 9.23. This indicates moderate variability in firm scale, with a distribution that spans from relatively small firms to significantly large entities within the Nigerian business landscape.

Table 2
Descriptive Statistics

VARIABLE	MEAN	SD	MIN	MAX	NO OBS
TOBQ	2.01	2.11	0.38	12.69	1040
MVAD	0.21	1.29	-12.06	11.85	1040
BOWN	15.64	22.11	0	92.97	1040
REDD	0.17	0.38	0	1	1040
IETR	3.43	17.61	-4.40	31.34	1040
ESGI	0.29	0.16	0	0.90	1040
FSIZ	6.90	0.99	3.38	9.23	1040

Source: Authors (2025)

4.2 Correlation Analysis

Next, we present the results of the correlation analysis in Table 3, which offers valuable insights into the direction and strength of associations among the study variables. The analysis reveals a very strong positive association between firm value measured by Tobin's Q (TOBQ) and market value added (MVAD), with a correlation coefficient of 0.8684. This indicates that the two proxies of firm value move closely together, suggesting consistency in how firm value is captured from market-based perspectives. Interestingly, Board Ownership (BOWN) exhibits a weak negative correlation with all three measures of firm value—TOBQ (-0.0883), MVAD (-0.1292), and EAPS (-0.2408). These associations hint at potential tensions between board equity stakes and firm value metrics, possibly reflecting agency-related concerns or risk aversion tendencies where ownership is concentrated. Research and Development Disclosure (REDD), a proxy for firms' innovation visibility, is positively associated with TOBQ (0.1125), and MVAD (0.1178). Although these associations are mild, they reflect a general tendency for firms that disclose R&D efforts to experience marginally stronger market and earnings performance, possibly owing to investor appreciation for innovation narratives.

Government expectations, measured by Income Effective Tax Rate (IETR), displays a near-zero and negative correlation with all the proxies of firm value: TOBQ (-0.0066) and MVAD (-0.0489). These weak associations suggest that variations in effective tax rates are largely independent of firm valuation outcomes during the study period, reinforcing the complex and sometimes ambiguous perception of taxation within corporate strategy and investor sentiment. ESGI also shows a weak positive association with MVAD (0.0517) and a negligible negative correlation with TOBQ (-0.0116), reflecting a more nuanced relationship between sustainability reporting and market-based value measures. Firm size (FSIZ), captured as the natural logarithm of total assets, displays notable positive correlations with all performance metrics: TOBQ (0.2681), MVAD (0.3523), and EAPS (0.6078). These associations suggest that larger firms are generally more valued in the market and report stronger profitability. FSIZ also exhibits a strong positive correlation with ESGI (0.6080), implying that larger firms are more likely to engage in non-mandatory ESG disclosures, perhaps due to better resources or greater regulatory and stakeholder visibility. However, FSIZ shows a moderate negative association with BOWN (-0.2901), indicating that board ownership tends to be lower in larger firms, which may reflect a dispersion of ownership or governance structure variations by firm size.

The interrelationships among the independent and control variables also provide meaningful insights. ESGI is positively correlated with REDD (0.1509) and FSIZ (0.6080), suggesting that firms committed to ESG reporting also tend to disclose innovation-related information and are typically larger in size. Meanwhile, BOWN shows weak to moderate negative correlations with most variables, reinforcing the notion that board ownership may diverge from strategic disclosure or growth-oriented practices. Collectively, the results reveal that the associations among the variables are generally weak to moderate, with no indication of excessively strong multicollinearity. The correlation coefficients fall within acceptable thresholds, which supports the integrity of the regression analyses to be conducted in subsequent sections. Further diagnostic checks, such as the Variance Inflation Factor (VIF), will be presented to statistically confirm the absence of multicollinearity concerns.

Table 3
Correlation Analysis

VARIABLES	TOBQ	MVAD	BOWN	REDD	IETR	ESGI	FSIZ
TOBQ	1.0000						
MVAD	0.8684	1.0000					
BOWN	-0.0883	-0.1292	1.0000				
REDD	0.1125	0.1178	-0.0114	1.0000			
IETR	-0.0066	-0.0489	-0.0090	0.0055	1.0000		
ESGI	-0.0116	0.0517	-0.1175	0.1509	-0.0088	1.0000	
FSIZ	0.2681	0.3523	-0.2901	0.0737	-0.0448	0.6080	1.0000

Source: Authors (2025)

4.3 Regression Analyses

Following the correlation analysis, the next phase of our empirical investigation involves regression analysis to determine the statistical associations between government expectations, non-mandatory disclosure, and firm value. We commenced with the estimation of an Ordinary Least Squares (OLS) regression model, serving as a foundational benchmark. To ensure the robustness of our findings, we conducted diagnostic tests for key econometric assumptions. The results revealed the presence of heteroscedasticity, thereby violating the homoscedasticity assumption of the classical linear regression model. This prompted the application of panel data estimation techniques—specifically the fixed effects (FE) and random effects (RE) models—to account for potential unobserved heterogeneity and to correct for bias in standard errors. The Hausman specification test further guided our model selection, helping us identify the most consistent and efficient estimator in line with Greene (2003) and Ajibolade and Sankay (2013).

Table 4 represents the results obtained from the estimation of the models of this study. The results show that the dependent variable of firm value, when measured in terms of Tobin's Q (TOBQ), has an R-squared value of 0.1721 in the unmoderated

OLS model. This suggests that the independent and control variables jointly explain approximately 17% of the variation in firm value, while the remaining variation is captured by the model's error term. Though modest, this explanatory power is consistent with prior empirical research on complex financial and governance constructs in emerging markets, where firm value is influenced by a wide array of economic, institutional, and firm-specific factors (Desai & Dharmapala, 2009; Zhang et al., 2020). In the moderated OLS model, the R-squared remains relatively stable at 0.1711, indicating that the addition of the interaction term does not materially alter the model's explanatory capacity at the pooled level.

To assess the suitability of the model, tests for multicollinearity were conducted using the Variance Inflation Factor (VIF). The mean VIF for the unmoderated and moderated OLS models are 1.18 and 1.30 respectively, both well below the conventional threshold of 10 suggested by Gujarati (2004), confirming the absence of multicollinearity. This ensures that the estimates derived from the regression are not inflated or distorted due to high intercorrelations among the independent variables. However, the Breusch-Pagan heteroscedasticity test yields significant test statistics in both models—457.19 ($p < 0.001$) in the unmoderated and 558.65 ($p < 0.001$) in the moderated—indicating that the OLS models suffer from heteroscedasticity. As homoscedasticity is a key assumption underpinning the reliability of OLS standard errors, its violation renders the coefficients potentially inefficient and the inferences invalid. Consequently, the study re-estimates the models using panel regression techniques.

The fixed effects (FE) and random effects (RE) models yield improved explanatory power, with R-squared values increasing to 0.2224 and 0.2035 respectively in the unmoderated model. This improvement is maintained in the moderated specification, where R-squared values are 0.2192 (FE) and 0.2046 (RE), suggesting that controlling for unobserved heterogeneity enhances model precision. The Hausman test produces a chi-square value of 86.10 ($p < 0.001$) for the unmoderated model and 81.32 ($p < 0.001$) for the moderated model, decisively supporting the use of the fixed effects model as the preferred estimator. This finding aligns with econometric literature which recommends the FE model when individual firm characteristics may correlate with the regressors (Wooldridge, 2010).

Table 4
Government Expectation, Non-Mandatory Disclosure, Firm Value

	Panel A: Unmoderated Model			Panel B: Moderated Model		
	TOBQ Model (Pool OLS)	TOBQ Model (FE)	TOBQ Model (RE)	TOBQ Model (Pool OLS)	TOBQ Model (FE)	TOBQ Model (RE)
IETR	-0.208 {0.000} ***	-0.121 {0.000} ***	-0.871 {0.000} ***	-0.001 {0.826}	0.010 {0.167}	0.009 {0.196}
ESGI	0.005 {0.222}	-0.019 {0.006} **	-0.001 {0.117}	-1.262 {0.000} ***	0.137 {0.586}	-0.512 {0.027} **
IETR × ESGI				-0.000 {0.593}	-0.030 {0.000} ***	-0.000 {0.422}
BOWN	0.003 {0.225}	0.005 {0.041} **	0.005 {0.030} **	-1.262 {0.000} ***	0.137 {0.586}	-0.512 {0.027} **
REDD	0.473 {0.000} ***	-0.051 {0.742}	0.145 {0.285}	-0.162 {0.599}	-0.418 {0.189}	-0.418 {0.183}
FSIZ	0.521 {0.000} ***	1.306 {0.000} ***	0.862 {0.000} ***	1.566 {0.000} ***	-0.107 {0.790}	0.549 {0.131}
CONS.	-2.834 {0.000} ***	-7.583 {0.000} ***	-4.934 {0.000} ***	-2.443 {0.000} ***	-7.738 {0.000} ***	-4.897 {0.000} ***
F/Wald Stat	26.00 (0.000)	33.04 (0.000)	193.73 (0.000)	25.82 (0.000)	32.42 (0.000)	195.16 (0.000)
R- Squared	0.1721	0.2224	0.2035	0.1711	0.2192	0.2046
VIF	1.18			1.30		
Hetest	457.19 {0.000}			558.65 {0.000}		
Hausman Test		86.10 {0.000}			81.32 {0.000}	

Note: (1) bracket {} are p-values: (2) **, ***, implies statistical significance at 5% and 1% levels respectively
Source: Authors (2025)

Table 4 shows that government expectation, proxied by the Income Effective Tax Rate (IETR), has a coefficient of -0.121 with a p-value of 0.000 in the fixed effects (FE) estimation of the unmoderated model, indicating statistical significance at the 1% level. This result suggests a robust and negative association between tax obligations and firm value among listed firms in Nigeria. The implication is that as effective tax rates rise, firm value, measured by Tobin's Q, tends to decline. This aligns with the notion that tax burdens can erode firms' retained earnings and discourage strategic investment, particularly in environments where tax systems are perceived as punitive or inefficient (Shaukat Malik et al., 2025). From the lens of agency theory, elevated taxes may constrain managerial discretion in capital allocation, thereby weakening firm competitiveness and value creation (Jensen & Meckling, 2019). These findings offer empirical reinforcement to the earlier work of Adegboyegun (2023), who found a negative—though insignificant—relationship between IETR and firm value using pooled regression. The improvement in statistical significance within the fixed effects model used in this study may reflect a more precise estimation that controls for firm-specific characteristics over time, validating the importance of using panel estimators when analyzing nuanced fiscal relationships in emerging markets like Nigeria (Park et al., 2025; Zou et al., 2024).

Turning to the ESG Index (ESGI) in the unmoderated model, Table 3 shows a coefficient of -0.019 with a p-value of 0.006 under the fixed effects specification, demonstrating statistical significance at the 5% level. Surprisingly, the negative sign of the coefficient suggests that increased non-mandatory ESG disclosure is associated with a slight reduction in firm value, at least when firm-level heterogeneity is accounted for. This counterintuitive finding diverges from dominant literature that generally links ESG transparency to enhanced market valuation and firm performance (Malik & Kashiramka, 2024; Beleneşi et al., 2021). One possible explanation for this divergence lies in the contextual dynamics of the Nigerian capital market, where ESG reporting remains largely voluntary and is often not integrated into core financial decision-making or rewarded by investors (Inneh et al., 2025). It is also plausible that ESG disclosures in this context are adopted more as a symbolic legitimacy tool rather than as part of a coherent strategic commitment, thereby incurring reporting costs without a commensurate boost in investor confidence or valuation. This result further reinforces stakeholder theory's proposition that the benefits of engagement and disclosure are contingent on stakeholder awareness, institutional trust, and regulatory maturity (Yoshikawa et al., 2020; Abdulfattah et al., 2022).

In the moderated model, the interaction term between IETR and ESGI ($IETR \times ESGI$) has a coefficient of -0.030 with a p-value of 0.000 in the fixed effects model, indicating strong statistical significance at the 1% level. This result underscores a critical moderating effect: the negative influence of government expectations on firm value becomes even more pronounced when firms engage more in ESG disclosures. Essentially, the combination of high tax burdens and increased voluntary ESG transparency appears to jointly depress firm value, a finding that challenges conventional wisdom about the complementary benefits of fiscal compliance and sustainability engagement. The interaction suggests that in resource-constrained or efficiency-driven firms, ESG reporting—though beneficial in theory—may compound the negative financial implications of higher tax obligations, possibly due to increased disclosure costs or stakeholder misalignment (Li et al., 2024; Zou et al., 2024). These findings suggest a complex interplay in which ESG engagement, rather than mitigating the adverse effect of taxation, may amplify it under certain institutional conditions—particularly where ESG practices are not fully internalized within firm strategy or supported by investor incentives.

4.4 Robustness Check

To ensure the robustness of our empirical findings, we conducted additional sensitivity analyses using Market Value Added (MVAD) as an alternative measure of firm value. This approach allows us to test whether the significant relationships identified in the main Tobin's Q models persist when firm value is measured from a different yet equally relevant financial perspective. Table 5 presents the results of the robustness checks for both the unmoderated and moderated models. In the unmoderated model, the fixed effects regression produces results largely consistent with our earlier findings. The Income Effective Tax Rate (IETR) retains a statistically significant and negative coefficient ($p = 0.000$), indicating that government expectations, proxied through tax burdens, are negatively associated with firm value even when MVAD is used as the dependent variable. This strengthens our earlier argument that elevated tax exposure continues to exert downward pressure on corporate value creation, aligning with the literature that emphasizes the performance-suppressing effects of excessive tax liability, particularly in emerging markets with less supportive fiscal regimes (Shaukat Malik et al., 2025; Zou et al., 2024).

Likewise, the ESG Index (ESGI) remains statistically significant in the unmoderated fixed effects model ($p = 0.001$), albeit with a negative coefficient. This further supports our earlier interpretation that voluntary ESG disclosures, while theoretically beneficial, may not be perceived positively by the market in the Nigerian context, especially if such disclosures are not backed by substantive strategic commitments. The result lends further credence to findings by Inneh et al. (2025) and Park et al. (2025), who argue that the financial impact of ESG performance is contingent upon the regulatory and institutional landscape in which such disclosures are made. Interestingly, when ESGI is examined in the moderated model using MVAD, its coefficient becomes positive and statistically significant in the pooled OLS ($p = 0.019$), although it loses significance in the fixed effects and random effects models. This shift in sign suggests a possible context- or technique-driven variation in how non-mandatory disclosures interact with valuation metrics, emphasizing the importance of model specification and methodological rigor in sustainability-related research (Malik & Kashiramka, 2024).

The most compelling evidence of robustness is observed in the interaction term between IETR and ESGI ($IETR \times ESGI$) in the moderated model. Across all three estimation techniques—pooled OLS, fixed effects, and random effects—the interaction term remains negative and highly significant ($p = 0.000$). This confirms that the joint effect of tax pressure and non-mandatory ESG disclosure continues to depress firm value, even when the outcome variable shifts from Tobin's Q to Market Value Added. The consistency of this finding across models and proxies suggests that the interaction is not spurious, but rather reflects a deeper structural issue in how firms balance fiscal obligations and sustainability signaling in environments with limited investor responsiveness to ESG narratives (Li et al., 2024; Abdulfattah et al., 2022).

Table 5**Robustness Test – Market Value Added**

	Panel A: Unmoderated Model			Panel B: Moderated Model		
	MVAD Model (Pool OLS)	MVAD Model (FE)	MVAD Model (RE)	MVAD Model (Pool OLS)	MVAD Model (FE)	MVAD Model (RE)
IETR	-0.000 {0.000}***	-0.000 {0.000}***	-0.000 {0.218}	0.047 {0.568}	-0.013 {0.882}	-0.007 {0.930}
ESGI	0.006 {0.000}***	-0.009 {0.001}**	-0.000 {0.978}	0.047 {0.019}**	0.037 {0.107}	0.041 {0.058}
IETR × ESGI				-0.001 {0.000}***	-0.000 {0.000}***	-0.000 {0.000}***
BOWN	0.002 {0.285}	0.005 {0.058}	0.005 {0.048}**	-0.051 {0.075}	-0.062 {0.020}**	-0.060 {0.019}**
REDD	0.526 {0.000}***	0.007 {0.962}	0.200 {0.130}	3.562 {0.006}**	1.653 {0.257}	1.896 {0.171}
FSIZ	0.532 {0.000}***	1.337 {0.000}***	0.891 {0.000}***	2.288 {0.000}***	1.988 {0.000}***	2.006 {0.000}***
CONS.	-3.828 {0.000}***	-8.688 {0.000}***	-6.025 {0.000}***	-14.615 {0.000}***	-12.646 {0.000}***	-12.797 {0.000}***
F/Wald Stat	28.87 (0.000)	36.41 (0.000)	217.44 (0.000)	26.59 (0.000)	8.42 (0.000)	87.66 (0.000)
R- Squared	0.1875	0.2397	0.2212	0.1751	0.3679	0.3677
VIF	1.18			1.30		
Hetest	513.39 {0.000}			796.76 {0.0000}		
Hausman Test	87.71 {0.000}				13.54 {0.000}	

Note: (1) bracket {} are p-values; (2) **, ***, implies statistical significance at 5% and 1% levels respectively

5. Conclusion and Recommendations

This study set out to examine the relationship between government expectations, non-mandatory disclosures, and firm value among listed firms in Nigeria, extending the investigation by exploring the moderating effect of ESG-based non-mandatory disclosures on the link between government expectation and corporate value. Drawing on panel data spanning 2011 to 2023 and employing robust econometric techniques—including fixed effects—the findings offer significant insights into how fiscal pressure and voluntary disclosure practices shape firm valuation in emerging economies. The analysis reveals a consistent and statistically significant negative relationship between the income effective tax rate (IETR) and firm value, as measured by Tobin's Q and, robustly, by Market Value Added (MVAD). This suggests that tax obligations continue to be perceived by the market as a constraint on firm performance, potentially limiting retained earnings and long-term investment capacity. This outcome aligns with agency theory and is corroborated by recent empirical evidence highlighting how excessive government expectations in the form of corporate taxation can erode shareholder value, especially in institutional settings where fiscal efficiency and corporate support are limited.

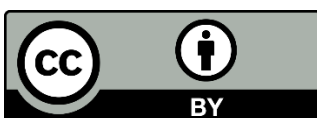
In examining the role of non-mandatory disclosure, measured via the ESG Index aligned with the GRI 2021 framework, the findings reveal a nuanced picture. While ESG disclosure was expected to enhance firm value by improving transparency and stakeholder trust, the results indicate a statistically significant negative association between ESGI and firm value under the fixed effects model. This counterintuitive result may reflect the unique characteristics of the Nigerian capital market, where ESG initiatives are still emerging and possibly viewed as non-essential or even cost-intensive by some market participants. Moreover, the moderating effect of ESG disclosure was found to be significant and negative across all model estimations. This interaction suggests that the adverse effect of tax obligations on firm value is amplified when firms engage more in ESG disclosures. Rather than offsetting the burden of taxation, non-mandatory disclosures may, in the current context, be interpreted by investors as additional costs or signals of diversion from core financial performance. These findings reinforce the relevance of contextual and institutional factors in interpreting the financial implications of voluntary disclosure regimes and government expectations. Taken together, the key takeaway from this study is that the intersection of tax policy and corporate disclosure is far more complex than traditionally theorized. While non-mandatory disclosures are generally viewed as strategic tools for value enhancement, their actual market reception appears contingent upon broader fiscal realities, stakeholder perceptions, and the maturity of corporate governance infrastructures. In environments where tax burdens are high and ESG frameworks lack enforcement or investor traction, such disclosures may not generate the expected valuation benefits. The results also emphasize the importance of methodological rigor and the value of applying multiple model estimations and dependent variable measures to confirm the stability of relationships in financial research.

Based on the empirical findings, several practical recommendations emerge. For corporate managers and board directors, the study highlights the need for a strategic reassessment of ESG disclosure practices, ensuring that such efforts are not only well-aligned with global frameworks but also embedded within financially sound corporate strategies that resonate with investors. Disclosures should be meaningful, data-driven, and accompanied by clear linkages to long-term value creation to avoid being perceived as mere compliance activities. For policymakers and regulators, there is a compelling case to strengthen the enabling environment for ESG adoption by providing incentives, harmonizing tax policies, and fostering investor education on the long-term benefits of sustainability reporting. Tax policies should be designed to avoid

overburdening firms, particularly when encouraging transparency and voluntary engagement in social and environmental matters. Analysts and market watchers are encouraged to develop more nuanced valuation models that appropriately capture the dual implications of fiscal performance and ESG practices. For investors, both existing and potential, these results offer a reminder to look beyond surface-level disclosures and critically evaluate how tax efficiency and ESG strategy integration jointly shape a firm's value trajectory. Finally, broader stakeholder groups—including media, civil society, and academia—have a role in shaping awareness and fostering the accountability needed to transform ESG from a peripheral concern into a core business principle.

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