EFFECT OF BEHAVIORAL BIASES ON TAX COMPLIANCE AMONG SMALL AND MEDIUM-SIZED ENTERPRISES OWNERS NAIROBI COUNTY, KENYA

BY

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MASTER OF SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING)

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE IN COMMERCE (FINANCE AND ACCOUNTING), IN THE SCHOOL OF BUSINESS AT KCA UNIVERSITY

NOVEMBER, 2025

DECLARATION

Student's Declaration

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for the award of a degree from any college or university except KCA University. I also declare that this contains no material written or published by other people except where due reference is made and the author duly acknowledged.

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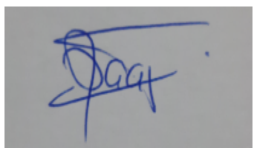
Signature: _  Date: 24th October 2025

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ABSTRACT

This study investigated the influence of behavioural biases on tax compliance among medium-sized enterprise (SME) owners in Nairobi County, Kenya. It focused on key biases, including mental accounting, risk aversion, authority trust bias, and overconfidence bias, to understand their impact on tax compliance behaviours. Despite efforts to streamline tax systems and promote voluntary compliance, challenges persisted, particularly in developing economies like Kenya, where the tax-to-GDP ratio had declined, signalling ongoing compliance issues. This study filled a critical gap in the literature, as previous research had largely overlooked the specific effects of these biases on tax compliance, particularly among SME owners in Nairobi County. The research applied theories such as Mental Accounting Theory, Prospect Theory, Institutional Trust Theory, and Behavioural Finance Theory to provide a comprehensive framework for understanding these biases. The target population consisted of 32,251 SME owners in Nairobi County who had registered and paid their trade licenses by July 2023. The study found that mental accounting did not significantly affect tax compliance. Despite the hypothesis that individuals who categorized their finances might show different compliance behaviours, the results revealed that mental accounting did not meaningfully influence tax compliance. In contrast, risk aversion showed a positive and significant relationship with tax compliance. SME owners who were more risk-averse demonstrated higher levels of compliance, likely due to a greater fear of penalties and legal repercussions. Authority trust bias, however, had a negative impact on tax compliance. SME owners who exhibited higher trust in authorities were less likely to comply with tax obligations, possibly due to a belief that authorities would overlook minor infractions. Lastly, overconfidence bias had a positive and significant effect on tax compliance. SME owners who felt more confident in their understanding of tax requirements and their ability to comply were more likely to fulfil their tax obligations. The findings provided valuable insights for policy interventions aimed at improving tax compliance rates among SMEs. By addressing both the structural challenges of tax systems and the cognitive biases influencing compliance behaviour, this study contributed to a better understanding of the psychological factors driving financial decisions. The research offered practical recommendations for tax authorities, policymakers, and SME owners, with the goal of supporting sustainable economic development through improved revenue collection and compliance practices.

Key words: Behavioral biases, tax compliance, SMEs, Nairobi County, mental accounting, risk aversion, authority trust bias, overconfidence bias

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ACRONYMS AND ABBREVIATIONS

CPA	Certified Public Accountant
FY	Financial Year
GDP	Gross Domestic Product
IRS	Internal Revenue Service
KRA	Kenya Revenue Authority
OECD	Organisation for Economic Co-operation and Development
SMEs	Small and Medium-sized Enterprises
VAT	Value Added Tax

DEFINITION OF TERMS

Authority Trust Bias	Confidence in governmental institutions and officials to act in their best interests, uphold fairness, and implement effective policies (Tyler, 2020).
Behavioural Biases	Systematic patterns of deviation from norm or rationality in judgment, influenced by perceptions, experiences, and emotions (Kahneman & Tversky, 2019).
Mental Accounting	The psychological process where individuals categorize and treat money differently based on subjective criteria such as source or intended use (Thaler, 2015).
Overconfidence Bias	The tendency of individuals to overestimate their knowledge, skills, or abilities, leading to excessive confidence in their judgments (Moore & Healy, 2018).
Risk Aversion	The tendency of individuals to prefer safer options over riskier ones when faced with uncertain outcomes (Kahneman & Tversky, 2019).
SMEs (Small and Medium-sized Enterprises)	Businesses characterized by their small size, often family-owned, providing basic goods and services with fewer formal structures (Masinde ,2010).
Tax Compliance	Voluntary adherence of taxpayers to tax laws without the need for enforcement by regulatory bodies (James & Alley, 2020).

Tax Gap The difference between taxes owed and taxes paid on time, indicating the extent of non-compliance and its impact on economic stability (OECD, 2021).

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Tax compliance remains a critical issue worldwide, affecting both developed and developing economies (Slemrod, 2018). Despite numerous reforms and modernization efforts, ensuring that taxpayers adhere to tax regulations continues to be a global challenge. The global tax gap the difference between taxes owed and those paid on time highlights the magnitude of non-compliance and its impact on fiscal stability (OECD, 2021). In developed economies, compliance levels are relatively higher but far from perfect. For instance, in the United States, the Internal Revenue Service estimated the annual tax gap at $496 billion for the years 2014–2016, representing about 15% of total tax liabilities (IRS, 2019). Similarly, in the European Union, the value-added tax (VAT) gap was approximately €134 billion in 2019, or 10.3% of total expected VAT revenue (European Commission, 2021). These figures reveal that even in advanced economies with robust tax systems, a substantial share of taxes remains uncollected, constraining public revenue and fiscal stability. Moreover, compliance levels vary significantly across tax categories including income tax, VAT, and withholding taxes and are influenced by tax morale, enforcement efficiency, and system complexity (OECD, 2021).

The persistence of tax evasion and avoidance is further compounded by the complexity of tax laws, which can confuse taxpayers and contribute to both intentional and unintentional non-compliance (Saad, 2019). Efforts in many countries to simplify tax codes and enhance taxpayer education have yielded only partial success, as deep-rooted behavioural and psychological factors continue to shape taxpayer decisions. Saad (2019) emphasized that understanding these behavioural dynamics such as cognitive biases and moral reasoning is essential for designing more effective tax policies and enforcement mechanisms that go beyond administrative reforms.

In Africa, tax compliance remains a pressing concern due to persistent challenges in domestic resource mobilization (Mpofu, 2022). Empirical evidence from Ghana revealed that social norms, perceived fairness, and trust in government play a significant role in influencing taxpayer behaviour (D'Arcy, 2018). When taxpayers perceive the tax system as fair and transparent, and believe that collected taxes are used effectively, they are more likely to comply voluntarily. These findings underscore that improving tax compliance requires addressing both institutional and behavioural dimensions. Strengthening administrative capacity, promoting fairness across different tax categories, and fostering trust in government institutions are crucial for enhancing compliance and broadening the tax base across African economies.

The dominance of the informal sector in many African countries further complicates tax administration. In Nigeria, where the informal sector contributes substantially to GDP, compliance among small and medium-sized enterprises (SMEs) remains low. Research attributes this to behavioural biases such as mistrust in tax authorities and perceptions of inequity within the tax system (Uadiale et al., 2020). These attitudes create a sense of unfairness that discourages compliance, particularly in areas like income and turnover taxes. Targeted interventions such as taxpayer education, simplified tax regimes for SMEs, and trust-building measures can help address these biases and improve voluntary compliance. By enhancing fairness and transparency, governments can strengthen revenue collection and promote economic inclusion in the informal economy.

In Kenya, tax compliance among SMEs presents similar challenges, particularly in counties like Nairobi, where behavioural biases and perceptions of unfairness are prevalent. Despite stable tax-to-GDP ratios over recent years, non-compliance among SMEs remains a concern due to perceived tax complexity, limited enforcement, and inadequate taxpayer education (Abdul, 2019; Wanjohi, 2019). Mwangi and Ngugi (2021) observed that procrastination, underreporting, and mistrust in tax authorities contribute to persistent non-compliance across various tax categories, including income tax, VAT, and withholding taxes. Addressing these issues requires a comprehensive framework that integrates behavioural insights with systemic reforms aimed at simplifying compliance procedures, enhancing tax literacy, and building institutional credibility.

This study contributes to the growing body of literature by providing an in-depth understanding of the relationship between behavioural biases and tax compliance among SME owners in Nairobi County, Kenya. By focusing on a critical economic segment and differentiating across key tax categories, the research highlights the importance of psychological and cognitive determinants in shaping compliance behaviour. The findings emphasize the need for policies that are both administratively efficient and behaviourally informed. Moreover, this study fills a regional research gap by offering context-specific insights relevant to African and other developing economies. By identifying the behavioural biases that impede compliance, it proposes targeted strategies to enhance voluntary tax compliance, strengthen tax administration, and improve revenue mobilization for sustainable economic development.

1.1.1 Behavioural Biases

Behavioural biases refer to systematic patterns of deviation from norm or rationality in judgment, where individuals' decisions are influenced by their perceptions, experiences, and emotions rather than objective evidence or logical reasoning (Kahneman & Tversky, 1979). These biases can significantly affect economic behaviours, including tax compliance. Understanding behavioural biases is crucial at this juncture, particularly in the context of the Finance Bill 2024, which aims to enhance tax revenue collection and compliance in Kenya. By identifying and analysing these biases, policymakers can design more effective interventions that address specific cognitive limitations and misconceptions among small and medium-sized enterprise owners. For instance, Mwangi (2014) found that cognitive biases such as overconfidence and mental accounting influenced how small and medium-sized enterprises owners managed their finances and interacted with tax authorities.

Mental accounting refers to the psychological process where individuals categorize and treat money differently based on subjective criteria such as the source of income, intended use, or emotional significance (Thaler, 2015). This concept is pivotal in understanding how small and medium-sized enterprises owners in Nairobi County, Kenya, manage their financial resources and comply with tax obligations. The study chose mental accounting as a variable because it offers insights into how small and medium-sized enterprises owners partition their finances, which can influence their decision-making regarding tax compliance (Thaler, 2019). For instance, separate budgets allow small and medium-sized enterprises owners to allocate specific funds for different purposes, potentially affecting how they prioritize tax payments (Heath & Soll, 2016). Similarly, categorical spending involves allocating money to distinct categories, influencing the perceived importance of tax obligations relative to other expenditures (Soman, 2021). Earmarked funds refer to setting aside money for specific purposes, which can lead small and medium-sized enterprises owners to prioritize other financial commitments over taxes (Thaler, 2015). Lastly, the sunk cost effect may influence tax compliance as small and medium-sized enterprises owners consider past investments when deciding on tax reporting strategies (Arkes & Blumer, 2015). Understanding these indicators provides a comprehensive view of how mental accounting shapes tax compliance behaviours among small and medium-sized enterprises owners.

Risk aversion refers to the tendency of individuals to prefer safer options over riskier ones when faced with uncertain outcomes (Kahneman & Tversky, 2019). In the context of small and medium-sized enterprises owners in Nairobi County, Kenya, risk aversion plays a crucial role in financial decision-making and tax compliance strategies. The study selected risk aversion as a variable because it provides insights into how small and medium-sized enterprises owners' attitudes towards financial risk influence their willingness to comply with tax regulations (Guiso, Sapienza, & Zingales, 2018). For example, small and medium-sized enterprises owners exhibiting low investments may prioritize stable returns and therefore are more likely to comply with tax obligations to avoid financial instability (Guiso et al., 2018). Similarly, those who avoid debt may demonstrate a preference for financial safety, translating into cautious tax compliance behaviours (Hofmann, Hoelzl, & Kirchler, 2018). Making safe choices in business operations can extend to tax behaviours, where small and medium-sized enterprises owners adhere to tax laws to mitigate risks and uncertainties (Fink & Meier, 2016). Moreover, the usage of insurance reflects a proactive approach to risk management, potentially indicating a higher propensity for tax compliance (Bordalo, Gennaioli, & Shleifer, 2022).

Authority Trust Bias refers to individuals' confidence in governmental institutions and officials to act in their best interests, uphold fairness, and implement effective policies (Tyler, 2020). This concept is crucial for understanding how small and medium-sized enterprises owners in Nairobi County, Kenya, perceive and interact with tax authorities. The study chose Authority Trust Bias as a variable because it reflects the relational aspect of tax compliance, influencing small and medium-sized enterprises owners' willingness to cooperate with tax regulations (Feld & Frey, 2017). Government credibility plays a significant role, as perceived fairness and honesty of tax authorities can enhance voluntary compliance among small and medium-sized enterprises

(Murphy, 2024). Moreover, compliance willingness is influenced by small and medium-sized enterprises owners' belief that tax regulations are legitimate and necessary for societal benefit (Tyler, 2020). Support for regulations is another indicator, where small and medium-sized enterprises owners who perceive tax laws as supportive of economic development are more likely to comply voluntarily (Kirchler, Hoelzl, & Wahl, 2018). Tax transparency also plays a critical role, as clear and accessible information about tax policies and procedures fosters trust and compliance (Pomeranz, 2015).

Overconfidence bias refers to the tendency of individuals to overestimate their knowledge, skills, or abilities, leading to excessive confidence in their judgments and decisions (Moore & Healy, 2018). This cognitive bias plays a significant role in influencing how small and medium-sized enterprises owners in Nairobi County, Kenya, perceive and approach tax compliance. The study selected overconfidence bias as a variable because it sheds light on how inflated beliefs about one's capabilities can impact tax reporting behaviours (Moore & Healy, 2018). High self-efficacy, where small and medium-sized enterprises owners believe strongly in their ability to manage tax obligations effectively, may lead to overestimation of their tax knowledge and compliance capabilities (Camerer & Lovallo, 2019). Knowledge overestimation occurs when small and medium-sized enterprises owners believe they understand tax laws better than they actually do, potentially leading to non-compliance due to misinformation (Camerer & Lovallo, 2019). Underestimating risks associated with tax evasion is common among overconfident individuals, as they may overlook or downplay potential penalties or consequences (Shefrin, 2017). Optimism bias also plays a role, where small and medium-sized enterprises owners may be overly optimistic about their chances of evading detection or avoiding negative outcomes related to tax non-compliance (Moore & Healy, 2018).

1.1.2 Behavioural Biases and Tax Compliance

Tax compliance, defined as the voluntary adherence of taxpayers to tax laws without the need for intervention or enforcement from regulatory bodies (James and Alley, 2020), is crucial for economic stability and development. Brown and Mazur (2018) describe tax compliance in terms of several types, including payment compliance, filing compliance, and reporting compliance. Despite numerous reforms and modernization of tax systems, ensuring that taxpayers adhere to tax regulations remains a significant challenge (Slemrod, 2018).

Behavioural biases play a significant role in influencing tax compliance decisions, often leading to substantial revenue losses for governments (Alm, 2018). Cognitive biases such as overconfidence, loss aversion, and mental accounting can cause taxpayers to underestimate their liabilities or delay payments (Kogler et al., 2020). These biases affect taxpayers' perceptions and actions, creating a gap between taxes owed and taxes paid on time, which underscores the extent of non-compliance and its adverse impacts on economic stability (OECD, 2021).

Social norms, perceived fairness, and trust in government are critical behavioural factors that influence tax compliance. Social norms can shape individuals' perceptions of tax obligations, leading to higher compliance if paying taxes is viewed as a societal expectation. Perceived fairness in the tax system fosters a sense of equity among taxpayers, making them more willing to comply when they believe the tax burden is distributed fairly. Trust in government is crucial as citizens are more likely to comply with tax laws when they believe their taxes are being used effectively and transparently (D'Arcy, 2018).

In many African countries, including Kenya, behavioural biases such as mistrust in tax authorities, perceived inequities in the tax system, and the complexity of tax laws discourage compliance, particularly among small and medium-sized enterprises (SMES) (Uadiale et al., 2020;

Abdul, 2019). The predominance of the informal sector complicates tax administration and compliance efforts. In Kenya, small and medium-sized enterprises form a substantial part of Nairobi County's economy, yet many small and medium-sized enterprises owners exhibit low tax compliance levels due to cognitive biases and perceptions of tax fairness (Wanjohi, 2019).

To address these issues, comprehensive strategies that consider both behavioural insights and systemic reforms are necessary. This includes implementing taxpayer education programs, trust-building initiatives, and simplifying tax codes to reduce complexity and confusion (Saad, 2019). By addressing these behavioural and institutional factors, it is possible to enhance voluntary tax compliance, improve tax administration, and ultimately increase revenue generation for sustainable development.

The study will utilize the indicators of timely filing, accurate reporting, full payment, and audit outcomes to measure tax compliance due to their comprehensive and multifaceted nature, which collectively capture the critical aspects of compliance behaviour. Timely filing ensures that taxpayers meet deadlines, thus reflecting formal compliance (Nurmantu, 2021). Accurate reporting is essential as it signifies material compliance by ensuring that the reported information aligns with tax laws (James & Alley, 2020). Full payment is a straightforward indicator of financial compliance, reflecting the taxpayer's adherence to their monetary obligations (Brown & Mazur, 2018). Audit outcomes provide an external validation of compliance by evaluating the correctness and honesty of tax declarations (Cobham, 2017). These indicators are chosen because they collectively offer a holistic view of tax compliance, covering the procedural, substantive, and financial dimensions, unlike other potential measures that might focus on only one aspect.

1.1.3 Small and medium-sized enterprise Owners in Nairobi County

Small and Medium-sized Enterprises (small and medium-sized enterprises) in Nairobi County play a crucial role in Kenya's economy, contributing significantly to employment and economic growth. According to the Kenya National Bureau of Statistics (KNBS), small and medium-sized enterprises account for approximately 33.8% of Kenya’s Gross Domestic Product (GDP) and employ around 86% of the private sector workforce, emphasizing their vital role in economic development (KNBS, 2019). The most common types of small and medium-sized enterprises in Nairobi include Retail Trade: 40%, Manufacturing: 25%, Services: 20%, Construction: 10%, Agriculture: 3%, Other: 2% as per Micro and Small Enterprises Authority (MSEA) (2023). These sectors are particularly popular among small and medium-sized enterprises owners because of the relatively low startup costs and the high demand for their goods and services in a growing urban population (IFC, 2020).

While retail and services dominate the small and medium-sized enterprises landscape in Nairobi, there are some sectors where small and medium-sized enterprises participation is relatively low. Manufacturing and technology, for example, are less common due to the higher capital and technical expertise required to enter these industries. According to a report by the International Finance Corporation (IFC), only about 10% of Kenyan small and medium-sized enterprises operate in the industrial and manufacturing sectors (IFC, 2020). The challenges of accessing the necessary equipment, raw materials, and skilled labour make it difficult for small and medium-sized enterprises owners to venture into these areas, especially when compared to the easier entry into retail and services.

Geographically, small and medium-sized enterprises in Nairobi are unevenly distributed across the county, with higher concentrations in commercial hubs like the Central Business District (CBD), Westlands, and Eastleigh. These areas are attractive to small and medium-sized enterprises owners because they offer access to a large customer base, better infrastructure, and proximity to suppliers (KIPPRA, 2020). Conversely, in more peripheral areas like Kangemi and Kawangware, the number of small and medium-sized enterprises is lower due to infrastructure challenges and lower purchasing power among local consumers. This distribution pattern highlights the connection between small and medium-sized enterprises success and access to critical business resources like transportation, utilities, and markets.

The employment impact of Nairobi's small and medium-sized enterprises is substantial. They provide job opportunities to a significant portion of the population, particularly in urban areas where formal employment can be limited. The Kenya National Bureau of Statistics (KNBS) estimates that small and medium-sized enterprises employ about 86% of the total private sector workforce in Kenya, contributing to poverty alleviation and improving livelihoods (KNBS, 2019). Given Nairobi's status as the country's commercial hub, many of these employment opportunities are found within the county, which serves as a key driver for urban employment and economic growth.

However, access to financing remains a persistent challenge for small and medium-sized enterprises owners in Nairobi. A report by the Kenya Institute for Public Policy Research and Analysis (KIPPRA) found that over 70% of small and medium-sized enterprises struggle with securing affordable credit, which limits their ability to expand and modernize (KIPPRA, 2020). Most small and medium-sized enterprises rely on personal savings, informal savings groups, or microfinance institutions, which often provide insufficient capital for scaling up operations. This financial barrier can hinder the growth potential of small and medium-sized enterprises and sometimes lead to business closures, especially during economic downturns or periods of reduced consumer demand.

In terms of revenue generation, small and medium-sized enterprises in Nairobi contribute significantly to the government's tax revenues, although a large proportion of them operate informally. The Kenya Revenue Authority (KRA) reports that approximately 80% of small and medium-sized enterprises in Nairobi function within the informal sector, making tax compliance a challenge (KRA, 2021). Despite these challenges, formal small and medium-sized enterprises contribute a significant amount of revenue, with the KRA recording KES 474.5 billion from the small and medium-sized enterprises sector during the 2019/2020 fiscal year (KRA, 2021). This revenue is essential for funding public services such as healthcare, education, and infrastructure development.

Nairobi's small and medium-sized enterprises have also shown resilience and adaptability in the face of challenges, particularly during the COVID-19 pandemic. A report by the Kenya Private Sector Alliance (KEPSA) indicated that around 30% of small and medium-sized enterprises in Nairobi adopted digital solutions to continue operating during the pandemic, such as transitioning to e-commerce platforms and providing delivery services (KEPSA, 2021). This shift allowed many businesses to maintain operations despite lockdown measures and economic disruptions, demonstrating the innovative capacity of small and medium-sized enterprises owners to adapt to changing market conditions.

In conclusion, small and medium-sized enterprises in Nairobi County are a diverse and dynamic sector that plays a critical role in the economy. They are concentrated primarily in retail and service sectors, providing employment and contributing significantly to the country's GDP and tax revenue. However, barriers such as limited access to financing and the challenges of formalization continue to hinder their full potential. Despite these obstacles, Nairobi's small and medium-sized enterprises remain resilient, adapting to new technologies and market conditions, thus ensuring their ongoing contribution to Kenya's socio-economic development.

1.2 Statement of the Problem

In an ideal setting, tax compliance is characterized by voluntary adherence to tax laws, where taxpayers file returns accurately and on time, and remit full payments without the need for excessive enforcement. A simple and transparent tax system, supported by clear guidelines and responsive tax authorities, fosters trust, fairness, and cooperation between taxpayers and government. This environment enhances tax morale and promotes sustainable revenue generation, particularly among small and medium-sized enterprise (SME) owners, thereby strengthening public service delivery and economic growth (Alm, 2018; D'Arcy, 2018; Kogler et al., 2020; Mpofu, 2022; OECD, 2021).

In Kenya, however, this ideal remains largely unmet. Despite continued reforms, compliance rates are low: in 2023, only about 63% of registered taxpayers filed returns, leaving a significant proportion non-compliant (KRA, 2024). At the same time, the tax-to-GDP ratio has declined, with domestic revenue collections falling short of targets, reaching KSh. 2.112 trillion against the KSh. 2.189 trillion targets by April 2025 (KRA, 2025). This downward trend heightens fiscal risks, undermines resource mobilization, and signals weaknesses in risk management within the tax administration framework. Without stronger behavioural-institutional interventions, gaps in revenue performance are likely to persist, limiting the government's capacity to meet developmental priorities (KRA, 2025).

Existing studies provide useful insights but reveal a critical gap. Mohwa and Achoki (2022) examined audit practices, Omboi and Mohwa (2022) explored penalties and interest, while KRA (2023) assessed compliance in relation to complexity and fairness. More recently, Mwangi and Ngugi (2023) focused on trust in authorities, and Onyango (2024) studied tax education initiatives. However, few studies between 2022 and 2025 explicitly interrogate how behavioural biases such as overconfidence, mental accounting, and risk aversion directly influence compliance among SME taxpayers in Nairobi. This omission is significant because such biases affect decision-making even under effective institutional systems, yet their impact remains empirically underexplored. Therefore, the literature lacks an integrated behavioural-institutional framework linking these biases to compliance outcomes. This study seeks to address this gap by investigating the role of behavioural biases in shaping tax compliance among SMEs in Nairobi County. By integrating behavioural insights with risk management considerations, the research will generate evidence-based recommendations for improving compliance strategies, simplifying taxpayer engagement, and enhancing revenue performance to support sustainable economic development.

1.3 Objective of the Study

1.3.1 General Objective

The main objective of the study was to examine the effect of behaviour biases on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya.

1.3.2 Specific Objectives

i. To assess the effect of mental accounting on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya.

ii. To analyse the effect of risk aversion on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya.

iii. To evaluate the effect of authority trust bias on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya.

iv. To assess the effect of overconfidence bias on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya.

1.4 Significance of the Study

1.4.1 Government and Tax Authorities

The significance of studying the effect of behavioural biases on tax compliance among small and medium-sized enterprises owners in Nairobi County is profound for the government and tax authorities. Understanding these biases provides insights into why tax compliance rates might be lower than expected, despite rigorous enforcement measures and penalties. By recognizing patterns of behaviour that lead to non-compliance, such as over-optimism, loss aversion, and social norms, tax authorities can design more effective communication and educational campaigns that address these biases directly. This can lead to a more voluntary and positive approach to tax compliance, reducing the need for punitive measures and fostering a culture of transparency and trust between the government and business owners.

Moreover, this study can guide the development of policies and interventions tailored to the small and medium-sized enterprises sector, which is a significant contributor to the Kenyan economy. By improving tax compliance rates, the government can increase its revenue base without necessarily increasing tax rates. This additional revenue can be reinvested in public services and infrastructure, further supporting the growth and sustainability of small and medium-sized enterprises. Additionally, a better understanding of taxpayer behaviour can help in streamlining tax processes, making them more user-friendly and reducing the administrative burden on both the tax authorities and the business owners.

1.4.2 Small and Medium Enterprises (small and medium-sized enterprises)

small and medium-sized enterprises owners understanding behavioural biases and their impact on tax compliance can lead to more informed decision-making and better financial management. Awareness of these biases allows small and medium-sized enterprises owners to recognize and mitigate their own tendencies that might lead to non-compliance. This can include adjusting for over-optimism in revenue projections or understanding how loss aversion might lead to underreporting income. Improved compliance not only avoids the risks of penalties and legal issues but also builds a positive reputation with tax authorities, which can be beneficial for future business dealings and opportunities.

Additionally, higher tax compliance can contribute to the stability and sustainability of small and medium-sized enterprises by fostering a more predictable financial environment. When small and medium-sized enterprises owners understand and manage their tax obligations better, they can plan their cash flows more effectively, invest more confidently in business expansion, and avoid unexpected financial crises that might arise from tax audits or penalties. This stability can enhance the overall business climate in Nairobi County, encouraging more entrepreneurs to start and grow their businesses, ultimately leading to economic growth and job creation.

1.4.3 Policymakers and Regulators

This study provides critical insights into the design and implementation of tax policies that are fair, efficient, and effective. By understanding the behavioural biases that affect tax compliance, policymakers can craft regulations that are more likely to be adhered to by small and medium-sized enterprises owners. This might include simplified tax procedures, incentives for timely tax payments, and educational programs that demystify tax obligations. A policy environment that considers human behaviours is likely to be more successful in achieving compliance and can reduce the costs associated with enforcement and litigation.

Furthermore, this study can inform broader economic policies aimed at supporting the small and medium-sized enterprises sector. By identifying the specific behavioural challenges faced by small and medium-sized enterprises owners, regulators can develop targeted interventions that promote financial literacy, risk management, and long-term business planning. These interventions can help small and medium-sized enterprises become more resilient and competitive, driving innovation and economic development in Nairobi County and beyond.

1.4.4 Financial Institutions

Financial institutions, including banks and microfinance organizations, can benefit from this study by gaining a deeper understanding of the financial behaviours and challenges faced by small and medium-sized enterprises owners. Recognizing the impact of behavioural biases on tax compliance can help these institutions develop tailored financial products and services that address the specific needs and pain points of small and medium-sized enterprises. For example, products that help manage cash flow more effectively or provide tax advisory services can enhance the financial stability of small and medium-sized enterprises, making them more attractive clients for financial institutions.

Moreover, better tax compliance among small and medium-sized enterprises can improve their creditworthiness and reduce the perceived risk for lenders. When small and medium-sized enterprises are seen as reliable and compliant with their tax obligations, financial institutions are more likely to extend credit and other financial services. This can lead to increased investment in the small and medium-sized enterprises sector, driving business growth and contributing to the overall economic health of Nairobi County.

1.4.5 Academic and Research Institutions

This study adds to the body of knowledge on tax compliance and behavioural economics, providing a rich area for further research and exploration. The insights gained from this study can be used to develop new theories and models that explain taxpayer behaviours more accurately. This can lead to more robust and predictive tools that can be used by policymakers, tax authorities, and businesses alike.

Furthermore, the findings of this study can be incorporated into educational curricula, helping to train the next generation of economists, policymakers, and business leaders. By understanding the role of behavioural biases in tax compliance, students and researchers can develop more nuanced and effective strategies for addressing tax compliance issues. This can lead to innovative solutions that are grounded in a deep understanding of human behaviour, ultimately contributing to the development of more effective and sustainable economic policies.

1.4.6 Tax Consultants and Advisors

Tax consultants and advisors can use the insights from this study to provide better services to their clients. Understanding the behavioural biases that affect tax compliance allows these professionals to offer more personalized and effective advice to small and medium-sized enterprises owners. They can help their clients recognize and overcome these biases, leading to better compliance and financial outcomes. This can enhance the reputation and value of tax consultants and advisors, making them indispensable partners for small and medium-sized enterprises.

Additionally, this study can help tax consultants and advisors develop new tools and methodologies for assessing and addressing tax compliance issues. By incorporating behavioural insights into their practices, they can offer more comprehensive and proactive services, helping small and medium-sized enterprises navigate the complexities of tax regulations and improve their overall financial health. This can lead to long-term relationships and increased trust between tax professionals and their clients.

1.4.7 Broader Community and Economy

The broader community and economy also stand to benefit from improved tax compliance among small and medium-sized enterprises owners. When small and medium-sized enterprises comply with tax regulations, it ensures a fairer distribution of the tax burden, which can lead to improved public services and infrastructure. This, in turn, creates a more conducive environment for business and economic activities, benefiting the entire community. Improved tax compliance can also enhance social trust and cohesion, as businesses are seen as contributing their fair share to the development and well-being of society.

Moreover, the economic growth driven by a robust and compliant small and medium-sized enterprises sector can lead to job creation and increased economic opportunities for the residents of Nairobi County. A thriving small and medium-sized enterprises sector can attract investment, foster innovation, and stimulate demand for goods and services, creating a virtuous cycle of growth and development. In this way, the insights from this study can contribute to the broader goal of sustainable economic development and improved quality of life for all citizens.

1.5 Research Questions

i. What is the effect of mental accounting on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya?

ii. What is the effect of risk aversion on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya?

iii. What is the effect of authority trust bias on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya?

iv. What is the effect of overconfidence bias on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya?

1.6 Scope of the Study

The scope of the study titled "The Effect of Behavioural Biases on Tax Compliance among Small and Medium-Sized Enterprises Owners in Nairobi County, Kenya" encompasses an examination of various behavioural biases such as mental accounting, risk aversion, Authority Trust Bias, and overconfidence bias among small and medium-sized enterprises owners. It aims to investigate how these cognitive tendencies influence tax compliance behaviours in Nairobi County. The study will analyse indicators like separate budgets, categorical spending, earmarked funds, and sunk costs for mental accounting; low investments, debt avoidance, safe choices, and insurance usage for risk aversion; government credibility, compliance willingness, regulation support, and tax transparency for Authority Trust Bias; and high self-efficacy, knowledge overestimation, underestimation of risks, and optimism bias for overconfidence bias. By focusing on these variables, the study seeks to provide insights that can inform policy interventions and strategies aimed at improving tax compliance rates among small and medium-sized enterprises in the region.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter summarizes the literature examined in relation to the study issue. This body of literature includes various theories and past scholarly research on behavioural biases and tax compliance, which serve as the basis for this study's approach. The review encompasses foundational concepts, key findings, and significant developments in the field, providing a comprehensive overview of the existing knowledge. By analysing these sources, the study identifies gaps, trends, and insights that inform the research methodology and framework. This examination ensures that the study is grounded in established academic work while contributing new perspectives to the ongoing discourse on financial risks and performance.

2.2 Theoretical Review

This section delves into the theories pertinent to this study. Key theories include Mental Accounting Theory, which explains how individuals categorize and manage their financial resources; Prospect Theory, which describes decision-making under risk and uncertainty; Institutional Trust Theory, which examines the impact of Authority Trust Bias on compliance behaviours; and Behavioural Finance Theory, which explores the influence of psychological factors on financial decisions. These theories provide a comprehensive framework for understanding the behavioural biases affecting tax compliance among small and medium-sized enterprises owners in Nairobi County, Kenya. Each theory offers unique insights into different aspects of financial behaviours, collectively enriching the analysis and findings of this study.

2.2.1 Framing Theory

Framing Theory, introduced by Erving Goffman in the 1970s, explains how individuals perceive and interpret information based on its presentation. According to Goffman (1974), the way information is framed can significantly influence decision-making and behaviours. This cognitive process impacts how individuals evaluate economic outcomes, how they perceive gains and losses, and ultimately how they manage their finances.

Framing significantly impacts tax compliance among small and medium-sized enterprises owners in Nairobi County. small and medium-sized enterprises owners often interpret their financial responsibilities through different frames, which influences their tax behaviours. According to Kirchler et al. (2017), framing leads individuals to react differently based on how financial information is presented, which can affect their tax compliance decisions. For instance, small and medium-sized enterprises owners may perceive business income and personal income through distinct frames, leading to varied compliance levels based on which account is perceived to be taxed.

Moreover, the framing of financial obligations can result in inconsistent tax compliance practices. As noted by Lamberton (2019), when small and medium-sized enterprises owners compartmentalize their income based on frames, they may prioritize some financial obligations over others. This compartmentalization often results in underreporting of taxable income or delayed tax payments. The tendency to interpret income through different frames can therefore undermine overall tax compliance.

Further, framing also influences the perceived fairness and complexity of the tax system. A study by Adams and Webley (2020) revealed that small and medium-sized enterprises owners' perceptions of tax fairness and complexity are shaped by how they interpret their income and expenses. If small and medium-sized enterprises owners view the tax system as unfair or overly complex based on its framing, they may be more inclined to evade taxes. Framing thus serves as a lens through which tax policies are evaluated, impacting compliance.

small and medium-sized enterprises owners' framing practices can be linked to their risk perceptions and behaviours. According to Jayasinghe and Wickramasinghe (2018), the way small and medium-sized enterprises owners categorize and perceive their finances through frames can affect their risk tolerance and compliance attitudes. Those who view tax payments framed as a loss from a specific category may adopt riskier behaviours, such as tax evasion, to protect their perceived financial stability. Framing thus plays a crucial role in shaping tax compliance behaviours among small and medium-sized enterprises owners in Nairobi County.

Despite its insights, Framing Theory has faced several critiques. One major criticism is its assumption of simplistic interpretations. Critics argue that the theory oversimplifies human behaviours and does not account for the complexities of financial decision-making. As highlighted by Morewedge et al. (2020), framing may not fully explain why individuals make certain financial decisions, as it does not consider other cognitive and emotional factors influencing behaviours.

Another critique is the theory's limited empirical support. While framing is a widely accepted concept, some researchers question the robustness of its empirical evidence. According to Shefrin (2018), many studies supporting framing rely on anecdotal evidence or small sample sizes, which may not be generalizable. This raises concerns about the theory's applicability in diverse contexts, such as tax compliance among small and medium-sized enterprises owners.

Additionally, Framing Theory has been criticized for its lack of predictive power. Critics argue that the theory describes how people categorize and perceive information but does not provide concrete predictions about financial behaviours. As noted by Fernandez and Lynch (2019), while framing can explain past behaviours, it is less effective in predicting future financial decisions, limiting its practical utility.

The theory's focus on individual behaviours has been questioned. Critics argue that Framing Theory overlooks the broader social and economic factors influencing financial decisions. According to Yang and Lester (2021), factors such as cultural norms, social influences, and economic conditions also play a significant role in shaping financial behaviours, which framing does not adequately address. This narrow focus limits the theory's comprehensiveness and applicability in complex financial contexts.

In response to these critiques, several improvements have been proposed to enhance Framing Theory. One significant improvement is the integration of additional cognitive and emotional factors. Researchers like Soman and Aaker (2018) have suggested incorporating elements such as emotions, heuristics, and biases into the theory to provide a more comprehensive understanding of financial decision-making. This integration aims to address the theory's oversimplification of human behaviours.

Moreover, efforts have been made to strengthen the empirical foundation of Framing Theory. Recent studies have employed larger and more diverse samples to validate the theory's principles. For instance, a study by Barone et al. (2019) used a large-scale survey to investigate framing practices across different populations, providing more robust empirical support. This approach aims to enhance the theory's generalizability and applicability in various contexts.

Another improvement involves enhancing the theory's predictive power. Researchers have developed models that incorporate framing principles with other behavioural factors to predict financial behaviours more accurately. For example, Liu and Chuang (2020) developed a model combining framing with prospect theory to predict investment behaviours, demonstrating the potential for more precise predictions. This improvement aims to increase the practical utility of the theory. The theory has been expanded to include broader social and economic influences. Recent research by Sussman and Alter (2022) has incorporated social and cultural factors into Framing Theory, recognizing their impact on financial behaviours. This expansion aims to provide a more holistic understanding of financial decision-making by considering the interplay between individual and contextual factors.

In this study, Framing Theory underpins the independent variable of behavioural biases, specifically how overconfidence, mental accounting, and risk aversion influence tax compliance among SMEs in Nairobi County. The theory explains that the way financial responsibilities and tax obligations are perceived and categorized through different frames directly affects compliance behaviours. By linking framing practices to decisions such as underreporting income, delaying payments, or perceiving taxes as unfair, the theory provides a psychological lens for understanding why SMEs may fail to comply fully with tax laws. Its importance lies in demonstrating that tax compliance is not only shaped by institutional structures but also by the cognitive framing of financial decisions, thereby offering policymakers and tax authorities practical insights for designing interventions that address behavioural as well as structural barriers to compliance.

2.2.2 Prospect Theory

Prospect Theory, developed by Daniel Kahneman and Amos Tversky in 1979, challenges traditional economic theories that assume individuals are rational actors who make decisions based on maximizing expected utility. Instead, Prospect Theory suggests that people value gains and losses differently, leading to decisions that deviate from rationality. According to Kahneman and Tversky (1979), individuals are generally more sensitive to potential losses than equivalent gains, a concept known as loss aversion. The theory posits that people use a reference point to evaluate outcomes, and decisions are made based on perceived gains or losses relative to this reference point.

Prospect Theory provides a framework for understanding the risk aversion behaviour of small and medium-sized enterprises owners in Nairobi County regarding tax compliance. small and medium-sized enterprises owners, like other individuals, are likely to exhibit loss aversion, meaning they are more motivated to avoid losses than to achieve gains. According to Alm and Torgler (2019), this loss aversion can influence tax compliance decisions, as small and medium-sized enterprises owners may perceive tax payments as a loss relative to their financial reference point.

Further, the concept of framing in Prospect Theory is crucial in understanding how small and medium-sized enterprises owners assess tax compliance risks. small and medium-sized enterprises owners are likely to interpret tax obligations differently based on how these obligations are presented or framed. For instance, presenting taxes as a penalty for non-compliance rather than a contribution to public goods can heighten the perception of loss, leading to increased risk aversion and potentially higher compliance rates (Feld & Frey, 2018).

Prospect Theory also suggests that small and medium-sized enterprises owners' tax compliance behaviour can be influenced by the perceived probability and impact of audits and penalties. According to Kirchler et al. (2020), the fear of audits and the potential financial penalties can amplify loss aversion, making small and medium-sized enterprises owners more risk-averse and thus more likely to comply with tax regulations. This behaviour aligns with the theory's prediction that individuals weigh potential losses more heavily than equivalent gains.

Moreover, the reference point in Prospect Theory is dynamic and can shift based on contextual factors. small and medium-sized enterprises owners may adjust their reference points based on changes in the economic environment, policy updates, or personal financial circumstances. As noted by Gangl et al. (2019), during economic downturns, the reference point may shift lower, making the prospect of tax payments more burdensome and increasing risk aversion. This shift underscores the importance of understanding the context in which tax compliance decisions are made.

Despite its influential contributions, Prospect Theory has faced several critiques. One major criticism is its descriptive nature. Critics argue that while Prospect Theory effectively describes how people make decisions under risk, it lacks normative guidelines on how individuals should make optimal decisions. According to Friedman et al. (2019), the theory does not provide a clear framework for improving decision-making processes, limiting its practical application.

Another critique is the theory's reliance on the concept of loss aversion, which some researchers believe is not universally applicable. For instance, Gal and Rucker (2018) argue that loss aversion may not be as prevalent or consistent across different cultures and contexts as Prospect Theory suggests. This variability raises questions about the universality of the theory's principles and their applicability in diverse settings, such as tax compliance among small and medium-sized enterprises owners.

Additionally, Prospect Theory has been criticized for its assumption of stable preferences. Critics contend that individual preferences can be influenced by various factors, such as emotions, social influences, and cognitive biases, which are not adequately accounted for in the theory. According to McGraw and Tetlock (2020), these dynamic factors can lead to inconsistencies in decision-making, challenging the stability of preferences assumed by Prospect Theory.

Finally, the empirical validation of Prospect Theory has been questioned. While numerous studies support the theory's predictions, some researchers argue that the experimental settings used to test the theory do not accurately reflect real-world decision-making environments. As noted by Rabin (2018), the controlled conditions in laboratory experiments may not capture the complexity and variability of decisions made in natural settings, such as those involving tax compliance among small and medium-sized enterprises owners.

In response to these critiques, several improvements have been made to enhance Prospect Theory. One significant improvement is the incorporation of emotional and psychological factors into the theory. Researchers like Loewenstein et al. (2018) have integrated elements such as emotions, stress, and cognitive biases into the framework, providing a more comprehensive understanding of decision-making under risk. This integration aims to address the theory's limitations in explaining the dynamic nature of preferences.

Moreover, efforts have been made to test Prospect Theory in more diverse and realistic settings. Recent studies have employed field experiments and real-world data to validate the theory’s principles. For instance, a study by Wakker and Deneffe (2019) used real-world tax compliance data to examine the impact of loss aversion and framing on compliance behaviour among small and medium-sized enterprises owners. This approach aims to enhance the ecological validity of the theory’s predictions.

Another improvement involves the development of normative guidelines based on Prospect Theory. Researchers have proposed practical strategies for decision-making under risk that align with the theory’s principles. For example, Sunstein (2020) suggested using choice architecture and nudges to help individuals make better decisions by framing options in ways that minimize perceived losses. These guidelines aim to enhance the practical application of Prospect Theory.

The theory has been expanded to include cultural and contextual factors. Recent research by Thaler and Ganser (2022) has incorporated cross-cultural comparisons to examine how cultural norms and values influence loss aversion and risk preferences. This expansion aims to provide a more nuanced understanding of decision-making across different contexts and enhance the generalizability of the theory.

In this study, Prospect Theory underpins the independent variable of **risk aversion**, illustrating how SMEs in Nairobi County make tax compliance decisions under conditions of uncertainty. The theory connects with the study by explaining that SMEs often perceive tax payments as losses relative to their financial reference points, which heightens loss aversion and shapes compliance behaviours. It further clarifies why the fear of audits, penalties, and perceived risks of non-compliance can strongly influence whether SMEs comply with tax regulations. Its importance lies in highlighting that tax compliance is not merely an institutional or legal issue but also a psychological one, where understanding loss aversion and risk perceptions can help policymakers design more effective compliance strategies that reduce resistance and improve voluntary tax adherence.

2.2.3 Theory of Planned Behaviour

Theory of Planned Behaviour, developed by Ajzen in the 1980s, posits that individual behaviour is influenced by three key components: attitudes, subjective norms, and perceived behavioural control. According to Ajzen (1991), individuals make conscious decisions based on their attitudes towards the behaviour, the social pressures they perceive, and their perception of the ease or difficulty of performing the behaviour. This theory suggests that when individuals have favourable attitudes toward compliance, perceive social support for complying, and believe they have control over their actions, they are more likely to engage in compliant behaviour.

Theory of Planned Behaviour is instrumental in understanding the tax compliance behaviour of small and medium-sized enterprises owners in Nairobi County, Kenya. Trust in tax authorities significantly influences compliance levels among small and medium-sized enterprises owners. According to Bergman and Nevarez (2020), small and medium-sized enterprises owners who perceive tax authorities as competent and fair are more likely to comply with tax regulations. This trust reduces the perceived risk of being exploited by the authorities and increases the willingness to adhere to tax laws.

Furthermore, the integrity of tax authorities plays a crucial role in fostering trust. small and medium-sized enterprises owners are more likely to comply with tax obligations if they believe that tax officials are honest and act in the public interest. As noted by Kirchler, Hoelzl, and Wahl (2018), perceptions of corruption and misconduct among tax authorities can erode trust and lead to increased tax evasion. Therefore, maintaining high ethical standards and transparency within tax institutions is essential for building trust and enhancing compliance.

Theory of Planned Behaviour also highlights the importance of communication and engagement between tax authorities and small and medium-sized enterprises owners. Effective communication can enhance trust by making tax processes more transparent and understandable. According to Murphy (2019), when tax authorities engage with taxpayers and provide clear information about tax obligations and benefits, trust levels increase, leading to higher compliance. This engagement helps small and medium-sized enterprises owners feel valued and respected, further reinforcing their trust in the authorities.

Moreover, the perceived fairness of tax policies and their implementation is crucial for building trust. small and medium-sized enterprises owners are more likely to trust and comply with tax authorities if they perceive the tax system as fair and equitable. A study by Alm, Jackson, and McKee (2018) found that perceptions of distributive and procedural fairness significantly impact tax compliance behaviour. When small and medium-sized enterprises owners believe that tax policies are applied fairly and that they receive fair treatment, their trust in the authorities strengthens, promoting compliance.

Despite its valuable insights, Theory of Planned Behaviour has faced several critiques. One major criticism is its assumption of rational behaviour based on trust. Critics argue that the theory oversimplifies the complex motivations behind compliance behaviours. According to Scholz and Lubell (2018), trust alone may not fully explain compliance, as other factors such as economic incentives, social norms, and enforcement mechanisms also play significant roles.

Another critique is the theory's limited scope in addressing diverse contexts and cultures. Theory of Planned Behaviour primarily focuses on Western contexts, where institutional structures and trust dynamics may differ significantly from those in other regions. For instance, Smith and Stoker (2019) argue that the theory may not adequately capture the trust dynamics in developing countries, where institutional weaknesses and corruption are more prevalent. This limitation raises concerns about the theory's applicability in varied settings, such as tax compliance among small and medium-sized enterprises owners in Nairobi County.

Additionally, Theory of Planned Behaviour has been criticized for its static view of trust. Critics contend that trust is a dynamic and evolving construct influenced by various factors, including past experiences, social interactions, and changes in institutional performance. According to van der Meer and Hakhverdian (2020), the theory does not sufficiently account for the temporal and situational fluctuations in trust levels. This oversight can limit the theory's ability to explain changes in compliance behaviour over time.

Finally, the empirical validation of Theory of Planned Behaviour has been questioned. While many studies support the theory's predictions, some researchers argue that the evidence is mixed and context-dependent. For example, Levi and Stoker (2018) highlight that trust may not always lead to compliance, as other factors such as perceived legitimacy and enforcement intensity can moderate this relationship. This variability suggests that the theory may not universally predict compliance behaviours.

In response to these critiques, several improvements have been proposed to enhance Theory of Planned Behaviour. One significant improvement is the integration of additional behavioural and psychological factors into the theory. Researchers like Tyler and Lind (2018) have suggested incorporating elements such as perceived legitimacy, social norms, and individual values to provide a more comprehensive understanding of compliance behaviour. This integration aims to address the theory's limitations in explaining the multifaceted motivations behind compliance.

Moreover, efforts have been made to test Theory of Planned Behaviour in diverse cultural and contextual settings. Recent studies have employed cross-cultural comparisons and field experiments to validate the theory's principles in different environments. For instance, a study by Hakhverdian and Mayne (2020) examined trust dynamics in various countries, including developing regions, to provide a more nuanced understanding of institutional trust and compliance. This approach aims to enhance the generalizability and applicability of the theory across different contexts.

Another improvement involves incorporating a dynamic perspective on trust. Researchers have developed models that consider the temporal and situational fluctuations in trust levels. For example, Levi, Sacks, and Tyler (2018) proposed a dynamic trust model that accounts for changes in institutional performance, social interactions, and individual experiences over time. This improvement aims to provide a more accurate and flexible explanation of compliance behaviours.

Lastly, the theory has been expanded to include the interplay between trust and other compliance-related factors. Recent research by Gangl, Hofmann, and Kirchler (2019) has examined how trust interacts with enforcement mechanisms, economic incentives, and social norms to influence compliance. This expansion aims to provide a more holistic understanding of the factors driving compliance behaviour, enhancing the explanatory power of Theory of Planned Behaviour.

In this study, the Theory of Planned Behaviour underpins the independent variable of authority trust bias, demonstrating how trust in tax authorities influences tax compliance among SMEs in Nairobi County. The theory connects with the study by explaining that favourable attitudes toward compliance, supportive social norms, and perceived fairness and integrity of tax institutions shape SMEs' willingness to comply with tax obligations. It highlights that when SMEs trust tax authorities as competent, transparent, and ethical, they are more likely to engage in voluntary compliance, while mistrust can drive evasion and resistance. Its importance lies in showing that compliance is not only a matter of enforcement but also of cultivating institutional trust, thereby offering policymakers insights into strengthening taxpayer–authority relationships to improve compliance outcomes.

2.2.4 Self-Efficacy Theory

Self-Efficacy Theory, developed by Albert Bandura in 1977, posits that an individual's belief in their ability to perform specific tasks influences their behaviour, motivation, and overall performance. According to Bandura, self-efficacy is the conviction that one can successfully execute the behaviours required to produce desired outcomes. This theory suggests that individuals with high self-efficacy are more likely to set challenging goals, persist in the face of obstacles, and ultimately achieve higher levels of performance (Bandura, 1977). In contrast, those with low self-efficacy may doubt their capabilities, leading to avoidance of tasks, lower motivation, and poorer outcomes. In the context of tax compliance among small and medium-sized enterprises owners in

Nairobi County, Kenya, Self-Efficacy Theory can help explain how overconfidence in one's ability to manage tax obligations can lead to non-compliance, as small and medium-sized enterprises owners may underestimate the complexity of tax regulations and overestimate their capacity to fulfil their tax responsibilities.

Self-Efficacy Theory is closely linked to overconfidence bias, particularly in the context of tax compliance. Overconfidence bias occurs when individuals overestimate their knowledge, skills, or control over a situation. For small and medium-sized enterprises owners in Nairobi County, high self-efficacy may translate into overconfidence regarding their ability to navigate tax obligations, leading to potential non-compliance. Studies have shown that individuals with inflated self-efficacy are more likely to believe they can manage complex tasks, such as tax filing and reporting, without the necessary expertise or resources (Baumeister et al., 2020). This overconfidence can result in underestimating the risks of non-compliance, such as penalties or audits, as small and medium-sized enterprises owners may believe they are less likely to be caught or penalized (Xiao & Porto, 2021).

Moreover, the relationship between self-efficacy and overconfidence bias is evident in the decision-making processes of small and medium-sized enterprises owners. High self-efficacy can lead to an illusion of control, where business owners believe they have more control over tax outcomes than they actually do (Moore & Healy, 2019). This illusion of control is a significant contributor to overconfidence bias, as it reinforces the belief that they can avoid negative tax consequences through their actions alone. As a result, small and medium-sized enterprises owners may take risks, such as underreporting income or delaying tax payments, believing they can manage the situation if issues arise (Parker & Stone, 2020).

In addition, overconfidence stemming from high self-efficacy can impact the perceived need for external assistance in tax matters. small and medium-sized enterprises owners who are overly confident in their abilities may be less likely to seek professional help, such as hiring accountants or tax advisors, believing that they can handle all aspects of tax compliance on their own (Camerer & Lovallo, 2019). This reluctance to seek help can increase the likelihood of errors in tax filing and reporting, ultimately leading to non-compliance. The interaction between self-efficacy and overconfidence bias, therefore, plays a crucial role in shaping the tax compliance behaviours of small and medium-sized enterprises owners in Nairobi County.

Despite its widespread application, Self-Efficacy Theory has faced several critiques. One major criticism is that it overemphasizes the role of individual beliefs while underestimating the impact of external factors, such as environmental constraints and social influences (Schunk & DiBenedetto, 2020). In the context of tax compliance, this critique suggests that high self-efficacy alone may not account for the complexities of the tax system and the broader economic environment in which small and medium-sized enterprises owners operate. External factors, such as changing tax regulations, economic downturns, and bureaucratic challenges, can significantly influence tax compliance behaviour, regardless of an individual's self-efficacy (Bandura, 2018).

Another critique is that Self-Efficacy Theory may not fully account for the negative consequences of excessive self-efficacy, such as overconfidence bias (Vancouver et al., 2018). While the theory highlights the positive aspects of high self-efficacy, such as persistence and goal attainment, it may overlook how inflated self-efficacy can lead to risky behaviours and poor decision-making. In the context of tax compliance, this critique suggests that overly confident small and medium-sized enterprises owners may engage in behaviours that increase the risk of non-compliance, such as neglecting to keep accurate records or underestimating tax liabilities (Pajares & Graham, 2018).

Additionally, Self-Efficacy Theory has been critiqued for its limited consideration of cultural and contextual factors. Research has shown that self-efficacy beliefs can vary significantly across different cultural and socio-economic contexts, which may influence how individuals perceive and approach tasks such as tax compliance (Heine et al., 2019). In the context of Nairobi County, where small and medium-sized enterprises operate in a unique cultural and economic environment, the applicability of Self-Efficacy Theory may be limited if it does not account for these contextual differences. For example, the challenges faced by small and medium-sized enterprises owners in Kenya, such as limited access to resources and support, may impact their self-efficacy and, consequently, their tax compliance behaviours (Luszczynska et al., 2018).

In response to these critiques, several improvements have been proposed to enhance the applicability and accuracy of Self-Efficacy Theory. One improvement is the integration of external factors, such as environmental and social influences, into the theory's framework. By acknowledging the role of external factors, researchers can develop a more comprehensive understanding of how self-efficacy interacts with the broader context in which individuals operate (Schunk & DiBenedetto, 2020). In the context of tax compliance, this improvement allows for a more nuanced analysis of how small and medium-sized enterprises owners' self-efficacy is influenced by factors such as government policies, economic conditions, and social networks.

Another improvement is the incorporation of a more balanced view of self-efficacy, recognizing both its positive and negative effects. Researchers have suggested that Self-Efficacy

Theory should account for the potential downsides of high self-efficacy, such as overconfidence bias, by emphasizing the importance of accurate self-asses small and medium-sized enterprises and the need for external feedback (Vancouver et al., 2018). In the context of small and medium-sized enterprises tax compliance, this improvement could involve promoting a more realistic understanding of tax obligations and the potential risks of non-compliance, thereby mitigating the negative effects of overconfidence.

Further, there has been a growing emphasis on the role of cultural and contextual factors in shaping self-efficacy beliefs. Researchers have argued for the need to adapt Self-Efficacy Theory to different cultural and socio-economic contexts, taking into account the unique challenges and opportunities faced by individuals in diverse settings (Heine et al., 2019). In Nairobi County, this could involve tailoring interventions to the specific needs and experiences of small and medium-sized enterprises owners, such as providing culturally relevant tax education and support services that enhance self-efficacy in a way that is grounded in the local context.

In this study, Self-Efficacy Theory underpins the independent variable of overconfidence bias, explaining how small and medium-sized enterprise owners in Nairobi County may overestimate their ability to manage complex tax obligations. The theory connects with the study by illustrating that inflated self-beliefs can create an illusion of control, reduce reliance on professional tax support, and increase the likelihood of risky behaviours such as underreporting income or delaying payments. Its importance lies in showing that tax compliance challenges are not only structural but also behavioural, emphasizing the need for accurate self-assessment and targeted interventions that address overconfidence in order to improve compliance among SMEs.

2.3 Empirical Review

To address a particular research topic, an empirical literature review also known as a methodological literature review examines earlier empirical studies. In this section, the literature on the behavioural biases affecting tax compliance among small and medium-sized enterprises owners in Nairobi County, Kenya, is reviewed. It explores studies that measure the extent to which these biases impact tax behaviour and identifies patterns and trends in the findings. Additionally, the review evaluates the methodologies employed in these studies, assessing their effectiveness in capturing the nuances of behavioural biases. By synthesizing the results of these empirical studies, this section aims to provide a comprehensive understanding of the factors driving tax compliance among small and medium-sized enterprises owners in Nairobi County, highlighting the role of psychological influences in shaping tax-related decisions.

2.3.1 Mental Accounting and Tax Compliance

Feldman et al. (2020) examined the impact of mental accounting on tax compliance in the United States, focusing on how individuals' financial segmentation influenced compliance behaviour. The study targeted individual taxpayers using a mixed-methods approach involving surveys and experiments. Findings revealed that taxpayers who practiced separate budgeting and categorical spending, such as allocating funds specifically for taxes, showed higher compliance levels compared to those who did not. This demonstrates that mental accounting indicators separate budgets, categorical spending, and earmarked funds are significant predictors of compliance because they create a psychological commitment to honouring tax obligations. The results supported the idea that organizing finances into mental categories reduces the likelihood of tax evasion by reinforcing self-discipline in financial management.

Alm and Torgler (2019) explored the relationship between mental accounting and tax compliance among small business owners in Australia. The study sought to understand how mental categorization of funds influenced compliance decisions. Using survey data from small and medium-sized enterprises (SMEs), findings revealed that business owners who earmarked funds for taxes or maintained separate budgets for different expenses were more likely to file and pay taxes on time. This supports the inclusion of mental accounting indicators such as separate budgets and earmarked funds in the conceptual framework, showing that these behaviours mitigate procrastination and cognitive overload related to tax obligations, thus enhancing compliance accuracy and timeliness.

Kassab, El Kharraz, and El-Haddad (2021) investigated the relationship between mental accounting and tax compliance among Egyptian SME owners, emphasizing how mental categorization of finances influenced compliance levels. Using a survey approach, the study found that taxpayers who established distinct spending categories and earmarked funds for tax payments demonstrated improved compliance. These findings justify the inclusion of indicators like categorical spending and earmarked funds, as they help taxpayers resist the temptation to divert money meant for taxes to other expenditures, thereby enhancing payment consistency.

Nwosu and Ocheni (2020) explored the negative implications of mental accounting on tax compliance among Nigerian informal sector operators. Their qualitative study revealed that individuals who prioritized personal and business expenses over taxes reflecting sunk cost and categorical spending biases were more prone to tax evasion. This supports the inclusion of sunk cost as a mental accounting indicator, showing that when taxpayers overemphasize prior financial commitments, they rationalize non-compliance. Hence, maladaptive mental accounting practices can reduce compliance by distorting perceived financial priorities.

Mugambi and Otieno (2019) examined the adverse effects of mental accounting on tax compliance among Ugandan SMEs. The study showed that taxpayers who mentally allocated funds for business expansion or personal use while ignoring tax payments were more likely to evade taxes. This demonstrates that categorical spending and sunk cost biases directly affect compliance by deprioritizing taxes within mental budgets. The results reinforce the conceptual link between maladaptive mental accounting and reduced compliance, supporting the need to study these behavioural tendencies as determinants of timely and full tax payment.

Mwangi and Ndegwa (2021) investigated the role of mental accounting in tax compliance among SMEs in Kakamega County, Kenya. Employing a quantitative approach, they found that those who maintained separate budgets and allocated specific funds for tax purposes were more compliant. The findings provide strong justification for including separate budgets and earmarked funds as indicators of mental accounting, as these practices enhance financial discipline and reduce the likelihood of underreporting or delayed payments.

Kamau, Kinyua, and Waweru (2020) assessed the effect of mental accounting on tax compliance among informal sector workers in Kenya. Using survey data, they found that individuals who consciously set aside money for tax payments exhibited greater compliance. This underscores that earmarked funds and categorical spending play a crucial role in compliance behaviour, promoting accurate reporting and full payment of taxes. These results reinforce the conceptual framework's emphasis on behavioural segmentation of funds as a mechanism for improving compliance outcomes.

Otieno and Ochieng (2019) examined mental accounting and tax compliance among manufacturing firms in Nairobi, focusing on how mental budgeting influenced compliance. Using a mixed-methods approach, they found that taxpayers who practiced separate budgeting and maintained earmarked funds for taxes achieved higher levels of compliance. The study demonstrates that mentally allocating resources specifically for tax purposes reduces cognitive burden and enhances commitment to compliance. These findings confirm that the chosen indicators separate budgets, categorical spending, earmarked funds, and sunk cost are valid and relevant in explaining how mental accounting shapes tax compliance behaviour.

2.3.2 Risk Aversion and Tax Compliance

Benzarti and Jappelli (2019) examined the relationship between risk aversion and tax compliance in the United States, focusing on how individuals' tolerance for risk influences their likelihood of adhering to tax laws. The study's objective was to determine whether risk-averse taxpayers were more compliant due to fear of penalties. Targeting individual taxpayers, the researchers used a survey-based design to assess both risk preferences and compliance behaviour. Findings revealed that highly risk-averse individuals exhibited greater timely filing and accurate reporting of taxes to avoid penalties, supporting the inclusion of "safe choices" and "insurance usage" as indicators of risk aversion in the conceptual framework. These findings emphasize that risk-averse taxpayers tend to engage in full payment behaviour to mitigate the financial risks of non-compliance.

Hofmann et al. (2020) explored how risk aversion shapes tax compliance among small and medium-sized enterprise (SME) owners in Germany, particularly focusing on their strategic decision-making processes related to tax obligations. The study applied both surveys and experimental designs, revealing that risk-averse SME owners were more compliant, driven by fear of audits and financial sanctions. This aligns with the indicator of "avoids debt," as these taxpayers preferred secure financial management over risky tax evasion practices. The results reinforce the importance of audit outcomes and accurate reporting as behavioural expressions of risk aversion influencing compliance decisions.

Ameyaw, Korang, Twum, and Asante (2019) investigated risk aversion and tax compliance among SME owners in Ghana to understand how attitudes toward uncertainty affect compliance behaviour. Using survey data, the study found that higher risk aversion led to more consistent full payment of taxes and adherence to timely filing, as risk-averse individuals sought to avoid audits and penalties. This supports the conceptual indicator of "safe choices," showing that risk-averse taxpayers are motivated by the desire for financial stability and predictability in business operations.

Mungai and Mwangi (2020) analyzed the negative effect of risk aversion on tax compliance among informal sector workers in Uganda. The study, using qualitative interviews, found that highly risk-averse individuals avoided formal registration and tax engagement altogether due to fear of government scrutiny. This outcome illustrates a paradoxical relationship—where risk aversion led to non-compliance—reflecting weak authority trust bias and highlighting the contextual role of government credibility and regulation support as crucial mediating factors. The findings underscore that in weak institutional environments, risk aversion may foster avoidance rather than compliance.

Ncube and Makoni (2021) examined risk aversion among SME owners in Zimbabwe and its implications for tax compliance. The study combined surveys and focus groups, revealing that while risk-averse individuals feared tax system instability, this fear sometimes led to underreporting or evasion to avoid perceived losses. This outcome supports the inclusion of authority trust bias indicators, such as government credibility and tax transparency, showing that when trust in institutions is low, risk aversion can undermine compliance rather than promote it.

Kariuki and Njoroge (2019) explored risk aversion and tax compliance among SMEs in Kiambu County, Kenya. The study used a quantitative survey design and found that higher levels of risk aversion led to greater compliance, as SMEs prioritized timely filing, accurate reporting, and full payment to avoid legal consequences. The findings validate "safe choices" and "low investments" as relevant indicators of risk aversion influencing compliance. They also support the conceptualization of compliance as a multidimensional construct encompassing both behavioural and cognitive decision factors.

Mutua and Karanja (2020) investigated the relationship between risk aversion and tax compliance among informal sector workers in Kenya, using survey data. Their findings showed that risk-averse individuals complied with tax regulations out of fear of penalties and enforcement actions, aligning with the indicators "safe choices" and "insurance usage." The study further supports the link between behavioural caution and proactive compliance decisions, such as accurate reporting and full payment, illustrating how risk-averse taxpayers prioritize compliance to ensure business continuity.

Odhiambo and Otieno (2021) assessed risk aversion and tax compliance among textile SMEs in Nairobi through a mixed-methods design. The study found that highly risk-averse business owners demonstrated stronger compliance willingness, particularly in timely filing and accurate reporting, to mitigate exposure to audits and financial loss. The findings highlight how risk aversion interacts with authority trust bias, as compliance behaviour was also influenced by perceptions of tax system fairness and regulatory enforcement. This evidence supports the inclusion of safe choices, compliance willingness, and audit outcomes as integral indicators within the conceptual framework linking behavioural biases to tax compliance.

2.3.3 Authority Trust Bias and Tax Compliance

Gangl (2019) investigated the link between Authority Trust Bias and tax compliance in several European countries, emphasizing the role of government credibility and perceived fairness in shaping taxpayer behaviour. Using survey data and regression analysis, the study found that taxpayers with higher trust in tax authorities exhibited greater compliance willingness and were less likely to engage in tax evasion. The study supported the view that authority trust bias positively influences tax compliance through perceptions of regulation support and tax transparency, aligning with the conceptual framework indicators.

Torgler (2020) conducted a cross-national analysis across Asia and Oceania to examine how institutional and cultural factors shape authority trust bias and tax compliance. Employing econometric models and large-scale survey data, the study revealed that countries with greater institutional trust demonstrated higher rates of timely filing and accurate reporting. The findings indicated that trust in government institutions fosters compliance willingness, particularly where taxpayers perceive regulations as transparent and fair. This evidence reinforces the relevance of authority trust bias indicators government credibility and regulation support in predicting compliance behaviour across different tax categories, including VAT and income taxes.

Ahiakpor (2019) examined authority trust bias among small business owners in Ghana to determine how perceptions of fairness and transparency influence full payment and reporting accuracy. Using survey and interview data, the study found that low trust in tax authorities often linked to perceptions of corruption undermined compliance efforts. Respondents expressed concerns about tax transparency and the equitable use of tax revenues, which reduced their willingness to comply voluntarily. The study provided empirical support for including government credibility and transparency as central indicators influencing compliance outcomes.

Mudaki and Kobia (2020) analyzed the negative effects of authority trust bias on tax compliance among informal sector workers in Tanzania. Adopting a mixed-methods approach, they discovered that low trust in tax authorities contributed to inaccurate reporting and underpayment. Respondents cited unfair enforcement practices and lack of regulation support as key reasons for non-compliance. The study concluded that distrust in tax administration erodes the psychological motivation to comply, validating authority trust bias indicators related to regulation fairness and perceived credibility.

Ogilo and Juma (2021) explored authority trust bias among SME owners in Uganda, focusing on how perceptions of government credibility influence audit outcomes and compliance decisions. Using structured questionnaires, they found that SMEs who viewed tax authorities as fair, transparent, and consistent in enforcement demonstrated higher levels of accurate reporting and full payment. The study showed that trust in regulatory institutions enhances compliance willingness by reducing perceived risks of unfair treatment, affirming the significance of the authority trust bias indicators in the conceptual model.

Mwaura and Njoroge (2019) examined authority trust bias and its influence on compliance among Kenyan SMEs in Kiambu County. Using surveys and interviews, they found that perceived fairness, tax transparency, and institutional integrity were key predictors of timely filing and accurate reporting. SMEs that trusted the Kenya Revenue Authority demonstrated stronger compliance behaviour due to confidence in fair procedures and predictable enforcement. The study reinforced the theoretical basis for linking trust bias indicators government credibility and transparency to improved compliance outcomes across tax categories.

Nyaga and Gitau (2020) investigated how authority trust bias affects compliance among informal sector workers in Kenya. Through in-depth interviews and focus group discussions, they established that trust in government institutions positively influenced compliance willingness and full payment behaviour. Participants who perceived tax authorities as reliable were more motivated to comply voluntarily. The study emphasized the behavioural dimension of compliance and supported the inclusion of authority trust bias indicators such as regulation support and transparency in the conceptual framework.

Omondi and Odhiambo (2021) studied the relationship between authority trust bias and tax compliance among SMEs in Kisumu County, Kenya. Using survey data and statistical modelling, they found that SMEs with greater trust in tax authorities were more likely to demonstrate accurate reporting and timely filing. High trust levels enhanced cooperative compliance attitudes and improved audit outcomes. The study concluded that authority trust bias through mechanisms of government credibility, transparency, and regulation support plays a critical role in fostering voluntary compliance, offering strong empirical backing for the selected indicators within the conceptual framework.

2.3.4 Overconfidence Bias and Tax Compliance

Braun and Torgler (2019) examined the impact of overconfidence on tax compliance behaviour across multiple countries, providing empirical support for the inclusion of knowledge overestimation and optimism bias as indicators of overconfidence bias. The study investigated how individuals' overestimation of their tax knowledge and capabilities affected their compliance decisions. Targeting individual taxpayers, the researchers employed behavioural experiments and surveys to measure overconfidence levels and tax reporting accuracy. Their findings revealed that individuals with higher self-assessed knowledge tended to underreport income, underestimate audit risks, and justify non-compliance through misplaced confidence in their ability to evade detection. These findings empirically validate knowledge overestimation and risk underestimation as critical dimensions influencing non-compliant tax behaviour.

Jacobs, Levin, and Tryon (2020) explored overconfidence and tax compliance among self-employed individuals in the United States, reinforcing high self-efficacy as a behavioural indicator of overconfidence bias. The study sought to understand how overestimation of financial acumen and tax knowledge affected compliance decisions. Using a mixed-methods approach that combined surveys and interviews, the research revealed that self-employed taxpayers who displayed elevated confidence in their tax management skills were more likely to evade taxes. Their overconfidence diminished the perceived likelihood of penalties and increased the tendency to rationalize evasion. The results underscore the importance of self-efficacy and optimism bias as mechanisms through which overconfidence manifests and erodes compliance.

Kakai and Juma (2019) investigated the influence of overconfidence on tax compliance among small business owners in Tanzania, highlighting underestimation of risks as a key behavioural driver. The study sought to determine how inflated financial self-assessments affected compliance outcomes. Using qualitative interviews and focus group discussions, they found that overconfident business owners were prone to ignoring professional tax advice, underestimating their obligations, and overestimating their capacity to manage audits. This supports the conceptual linkage between high self-efficacy and risk underestimation in explaining why some taxpayers willingly engage in evasion despite awareness of its illegality.

Ouma and Mutuku (2020) examined overconfidence bias and tax compliance among informal sector workers in Uganda, emphasizing the behavioural tendency to overestimate one's business acumen and underestimate liabilities. Drawing on survey data and statistical modelling, the study demonstrated that individuals who perceived themselves as financially savvy were less likely to seek expert assistance and more inclined to report inaccurately. This resulted in systematic underreporting and exaggerated deductions. Their findings affirm that knowledge overestimation and optimism bias operate as mediating factors between overconfidence and reduced compliance levels.

Sang and Wambua (2021) studied overconfidence and tax compliance among SME owners in Ethiopia to evaluate how inflated business expectations contribute to non-compliance. Using quantitative analysis of structured questionnaires, the study found that overconfident SME owners projected unrealistic profitability and assumed they could manage audits without consequence. These results align with the optimism bias and high self-efficacy dimensions of overconfidence, showing how misplaced expectations about business performance distort compliance decisions and encourage underreporting of taxable income.

Onyango and Mwangi (2019) investigated overconfidence bias among SME owners in Nairobi County, Kenya, supporting the inclusion of knowledge overestimation and underestimation of risks as relevant indicators. Using survey and interview methods, the researchers found that overconfident taxpayers exhibited misplaced trust in their ability to comply without external help, often resulting in inaccurate reporting and tax avoidance. Their findings indicate that overconfidence fosters a false sense of control that weakens adherence to tax obligations, consistent with global evidence linking self-assuredness to non-compliance.

Wanjiru and Nyaga (2020) examined overconfidence among informal sector workers in Kenya and how it influenced their compliance behaviour, offering further justification for optimism bias as a critical indicator. Using qualitative data from interviews and focus groups, the study revealed that overconfident individuals consistently misjudged their tax liabilities and over-relied on intuition rather than formal guidance. This behavioural pattern validated the conceptual association between risk underestimation, optimism bias, and low compliance propensity, showing how misplaced optimism erodes fiscal responsibility.

Zulu and Kariuki (2021) analysed the relationship between overconfidence and tax compliance among SMEs in Mombasa, Kenya, offering integrated support for all four indicators of overconfidence bias high self-efficacy, knowledge overestimation, underestimation of risks, and optimism bias. Using a mixed-methods approach that combined surveys with focus group discussions, the study established that overconfident business owners often disregarded professional tax advice, underestimated their liabilities, and assumed audits were unlikely. These behaviours collectively reduced voluntary compliance and reinforced the conceptual framework's inclusion of overconfidence bias as a key determinant of tax non-compliance.

2.4 Knowledge Gap

From the empirical review of mental accounting, risk aversion, Authority Trust Bias, and overconfidence bias in relation to tax compliance, several knowledge gaps emerge. Methodologically, while many studies employ surveys and qualitative interviews, there is a notable absence of experimental designs that could provide more controlled insights into these behavioural factors' causal effects on tax compliance. Experimental studies could manipulate variables like trust levels or overconfidence to observe direct impacts on compliance behaviour, offering clearer causal interpretations.

The dichotomy of findings across studies also reveals significant gaps in understanding. For instance, while some studies indicate that higher levels of Authority Trust Bias led to greater tax compliance, others highlight instances where distrust or perceived inefficiency in tax administration correlates with higher tax evasion. Similarly, findings on overconfidence and its impact on tax compliance vary, with some studies showing a positive relationship between overconfidence and evasion, while others suggest the opposite. These inconsistencies point to the need for more nuanced investigations into contextual factors that moderate these relationships.

A noticeable time gap exists concerning the currency of studies, particularly with regard to the evolving tax landscapes and policy changes. Despite the relevance of tax compliance issues in the current 2024/2025 finance bill and ongoing economic conditions, there is a scarcity of studies conducted post-2019. This gap limits the applicability of existing findings to current policy debates and regulatory environments, potentially overlooking crucial factors influencing taxpayer behaviour in the present day.

Conceptually, while numerous studies explore the relationship between behavioural biases such as mental accounting, risk aversion, and overconfidence with tax compliance, most of this research focuses on individual taxpayers or small business owners in developed countries like the United States, Australia, and Europe. These studies may not fully capture the specific conceptual dynamics of behavioural biases in developing economies like Kenya, where tax systems, cultural norms, and psychological tendencies surrounding tax compliance differ. The existing literature tends to generalize findings, leaving a gap in understanding how these biases function uniquely within Kenya's tax environment, particularly among small and medium-sized enterprises owners.

Contextually, while some research has been conducted within African contexts, there is limited focus on Nairobi County's small and medium-sized enterprises owners. This leaves a gap in localized studies that consider the socio-economic, political, and institutional factors unique to Nairobi County. These factors, such as trust in tax authorities, economic pressures on small and medium-sized enterprises, and the dynamics of the informal sector, may significantly influence how behavioural biases affect tax compliance in this particular context.

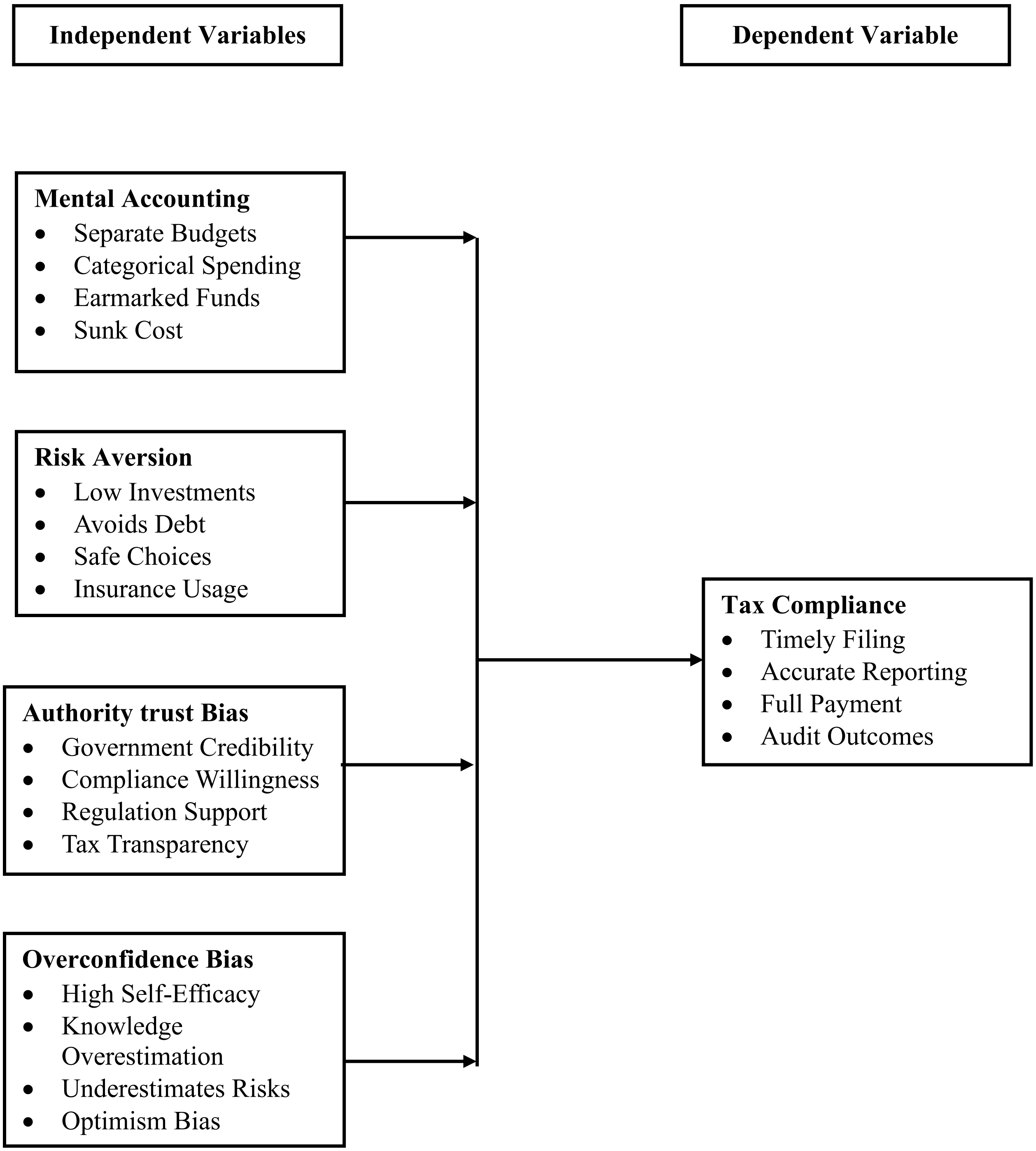
Methodologically, many of the studies employ mixed-method approaches, combining surveys with experimental designs or qualitative methods. However, there is a noticeable gap in the use of advanced quantitative techniques, such as structural equation modelling or time-series analysis, which could offer a deeper understanding of the relationship between behavioural biases and tax compliance. Additionally, a lack of longitudinal studies tracking changes in behavioural biases and tax compliance over time among small and medium-sized enterprises owners in Nairobi County limits insight into the persistence or adaptability of these biases within this population.

Addressing these gaps requires future research to employ more diverse and rigorous methodologies. Additionally, studies should consider contextual factors such as legislative changes and economic conditions to provide up-to-date insights into taxpayer behaviour. Bridging these gaps will not only enhance theoretical understanding but also inform more effective policy interventions aimed at improving tax compliance and revenue collection strategies.

2.5 Conceptual Framework

A conceptual framework outlines the expected relationships among variables. Reichel and Ramey (2017) emphasized the significance of setting clear research objectives and ensuring their alignment to achieve coherent conclusions. Smyth (2018) noted that a well-defined conceptual framework simplifies the understanding of research findings and facilitates adjustments to the study as needed. This study will employ a conceptual framework to explore its research questions. As illustrated in Figure 1, the framework comprises four independent variables and one dependent variable.

Figure 1:
Conceptual Framework



Source: Author (2024

2.6 Operationalization of Variables

Mugenda and Mugenda (2013) emphasize that operationalizing a variable involves clearly defining it to enable its measurement or representation, whether through quantitative or qualitative methods. This process is essential due to the inherent difficulties in measuring certain variables. Providing a specific definition enhances the quality of a variable and improves the effectiveness of research design. Operationalization aims to enhance the strength, accuracy, and reliability of variables used in research. The following section outlines the methodologies employed to measure these variables, utilizing a data collection tool detailed in Table 1.

Table 1
Operationalization of Variables

Variable	Type of variable	Indicators	Measurement Tool
Tax compliance	Dependent	• Timely Filing • Accurate Reporting • Full Payment • Audit Outcomes	Likert Scale
Mental Accounting	Independent	• Separate Budgets • Categorical Spending • Earmarked Funds • Sunk Cost	Likert Scale
Risk aversion	Independent	• Low Investments • Avoids Debt • Safe Choices • Insurance Usage	Likert Scale

Authority Trust Bias	Independent	• Government Credibility • Compliance Willingness • Regulation Support • Tax Transparency	Likert Scale
Overconfidence Bias	Independent	• High Self-Efficacy • Knowledge Overestimation • Underestimates Risks • Optimism Bias	Likert Scale

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents a comprehensive overview of the research strategy and methods employed in the study. It details the procedural approach that the researcher adopts to address the research inquiries effectively, objectively, cost-efficiently, and precisely. The section outlines the research design, including the rationale behind the chosen methodology, and describes the study location where the research is conducted. It also defines the target population, elaborates on the sampling design covering sample size determination and sampling procedures and explains the data collection methods. This includes a discussion on the research instruments used, ensuring validity and reliability, and the specific procedures followed during data collection. Additionally, the chapter discusses the mathematical model applied, the method of data analysis employed, and the techniques used for data presentation. Ethical considerations are also addressed, ensuring that the research adheres to ethical standards and respects participants' rights and confidentiality throughout the study.

3.2 Research Design

Mugenda and Mugenda (2012) assert that research design plays a crucial role in facilitating a researcher's ability to conduct a comprehensive and timely study, thus providing a thorough resolution to the prevailing problem. Consequently, a research design serves as the methodology employed in a study to address research inquiries. This study employs an explanatory research methodology. This methodology is considered effective in assessing the impact of behavioural biases on tax compliance among small and medium enterprises (small and medium-sized enterprises) in Nairobi County, Kenya. Bell, Bryman, and Harley (2018) argue that using an explanatory research design is a highly effective approach for elucidating the underlying causes and factors contributing to a particular phenomenon. This design clarifies the causal links between the variables under investigation.

Bulmberg, Cooper, and Schindler (2011) contend that an explanatory study design can effectively reveal the relationships between variables of interest by providing insights into the nature, causality, frequency, and timing of a given phenomenon. The use of this research design proves advantageous for this study as it helps in clarifying the ramifications of behavioural biases on tax compliance within the context of small and medium-sized enterprises in Nairobi County, Kenya.

The explanatory research design is chosen for this study to uncover the causal relationships between behavioural biases and tax compliance among small and medium-sized enterprises owners in Nairobi County. This design allows researchers to identify and understand how specific biases, such as overconfidence or risk aversion, influence tax compliance behaviours. By focusing on causal links, the study can provide insights into the mechanisms through which behavioural biases affect tax compliance, which is crucial for developing targeted interventions to improve tax adherence among small and medium-sized enterprises.

Additionally, the explanatory research design helps in detailing the underlying factors that contribute to tax compliance issues. This approach enables the study to explore not only the direct effects of behavioural biases but also how these biases interact with other socio-economic determinants. By mapping out these interactions, the study offers a comprehensive view of the factors influencing tax compliance, thus addressing the complexity of the issue in the context of Nairobi County's small and medium-sized enterprises.

Finally, employing an explanatory research design supports the development of actionable recommendations based on the findings. Understanding the causal relationships between behavioural biases and tax compliance allows policymakers and tax authorities to craft effective strategies tailored to the specific needs and challenges faced by small and medium-sized enterprises owners. This design's ability to provide detailed explanations of the relationships between variables ensures that the study's outcomes are practical and relevant for improving tax compliance practices among small and medium-sized enterprises in the region.

3.3 Target Population

Population refers to a set of people, events, or objects that is representative of a broader group and includes all its members. It can be either genuine or hypothetical (Willie, 2022). For the study to generalize its results, the target population must exhibit observable characteristics relevant to the research (Stuart et al., 2019). The accessible population, however, denotes the group of individuals within the study to whom researchers can apply their findings (Saunders et al., 2014). As defined by Buchanan and Bryman (2009), the target population is a specific subgroup within a larger population, characterized by shared attributes and encompassing all individuals or items that fall within this classification. For this study, the target population consists of small and medium-sized enterprises owners in Nairobi County who have registered and paid their trade licenses by July 2024, totalling 32,251 as per Micro and Small Enterprises Authority (MSEA) (2023). This number represents the population for our research on the effect of behavioural biases on tax compliance.

3.4 Sampling Technique and Sample Size

The target population of small and medium-sized enterprises owners in Nairobi County is be stratified into different categories based on the nature of their businesses. The strata will include: Retail Trade, Manufacturing, Services, Construction, Agriculture, Other (e.g., hospitality, transport, etc.)

To determine the sample size for each stratum, the researcher applied the proportional allocation method based on the size of each stratum relative to the total population. The formula for calculating the sample size for each stratum (n_i) is as follows:

$$n_i = (\frac{N_I}{N}) \times n$$

Where:

- ni= sample size for stratum i
- Ni = target population size for stratum i
- N= total population size
- n = total sample size

The distribution of the target population among these strata was be as follows; Retail Trade: 40% (12,900 small and medium-sized enterprises), Manufacturing: 25% (8,063 small and medium-sized enterprises), Services: 20% (6,450 small and medium-sized enterprises), Construction: 10% (3,225 small and medium-sized enterprises), Agriculture: 3% (968 small and medium-sized enterprises), Other: 2% (675 small and medium-sized enterprises)

Table 2
Summary of Target Population Sizes and Sample Sizes

Stratum	Target Population Size (N_i)	Sample Size (n_i)
Retail Trade	12,900	155
Manufacturing	8,063	98
Services	6,450	78
Construction	3,225	39
Agriculture	968	12
Other	675	8
Total	**32,251**	**395**

Source: Author (2024)

3.5 Data Collection Instruments

The study utilized primary data collected through questionnaires administered via Google Forms to examine the impact of behavioural biases on tax compliance among small and medium-sized enterprises owners in Nairobi County, Kenya. The researcher will create a new Google Form, incorporating various question types, including multiple-choice, Likert scale, and open-ended text responses, all designed to align with the study's objectives. The survey link will be distributed to the target respondents through email and other communication channels. Respondents will complete the survey electronically within the specified data collection period. To ensure the confidentiality and integrity of the responses, data security measures will be implemented throughout the process. Once the data collection period concludes, the researcher will export the responses and clean the data for analysis. This approach will facilitate efficient and organized data collection that meets the requirements of the study.

3.6 Reliability and Validity of the Research Instruments

3.6.1 Reliability of the Study

Reliability, as defined by Moskal and Leydens (2000), refers to the extent to which a small and medium-sized enterprise instrument consistently produces stable and trustworthy results. In the current study, which investigates the effect of behavioural biases on tax compliance among small and medium-sized enterprises owners in Nairobi County, Kenya, Cronbach's Alpha Reliability Test is employed to evaluate the reliability of the research instrument. This test, as described by Gliem and Gliem (2003), is used to measure the internal consistency of the research instrument, ensuring that the items within the instrument are correlated and reliably capture the intended constructs. For the purposes of this study, a Cronbach's Alpha coefficient exceeding 0.70 is deemed appropriate for interpretation, as this threshold indicates a high level of internal consistency and reliability in the context of social sciences. This ensures that the findings related to the behavioural biases and their impact on tax compliance are based on a robust and dependable measurement tool, thereby enhancing the validity of the study's conclusions.

3.6.2 Validity of the Study

According to Saunders and Lewis (2012), validity represents the degree to which a data collection instrument accurately measures the intended construct. In the current study examining the effect of behavioural biases on tax compliance among small and medium-sized enterprises owners in

Nairobi County, Kenya, the validity of the research instrument is rigorously assessed through expert opinion and pre-testing methods. The researcher actively seeks guidance from the supervisor, who provides expert opinion on the design and relevance of the questions included in the instrument. Additionally, the researcher distributes 20 questionnaires randomly among small and medium-sized enterprises in Nairobi County to conduct the pre-testing phase. This distribution allows for the collection of preliminary data and provides insight into the instrument's effectiveness in capturing the nuances of tax compliance behaviour influenced by biases. Throughout this process, the researcher collaborates closely with colleagues and the supervisor, engaging in discussions to refine the instrument and enhance its validity. This collaborative approach helps identify any ambiguous items that might pose challenges for accurate responses. The researcher makes necessary adjustments to these items based on feedback, thereby improving the overall quality and validity of the instrument. This thorough validation process ensures that the instrument effectively measures the behavioural biases affecting tax compliance among small and medium-sized enterprises owners in Nairobi County.

3.7 Data Analysis and Presentation

The data is coded according to the research objectives of the study, "The Effect of Behaviour Biases on Tax Compliance Among small and medium-sized enterprises Owners in Nairobi County, Kenya." The analysis is conducted using SPSS version 26. Descriptive statistics, Pearson correlation analysis, and multiple regression analysis are employed to examine the data. Descriptive statistics summarize the data by calculating the means and standard deviations, providing insights into the central tendencies and variability of the variables under investigation. Pearson correlation analysis explores the strength and direction of relationships between different behavioural biases and tax compliance. Multiple regression analysis is used to assess the impact of various behavioural biases on tax compliance, allowing for the evaluation of how each bias influences compliance while controlling for other variables. The study adopts a specific regression model to analyse these relationships, aiming to uncover how behavioural biases affect tax compliance among small and medium-sized enterprises owners in Nairobi County and to provide evidence-based recommendations for improving tax compliance strategies in this context.

$$Y_i = \beta_0 + \beta_{1i}X_{1i} + \beta_{2i}X_{2i} + \beta_{3i}X_{3i} + \beta_{4i}X_{4i} + \varepsilon$$

Where:

Y=Tax Compliance

β_0 = Intercept

X_1 = Mental Accounting

X_2 = Risk Aversion

X_3 = Authority Trust Bias

X_4 = Overconfidence Bias

β_1-β_4 = Regression Coefficients

$\mathcal{E}$ = error term.

3.8 Diagnostic Tests

This research incorporates diagnostic tests to validate the multiple regression equation, ensuring that the model adheres to the classical linear model assumptions and produces unbiased results. To achieve this, the study employs several key diagnostics. The normality test examines whether the residuals of the regression model follow a normal distribution, which is crucial for the validity of inferential statistics. The linearity test assesses whether the relationship between the independent variables (behavioural biases) and the dependent variable (tax compliance) is linear, confirming that the model accurately captures the nature of these relationships. Additionally, the multicollinearity test identifies any high correlations among the independent variables, which could undermine the stability and interpretability of the regression coefficients. By conducting these diagnostic tests, the research ensures the robustness of the findings and the reliability of conclusions drawn about the impact of behavioural biases on tax compliance among small and medium-sized enterprises owners in Nairobi County, Kenya.

3.8.1 Normality Test

Normality examines both the distribution of data and the distribution of a random variable within the dataset. In this study, the normality test is conducted using the Shapiro-Wilk statistic. According to Priyatno (2017), the criterion for decision-making in this test is as follows: if the significance level exceeds 0.05, the null hypothesis, which posits that the data originate from a normally distributed population, is not rejected. This indicates that the data distribution is not significantly different from normality. Conversely, if the significance level is less than or equal to 0.05, the null hypothesis is rejected, suggesting that the data do not follow a normal distribution. In the context of this research on tax compliance among small and medium-sized enterprises owners in Nairobi County, ensuring that the data meet the normality assumption is crucial for the validity of subsequent statistical analyses.

3.8.2 Linearity Test

Linearity refers to the ability of a mathematical relationship to be graphically represented as a straight line. According to Edwards (1995), the linearity test aims to determine whether a linear relationship exists between the dependent and independent variables in the dataset. Given that this study employs linear regression, meeting the linearity assumption is essential for accurate modelling of tax compliance behaviours. The linearity test assesses the data distribution between the dependent variable (tax compliance) and the independent variables (behavioural biases). This study utilizes scatter plot graphs to visually inspect the linearity of the regression model. If the scatter plot reveals a clear linear pattern, it confirms that the linearity assumption is satisfied. If the pattern deviates significantly from a straight line, it indicates a violation of the linearity assumption, suggesting that the relationship may be nonlinear and thus requiring alternative analytical approaches.

3.8.3 Multicollinearity Test

Multicollinearity occurs when independent variables in the regression model exhibit a high degree of correlation with one another. In this study, the presence of multicollinearity is assessed using the Variance Inflation Factor (VIF). A VIF value of 1 indicates no multicollinearity among the independent variables, whereas VIF values greater than 10 signal a high level of multicollinearity, which can lead to problems in regression analysis due to inflated standard errors and unreliable coefficient estimates. If the VIF value is between 5 and 10, it suggests moderate multicollinearity, which may still be acceptable depending on the context. High multicollinearity necessitates the removal of one or more independent variables to reduce redundancy and improve the stability of the regression model. This diagnostic test is vital for ensuring the reliability and validity of the regression analysis on behavioural biases and tax compliance.

3.8.4 Heteroscedasticity Test

Heteroscedasticity arises when the variance of the error terms in a regression model is not constant across all levels of the independent variables. It is typically caused by the presence of outliers or omitted variables. In this study, heteroscedasticity is examined using scatter plots, as described by Tabachnick and Fidell (2007). The residuals differences between observed and predicted values should exhibit constant variance for all predicted scores. A scatter plot that displays a rectangular shape, with scores concentrated around a horizontal line and uniformly distributed, indicates that the assumption of homoscedasticity (constant variance) is met. Conversely, if the scatter plot reveals a systematic pattern or clustering of scores, it suggests a violation of the homoscedasticity assumption, signalling the presence of heteroscedasticity. Addressing heteroscedasticity is crucial for accurate and reliable regression results, particularly in the analysis of tax compliance behaviours among small and medium-sized enterprises owners.

3.9 Ethical Consideration

The researcher adheres to ethical guidelines throughout the study on the effect of behavioural biases on tax compliance among small and medium-sized enterprises owners in Nairobi County, Kenya. Approval is sought from the relevant research institutions as well as from the institution where the research project takes place. Authorization is granted by the University to conduct the investigation. Procedures are implemented to safeguard the privacy of participants and ensure the highest level of confidentiality for the data they provide. The researcher remains committed to the principle of good faith, striving to acquire findings in the most impartial manner possible.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

The chapter summarizes the results obtained from the analysed data. After completing the data analysis, which adhered to the study's objectives to answer the research question, the findings were interpreted. Both descriptive and inferential statistical methods were employed for data analysis. The chapter is organized as follows: it begins with an overview of the response rate and proceeds to establish the context of the study. This is followed by a discussion on diagnostic tests, an evaluation of data reliability and validity, an analysis of descriptive statistics, an examination of demographic information, and finally, a summary of the research conclusions.

4.2 Response rate

The findings presented below illustrate the level of participant collaboration in sharing their perspectives in response to the questions asked. These questions spanned a wide range of topics, allowing for diverse insights and comprehensive discussions from the respondents. This collaborative effort provided valuable data that reflected the varied opinions and experiences relevant to the study's focus.

Out of the 395 surveys distributed, 329 were successfully completed and returned, resulting in a 83.29% response rate. According to Hardigan, Popovici, and Carvajal (2016), a response rate of 50% or higher is considered acceptable for descriptive research.

Table 3
Response Rate

Response	Frequency	Percentage
Returned	329	83.29%
Unreturned	66	16.71%
Total	**395**	**100%**

4.2.1 Reliability Test

Cronbach's alpha was utilized as the reliability metric in the study to evaluate the validity of the survey construct. Table 4.2.1 presents the reliability results obtained from the pilot test. The reliability analysis of the research instrument, as shown in Table 4.2.1, highlights the internal consistency of the variables assessed in the study using Cronbach's alpha. Cronbach's alpha is a commonly accepted measure of reliability, with a threshold of 0.7 generally considered the minimum for acceptable reliability in social science research. The findings from the pilot test indicate that all variables met or exceeded this threshold, confirming that the instrument used is reliable.

Specifically, the variable Mental Accounting yielded a Cronbach's alpha of 0.793, demonstrating good reliability and suggesting that the six items used in the questionnaire to assess this concept were consistent in measuring the construct. Similarly, Risk Aversion had a Cronbach's alpha of 0.788, indicating that the items effectively captured the intended dimension of behaviour. Authority Trust Bias reported an alpha value of 0.77, reinforcing that the questionnaire items for this variable also maintained reliability standards.

The analysis further shows that the variable Overconfidence Bias had a Cronbach's alpha of 0.798, slightly higher than the others, emphasizing a strong level of internal consistency among its six items. Finally, Tax Compliance had an alpha value of 0.78, confirming the reliability of the six questions designed to measure this construct.

In conclusion, the reliability findings across all variables demonstrate that the survey instrument used in the study possesses adequate internal consistency, supporting its suitability for data collection. According to Park & Park (2013) and Kiliç (2016), an acceptable coefficient for basic research is one that is equal to or greater than 0.7. These results assure that the constructs measured are stable and dependable, which enhances the credibility of the study's findings and interpretations.

Table 4
Reliability of the Instrument

Variables	Cronbach's Alpha	Number of Items in questionnaire	Conclusion
Mental Accounting	0.793	6	Reliable
Risk Aversion	0.788	6	Reliable

Authority Trust Bias	0.77	6	Reliable
Overconfidence Bias	0.798	6	Reliable
Tax Compliance	0.78	6	Reliable

4.2.2 Validity Analysis using Kaiser-Meyer-Olkin and Bartlett's test

The results from Table 4.2.2 provide insights into the factorial test outcomes, highlighting the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity, which were used to determine the validity of the constructs examined in the study. The KMO values for the various constructs, including mental accounting, risk aversion, authority trust bias, overconfidence bias, and tax compliance, all indicate moderate to strong sampling adequacy, which is essential for reliable factor analysis. Specifically, the KMO values range from 0.637 for overconfidence bias to 0.764 for authority trust bias. These values exceed the minimum threshold of 0.6, suggesting that the sample is suitable for conducting factor analysis.

Bartlett's Test of Sphericity results further support the validity of these constructs, as indicated by significant chi-square values and p-values of 0 across all variables. For mental accounting, the chi-square value is 66.061 with 6 degrees of freedom (df), which is statistically significant. Similarly, risk aversion shows a higher chi-square value of 95.158 with 6 df, confirming strong correlations among the items. Authority trust bias and overconfidence bias also demonstrate significant results with chi-square values of 28.154 and 62.549, respectively. Tax compliance mirrors these findings, with a chi-square value of 62.749 and a significance level of 0, further indicating validity.

These results affirm that all constructs assessed through the factorial analysis are valid for further research. The significant findings from Bartlett's Test of Sphericity confirm that the correlation matrix for each construct is not an identity matrix, justifying the factorability of the data. The KMO measures also show that the variables possess adequate inter-item correlation, which is fundamental for factor analysis reliability.

In conclusion, the data demonstrate that the constructs related to behavioural biases and tax compliance in the study exhibit satisfactory validity. This provides a solid foundation for further statistical analysis, confirming that the chosen constructs are appropriate for examining the effects of behavioural biases on tax compliance among SME owners.

Table 5
: Factorial Test Results

	KMO	Bartlett's Test of Sphericity			Validity
		Approx. Chi-Square	Df	Sig.	
Mental Accounting	0.73	66.061	6	0	Valid
Risk Aversion	0.75	95.158	6	0	Valid
Authority Trust Bias	0.764	28.154	6	0	Valid
Overconfidence Bias	0.637	62.549	6	0	Valid
Tax Compliance	0.647	62.749	6	0	Valid

4.3 Socio- Demographic Characteristics of Respondents

This section provides an overview of the socio-demographic characteristics of the respondents who participated in the study. Understanding these characteristics is essential as they offer valuable context for interpreting the responses and insights gathered. Key demographic factors such as age, gender, education level, and years of experience were examined to better understand the background of the participants and how these factors may influence their perspectives on the study's topics.

4.3.1 Nature of business

The demographic data regarding the Nature of Business distribution of the respondents is presented in the table below. A total of 329 individuals participated in the survey.

Table 6
: Nature of business

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Retail Trade	62.00	18.80	18.80	18.80
	Manufacturing	58.00	17.60	17.60	36.50
	Services	54.00	16.40	16.40	52.90
	Construction	40.00	12.20	12.20	65.00
	Agriculture	57.00	17.30	17.30	82.40
	Other	58.00	17.60	17.60	100.00
	Total	**329.00**	**100.00**	**100.00**	

The distribution of the nature of business among the respondents reveals a diverse set of sectors represented within the small and medium-sized enterprises (SMEs) in Nairobi County. Retail trade comprises the largest proportion at 18.80%, followed closely by manufacturing and other sectors, each contributing 17.60%. Agriculture and services also play a significant role, accounting for 17.30% and 16.40% of the sample, respectively, while the construction sector is represented by 12.20%.

The fact that the largest percentages come from retail trade, manufacturing, and other sectors suggests that SMEs in Nairobi County are highly varied in terms of industry focus, indicating a potential diversity in the challenges and opportunities they face. This diversity may also influence the behavioural biases present among SME owners, as different industries may have distinct perceptions of the tax system and varying levels of tax compliance.

The high representation of retail trade and manufacturing suggests that these sectors could be particularly important when analysing the effects of behavioural biases on tax compliance. These industries often have different levels of formalization and regulatory scrutiny, which may shape how business owners perceive tax obligations and the associated risks. Moreover, the construction and agriculture sectors, while smaller in representation, could offer insights into how tax compliance behaviours are shaped by sector-specific challenges, such as informal business practices or perceptions of tax fairness and system complexity.

Understanding the composition of the SME sector in Nairobi is crucial for designing targeted interventions aimed at improving tax compliance. The diversity in the nature of business highlights the importance of tailoring tax education and enforcement efforts to the unique characteristics of each sector, as behavioural biases may manifest differently across industries. Additionally, these findings could influence the development of strategies to address specific concerns in tax policy, ensuring that the strategies are relevant to the various sectors represented.

4.3.2 Age of Respondents

The demographic data regarding the age distribution of the respondents is presented in the table below. A total of 329 individuals participated in the survey.

Table 7
Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25 years	73.00	22.20	22.20	22.20
	25-35 years	57.00	17.30	17.30	39.50
	36-45 years	54.00	16.40	16.40	55.90
	46-55 years	76.00	23.10	23.10	79.00
	56 years and above	69.00	21.00	21.00	100.00
	Total	329.00	100.00	100.00	

The age distribution of the respondents indicates a broad representation of business owners across different age groups, with a significant portion of the participants falling within the 46-55 years category, which accounts for 23.10% of the total respondents. This age group is followed closely by those below 25 years (22.20%), suggesting that the SME sector in Nairobi County is attracting both younger entrepreneurs and those with more experience.

The second-largest group, comprising individuals between 25 and 35 years (17.30%), is likely to represent individuals who are still in the early to mid-stages of their entrepreneurial journey. Those aged 36-45 years, at 16.40%, also contribute to a significant portion of the sample. The group of 56 years and above constitutes 21% of the respondents, indicating that older entrepreneurs are also active in this sector.

The broad age distribution may imply diverse perspectives on tax compliance influenced by both experience and generational outlooks. Younger entrepreneurs (below 25 years) may have different perceptions of tax fairness, complexity, and risk compared to older entrepreneurs who may have more experience navigating the tax system. The older age groups might have more entrenched practices regarding tax compliance, while younger respondents could be more open to digital or alternative tax systems.

Given this variation in age, the study suggests that targeted approaches to improving tax compliance could be developed by considering age-specific attitudes toward tax policies. Younger SMEs might require more education and guidance on tax responsibilities, while older entrepreneurs might benefit from reforms that reduce bureaucratic complexity. Understanding how age influences tax compliance behaviours will be critical in crafting effective strategies to address the behavioural biases within this demographic.

4.3.3 Gender of Respondents

The demographic data regarding the Gender distribution of the respondents is presented in the table below. A total of 329 individuals participated in the survey.

Table 8
Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	166.00	50.50	50.50	50.50
	Gender	163.00	49.50	49.50	100.00
	Total	329.00	100.00	100.00	

The gender distribution among the respondents is almost equally split, with 50.50% identifying as male and 49.50% as female. This relatively balanced representation suggests that both male and female entrepreneurs are equally active in the SME sector in Nairobi County.

This gender parity provides a unique opportunity to analyse how behavioural biases toward tax compliance might differ between men and women. The nearly equal representation of genders implies that both male and female business owners may experience similar challenges and attitudes toward the tax system, such as perceived fairness, complexity, or risk of punishment. However, gender-specific factors, such as access to resources, education, and social norms, could still influence the tax compliance behaviours of male and female entrepreneurs differently.

For instance, if gender-based differences in income levels or business ownership structures exist, these could shape how individuals perceive the tax burden or their likelihood to engage in tax evasion. Additionally, if cultural or societal expectations vary between genders, this may affect the willingness of business owners to comply with tax regulations. Therefore, understanding gender dynamics is important when developing tax policies or compliance strategies that are sensitive to the unique experiences and challenges faced by both male and female entrepreneurs.

Given the equal gender representation, the study provides a balanced perspective on tax compliance behaviours, ensuring that any interventions or recommendations are inclusive and tailored to address potential gender-related biases in tax compliance within the SME sector.

4.3.4 Level of Education

The demographic data regarding the Level of Education distribution of the respondents is presented in the table below. A total of 329 individuals participated in the survey.

Table 9
level of Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Certificate level	81.00	24.60	24.60	24.60
	Diploma level	82.00	24.90	24.90	49.50
	First Degree level	72.00	21.90	21.90	71.40
	Master's degree level and above	94.00	28.60	28.60	100.00
	Total	329.00	100.00	100.00	

The educational distribution of the respondents indicates a diverse range of qualifications, with the largest group holding a master's degree or higher (28.60%), followed closely by individuals with a diploma (24.90%) and certificate-level education (24.60%). Those with a first degree make up 21.90% of the respondents.

The higher representation of individuals with master's degrees and diplomas suggests that a significant proportion of the SME owners in Nairobi County have received formal education beyond basic secondary school. This suggests that these business owners may possess a greater level of awareness and understanding of tax obligations, financial management, and regulatory requirements. Their higher education could potentially reduce the likelihood of falling prey to cognitive biases that influence tax compliance, as they may have more access to resources and information on tax regulations.

On the other hand, the substantial presence of individuals with certificate-level education may indicate a segment of the SME population with less formal education. This group might face challenges in fully understanding tax policies or may have a higher reliance on informal sources of information. Their level of education could contribute to biases in tax perceptions, such as underestimating the complexity of the tax system or perceiving it as unfair.

The study implies that tax compliance interventions might need to be tailored based on educational levels. For instance, those with higher education levels might benefit from more advanced tax policy discussions or digital tools, while individuals with lower educational qualifications may require more basic, accessible information about tax obligations and the benefits of tax compliance.

The diversity in educational attainment highlights the importance of designing targeted tax education programs that cater to different levels of understanding, ensuring that all SME owners, regardless of their educational background, have the knowledge and tools necessary to make informed tax decisions and minimize compliance biases.

4.4 Descriptive Statistics

4.4.1 Mental Accounting

The analysis of responses regarding mental accounting practices among SME owners in Nairobi County reveals several key insights. For the statement "I maintain separate budgets for different business activities and expenses," 31.00% of respondents agreed, while 35.87% remained neutral and 33.13% disagreed. The mean score of 3.02 and a standard deviation of 0.80 indicate that responses are centred around the neutral mark, suggesting that while some business owners do practice separate budgeting, a notable number either do not or are undecided. This could imply a potential gap in effective financial management, as not maintaining separate budgets might hinder detailed tracking and allocation of resources, impacting tax compliance and financial transparency.

In terms of categorizing spending into different groups to manage finances effectively, 30.70% of respondents agreed, 32.83% were neutral, and 36.47% disagreed, resulting in a mean of 3.06 and a standard deviation of 0.82. These findings highlight a slight leaning towards disagreement, suggesting that many business owners might not actively engage in financial categorization. The implications of this could be significant, as failing to categorize spending could lead to poor financial organization and difficulty in assessing tax obligations accurately.

For the statement "I allocate specific funds for designated purposes within my business," 29.79% agreed, 37.08% were neutral, and 33.13% disagreed. The mean of 3.03 with a standard deviation of 0.79 reflects a slight neutrality among the responses, indicating that while some SMEs do allocate specific funds, a substantial proportion do not prioritize this practice. This could imply challenges in disciplined financial planning, where designated fund allocation is critical for tax readiness and financial clarity.

The responses to "I make business decisions based on the costs already incurred rather than future benefits" showed that 33.74% agreed, 32.83% were neutral, and 33.43% disagreed. The mean score of 3.00 and a standard deviation of 0.82 reflect an even distribution of opinions. This suggests a balance between those who focus on sunk costs and those who consider future benefits, highlighting a potential cognitive bias known as the sunk cost fallacy. Such decision-making can impact financial strategy and tax compliance by prioritizing past expenditures over future profitability.

When asked about tracking income and expenses separately for different revenue streams, 27.96% agreed, 34.35% were neutral, and 37.69% disagreed, with a mean score of 3.10 and a standard deviation of 0.81. The responses indicate a leaning towards disagreement, suggesting that many SMEs may not practice detailed revenue stream tracking. This has implications for financial oversight, as tracking separate revenue streams is essential for understanding profitability and ensuring accurate tax reporting.

Regarding the statement "I prioritize certain expenses over others based on their perceived importance," 31.31% of respondents agreed, 36.47% were neutral, and 32.22% disagreed, with a mean of 3.01 and a standard deviation of 0.80. The results indicate a balance between agreement and disagreement, suggesting that while some business owners prioritize expenses, others may not have a structured approach. This practice could affect how SMEs handle cash flow and prioritize tax-related expenses, potentially leading to lapses in tax compliance.

Overall, the findings imply that while some SME owners exhibit mental accounting practices that could aid in tax compliance, others may lack structured financial strategies. This variation points to a need for targeted financial training and resources to enhance mental accounting practices and improve overall tax adherence among SMEs.

Table 10
Mental Accounting

	SA	A	N	D	SD	Desc.Stat	
						M	SD
I maintain separate budgets for different business activities and expenses.	0.00%	31.00%	35.87%	33.13%	0.00%	3.02	0.80
I categorize my spending into different groups to manage finances more effectively.	0.00%	30.70%	32.83%	36.47%	0.00%	3.06	0.82
I allocate specific funds for designated purposes within my business.	0.00%	29.79%	37.08%	33.13%	0.00%	3.03	0.79
I make business decisions based on the costs already incurred rather than future benefits.	0.00%	33.74%	32.83%	33.43%	0.00%	3.00	0.82
I track income and expenses separately for different revenue streams within my business.	0.00%	27.96%	34.35%	37.69%	0.00%	3.10	0.81
I prioritize certain expenses over others based on their perceived importance.	0.00%	31.31%	36.47%	32.22%	0.00%	3.01	0.80

4.4.2 Risk Version

The analysis of responses related to risk aversion among SME owners provides important insights into financial decision-making. For the statement "I prefer making minimal investments to avoid financial risk in my business," 40.12% of respondents agreed, 30.70% were neutral, and 29.18% disagreed. With a mean score of 2.89 and a standard deviation of 0.83, the data indicates that a significant number of SME owners lean toward risk-averse behaviour, preferring minimal investment to avoid potential losses. This cautious approach could imply limited growth potential for these businesses, as avoiding investments may reduce opportunities for expansion and increased profitability.

Regarding the statement "I avoid taking on debt to minimize financial risk for my business," 30.40% of respondents agreed, 35.56% were neutral, and 34.04% disagreed. The mean score of 3.04 and a standard deviation of 0.80 suggest a balanced perspective, with a substantial proportion of respondents expressing uncertainty. The hesitancy to take on debt could indicate a preference for self-financing or risk-averse financial strategies. This behaviour may limit access to additional capital, potentially restricting business operations and expansion.

In response to "I make conservative decisions to ensure financial safety rather than pursuing high-risk opportunities," 35.87% agreed, 30.09% were neutral, and 34.04% disagreed, resulting in a mean of 2.98 and a standard deviation of 0.84. This reflects a tendency toward conservative decision-making, where many respondents prioritize financial stability over potential high-reward opportunities. This conservative stance can safeguard businesses from substantial losses but may also limit growth and innovation due to an aversion to risk.

For the statement "I regularly use insurance to protect my business from potential risks," 29.18% agreed, 32.52% were neutral, and 38.30% disagreed. The mean score of 3.09 and a standard deviation of 0.82 suggest that while some SMEs value insurance as a protective measure, a notable portion does not prioritize it. This could imply a lack of awareness or financial resources to invest in insurance, potentially leaving businesses vulnerable to unforeseen risks and significant losses.

When considering the statement "I avoid engaging in business activities that could expose me to significant financial loss," 34.04% agreed, 31.61% were neutral, and 34.35% disagreed. The mean score of 3.00 and a standard deviation of 0.83 indicate mixed responses, reflecting that many business owners weigh the potential consequences of engaging in risky activities. This cautious approach may provide a safety net against severe financial difficulties but could also reduce the likelihood of seizing profitable opportunities.

Lastly, for the statement "I prefer to keep a financial reserve to mitigate unexpected business risks," 35.87% agreed, 34.95% were neutral, and 29.18% disagreed, resulting in a mean of 2.93 and a standard deviation of 0.80. This shows that a notable portion of respondents values maintaining financial reserves for risk management. This practice can enhance business resilience and financial stability, allowing SMEs to navigate challenging periods more effectively.

Overall, the findings suggest a prevalent risk-averse attitude among SME owners, with many prioritizing financial safeties over potential growth. This approach may contribute to stable business operations but could hinder innovation and long-term profitability. Encouraging balanced risk-taking and financial literacy could help SMEs harness growth opportunities while maintaining prudent financial practices.

Table 11
Risk Aversion

	SA	A	N	D	SD	Desc.Stat M	Desc.Stat SD
I prefer making minimal investments to avoid financial risk in my business.	0.00%	40.12%	30.70%	29.18%	0.00%	2.89	0.83
I avoid taking on debt to minimize financial risk for my business.	0.00%	30.40%	35.56%	34.04%	0.00%	3.04	0.80
I make conservative decisions to ensure financial safety rather than pursuing high-risk opportunities.	0.00%	35.87%	30.09%	34.04%	0.00%	2.98	0.84
I regularly use insurance to protect my business from potential risks.	0.00%	29.18%	32.52%	38.30%	0.00%	3.09	0.82
I avoid engaging in business activities that could expose me to significant financial loss.	0.00%	34.04%	31.61%	34.35%	0.00%	3.00	0.83
I prefer to keep a financial reserve to mitigate unexpected business risks.	0.00%	35.87%	34.95%	29.18%	0.00%	2.93	0.80

4.4.3 Authority Trust Bias

The analysis of authority trust bias among SME owners in Nairobi County reveals significant insights into their perspectives on tax compliance and the trust they place in tax authorities. Trust in tax authorities and the perceived fairness and transparency of tax regulations play a critical role in influencing compliance behaviour. The findings from various statements show mixed reactions among SME owners, with many expressing neutrality or disagreement regarding trust and transparency in tax practices. This introduction outlines key responses to statements about trust in government credibility, willingness to comply due to trust, belief in the fairness of tax regulations, perceived transparency of tax authorities, the preventive nature of compliance, and trust in the responsible use of tax revenues. The implications of these findings suggest areas for policy improvement and strategies to enhance trust and encourage voluntary tax compliance among SMEs.

The statement "I trust the credibility of government authorities in enforcing tax regulations" had 35.87% of respondents agreeing, 30.70% remaining neutral, and 33.43% disagreeing, resulting in a mean score of 2.98 and a standard deviation of 0.83. This data suggests that while a significant portion of SME owners place trust in government authorities for tax enforcement, there remains a notable level of scepticism or neutrality. The implications of this finding indicate that fostering stronger trust between SMEs and tax authorities could enhance voluntary compliance and reduce the perceived risk associated with tax obligations.

For "I am willing to comply with tax regulations due to my trust in tax authorities," 34.95% of respondents agreed, 30.09% were neutral, and another 34.95% disagreed, with a mean score of 3.00 and a standard deviation of 0.84. This balance between agreement and disagreement implies that while trust motivates some compliance, it is not consistent across the board. The implications suggest that building a positive and trustworthy relationship between tax authorities and SMEs could play a pivotal role in improving tax compliance rates.

Regarding the statement "I support tax regulations because I believe they are fair and beneficial for the business environment," 38.91% of respondents agreed, 33.13% were neutral, and 27.96% disagreed, resulting in a mean of 2.89 and a standard deviation of 0.81. This shows a modest level of agreement with the fairness and perceived benefits of tax regulations, though a significant percentage either remained neutral or disagreed. This finding implies that promoting the benefits and fairness of tax regulations more effectively could help in creating a more supportive outlook among business owners and potentially increase adherence to tax laws.

For "I perceive that tax authorities provide clear and transparent information regarding tax obligations," 32.83% agreed, 30.70% were neutral, and 36.47% disagreed. The mean score of 3.04 and standard deviation of 0.83 reveal mixed sentiments, indicating that a notable number of SME owners do not perceive transparency from tax authorities. The implication here is that increasing the clarity and accessibility of tax information could strengthen trust and lead to improved compliance from SMEs, as a lack of transparency can contribute to misunderstandings and non-compliance.

In response to "I believe that complying with tax regulations will prevent legal issues with tax authorities," 29.48% of respondents agreed, 34.35% were neutral, and 36.17% disagreed, with a mean score of 3.07 and a standard deviation of 0.81. This suggests that while some SMEs recognize compliance as a preventive measure against legal issues, many remain uncertain or disagree. The implication is that reinforcing the importance of compliance in avoiding legal repercussions could motivate more consistent adherence to tax laws.

Lastly, for the statement "I trust that tax revenues are used responsibly for public services that benefit my business," 29.18% agreed, 34.04% were neutral, and 36.78% disagreed, yielding a mean score of 3.08 and a standard deviation of 0.81. This data indicates a significant level of scepticism among SMEs regarding the responsible use of tax revenues. The implication is that demonstrating transparency and accountability in the use of tax funds could enhance trust among business owners and contribute to a higher willingness to comply with tax regulations.

Overall, these findings highlight the importance of trust in tax authorities and perceived fairness and transparency in tax regulations. Enhancing these factors could lead to higher levels of tax compliance and positive attitudes among SME owners.

Table 12
Authority Trust Bias

	SA	A	N	D	SD	Desc.Stat	
						M	SD
I trust the credibility of government authorities in enforcing tax regulations.	0.00%	35.87%	30.70%	33.43%	0.00	2.98	0.83
I am willing to comply with tax regulations due to my trust in tax authorities.	0.00%	34.95%	30.09%	34.95%	0.00	3.00	0.84
I support tax regulations because I believe they are fair and beneficial for the business environment.	0.00%	38.91%	33.13%	27.96%	0.00	2.89	0.81
I perceive that tax authorities provide clear and transparent information regarding tax obligations.	0.00%	32.83%	30.70%	36.47%	0.00	3.04	0.83
I believe that complying with tax regulations will prevent legal issues with tax authorities.	0.00%	29.48%	34.35%	36.17%	0.00	3.07	0.81
I trust that tax revenues are used responsibly for public services that benefit my business.	0.00%	29.18%	34.04%	36.78%	0.00	3.08	0.81

4.4.4 Overconfidence Bias

The examination of overconfidence bias among SME owners in Nairobi County sheds light on their self-perceptions and behaviours related to tax compliance. Overconfidence can significantly impact decision-making and risk management, especially in areas that require specialized knowledge such as taxation. The analysis presented involves various aspects of overconfidence, including SME owners' belief in their ability to manage tax compliance, the tendency to overestimate their knowledge of tax regulations, underestimation of risks, optimism about avoiding tax issues, reluctance to seek professional advice, and confidence in their tax strategies. Understanding these attitudes is essential for identifying potential gaps in knowledge and vulnerabilities in compliance practices, which could lead to non-compliance or overlooked risks. The discussion of the findings provides an overview of how prevalent overconfidence is and the implications for tax policy and advisory support for SMEs.

The statement "I am confident in my ability to handle all aspects of tax compliance effectively" yielded mixed responses, with 32.83% of respondents agreeing and 36.17% remaining neutral, while 31.00% disagreed. This indicates that a significant portion of SME owners believes in their capability to manage tax compliance, but an equally large group either feels uncertain or disagrees with their effectiveness. The implication is that while confidence exists, it is not universally shared, suggesting that tax authorities and policymakers could enhance support structures or training programs to increase competence and confidence in tax compliance.

For the statement "I tend to overestimate my knowledge of tax regulations and compliance requirements," 32.52% agreed, while 31.61% were neutral and 35.87% disagreed. These results reflect a varied perception among SME owners, with a notable proportion acknowledging overconfidence in their tax knowledge, but a comparable number refuting this claim. This overestimation may lead some business owners to make uninformed decisions, potentially increasing the risk of non-compliance. Consequently, it may be beneficial for authorities to provide clear and accessible resources that address gaps in knowledge and counter overconfidence.

In response to "I underestimate the risks associated with non-compliance and potential penalties," 32.52% of respondents agreed, 31.31% were neutral, and 36.17% disagreed. These findings indicate that a significant number of SME owners recognize their tendency to downplay the potential consequences of non-compliance, which could result in increased vulnerability to penalties and legal issues. The implication is that there may be a need for increased awareness campaigns highlighting the seriousness of non-compliance to encourage proactive measures among SMEs.

For the statement "I am optimistic that I can avoid tax issues despite potential risks and uncertainties," 33.74% agreed, another 33.74% were neutral, and 32.52% disagreed. This distribution points to a strong sense of optimism among some SME owners about avoiding tax-related problems, yet there remains a balanced perspective with a significant portion expressing neutrality or disagreement. This overconfidence in avoiding tax issues could lead to under preparedness and higher risks of facing audits or penalties, indicating the necessity for targeted educational programs emphasizing the importance of compliance and risk management.

The statement "I rarely seek professional advice on tax matters because I believe I understand them well" received agreement from 33.43% of respondents, neutrality from 34.35%, and disagreement from 32.22%. These results suggest that while many SME owners are confident in their understanding and do not often seek external advice, an almost equal portion either seeks professional support or feels uncertain. This overconfidence in self-reliance could result in missed opportunities to improve compliance strategies. Encouraging SMEs to seek professional advice can help mitigate risks associated with inadequate tax knowledge.

Lastly, for the statement "I am confident that my tax strategies will protect my business from audits or penalties," 36.17% of respondents agreed, 31.00% were neutral, and 32.83% disagreed. The responses indicate that while a sizable number of SME owners trust their tax strategies, there is a considerable group that remains uncertain or lacks confidence. This disparity suggests that while some SMEs may have effective tax practices, others could benefit from reviewing and reinforcing their strategies to ensure protection from potential audits or penalties.

Table 13
: Overconfidence Bias

	SA	A	N	D	SA	Desc.Stat	
						M	SD
I am confident in my ability to handle all aspects of tax compliance effectively.	0.00%	32.83%	36.17%	31.00%	0.00%	2.98	0.8
I tend to overestimate my knowledge of tax regulations and compliance requirements.	0.00%	32.52%	31.61%	35.87%	0.00%	3.03	0.83
I underestimate the risks associated with non-compliance and potential penalties.	0.00%	32.52%	31.31%	36.17%	0.00%	3.04	0.83
I am optimistic that I can avoid tax issues despite potential risks and uncertainties.	0.00%	33.74%	33.74%	32.52%	0.00%	2.99	0.82
I rarely seek professional advice on tax matters because I believe I understand them well.	0.00%	33.43%	34.35%	32.22%	0.00%	2.99	0.81
I am confident that my tax strategies will protect my business from audits or penalties.	0.00%	36.17%	31.00%	32.83%	0.00%	2.97	0.83

4.4.5 Tax Compliance

The statement "I always file my tax returns on time as required by regulations" revealed that 31.61% of respondents agreed, 31.00% were neutral, and 37.39% disagreed. These findings indicate that while a portion of SME owners adheres to timely filing of tax returns, a considerable number either remain uncertain or do not consistently comply with deadlines. The implication is that tax authorities may need to emphasize the importance of punctual tax filing through targeted awareness campaigns and provide support to reduce delays in filing, potentially improving compliance rates among SMEs.

For the statement "I ensure that all information reported in my tax filings is accurate and complete," 32.52% agreed, 33.13% were neutral, and 34.35% disagreed. The distribution highlights that while some business owners are committed to providing accurate and complete information, a significant portion is either uncertain or struggles with this aspect of tax compliance. This could have implications for the accuracy of tax filings, potentially leading to audit issues or penalties. The results suggest a need for more comprehensive training and resources to assist SME owners in understanding how to accurately complete their tax returns.

The statement "I make full payment of taxes owed by the due date" received agreement from 34.65% of respondents, with 35.87% being neutral and 29.48% disagreeing. This indicates that while a notable group ensures timely payment of taxes, a substantial number remain neutral or face difficulties meeting deadlines. The implications are that financial constraints or procedural challenges might contribute to these delays. Tax authorities could consider flexible payment plans or better communication on payment processes to encourage full and timely compliance.

For the statement "My business has consistently passed tax audits without any significant issues," 31.91% agreed, 32.83% were neutral, and 35.26% disagreed. This reflects that while some SMEs have a good track record in tax audits, a significant number remain uncertain or have faced challenges. This indicates that compliance practices may vary widely among SMEs, and more robust audit preparation resources could help improve overall audit outcomes. Tax authorities and professional advisors might benefit from offering tailored guidance on best practices for audit readiness.

The statement "I consistently review my tax filings to ensure they align with the latest tax laws" showed that 35.87% of respondents agreed, 31.00% were neutral, and 33.13% disagreed. This suggests that while some SME owners make efforts to stay updated with tax law changes, a considerable number either remain uncertain or do not prioritize this review process. The implications are that SMEs might be at risk of non-compliance due to unawareness of recent legislative changes. Enhancing outreach and offering regular updates on tax laws could encourage more SME owners to review and align their filings accordingly.

Lastly, the statement "I keep detailed records of all transactions to ensure compliance during tax audits" saw 35.87% agreement, 33.74% neutrality, and 30.40% disagreement. This shows that a significant portion of SME owners prioritize record-keeping, though a substantial number do not have this practice well-established. This could lead to challenges during audits or when proving compliance. The implication is that promoting the importance of detailed and organized record-keeping could reduce the likelihood of compliance issues and audit complications, strengthening overall tax practices.

The findings from the analysis of tax compliance among SME owners indicate a mixed level of adherence to key compliance practices. While a portion of SME owners demonstrates diligence in timely filings, accurate reporting, and proper record-keeping, a significant percentage remains neutral or faces challenges in these areas. The results highlight the importance of targeted measures to improve awareness, support, and training for SME owners. Addressing these issues can strengthen tax compliance, reduce audit complications, and ensure that SME owners are better equipped to meet their tax obligations effectively.

Table 14
Tax Compliance

	SA	A	N	D	SD	Desc.Stat	
						M	SD
I am confident in my ability to handle all aspects of tax compliance effectively.	0.00%	32.83%	36.17%	31.00%	0.00%	2.98	0.80
I tend to overestimate my knowledge of tax regulations and compliance requirements.	0.00%	32.52%	31.61%	35.87%	0.00%	3.03	0.83
I underestimate the risks associated with non-compliance and potential penalties.	0.00%	32.52%	31.31%	36.17%	0.00%	3.04	0.83
I am optimistic that I can avoid tax issues despite potential risks and uncertainties.	0.00%	33.74%	33.74%	32.52%	0.00%	2.99	0.82
I rarely seek professional advice on tax matters because I believe I understand them well.	0.00%	33.43%	34.35%	32.22%	0.00%	2.99	0.81
I am confident that my tax strategies will protect my business from audits or penalties.	0.00%	36.17%	31.00%	32.83%	0.00%	2.97	0.83

4.5 Diagnostic Testing

4.5.1 Normality Test

Normality examines both the distribution of data and the distribution of a random variable within the dataset. In this study, the normality test is conducted using the Shapiro-Wilk statistic. According to Priyatno (2017), the criterion for decision-making in this test is as follows: if the significance level exceeds 0.05, the null hypothesis, which posits that the data originate from a normally distributed population, is not rejected. This indicates that the data distribution is not significantly different from normality. Conversely, if the significance level is less than or equal to 0.05, the null hypothesis is rejected, suggesting that the data do not follow a normal distribution. In the context of this research on tax compliance among small and medium-sized enterprises owners in Nairobi County, ensuring that the data meet the normality assumption is crucial for the validity of subsequent statistical analyses.

Table 15
Normality Test

	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Mental Accounting	0.097	329	0.134	0.937	329	0.533
Risk Aversion	0.086	329	0.087	0.954	329	0.192
Authority Trust Bias	0.124	329	0.142	0.961	329	0.262
Overconfidence Bias	0.145	329	0.163	0.982	329	0.283
Tax Compliance	0.136	329	0.096	0.963	329	0.225

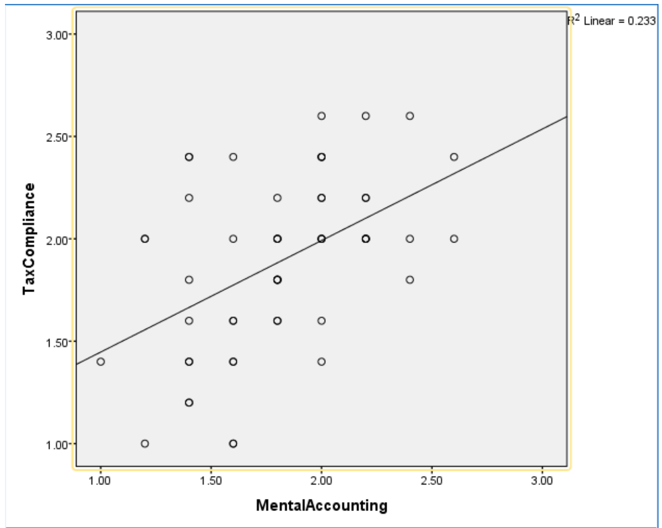
a Lilliefors Significance Correction

The normality test results, as shown in Table 4.5.1, indicate that the data for each variable – mental accounting, risk aversion, authority trust bias, overconfidence bias, and tax compliance – conform to a normal distribution. This conclusion is supported by both the Kolmogorov-Smirnov and Shapiro-Wilk tests, where the significance values for all variables exceed the threshold of 0.05, indicating that the null hypothesis of normality cannot be rejected. Specifically, mental accounting, risk aversion, authority trust bias, overconfidence bias, and tax compliance demonstrate p-values of 0.134, 0.087, 0.142, 0.163, and 0.096 in the Kolmogorov-Smirnov test, and 0.533, 0.192, 0.262, 0.283, and 0.225 in the Shapiro-Wilk test, respectively. These findings imply that the data distribution for each variable is sufficiently normal for parametric statistical analyses to be applied, supporting the robustness of subsequent hypothesis testing.

4.5.2 Linearity Test

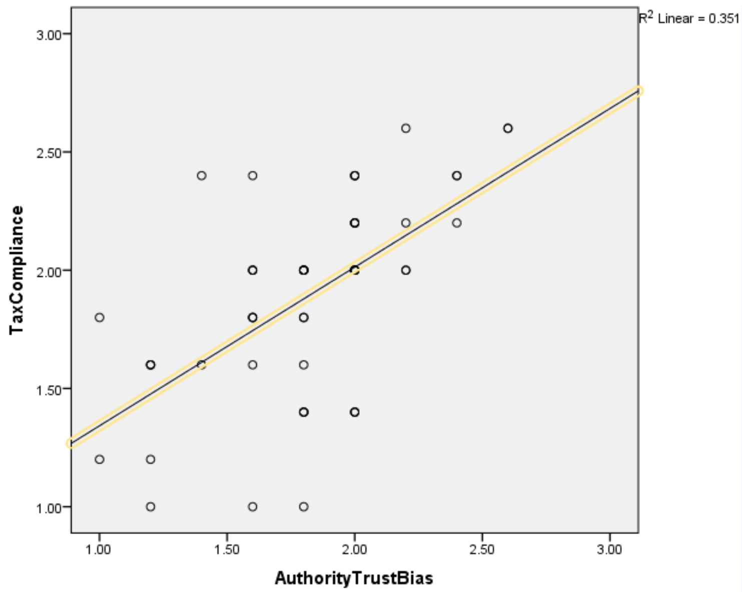
Linearity refers to the ability of a mathematical relationship to be graphically represented as a straight line. According to Edwards (1995), the linearity test aims to determine whether a linear relationship exists between the dependent and independent variables in the dataset. Given that this study employs linear regression, meeting the linearity assumption is essential for accurate modelling of tax compliance behaviours. The linearity test assesses the data distribution between the dependent variable (tax compliance) and the independent variables (behavioural biases). This study utilizes scatter plot graphs to visually inspect the linearity of the regression model. If the scatter plot reveals a clear linear pattern, it confirms that the linearity assumption is satisfied. If the pattern deviates significantly from a straight line, it indicates a violation of the linearity assumption, suggesting that the relationship may be nonlinear and thus requiring alternative analytical approaches.

Figure 2
Linearity Test (Mental Accounting)



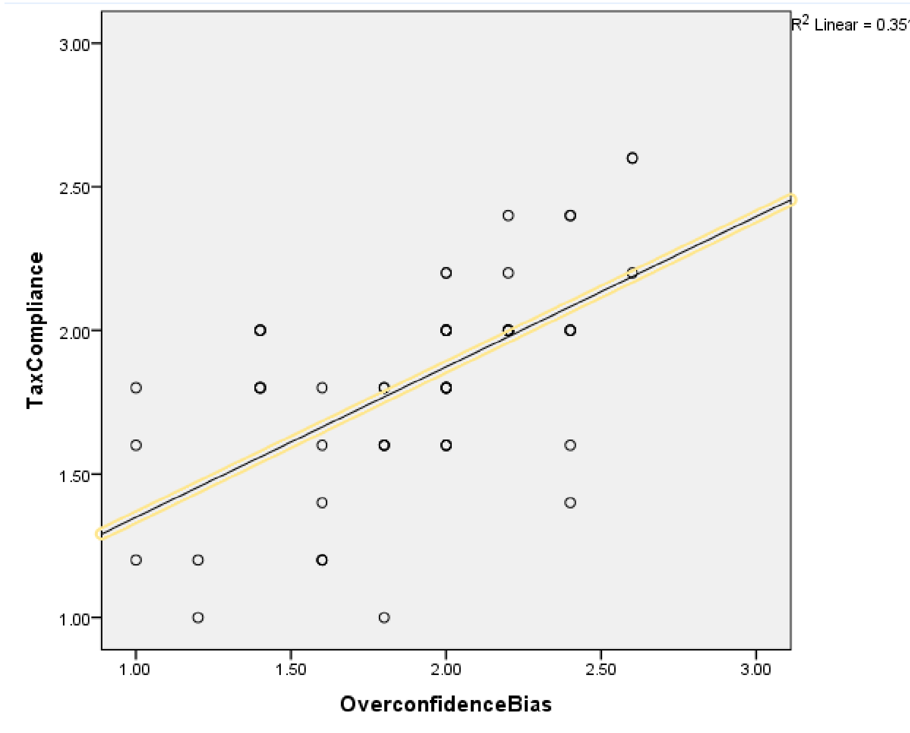
The scatter plot illustrates the relationship between "Mental Accounting" and "Tax Compliance." A fitted linear regression line shows a positive trend, implying that as "Mental Accounting" increases, "Tax Compliance" tends to rise. The R-squared value is 0.233, indicating that 23.3% of the variance in "Tax Compliance" is explained by "Mental Accounting." While this suggests some level of linear relationship, the relatively low R-squared value implies that other factors are significantly influencing "Tax Compliance." Therefore, while there is a positive linear trend.

Figure 3
Linearity Test (Authority Trust Bias)



The scatter plot displays a positive correlation between Authority Trust Bias and Tax Compliance, with an R-squared value of 0.351. This indicates that approximately 35.1% of the variation in tax compliance can be explained by variations in authority trust bias. The data points are somewhat scattered, suggesting a moderate linear relationship. While there is a general trend of increasing tax compliance with higher authority trust bias, the relationship is not perfect, and there is significant variability in the data. Therefore, while there is a linear association, other factors likely influence tax compliance beyond authority trust bias.

Figure 4
Linearity Test (Authority Trust Bias)



The scatter plot illustrates a positive correlation between Overconfidence Bias and Tax Compliance, with an R-squared value of 0.351. This indicates that approximately 35.1% of the variation in tax compliance can be explained by variations in overconfidence bias. The data points are somewhat scattered, suggesting a moderate linear relationship. While there is a general trend of increasing tax compliance with higher overconfidence bias, the relationship is not perfect, and there is significant variability in the data. Therefore, while there is a linear association, other factors likely influence tax compliance beyond overconfidence bias.

4.5.3 Multicollinearity Test

Multicollinearity occurs when independent variables in the regression model exhibit a high degree of correlation with one another. In this study, the presence of multicollinearity is assessed using the Variance Inflation Factor (VIF). A VIF value of 1 indicates no multicollinearity among the independent variables, whereas VIF values greater than 10 signal a high level of multicollinearity, which can lead to problems in regression analysis due to inflated standard errors and unreliable coefficient estimates. If the VIF value is between 5 and 10, it suggests moderate multicollinearity, which may still be acceptable depending on the context. High multicollinearity necessitates the removal of one or more independent variables to reduce redundancy and improve the stability of the regression model. This diagnostic test is vital for ensuring the reliability and validity of the regression analysis on behavioural biases and tax compliance.

Table 16
Collinearity Statistics

	VIF
Mental Accounting	1.08
Risk Aversion	1.23
Authority Trust Bias	2.07
Overconfidence Bias	1.92

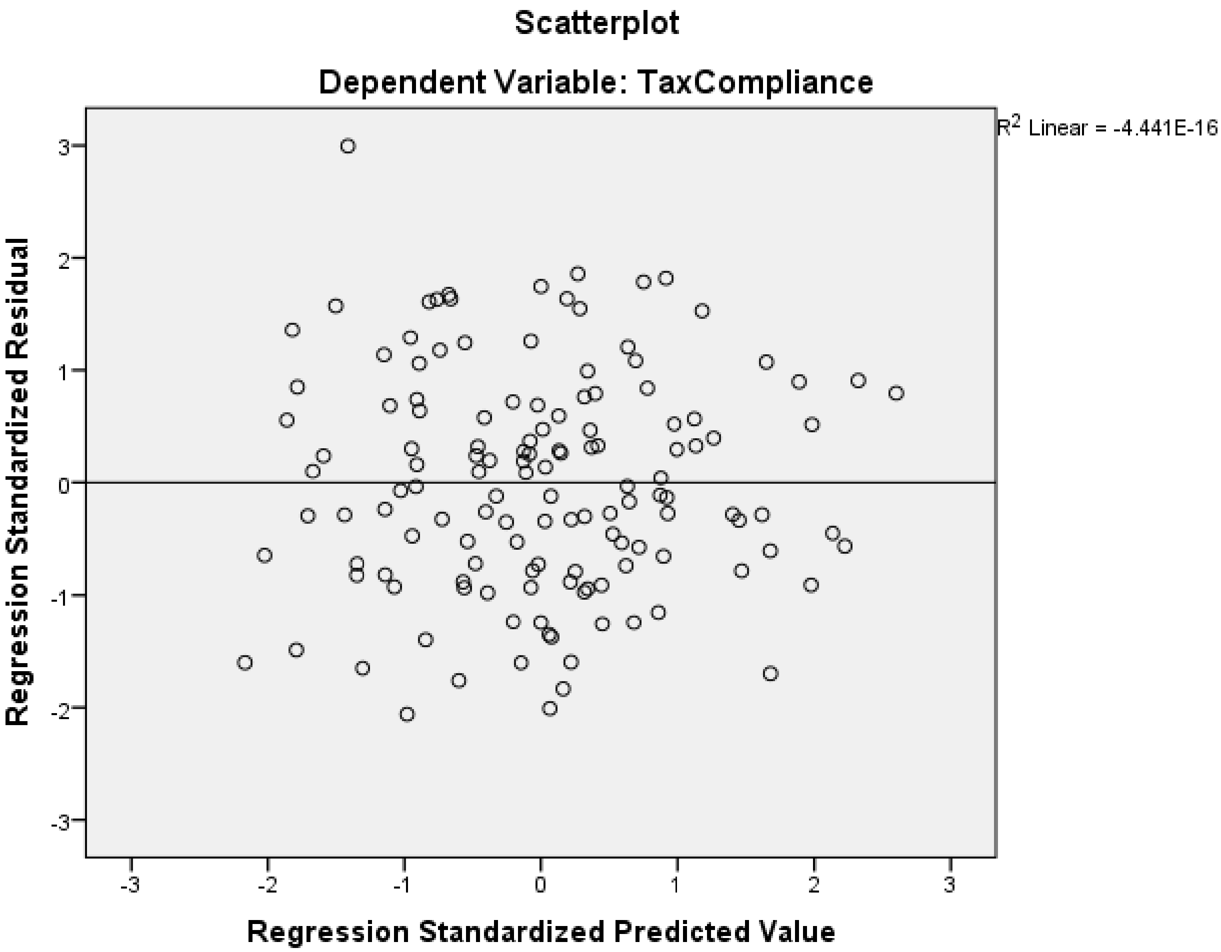
The VIF values for all the independent variables (Mental Accounting, Risk Aversion, Authority Trust Bias, and Overconfidence Bias) are all well below the threshold of 10, indicating that there is no significant multicollinearity among the variables. The values range from 1.08 to 2.07, which suggests that the independent variables are not highly correlated with each other and do not pose any major issues for the regression analysis. Therefore, the model is stable, and the coefficient estimates are likely to be reliable, allowing for valid conclusions to be drawn about the impact of these behavioural biases on tax compliance without concerns over multicollinearity.

4.5.4 Heteroscedasticity Test

Heteroscedasticity arises when the variance of the error terms in a regression model is not constant across all levels of the independent variables. It is typically caused by the presence of outliers or omitted variables. In this study, heteroscedasticity is examined using scatter plots, as described by Tabachnick and Fidell (2007). The residuals differences between observed and predicted values should exhibit constant variance for all predicted scores. A scatter plot that displays a rectangular shape, with scores concentrated around a horizontal line and uniformly distributed, indicates that the assumption of homoscedasticity (constant variance) is met. Conversely, if the scatter plot reveals a systematic pattern or clustering of scores, it suggests a violation of the homoscedasticity assumption, signalling the presence of heteroscedasticity. Addressing heteroscedasticity is crucial for accurate and reliable regression results, particularly in the analysis of tax compliance behaviours among small and medium-sized enterprises owners.

Based on the scatterplot of regression standardized residuals versus standardized predicted values for the financial sustainability model, there is no clear indication of heteroskedasticity. The residuals appear randomly dispersed around the zero line across the range of predicted values, without forming any discernible pattern such as a funnel shape or systematic spread. This randomness suggests that the variance of the residuals remains relatively constant, satisfying the assumption of homoscedasticity. Additionally, the near-zero slopes of the fitted line (Linear = 4.441E-16) reinforces the absence of a linear trend in the residuals, further supporting the conclusion that heteroskedasticity is unlikely to be present in this model.

Figure 5
Scatterplot



4.6 Inferential Analysis

4.6.1 Correlation Analysis

The correlation analysis results for the study on the effect of behavioural biases on tax compliance among small and medium-sized enterprises (SMEs) owners in Nairobi County reveal several statistically significant relationships between tax compliance and the behavioural bias variables. Notably, risk aversion exhibits a strong positive and statistically significant correlation with tax compliance ($r = 0.452$, $p = 0.000$). This finding implies that SME owners who are more risk-averse are more likely to comply with tax obligations, possibly because they seek to avoid the penalties, audits, or reputational risks associated with non-compliance. The strength of this relationship highlights risk aversion as a key behavioural factor influencing compliance outcomes.

Similarly, overconfidence bias demonstrates a positive and significant association with tax compliance ($r = 0.427$, $p = 0.000$). This suggests that SME owners who are overly confident in their ability to manage tax obligations are more likely to report compliance. However, this relationship may reflect a tendency for overconfident taxpayers to perceive themselves as compliant, even where errors or misjudgements occur, pointing to the potential for misalignment between perceived and actual compliance.

In addition, authority trust bias shows a weaker but positive and significant correlation with tax compliance ($r = 0.213$, $p = 0.0001$). This indicates that trust in tax authorities and the belief that they act fairly and transparently contribute to higher compliance levels among SME owners. This aligns with behavioural tax research, which suggests that trust-based compliance reduces the need for coercive enforcement mechanisms.

On the other hand, mental accounting is negatively but insignificantly correlated with tax compliance ($r = -0.0897$, $p = 0.1044$). This suggests that the tendency of SME owners to compartmentalize finances does not have a meaningful influence on tax compliance within this context. The negative direction, though weak and not statistically significant, indicates that reliance on mental accounting may sometimes distort accurate financial reporting, thereby discouraging compliance.

In summary, the correlation analysis highlights that risk aversion, overconfidence bias, and authority trust bias are significant behavioural drivers of tax compliance among SMEs in Nairobi County. While mental accounting appears less influential, the strong positive effects of risk aversion and overconfidence suggest that both fear of penalties and self-belief play crucial roles in shaping tax compliance behaviour.

Table 17
Correlation Analysis

		Tax Compliance	Mental Accounting	Risk Aversion	Authority Trust Bias	Overconfidence Bias
Tax Compliance	Pearson Correlation	1.0000				
	Sig. (2-tailed)					
	N	329.0000				
Mental Accounting	Pearson Correlation	-0.0897				
	Sig. (2-tailed)	0.1044				
	N	329.0000				
Risk Aversion	Pearson Correlation	.452**	-0.0286			
	Sig. (2-tailed)	0.0000	0.6055			
	N	329.0000	329.0000			
Authority Trust Bias	Pearson Correlation	.213**	-.261**	.410**		
	Sig. (2-tailed)	0.0001	0.0000	0.0000		
	N	329.0000	329.0000	329.0000		
Overconfidence Bias	Pearson Correlation	.427**	-.200**	.362**	.685**	
	Sig. (2-tailed)	0.0000	0.0003	0.0000	0.0000	
	N	329.0000	329.0000	329.0000	329.0000	329.0000

**. Correlation is significant at the 0.01 level (2-tailed).

4.6.2 Model Fitting

The model summary indicates that the independent variables "Overconfidence Bias," "Mental Accounting," "Risk Aversion," and "Authority Trust Bias" collectively explain approximately 32.37% of the variance in "Tax Compliance" (R Square = 0.3237). The Adjusted R Square of 0.3154 suggests that this model's explanatory power remains robust even after adjusting for the number of predictors. The standard error of the estimate (0.0577) represents the average distance between observed and predicted values of "Tax Compliance," with a relatively low value indicating a good fit.

The F-statistic (38.7725) and its corresponding significance value (p = 0.0000) indicate that the overall model is statistically significant at the 0.01 level. This means that the combination of the independent variables provides a significantly better prediction of "Tax Compliance" than would be expected by chance.

In conclusion, the model demonstrates a statistically significant relationship, with the behavioural biases explaining a moderate proportion of the variance in tax compliance, highlighting the importance of these factors in predicting tax compliance behaviour.

Table 18
Model Summary [b]

					Change Statistics				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**R Square Change**	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.569[a]	0.3237	0.3154	0.0577	0.3237	38.7725	4.0000	324.0000	0.0000

a. Predictors: (Constant), Overconfidence Bias, Mental Accounting, Risk Aversion, Authority Trust Bias
b. Dependent Variable: Tax Compliance

The ANOVA table indicates that the regression model, which includes the predictors "Overconfidence Bias," "Mental Accounting," "Risk Aversion," and "Authority Trust Bias," explains a statistically significant amount of variance in "Tax Compliance." The F-statistic is 38.7725, with a significance level (p-value) of 0.000, indicating that the overall model is highly significant at the 0.01 level.

The regression sums of squares (0.5155) and the residual sum of squares (1.0770) show that a substantial portion of the variance in "Tax Compliance" is accounted for by the predictors in the model, compared to the unexplained variance (residual). In conclusion, this ANOVA result confirms that the independent variables significantly contribute to predicting tax compliance, underscoring the relevance of behavioural biases in influencing tax compliance among the study participants.

Table 19
ANOVA [a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.5155	4.0000	0.1289	38.7725	.000[b]
	Residual	1.0770	324.0000	0.0033		
	Total	1.5925	328.0000			

a. Dependent Variable: Tax Compliance
b. Predictors: (Constant), Overconfidence Bias, Mental Accounting, Risk Aversion, Authority Trust Bias

The coefficient analysis from Table 20 offers valuable insights into how each behavioural bias impacts tax compliance among small and medium-sized enterprise (SME) owners in Nairobi County, Kenya, under the study titled "The Effect of Behavioural Biases on Tax Compliance." Starting with the constant term, the value of 0.0132, although not statistically significant ($p = 0.1213$), represents the baseline level of tax compliance when all other factors are held constant.

When examining the specific behavioural biases, Mental Accounting has a negative unstandardized coefficient of -0.0012, suggesting that, ceteris paribus, a one-unit increase in mental accounting is associated with a slight decrease in tax compliance by 0.0012 units. However, this relationship is not statistically significant ($p = 0.2101$), indicating that mental accounting does not have a meaningful impact on tax compliance in this context.

On the other hand, Risk Aversion shows a positive and significant effect, with an unstandardized coefficient of 0.1182 and a highly significant p-value of 0.000. This suggests that, all other factors being equal, a one-unit increase in risk aversion leads to an increase of 0.1182 units in tax compliance. This positive relationship implies that individuals who are more risk-averse tend to comply with tax obligations more readily, likely due to their aversion to potential penalties or repercussions from non-compliance.

Authority Trust Bias has a negative effect on tax compliance, with an unstandardized coefficient of -0.0211 and a significant p-value of 0.000. This indicates that, ceteris paribus, a one-unit increase in authority trust bias reduces tax compliance by 0.0211 units. This negative relationship suggests that excessive trust in authority may decrease tax compliance, possibly because individuals with high trust levels may believe that authorities will be lenient or overlook minor non-compliance.

Finally, Overconfidence Bias demonstrates a positive and substantial effect, with an unstandardized coefficient of 0.0231 and a significant p-value of 0.000. This suggests that, all other factors kept constant, a one-unit increase in overconfidence bias is associated with a 0.0231-unit increase in tax compliance. This relationship implies that individuals with higher overconfidence in their understanding of tax obligations or compliance abilities are more likely to comply, possibly due to a belief in their own competence and control over tax-related matters.

In conclusion, the study reveals that, among SME owners in Nairobi, risk aversion and overconfidence bias positively influence tax compliance, while authority trust bias has a negative effect. Mental accounting, however, does not have a significant impact on compliance. This suggests that promoting a balanced level of confidence and risk-awareness could potentially improve tax compliance rates among SMEs.

The realistic representation is shown in the model below.

$$Y_i = 0.0132 - 0.0012X_1 + 0.1182\mathrm{X}_2 + -0.0211\mathrm{X}_3 + 0.0231\mathrm{X}_4$$

Where:
Y=Tax Compliance

X_1 = Mental Accounting

X_2 = Risk Aversion

X_3 = Authority Trust Bias

X_4 = Overconfidence Bias

Table 20
Coefficients [a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	0.0132	0.0085		1.5536	0.1213	-0.0035	0.0300
	Mental Accounting	-0.0012	0.0010	-0.0597	-1.2558	0.2101	-0.0031	0.0007
	Risk Aversion	0.1182	0.0150	0.3983	7.8583	0.0000	0.0886	0.1478
	Authority Trust Bias	-0.0211	0.0049	-0.2854	-4.3382	0.0000	-0.0307	-0.0115
	Overconfidence Bias	0.0231	0.0031	0.4663	7.3732	0.0000	0.0169	0.0292

a. Dependent Variable: Tax Compliance

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a comprehensive synthesis of the study's findings, comparing them with those of previous research to identify areas of alignment and divergence. It includes a detailed analysis of how the current results support or contrast with the conclusions of other scholars, offering a critical perspective on the consistency of findings across studies. Additionally, this chapter discusses the researcher's interpretations and insights derived from the analysis, along with the challenges encountered during the study process. Recommendations for future research are also presented, suggesting potential directions and methodologies that could further enrich understanding of this topic.

5.2 Summary of Findings

5.2.1 Mental Accounting and Tax Compliance

The initial goal of the study was assessing the effect of mental accounting on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya. The study finds that Mental Accounting does not have a significant impact on tax compliance among SME owners in Nairobi. While it was initially hypothesized that individuals who use mental accounting techniques categorizing funds based on purpose might show different compliance behaviours, the results indicate that such practices do not meaningfully influence their likelihood to comply with tax obligations. This suggests that mental accounting, as a behavioural tendency, does not drive decisions related to tax compliance in this context.

This finding aligns with some prior research but contrasts with others. Studies such as those by Torgler (2005) and Alm et al. (2016) often emphasize the role of cognitive biases, including mental accounting, in influencing taxpayer behaviour, arguing that such biases can alter an individual's perception of financial obligations. However, similar to our findings, there are studies suggesting that mental accounting may not significantly affect compliance decisions, as tax-related actions often depend on broader factors, such as perceived risk of penalty or the structure of tax incentives, rather than categorization of funds. The mixed evidence in the literature indicates that the role of mental accounting in tax compliance may be limited and context-dependent, varying according to individual or cultural differences and the specific tax environment involved.

5.2.2 Risk Aversion and Tax Compliance

The second goal of the study was assessing the effect of risk aversion on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya. The study finds a positive relationship between risk aversion and tax compliance among SME owners in Nairobi. Individuals who are more risk-averse demonstrate a greater tendency to fulfil their tax obligations, likely due to their aversion to potential penalties or repercussions associated with non-compliance. This suggests that a cautious approach towards risk may motivate SME owners to adhere to tax regulations more diligently, reducing the likelihood of engaging in tax evasion.

The study's findings align with prior research by Alm et al. (2016) and Torgler (2005), which observed that individuals who are more risk-averse tend to show higher levels of tax compliance. These studies attribute this behaviour to the fear of facing legal consequences or financial penalties, leading risk-averse individuals to comply as a form of self-protection. Similarly, other researchers have documented the role of risk perception in shaping compliance behaviour, noting that individuals who fear the potential losses from non-compliance are more likely to adhere to tax obligations. However, some studies offer contrasting perspectives. For example, Chen et al. (2018) suggest that risk aversion does not always lead to compliance, particularly in contexts where enforcement is weak or where individuals perceive the likelihood of penalties as low. Additionally, Moussa (2019) argued that in some cases, high risk aversion may lead individuals to underreport or evade taxes as a way of minimizing financial burdens, especially in unstable economic environments. This divergence suggests that while risk aversion generally supports tax compliance, its effect can be influenced by external factors such as enforcement strength and economic stability.

5.2.3 Authority Trust Bias and Tax Compliance

The third goal of the study was assessing the effect of Authority trust bias on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya. The findings indicate a negative relationship between authority trust bias and tax compliance among SME owners in Nairobi. This suggests that individuals who exhibit a high level of trust in authorities are less likely to comply with tax obligations. The interpretation is that excessive trust may lead these individuals to believe that authorities will either overlook minor non-compliance or be lenient if such instances arise. Thus, while trust in authority is generally considered beneficial for fostering cooperation and adherence to regulations, too much trust might inadvertently diminish tax compliance by reducing the perceived need for vigilance.

In alignment with these findings, studies by Alm et al. (2016) and Torgler (2005) emphasize that while trust in authorities can generally promote compliance, unchecked trust may have the opposite effect, as individuals might assume authorities will not enforce strict penalties for non-compliance. Conversely, some studies diverge from this view. For example, Alm and McClellan (2012) found that trust in authority typically correlates positively with tax compliance, suggesting that individuals with higher trust in tax authorities are more motivated to comply voluntarily. The variations in findings across different studies could reflect contextual or cultural differences, highlighting the need for further examination of how authority trust bias influences tax compliance across various demographics and regions.

5.2.4 Overconfidence Bias and Tax Compliance

The fourth goal of the study was assessing the effect of Overconfidence bias on tax compliance among small and medium-sized enterprises owners Nairobi County, Kenya. The findings reveal that Overconfidence Bias has a positive effect on tax compliance among SME owners in Nairobi. Individuals who display higher levels of overconfidence, particularly in their understanding of tax requirements and their own compliance abilities, are more likely to comply with tax obligations. This tendency likely stems from a belief in their competence and control over tax-related matters, which encourages a sense of responsibility toward compliance.

In line with these findings, past studies such as those by Torgler (2005) and Alm et al. (2016) indicate that confidence in one's tax knowledge or skills can promote compliance, as individuals feel more equipped to navigate tax obligations accurately. Similarly, some studies on behavioural economics have suggested that confidence in one's understanding of regulations fosters positive compliance behaviour, likely due to reduced apprehension and a greater perceived ability to fulfil tax responsibilities. However, this relationship contrasts with other research that suggests overconfidence can lead to non-compliance, where individuals mistakenly overestimate their ability to comply or assume leniency from tax authorities due to perceived control. These opposing findings highlight the nuanced nature of overconfidence, suggesting it may drive both compliance and non-compliance based on individual perceptions of tax authority expectations and personal control.

5.3 Conclusions of the Study

The study finds that mental accounting does not significantly influence tax compliance among SME owners in Nairobi. Despite the hypothesis suggesting that individuals who categorize their finances might behave differently in relation to tax compliance, the results indicate that such practices do not substantially affect their likelihood to comply with tax obligations. This finding is consistent with some studies that emphasize the limited role of mental accounting in tax compliance decisions, indicating that broader factors such as enforcement and risk perceptions may play a more critical role. Therefore, mental accounting does not appear to be a significant determinant of tax compliance in this context.

The study reveals a positive relationship between risk aversion and tax compliance. Risk-averse SME owners in Nairobi are more likely to adhere to tax regulations, likely due to their aversion to potential penalties or other negative consequences of non-compliance. This aligns with previous studies that highlight how individuals with a strong aversion to risk are more inclined to comply with tax obligations as a protective measure against possible legal or financial repercussions. While some studies suggest that the effect of risk aversion on compliance may vary depending on external factors such as enforcement strength, this study confirms that, in general, risk aversion encourages tax compliance among SME owners in Nairobi.

The findings indicate a negative relationship between authority trust bias and tax compliance. SME owners who display a high level of trust in authorities are less likely to comply with tax obligations, possibly due to a belief that authorities will overlook minor instances of non-compliance or be lenient. This suggests that while trust in authority is generally beneficial, an excessive level of trust may reduce the perceived necessity to comply with tax regulations. The study's findings are consistent with research suggesting that unchecked trust can lead to complacency in compliance behaviour. However, other studies have suggested that trust in authority could enhance compliance, highlighting the complexity of this relationship and the need for further investigation.

The study finds a positive relationship between overconfidence bias and tax compliance. SME owners who exhibit higher levels of overconfidence, particularly in their understanding of tax matters, are more likely to comply with tax obligations. This positive relationship is consistent with previous research that suggests individuals who are confident in their tax knowledge or abilities are more inclined to fulfil their tax responsibilities. However, some studies also point to the possibility that overconfidence could lead to non-compliance if individuals overestimate their ability to navigate tax requirements or assume that authorities will be lenient. The study emphasizes the dual nature of overconfidence, suggesting that it can drive both compliance and non-compliance, depending on the individual's perceptions of their control and authority expectations.

5.4 Recommendations

To enhance tax compliance, it is recommended that SME owners be educated on the importance of maintaining accurate financial records and adopting better financial management practices. Since mental accounting did not show a significant impact on tax compliance, tax authorities could focus on promoting general financial literacy, ensuring that SME owners understand the broader implications of tax obligations beyond simple categorization of funds. Educational campaigns can encourage a more comprehensive understanding of tax regulations and the consequences of non-compliance, which may lead to higher compliance rates among SME owners.

Given the positive relationship between risk aversion and tax compliance, it is recommended that tax authorities emphasize the risks associated with tax evasion, particularly the potential penalties and legal consequences. By highlighting the negative outcomes of non-compliance, tax agencies can appeal to risk-averse SME owners who are more likely to adhere to tax obligations out of a desire to avoid penalties. Additionally, providing clear, accessible information about tax laws and compliance processes can further reduce perceived risks and encourage voluntary compliance. Offering incentives for timely compliance could also be a strategy to align risk-averse individuals with positive tax behaviour.

To address the negative impact of authority trust bias on tax compliance, tax authorities should focus on building a balanced relationship with SME owners. While it is beneficial to foster trust, it is essential to communicate that trust should not lead to complacency regarding tax responsibilities. Regular audits, clear communication about enforcement measures, and visible actions taken against non-compliance can reinforce the message that tax compliance is essential. Tax authorities should also consider transparency in their operations to demonstrate that non-compliance will be addressed appropriately, ensuring that SME owners understand the importance of staying vigilant despite their trust in authorities.

To mitigate the potentially adverse effects of overconfidence bias, it is recommended that tax authorities provide targeted education and training programs that address the complexities of tax regulations. SME owners with overconfidence in their tax knowledge may overlook critical details or misinterpret regulations. Offering workshops or consultations could help reduce errors in compliance stemming from overconfidence. Additionally, fostering an environment where SME owners can seek guidance or clarification on tax matters without fear of penalty may encourage those with overconfidence to confirm their understanding before taking action, leading to more accurate compliance behaviours.

5.5 Recommendations for Further studies

For further studies, it is essential to explore several areas to gain a more nuanced understanding of the behavioural factors affecting tax compliance. First, research should examine the influence of cultural and socioeconomic factors on the behavioural biases identified in this study. Given that this study focused on SMEs in Nairobi County, future studies could extend this to other regions in Kenya or even across different countries in Africa, considering how varying cultural contexts and local tax systems may affect the relationship between behavioural biases and tax compliance. Such comparisons would help determine whether the patterns observed are universal or context-specific, thus offering a broader perspective on the issue.

While this study found mental accounting to be insignificant in influencing tax compliance, it would be valuable for future research to examine this concept in greater depth. This could involve investigating different types of mental accounting techniques or exploring whether mental accounting interacts with other cognitive biases in influencing compliance behaviour. Additionally, future studies could experiment with different tax environments to determine whether the relationship between mental accounting and compliance might vary under different conditions, such as varying levels of tax complexity or enforcement intensity.

Another important area for future research is the role of tax education and awareness in moderating the effects of the behavioural biases on tax compliance. Understanding how tax knowledge and the clarity of tax regulations affect the biases observed in this study could lead to more effective interventions. Specifically, research could examine whether improving taxpayers' understanding of their obligations and the potential consequences of non-compliance can help reduce the negative effects of biases such as authority trust bias or overconfidence bias.

Finally, longitudinal studies that track changes in tax compliance behaviour over time could provide valuable insights into how these biases evolve. It would be beneficial to explore how individual tax compliance behaviour is influenced by changes in the external environment, such as shifts in tax policy, the introduction of new technologies, or the implementation of stricter enforcement measures. This type of research could shed light on whether biases like risk aversion and overconfidence become more pronounced or diminish as the external conditions surrounding tax compliance change.

In conclusion, further studies should seek to broaden the scope of this research by considering additional factors that could influence tax compliance. By exploring the complex interplay of behavioural biases, cultural contexts, tax policies, and individual perceptions, future research will contribute significantly to the development of more effective strategies for enhancing tax compliance among SMEs.

5.6 Limitations of the Study

Several limitations hindered the researcher from fully conducting this investigation. Nevertheless, these limitations did not affect the overall quality of the research. The defined boundaries provided opportunities for identifying new areas for further exploration. The following constraints were present:

5.6.1 Contextual Limitation

A contextual limitation in our study lies in its specific focus on small and medium-sized enterprises (SMEs) in Nairobi County, Kenya. While the findings provide valuable insights into the behavioural biases affecting tax compliance within this demographic, the results may not be directly applicable to SMEs in other regions or countries. The unique economic, cultural, and regulatory environment in Kenya may limit the generalizability of the study's conclusions. Therefore, future research in different geographical contexts or with diverse populations is essential to determine whether these findings hold true across various settings or industries.

5.6.2 Conceptual Limitation

The conceptual limitation of this study stems from the complexity of tax compliance, which is influenced by numerous factors beyond the scope of this research. While the study specifically examined the impact of behavioural biases, such as mental accounting, risk aversion, authority trust bias, and overconfidence bias, tax compliance is a multifaceted issue. Additional factors such as the effectiveness of tax policies, the enforcement mechanisms in place, and socio-economic status may also play crucial roles. By focusing solely on the psychological factors, this study provides valuable insights but does not offer a comprehensive understanding of all the possible determinants of tax compliance. Future studies should explore a broader range of conceptual dimensions to provide a more holistic view of what influences tax compliance among SMEs.

5.6.3 Methodological Limitation

The methodological limitation of this study is tied to its reliance on a cross-sectional design, which captures data at a single point in time. While this approach is useful for identifying associations between variables, it does not account for changes that may occur over time in tax compliance behaviours. Given that tax compliance is a dynamic process influenced by evolving factors, a longitudinal study could provide more robust insights into causality and the long-term effects of behavioural biases. Additionally, this study primarily utilized quantitative data, which may not fully capture the complexities of the factors at play. A mixed-methods approach, incorporating qualitative data through interviews or focus groups, could provide deeper insights into the lived experiences of SME owners and the nuanced ways in which these biases influence their compliance decisions.

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APPENDICES

APPENDIX A.I Questionnaires

SECTION A: Background Information

1.Nature of business:

Retail shop [ ]

Wholesale shop [ ]

Manufacturing [ ]

Service provision [ ]

Others [ ]

2.What is your age bracket?

Below 25 years [ ]

25-35 years [ ]

36-45 years [ ]

46-55 years [ ]

56 years and above [ ]

3.Gender

Male [ ]

Female [ ]

4.What is your highest level of education?

Certificate level [ ]

Diploma level [ ]

First Degree level [ ]

Master's degree level and above [ ]

5.How long have been working with the organization?

0 -3 years [ ]

4 to 6 years [ ]

7 to 10 years [ ]

10 years and above [ ]

SECTION B: MENTAL ACCOUNTING

In your own opinion, how does the following statements relate to Mental Accounting effect on Tax compliance on small and medium-sized enterprises owners?

(1- Strongly agree, 2- agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree)

	1	2	3	4	5
I maintain separate budgets for different business activities and expenses.					
I categorize my spending into different groups to manage finances more effectively.					
I allocate specific funds for designated purposes within my business.					
I make business decisions based on the costs already incurred rather than future benefits.					
I track income and expenses separately for different revenue streams within my business.					
I prioritize certain expenses over others based on their perceived importance.					

SECTION C: RISK AVERSION

In your own opinion, how does the following statements relate to Risk Aversion effect on Tax compliance on small and medium-sized enterprises owners?

(1- Strongly agree, 2- agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree)

	1	2	3	4	5
I prefer making minimal investments to avoid financial risk in my business.					

I avoid taking on debt to minimize financial risk for my business.					
I make conservative decisions to ensure financial safety rather than pursuing high-risk opportunities.					
I regularly use insurance to protect my business from potential risks.					
I avoid engaging in business activities that could expose me to significant financial loss.					
I prefer to keep a financial reserve to mitigate unexpected business risks.					

SECTION D: AUTHORITY TRUST BIAS

In your own opinion, how does the following statements relate to Authority Trust Bias effect on Tax compliance on small and medium-sized enterprises owners?

(1- Strongly agree, 2- agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree)

	1	**2**	**3**	**4**	**5**
I trust the credibility of government authorities in enforcing tax regulations.					
I am willing to comply with tax regulations due to my trust in tax authorities.					
I support tax regulations because I believe they are fair and beneficial for the business environment.					
I perceive that tax authorities provide clear and transparent information regarding tax obligations.					
I believe that complying with tax regulations will prevent legal issues with tax authorities.					
I trust that tax revenues are used responsibly for public services that benefit my business.					

SECTION E: OVERCONFIDENCE BIAS

In your own opinion, how does the following statements relate to Overconfidence Bias effect on Tax compliance on small and medium-sized enterprises owners?

(1- Strongly agree, 2- agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree)

	1	2	3	4	5
I am confident in my ability to handle all aspects of tax compliance effectively.					
I tend to overestimate my knowledge of tax regulations and compliance requirements.					
I underestimate the risks associated with non-compliance and potential penalties.					
I am optimistic that I can avoid tax issues despite potential risks and uncertainties.					
I rarely seek professional advice on tax matters because I believe I understand them well.					
I am confident that my tax strategies will protect my business from audits or penalties.					

SECTION F: TAX COMPLIANCE

In your own opinion, how does the following statements relate level of Tax compliance on small and medium-sized enterprises owners?

(1- Strongly agree, 2- agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree)

	1	2	3	4	5
I always file my tax returns on time as required by regulations.					
I ensure that all information reported in my tax filings is accurate and complete.					
I make full payment of taxes owed by the due date.					
My business has consistently passed tax audits without any significant issues.					
I consistently review my tax filings to ensure they align with the latest tax laws.					
I keep detailed records of all transactions to ensure compliance during tax audits.					