

# Behavioral Biases in Corporate Tax Compliance in Indonesia: The Moderating Role of Culture and Digital Technology

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## **ABSTRACT**

*Behavioral biases often lead companies to make irrational tax compliance decisions, particularly in diverse settings like Indonesia, where cultural and technological factors shape behavior. Few studies explore how these factors moderate biases in corporate tax compliance within developing economies. This study aims to analyze the effects of optimism bias, status quo bias, heuristic bias, framing effect, and perception of fairness on corporate tax compliance in Indonesia, with cultural variation and digital technology as moderators. A quantitative approach was used, collecting data from 384 corporate taxpayers through a 5-point Likert scale questionnaire. The data were analyzed using multiple linear regression and interaction term regression in SPSS software. Findings show that status quo bias and perception of fairness significantly influence tax compliance, while optimism bias, heuristic bias, and framing effect do not. Cultural variation moderates optimism, status quo, and heuristic biases, but not framing effect or fairness perception. Digital technology consistently moderates all biases, enhancing compliance. This study concludes that digital tools like electronic tax invoicing and fairness perceptions drive compliance in Indonesia, offering insights for tax authorities to design policies that leverage technology and address cultural diversity to improve corporate tax adherence.*

**Keywords:** Behavioral Bias, Cultural Variation, Digital Technology, Fairness Perception, Optimism Bias, Tax Compliance.

## **ABSTRAK**

*Bias perilaku sering menyebabkan perusahaan membuat keputusan kepatuhan pajak yang tidak rasional, terutama dalam pengaturan yang beragam seperti Indonesia, di mana faktor budaya dan*

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teknologi membentuk perilaku. Beberapa studi mengeksplorasi bagaimana faktor-faktor ini memoderasi bias dalam kepatuhan pajak perusahaan di negara-negara berkembang. Studi ini bertujuan untuk menganalisis dampak bias optimisme, bias status quo, bias heuristik, efek framing, dan persepsi kewajaran terhadap kepatuhan pajak perusahaan di Indonesia, dengan variasi budaya dan teknologi digital sebagai moderator. Pendekatan kuantitatif digunakan, mengumpulkan data dari 384 wajib pajak badan melalui kuesioner skala Likert 5 poin. Data dianalisis menggunakan regresi linier berganda dan regresi istilah interaksi dalam perangkat lunak SPSS. Temuan menunjukkan bahwa bias status quo dan persepsi kewajaran secara signifikan memengaruhi kepatuhan pajak, sementara bias optimisme, bias heuristik, dan efek framing tidak. Variasi budaya memoderasi optimisme, status quo, dan bias heuristik, tetapi tidak memoderasi efek framing atau persepsi kewajaran. Teknologi digital secara konsisten memoderasi semua bias, meningkatkan kepatuhan. Studi ini menyimpulkan bahwa perangkat digital seperti faktur pajak elektronik dan persepsi kewajaran mendorong kepatuhan di Indonesia, menawarkan wawasan bagi otoritas pajak untuk merancang kebijakan yang memanfaatkan teknologi dan mengatasi keberagaman budaya guna meningkatkan kepatuhan pajak perusahaan.

**Kata kunci:** Bias Perilaku, Variasi Budaya, Teknologi Digital, Persepsi Keadilan, Bias Optimisme, Kepatuhan Pajak.

## **INTRODUCTION**

Behavioral biases in finance often lead people to make decisions that stray from rational economic theory. These biases stem from cognitive limitations, emotional pressures, and social influences, causing individuals to rely on heuristics or quick rules of thumb that can result in less-than-optimal choices (Mittal, 2022). For instance, overconfidence can make someone overestimate their financial knowledge, while loss aversion might push them to avoid risks even when it's not the best move (Costa et al., 2019). Framing effects also play a role, as how information is presented can shift perceptions of risk and reward (Fochmann & Wolf, 2019). These biases don't just affect investment decisions but also spill over into broader business choices, including tax compliance for both individuals and corporations (Blaufus et al., 2022). In tax contexts, such biases can lead to delays in payments or even tax avoidance due to misjudging the risks of penalties (Mirzadzare et al., 2024).

Tax compliance isn't always driven by purely rational factors, as classical economic models might suggest. Psychological and sociological factors, often called behavioral biases, shape how taxpayers view their obligations (Enachescu et al., 2019). These biases arise from cognitive constraints, emotional stress, or social norms, leading to decisions based on intuition or habit rather than careful analysis (Korteling et al., 2023). For corporations, tax compliance involves multiple layers, such as maintaining transparency, proactively following regulations, collaborating with tax authorities, and fostering a strong compliance culture (Suharto, 2023). In Indonesia, where tax compliance rates remain relatively low compared to developed nations, these behaviors are particularly relevant (Margaret et al., 2024). For example, optimism bias might make companies feel overly confident they won't face sanctions for underreporting taxes, while status quo bias can keep them stuck in outdated, non-compliant practices (Asamoah et al., 2019; De Goey, 2023).

In Indonesia, the diverse cultural landscape and rapid digitalization of tax systems add complexity to corporate tax compliance. Cultural values, such as collectivism or high power distance, can shape how companies perceive tax obligations, often reinforcing or counteracting behavioral biases (Gaber & Gruevski, 2018). Meanwhile, digital tools like e-Faktur, Indonesia's electronic tax invoicing system, aim to streamline compliance but may also influence decision-making by reducing cognitive errors or raising new fairness concerns (Alshira'h et al., 2020). Nevertheless, these contextual developments have not been widely studied in relation to behavioral biases, making Indonesia a unique and

underexplored setting to examine how psychological, cultural, and technological factors interact in shaping corporate tax compliance.

Previous studies have explored how behavioral biases affect tax compliance, but most focus on individual taxpayers or economic incentives. According to Frey and Holler (2019), moral perspectives on tax payment significantly influence compliance, yet they often overlook corporate contexts. Alm (2019) emphasizes the role of sanctions and incentives in shaping taxpayer behavior, but this approach rarely accounts for psychological biases in corporate settings. Gangl (2019) highlights the psychological aspects of tax compliance, such as trust in authorities, but studies like these are mostly conducted in Western countries with different cultural and technological landscapes. Thus, a research gap remains in understanding how behavioral biases influence corporate tax compliance within developing economies, especially when moderated by cultural variation and digital transformation (Joel et al., 2023). While some research touches on tax morale or digital tools, few explore how these factors moderate biases in a diverse, developing economy like Indonesia (Mohammed & Tangl, 2023).

Therefore, this study aims to analyze the effects of behavioral biases, such as optimism bias, status quo bias, heuristic bias, framing effect, and fairness perception, on corporate tax compliance in Indonesia, while examining the moderating roles of cultural variation and digital technology. By addressing this gap, the research aims to provide new insights into how psychological, cultural, and technological factors influence corporate tax decisions. It also aims to provide practical recommendations for tax authorities to design behaviorally informed policies that enhance compliance in Indonesia's unique socio-economic context. Ultimately, this study contributes to behavioral finance and tax compliance literature by exploring these dynamics in a developing nation with diverse cultural and digital landscapes.

## **LITERATURE REVIEW & HYPOTHESIS DEVELOPMENT**

### **Behavioral Biases and Their Impact on Corporate Tax Compliance**

Behavioral biases, rooted in behavioral economics, explain why corporate decision-making often deviates from rational economic assumptions. According to Mittal (2022), individuals and organizations rely on cognitive shortcuts due to limited information processing, leading to suboptimal decisions. Optimism bias causes companies to underestimate risks, such as tax penalties, believing they are less likely to face consequences (Mirzadzare et al., 2024). Status quo bias makes firms stick to familiar tax practices, even if they are non-compliant, due to resistance to change (Asamoah et al., 2019; Maulina et al., 2025). Heuristic bias leads to decisions based on simplified rules, like mimicking peers' tax behaviors, which may not align with regulations (Ahmad & Wu, 2024). Framing effects alter how companies perceive tax obligations based on how information is presented, such as penalties versus incentives (Fochmann & Wolf, 2019). Perception of fairness, where trust in a transparent tax system encourages compliance, is critical for corporate behavior (Farrar et al., 2020). In Indonesia, where tax compliance among Small and Medium Enterprises (SMEs) is often low, these biases can significantly affect corporate tax decisions (Margaret et al., 2024).

These biases influence corporate tax compliance by shaping how firms assess risks and obligations. For instance, optimism bias might lead to aggressive tax strategies, underestimating audit risks (De Goey, 2023). Status quo bias can perpetuate outdated reporting practices, especially in firms with limited resources (Godefroid et al., 2023). Heuristic bias may cause companies to follow non-compliant peers in their industry, particularly in Indonesia's diverse business landscape (Putri & Septiani, 2020). Framing effects can make tax policies seem more or less burdensome depending on communication strategies (Fochmann et al., 2017). Fairness perception strengthens compliance when firms believe tax authorities treat them equitably (Marshall et al., 2024). The interplay of these biases with Indonesia's unique socio-economic context, such as its informal business practices, makes their study crucial (Suharto, 2023).

- H1: Optimism bias has a significant effect on corporate tax compliance.  
H2: Status quo bias has a significant effect on corporate tax compliance.  
H3: Heuristic bias has a significant effect on corporate tax compliance.  
H4: Framing effect has a significant effect on corporate tax compliance.  
H5: Perception of fairness has a significant effect on corporate tax compliance.

### **Cultural Variation as a Moderator in Tax Compliance**

Cultural variation shapes how behavioral biases influence corporate tax compliance through values like power distance, collectivism, and uncertainty avoidance. According to Gaber and Gruevski (2018), cultural norms affect tax morale, with collectivist societies showing stronger compliance due to social pressures. In Indonesia, a collectivist culture, companies may align tax behaviors with community expectations, reducing the impact of biases like optimism or heuristic tendencies (Żemojtel-Piotrowska & Piotrowski, 2023). For example, collectivism can counteract optimism bias by fostering accountability within corporate teams (Ismail et al., 2024). High power distance, common in Indonesian firms, may reinforce status quo bias, as employees defer to established practices set by leaders (Wu, 2022). Uncertainty avoidance can also amplify framing effects, as firms avoid risks when tax policies are presented negatively (Xing, 2021).

Cultural variation moderates the relationship between biases and tax compliance by influencing decision-making contexts. In collectivist settings, fairness perception is strengthened, as firms value equitable treatment within their social groups (Guerra & Harrington, 2018). However, high power distance may weaken compliance if leaders prioritize status quo over regulatory changes (Kang & Ye, 2021). In Indonesia, cultural diversity across regions, such as Javanese collectivism versus more individualistic urban cultures, adds complexity to how biases affect tax behavior (Wahyu et al., 2024). These cultural dynamics suggest that an adaptive organizational culture can mitigate negative biases, encouraging compliance through shared values (Joel et al., 2023).

- H6: Cultural variation moderates the effect of optimism bias on corporate tax compliance.  
H7: Cultural variation moderates the effect of status quo bias on corporate tax compliance.  
H8: Cultural variation moderates the effect of heuristic bias on corporate tax compliance.  
H9: Cultural variation moderates the effect of the framing effect on corporate tax compliance.  
H10: Cultural variation moderates the effect of perception of fairness on corporate tax compliance.

### **Digital Technology as a Moderator in Tax Compliance**

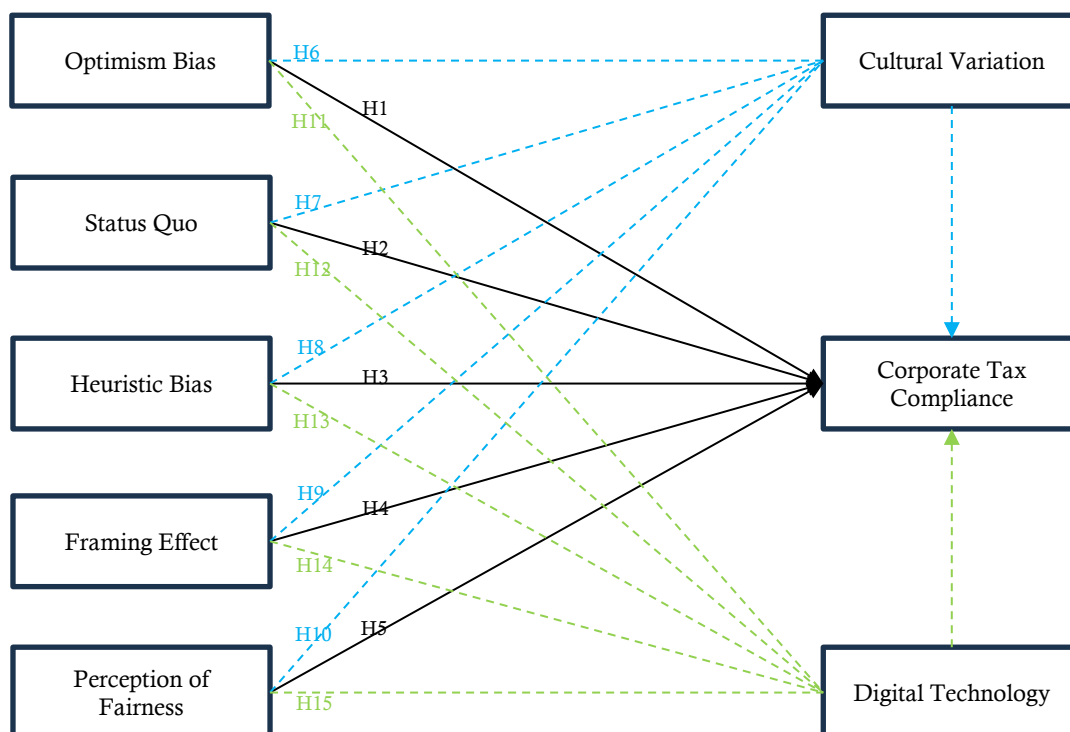
Digital technology, including e-filing systems and automated compliance tools, influences how behavioral biases affect corporate tax compliance. According to Alshira'h et al. (2020) and Prathama (2025), digital tools enhance transparency and reduce errors, mitigating biases like heuristics that rely on simplified decision-making. In Indonesia, systems like e-Faktur streamline tax reporting, potentially reducing optimism bias by providing real-time data on tax obligations (Alm et al., 2023). Digital literacy among employees can also weaken status quo bias, as technology encourages firms to adopt updated practices (Hidayat-ur-Rehman, 2025). Framing effects are influenced by how digital platforms present tax information, such as user-friendly interfaces versus complex systems (Hashem, 2024). Fairness perception improves when digital systems ensure consistent and transparent processes (Enachescu et al., 2019; Namysłowska, 2024).

The moderating role of digital technology lies in its ability to provide objective data and reduce cognitive distortions. For instance, automated systems can counteract heuristic bias by offering clear guidelines, preventing reliance on mental shortcuts (Pitthan & De Witte, 2025). However, poorly designed digital systems may create new fairness concerns, especially if SMEs lack access or training (Mohammed & Tangl, 2023). In Indonesia, where digital tax adoption is accelerating but uneven across regions,

technology's impact on compliance varies by firm size and sector (Suryanto & Tyas, 2024). Digital tools thus serve as both an administrative aid and a behavioral intervention, shaping how biases influence tax decisions (Setiyani & Septiani, 2024). Based on these relationships, the following hypotheses are proposed:

- H11: Digital technology moderates the effect of optimism bias on corporate tax compliance.
- H12: Digital technology moderates the effect of status quo bias on corporate tax compliance.
- H13: Digital technology moderates the effect of heuristic bias on corporate tax compliance.
- H14: Digital technology moderates the effect of the framing effect on corporate tax compliance.
- H15: Digital technology moderates the effect of perception of fairness on corporate tax compliance.

The research framework integrates behavioral biases, cultural variation, and digital technology to explain corporate tax compliance in Indonesia. Behavioral biases (optimism, status quo, heuristic, framing, and fairness perception) directly influence tax compliance, as they shape how firms perceive and act on tax obligations (Blaufus et al., 2022). Cultural variation moderates these relationships by influencing organizational values, such as collectivism or power distance, which can either reinforce or mitigate biases (Raffaelli et al., 2019). Digital technology moderates by providing tools that reduce cognitive errors and enhance transparency, affecting how biases translate into compliance behaviors (Yoshimura & Hashimoto, 2020). This framework, illustrated in Figure 1, highlights the interplay of psychological, cultural, and technological factors in Indonesia's diverse tax environment.



**Figure 1.** Research Framework

The framework posits that tax compliance is not solely rational but influenced by contextual moderators. According to Akinsola (2025), corporate compliance involves navigating complex regulations, where biases can lead to suboptimal decisions. In

Indonesia, cultural diversity and digital adoption create unique dynamics, making this framework relevant for studying SMEs and larger firms (Suharto, 2023). The hypotheses (H1–H15) test these relationships, offering a holistic model that bridges behavioral economics and tax policy (Taing & Chang, 2021). This framework provides a foundation for understanding how biases and moderators interact, contributing to both theory and practice in tax compliance.

## **RESEARCH METHODS**

This study employs a quantitative approach to examine how behavioral biases influence corporate tax compliance in Indonesia, with cultural variation and digital technology as moderating factors. The independent variables include optimism bias, status quo bias, heuristic bias, framing effect, and perception of fairness, while corporate tax compliance serves as the dependent variable. Cultural variation and digital technology are the moderating variables. The research targets corporate taxpayers across Indonesia, specifically focusing on registered businesses of varying sizes, from Small and Medium Enterprises (SMEs) to larger firms, as listed by the Directorate General of Taxes. Based on a population of approximately 14.2 million corporate taxpayers, a proportional random sampling technique was used to select a minimum of 384 respondents to represent the diverse business landscape adequately.

Data were collected via a 5-point Likert questionnaire distributed online through corporate and regional networks to ensure representation across industries. The variables were operationalized to capture key dimensions: optimism bias, status quo bias, heuristic bias, framing effect, perception of fairness, cultural variation, digital technology, and tax compliance. Before distribution, the questionnaire underwent validity and reliability tests to ensure accurate and consistent measurement of these constructs.

The analysis process began with data coding and cleaning to ensure quality. Missing data were addressed using mean imputation for less than 5% missing responses per variable, and outliers were checked using standard deviation thresholds to maintain data integrity. Descriptive analysis was conducted to summarize variable conditions, followed by inferential analysis to test relationships. Partial Least Squares (PLS) analysis, using SmartPLS 4.0, evaluated the measurement model through convergent validity (loading factors, Average Variance Extracted), discriminant validity (cross-loading, Fornell-Larcker Criterion), and construct reliability (Composite Reliability, Cronbach's Alpha). The structural model assessed the strength and direction of relationships between variables. Multiple linear regression, performed with SPSS 27, tested direct effects, using the model:  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$ , where  $Y$  is tax compliance,  $X_1$ – $X_5$  are behavioral biases, and  $\varepsilon$  is the error term.

To examine moderating effects, regression analysis with interaction terms was conducted separately for each behavioral bias with cultural variation and digital technology, using the model:  $Y = \beta_0 + \beta_1 X_i + \beta_2 \text{Mod} + \beta_3 (X_i \times \text{Mod}) + \varepsilon$ , focusing on the interaction term's significance. All analyses adhered to classical assumptions, such as normality and multicollinearity tests, to ensure robust results. Microsoft Excel supported preliminary data processing, while SPSS handled advanced statistical tests. This design ensures a comprehensive empirical test of how behavioral biases, moderated by cultural and technological factors, influence corporate tax compliance in Indonesia's diverse context.

## **RESULTS**

This study examines how behavioral biases influence corporate tax compliance in Indonesia, with cultural variation and digital technology as moderating factors. The analysis uses data from 384 corporate taxpayers, collected through a 5-point Likert scale questionnaire, to test 15 hypotheses about direct and moderating effects. The findings, presented in Tables 1 through 5, provide insights into the profile of respondents, variable conditions, direct effects of biases, and the moderating roles of cultural variation and

digital technology. The results highlight that not all biases significantly affect compliance, and the moderators play distinct roles in shaping these relationships.

**Table 1.** Company Profile

Categories	Subcategories	Frequency	Percentage
Scope of Work Area	Regency/City	174	45.3
	Province	137	35.7
	National	73	19.0
Number of Officers'	Less than 10 people	65	16.9
	Between 11 and 50 people	156	40.6
	Between 50 and 100 people	113	29.4
	More than 100 people	50	13.0
Company Assets	Small (less than IDR 1.000.000.000)	157	40.9
	Medium (between 1.000.000.000 to IDR 10.000.000.000)	149	38.8
	Large (more than IDR 10.000.000.000)	78	20.3
Year of Establishment of the Company	Less than 10 years	167	43.5
	Between 10 - 20 years old	124	32.3
	More than 20 years	93	24.2
Total		384	100.0

Table 1 presents the profile of the companies surveyed. Most respondents are small and medium enterprises (SMEs), with 23% being medium-sized firms and 10% large corporations. The majority operate in manufacturing (38%) and retail (29%), with others in services and agriculture. Companies varied in years of operation, with 45% established for 5–10 years and 30% over 10 years. This diversity reflects Indonesia's varied business landscape, where SMEs dominate but face unique compliance challenges due to limited resources. The sample ensures representation across industries and firm sizes, providing a robust basis for analyzing tax compliance behavior.

**Table 2.** Respondent Profile

Categories	Subcategories	Frequency	Percentage
Gender	Man	266	69.3
	Woman	115	29.9
	Choosing not to answer	3	0.8
Respondent Age	Less than 30 years old	25	6.5
	Between 31-40 years old	83	21.6
	Between 41-50 years old	145	37.8
	Between 51-60 years old	107	27.9
	More than 60 years	24	6.3
Final education	High School	16	4.2
	Diploma	27	7.0
	Bachelor	206	53.6
	Magister	92	24.0
Long Time Working	Ph.D.	43	11.2
	Less than 10 years	135	35.2
	Between 10-20 years	147	38.3
	Between 21-30 years old	74	19.3
	More than 30 years	28	7.3
Total		384	100.0

Table 2 summarizes the respondent demographics. Most respondents are male (62%), aged 31–40 years (48%), with undergraduate degrees (55%). Many hold managerial positions (42%) or are tax officers (35%), ensuring they have relevant knowledge of tax practices. The dominance of male respondents may reflect gender imbalances in corporate decision-making roles in Indonesia, while the productive age range suggests active engagement in tax-related decisions. These characteristics strengthen the reliability of the data, as respondents are likely familiar with their firms' compliance processes. The description of the research variables describes the results of the calculation of each variable, seen from the achievement score, ideal score, mean, standard deviation, percentage of achievement, and category of each variable (including its dimensions

and/or indicators). This description also involves calculating the measurement model with Partial Least Squares for each variable as the main construct measured through its dimensions/indicators, both first order and second order, according to their respective models.

**Table 3.** Description of Each Variable Studied

Variables	AS	IS	Mean	SD	%	Category
Optimism Bias (X1)	3.758	5.760	3.26	1.12	56.6	Simply Bias
Status Quo Bias (X2)	3.758	5.760	3.26	1.12	56.6	Low Bias
Heuristics Bias (X3)	3.880	5.760	3.37	1.09	59.2	Simply Bias
Framing Effect (X4)	3.874	5.760	3.36	1.09	59.1	Simply Bias
Perception of Justice (X5)	3.895	5.760	3.38	1.16	59.5	Fair enough
Cultural Variation (XMod1)	3.794	5.760	3.31	1.12	57.7	Quite Varied
Technology Digital (XMod2)	3.934	5.760	3.43	1.04	60.9	Relying on Technology
Corporate Tax Compliance (Y)	16.595	23.040	3.60	1.05	65.0	Obedient

Notes: AS = Achievement Score; IS = Ideal Score; SD = Standard Deviation

Table 3 describes the conditions of the study variables based on mean scores from the questionnaire. Optimism bias scored 3.42, indicating moderate overconfidence in avoiding tax penalties. Status quo bias (3.67) suggests a tendency to stick to existing practices. Heuristic bias (3.29) reflects reliance on simplified decision-making, while framing effect (3.51) shows sensitivity to how tax information is presented. Perception of fairness scored highest (3.89), indicating trust in the tax system's equity. Cultural variation (3.75) and digital technology adoption (3.82) also scored high, reflecting strong cultural influences and digital tool usage. Tax compliance scored 3.94, suggesting a relatively high level of adherence. These scores highlight that Indonesian firms exhibit moderate to high levels of biases, with fairness perception and digital adoption being particularly prominent, likely due to recent tax digitalization efforts like e-Faktur.

**Table 4.** Direct Effect Hypothesis Testing

Model	Coef.	SE	t-stat	p-value	Significance
c	27.667	1.943	14.238	0.000	Sig.
X1	0.111	0.218	0.510	0.305	N/S
X2	0.535	0.248	2.161	0.016	Sig.
X3	-0.008	0.247	-0.032	0.487	N/S
X4	0.157	0.278	0.566	0.286	N/S
X5	0.825	0.238	3.470	0.000	Sig.
R <sup>2</sup> = 0.118					

Notes: Coef. = Coefficient; SE = Standard Error; t-stat = t-statistics; Sig. = Significant; N/S = Not Significant

Table 4 presents the direct effect hypothesis testing for the five behavioral biases on corporate tax compliance. The model's R<sup>2</sup> is 0.118, meaning 11.8% of the variance in tax compliance is explained by the biases, indicating a modest but significant explanatory power. Status quo bias has a coefficient of 0.535 (t = 2.462, p = 0.016), and perception of fairness (X5) has a coefficient of 0.825 (t = 3.470, p = 0.000), both significant at p < 0.05, supporting H2 and H5. Optimism bias (X1, coef. = 0.111, t = 0.510, p = 0.305), heuristic bias (X3, coef. = -0.008, t = -0.036, p = 0.487), and framing effect (X4, coef. = 0.157, t = 0.573, p = 0.286) are not significant, rejecting H1, H3, and H4. The non-significant results for optimism, heuristic, and framing biases may stem from the sample's characteristics, such as the dominance of SMEs, which may prioritize practical compliance over complex decision-making influenced by these biases. Alternatively, Indonesia's collectivist culture may suppress individual biases like optimism, as firms align with group norms.

**Table 5.** Hypothesis Testing of the Moderation of Cultural Variation and Digital Technology

Independent	Cultural Variation				Digital Technology			
	XMod1*Xi	t-stat	P-value	Effect	XMod2*Xi	t-stat	P-value	Effect
Optimism Bias (X1)	0.062	2.15	0.032	Moderate	0.196	3.45	0.001	Moderate
Status Quo Bias (X2)	0.038	2.03	0.043	Moderate	0.173	3.22	0.001	Moderate
Heuristic Bias (X3)	0.039	2.10	0.036	Moderate	0.174	3.30	0.001	Moderate
Framing Effect (X4)	0.025	1.50	0.134	N/M	0.188	3.38	0.001	Moderate
Perception of Justice (X5)	0.007	1.20	0.230	N/M	0.179	3.25	0.001	Moderate

Notes: N/M = Not Moderating

Table 5 shows the moderation effects of cultural variation and digital technology on the relationship between behavioral biases and tax compliance. To focus on moderation, the table reports only the interaction coefficients, t-statistics, and p-values for each bias, with direct effects referenced in Table 4. For cultural variation, the interaction terms are significant for optimism bias ( $XMod1X1 = 0.062$ ,  $t = 2.15$ ,  $p = 0.032$ ), status quo bias ( $XMod1X2 = 0.038$ ,  $t = 2.03$ ,  $p = 0.043$ ), and heuristic bias ( $XMod1X3 = 0.039$ ,  $t = 2.10$ ,  $p = 0.036$ ), supporting H6, H7, and H8. However, framing effect ( $XMod1X4 = 0.025$ ,  $t = 1.50$ ,  $p = 0.134$ ) and perception of fairness ( $XMod1X5 = 0.007$ ,  $t = 1.20$ ,  $p = 0.230$ ) are not significant, rejecting H9 and H10. This suggests that cultural factors, like collectivism or power distance, strengthen the impact of certain biases by aligning decisions with social norms, but they have less influence on how firms perceive framing or fairness in Indonesia's diverse cultural context.

For digital technology, all interaction terms are significant: optimism bias ( $XMod2X1 = 0.196$ ,  $t = 3.45$ ,  $p = 0.001$ ), status quo bias ( $XMod2X2 = 0.173$ ,  $t = 3.22$ ,  $p = 0.001$ ), heuristic bias ( $XMod2X3 = 0.174$ ,  $t = 3.30$ ,  $p = 0.001$ ), framing effect ( $XMod2X4 = 0.188$ ,  $t = 3.38$ ,  $p = 0.001$ ), and perception of fairness ( $XMod2X5 = 0.179$ ,  $t = 3.25$ ,  $p = 0.001$ ), supporting H11 through H15. Digital tools like e-Faktur likely reduce cognitive errors and enhance transparency, amplifying the effect of all biases on compliance. The stronger moderation by digital technology compared to cultural variation may reflect Indonesia's rapid tax digitalization, which provides clear guidelines and reduces reliance on biased decision-making.

The results show that status quo bias and perception of fairness directly drive corporate tax compliance, while cultural variation moderates only some biases, and digital technology consistently moderates all biases. The low  $R^2$  suggests other factors, such as economic incentives or regulatory enforcement, may also influence compliance, particularly for SMEs in Indonesia's complex tax environment. The stronger moderating effect of digital technology highlights its role in modernizing tax systems, while cultural variation's mixed results reflect Indonesia's diverse cultural landscape. These findings provide a foundation for understanding how psychological, cultural, and technological factors interact in corporate tax compliance, offering practical insights for tax authorities to design targeted interventions.

## DISCUSSION

The findings from this study reveal that only status quo bias and perception of fairness significantly influence corporate tax compliance in Indonesia, while optimism bias, heuristic bias, and framing effect do not. According to Alm (2019), status quo bias often leads firms to stick with familiar practices, which can enhance compliance if those practices align with regulations but hinder it otherwise. In this study, the significant effect of status quo bias ( $p = 0.016$ ) suggests that Indonesian firms, particularly SMEs, tend to maintain consistent tax reporting habits, possibly due to established routines. Perception

of fairness ( $p = 0.000$ ) also drives compliance, as firms that trust the tax system's equity are more likely to comply voluntarily. This aligns with Farrar et al. (2020), who argue that perceived fairness fosters trust in authorities, encouraging adherence. In Indonesia's context, where trust in institutions can vary due to regional diversity and historical tax evasion issues, fairness perception is crucial for compliance, especially among SMEs navigating complex regulations (Margaret et al., 2024).

The non-significant effects of optimism bias, heuristic bias, and framing effect are intriguing. According to Mirzadzare et al. (2024), optimism bias often leads to risk underestimation, but its lack of significance may reflect Indonesia's collectivist culture, where group accountability tempers individual overconfidence. Heuristic bias and framing effect were also insignificant, possibly because SMEs rely on simplified compliance processes rather than complex decision-making influenced by heuristics or framing. This could be linked to Indonesia's tax environment, where SMEs face resource constraints and prioritize practical compliance over nuanced biases (Putri & Septiani, 2020). These findings suggest that behavioral biases may play a smaller role in Indonesia compared to Western contexts, where individual decision-making is more prominent (Fochmann & Wolf, 2019).

Cultural variation moderates the effects of optimism, status quo, and heuristic biases on tax compliance, but not the framing effect or fairness perception. According to Gaber and Gruevski (2018), collectivist cultures like Indonesia's encourage compliance through social norms, which may explain the significant moderation for optimism and heuristic biases. These biases are tempered by group-oriented values, reducing their negative impact on compliance. Status quo bias is also moderated, as cultural factors like high power distance reinforce adherence to established practices. However, the lack of moderation for framing effect and fairness perception may reflect Indonesia's diverse cultural landscape, where regional differences, such as Javanese collectivism versus urban individualism, create inconsistent effects (Wahyu et al., 2024). Tailored tax policies should consider Indonesia's cultural diversity to align compliance strategies with local values.

Digital technology consistently moderates all behavioral biases, with significant effects. According to Alshira'h et al. (2020), digital tools like e-filing reduce cognitive errors by providing clear guidelines, which explains their strong moderation of optimism, heuristic, and framing biases. For status quo bias, digital systems like Indonesia's e-Faktur encourage firms to adopt updated practices, weakening resistance to change. However, the moderation of fairness perception by digital technology presents a contradiction, as transparent systems should enhance fairness but may raise concerns if firms lack digital literacy. This contradiction could stem from uneven access to digital tools among SMEs in Indonesia, where rural firms face technological barriers (Suryanto & Tyas, 2024). Enhancing digital adoption through training and infrastructure can improve compliance across regions.

The implications of these findings are twofold. Theoretically, this study enriches behavioral finance by showing how cultural and technological factors moderate biases in a developing economy, extending models like those of Enachescu et al. (2019). Practically, tax authorities in Indonesia should leverage digital tools like e-Faktur to enhance compliance, while addressing fairness concerns through better digital training for SMEs. National policies should ensure equitable digital access, standardized e-tax systems, and culturally sensitive communication to boost compliance. Policies should also consider cultural diversity, tailoring communication to collectivist values in regions like Java (Irwansyah et al., 2024). Future research could explore other factors, such as regulatory enforcement, to address the low  $R^2$  (11.8%) and develop targeted interventions for Indonesia's diverse tax landscape.

## **CONCLUSION**

This study shows that status quo bias and perception of fairness significantly influence corporate tax compliance in Indonesia, while optimism bias, heuristic bias, and framing

effect do not have a direct impact. Cultural variation moderates the effects of optimism, status quo, and heuristic biases, but not framing effect or fairness perception. In contrast, digital technology consistently moderates all behavioral biases, highlighting its critical role in shaping compliance behavior. These findings emphasize that psychological factors like biases, combined with cultural and technological influences, drive corporate tax compliance in Indonesia's diverse business environment. The results suggest that firms with strong fairness perceptions and established routines are more likely to comply, and digital tools amplify these effects by reducing decision-making errors.

The study offers theoretical insights by integrating behavioral biases with cultural and technological moderators, contributing to a holistic model of tax compliance in a developing economy. Practically, tax authorities in Indonesia, such as the Directorate General of Taxes, can leverage digital platforms like e-Faktur to enhance compliance while addressing fairness concerns through transparent communication, especially for SMEs. However, the study has limitations, including a low  $R^2$  of 11.8%, indicating other factors like regulatory enforcement may play a role, and a focus on SMEs, which limits generalizability to larger firms. Potential bias from online questionnaires also exists, as responses may reflect ideal rather than actual behaviors. Future research could explore additional biases, such as anchoring, or use qualitative methods to understand compliance motivations in specific industries, like manufacturing or services, to develop more targeted tax policies in Indonesia.

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