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BEHAVIORAL PUBLIC ADMINISTRATION: NUDGING FOR BETTER COMPLIANCE IN TAX AND REGULATORY SYSTEMS

ADMINISTRASI PUBLIK PERILAKUAN: NUDGE UNTUK MENINGKATKAN KEPATUHAN DALAM SISTEM PAJAK DAN REGULASI

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ABSTRACT
Compliance with tax and regulatory systems is essential for effective governance, yet traditional sanction-based approaches remain costly and often ineffective. As a more adaptive alternative, behavioral public administration particularly through nudging strategies—has gained traction to promote voluntary compliance. However, the effectiveness of nudges varies across contexts, and comprehensive cross-national reviews remain limited. This study employs a narrative literature review of publications from 2008–2025 using Scopus and Web of Science, focusing on behavioral interventions in tax and regulatory settings. Using MINDSPACE and EAST frameworks, the study classifies nudge types and synthesizes their effectiveness. Findings indicate that social norm and salience-based nudges significantly enhance compliance, though outcomes are shaped by contextual moderators such as public trust, digitalization, and bureaucratic capacity. This review advances theoretical integration between behavioral economics and public administration and offers practical guidance for designing context-sensitive, evidence-based compliance policies.
Keywords: Behavioral Nudges, Tax Compliance, Regulatory Compliance, Public Administration, Behavioral Economics, Policy Effectiveness

ABSTRAK
Kepatuhan terhadap sistem perpajakan dan regulasi merupakan elemen krusial dalam mewujudkan tata kelola pemerintahan yang efektif. Namun, pendekatan tradisional berbasis sanksi sering kali mahal dan kurang efisien. Sebagai alternatif yang lebih adaptif, administrasi publik berbasis perilaku khususnya melalui strategi nudging semakin banyak diterapkan untuk mendorong kepatuhan sukarela. Meskipun demikian, efektivitas nudge masih bervariasi di berbagai konteks, dan kajian lintas negara yang komprehensif masih terbatas. Studi ini menggunakan pendekatan narrative literature review terhadap publikasi tahun 2008–2025 di basis data Scopus dan Web of Science, dengan fokus pada intervensi perilaku dalam konteks pajak dan regulasi. Dengan kerangka MINDSPACE dan EAST, studi ini mengklasifikasikan tipe nudge dan mensintesis efektivitasnya. Temuan menunjukkan bahwa nudge berbasis norma sosial dan salience secara signifikan meningkatkan kepatuhan, meskipun hasilnya sangat dipengaruhi oleh faktor kontekstual seperti kepercayaan publik, digitalisasi, dan kapasitas birokrasi. Kajian ini memperkuat integrasi teoritis antara ekonomi perilaku dan administrasi publik serta memberikan panduan praktis bagi perancang kebijakan dalam membangun sistem kepatuhan yang berbasis bukti dan sensitif terhadap konteks.
Kata Kunci: Behavioral Nudges, Kepatuhan Pajak, Kepatuhan Regulasi, Administrasi Publik , Ekonomi Perilaku, Efektivitas Kebijakan

1. INTRODUCTION

Compliance with the tax system and regulations is a crucial pillar for the continued functioning of the state. Tax revenue, for example, plays a vital role in funding various development programs, public services, and national economic stability. According to the International Monetary Fund (2023), the contribution of taxes to Gross Domestic Product (GDP) in developing countries ranges from 15% to 30%, and can exceed 35% in developed

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countries. However, serious challenges remain, one of which is the tax gap—the difference between the amount of tax that taxpayers should pay and what they actually pay. In the United States alone, the Internal Revenue Service (IRS) estimates the annual tax gap to reach USD 540 billion in 2021, demonstrating the enormous scale of the problem even in countries with relatively advanced tax administration systems.

Conventional efforts to increase compliance are generally based on coercive approaches based on the threat of sanctions, audits, and law enforcement. However, this approach does not always produce the desired long-term impact. A study by Alm and Torgler (2011) showed that increasing sanctions only has a limited impact on short-term behavior and can even undermine public trust in government institutions. Furthermore, the OECD (2020) noted that administrative and enforcement costs to ensure tax and regulatory compliance can consume up to 20% of fiscal and regulatory agency budgets. The negative psychological effects of this approach, such as the emergence of resistance and alienation from citizens, are also a major concern in contemporary public administration literature.

In response to the limitations of traditional approaches, a new paradigm rooted in behavioral science has emerged, particularly through the behavioral public administration approach. This approach integrates findings from behavioral economics into public policy design, one example being the concept of nudging introduced by Thaler and Sunstein (2008). Nudges are subtle interventions that change the way choices are presented to individuals without restricting their freedom of choice. By 2024, more than 250 behavioral insight units had been established in over 60 countries (OECD, 2024), including Indonesia, indicating widespread adoption of this approach in the public sector.

Various studies have shown that nudging can improve compliance in a more efficient and sustainable manner. For example, an experiment by Hallsworth et al. (2017) in the UK found that the use of social norm messages in tax bills increased payment rates by up to 15%. Furthermore, because of their non-intrusive and low-cost nature, nudges are considered a promising strategy for countries with limited administrative resources. However, the effectiveness of these interventions varies significantly depending on the type of nudge used, the institutional context, and the psychological and social characteristics of citizens. Unfortunately, to date, there has been no comprehensive study examining how various types of behavioral nudges influence compliance behavior in tax and regulatory systems, particularly across countries and institutional contexts. Therefore, this study aims to fill this gap by in-depth exploring various types of nudges and the mechanisms by which they influence compliance, as well as the factors that moderate their success. The findings of this study are expected to provide theoretical contributions to the development of behavioral public administration, as well as practical guidance for policymakers in building more adaptive, humane, and effective compliance systems.

In the past two decades, there has been a significant paradigm shift in the realm of public administration, particularly in the design and implementation of public policy. This shift is marked by the increasing integration of theories from behavioral economics into public administration frameworks. The classical public administration tradition, which emphasizes rationality, proceduralism, and bureaucratic structures, has begun to be complemented—and even challenged—by approaches that emphasize the limitations of individual rationality and the psychological and social dynamics that influence citizen decision-making. One of the most prominent contributions of this approach is the concept of nudge theory, which rests on the assumption that human behavior is often influenced by cognitive biases, limited information, and the choice structures surrounding them. Nudges—or subtle nudges—are interventions designed to guide individuals toward better decisions without coercion, prohibition, or direct economic incentives. In the context of public administration, nudges have become an attractive policy tool due to their non-intrusive yet effective nature, particularly in increasing regulatory and tax compliance.

The adoption of behavioral economics theory and practice has given rise to a new subdiscipline within public administration known as behavioral public administration. This field examines the interaction between human behavior and public institutions in greater depth, including how perceptions, emotions, social norms, and information framing influence public responses to government policies. This integration opens up opportunities for more humane, efficient, and contextual policy design, focusing not only on structures and procedures but also on how people think and act in everyday life. The emergence of behavioral insights-based policy units in various countries is clear evidence of the relevance and growth of this approach. Governments are beginning to recognize that policy effectiveness is determined not only by the content of regulations or the strength of sanctions, but also by the method of delivery, the social context, and the accompanying psychological influences. Thus, behavioral public administration offers a new dimension to public policy formulation: the ability to influence citizen behavior in subtle yet measurable ways.

Behavioral approaches, specifically nudging, have garnered significant attention due to their potential to influence decision-making without substantially altering choices or restrictions (Congiu & Moscati, 2021; . However, gaps persist within the academic literature, particularly regarding the classification and comparative analysis of nudges across diverse regulatory and cultural contexts. Many studies primarily focus on specific nudging strategies, neglecting a broader spectrum of interventions or the contexts in which they are deployed (Congiu & Moscati, 2021; Daneman et al., 2022). For effective policy-making, it is critical to comprehensively understand the variety of nudges and their effectiveness across different situations and regulations.

Current research tends to overlook the influence of social, cultural, and institutional contexts on the efficacy of behavioral interventions. For instance, the success of social norm-based nudges may be intricately linked to the public's trust in government or social cohesion, dimensions that are seldom deeply examined (O'Meara et al., 2020; Charlier et al., 2021). Studies exploring cross-cultural nuances reveal that the effectiveness of nudges can vary greatly depending on societal values and regulatory frameworks, yet empirical investigations in this area remain limited ("Nudging Public Policy", 2021; Singh et al., 2024). As such, more systematic research is essential to bridge these gaps, particularly considering how public governance and local values can shape the response to behavioral interventions.

Moreover, the literature often fails to differentiate between types of regulations, such as environmental, business, or tax regulations, which could require tailored nudge approaches ("Nudging Public Policy", 2021; (Truijens, 2022; Loibl et al., 2018). The fragmented nature of current research presents challenges in applying findings to broad policy decisions. The lack of comprehensive studies that address these variations in nudging effectiveness across different regulatory contexts diminishes the overall utility of the existing literature (Schüz et al., 2021; Gerver et al., 2024; Hall, 2016). Addressing these discrepancies will enable a more nuanced understanding of how behavioral interventions can be optimally designed and implemented to achieve desired outcomes. In summary, while nudging as a behavioral intervention has shown promise, increased focus is needed on comprehensive classifications of nudges, the consideration of contextual factors, and the tailoring of nudge strategies to specific regulatory environments. Such advancements can enhance the applicability of behavioral insights to real-world policy challenges (Truijens, 2022; Wang et al., 2022; Loibl et al., 2018).

Thus, there is an urgent need to develop an in-depth conceptual mapping and thematic synthesis of nudge types in the context of public administration, as well as how their effectiveness is influenced by contextual factors. This effort will not only fill the literature gap but also provide practical contributions to policy designers across various sectors. This study aims to address this gap by presenting a comprehensive narrative review of various types of nudge-based interventions used to improve compliance with tax and regulatory systems. The primary focus of this study is to identify and analyze in depth how different nudge types operate to influence individual behavior, and the extent to which their effectiveness depends on specific social and institutional contexts.

Specifically, this study will explore the psychological and social mechanisms underlying the success of a nudge, such as the role of social norms, information framing, the use of defaults, or salience-based messages. It will also address the interaction between these interventions and contextual variables such as the level of public trust, bureaucratic capacity, and the characteristics of the targeted regulations. Therefore, this study poses the following research question: "How do different types of behavioral nudges influence compliance behavior in tax and regulatory systems?" Through this question, this study aims not only to develop a typology of nudges relevant to the public sector but also to provide a conceptual foundation for the development of more adaptive and evidence-based policy strategies. The results of this study are expected to contribute to expanding the discourse on behavioral public administration while enriching the practice of formulating more efficient, ethical, and contextual public policies.

2. METHODS

2.1. Type of Review

This study uses an approach narrative literature review which aims to explore and synthesize theoretical and empirical findings regarding the use of nudges in improving compliance with tax and regulatory systems. This approach was chosen because of its flexibility in integrating various forms and sources of literature.both conceptual and case studies, and its ability to construct interpretive narratives that strengthen the understanding of a complex phenomenon in depth. Unlike systematic reviews, which rely on quantitative methods and strict protocols, narrative reviews allow for the development of more contextual, reflective, and theoretical analyses, making them suitable for exploring the dynamics of the use of behavioral insights in public policy across contexts and sectors.

This approach also allows for a thematic synthesis that not only illustrates the effectiveness of nudges but also links them to the institutional, cultural, and psychological dynamics that are crucial to the realm of behavioral public administration. Thus, this narrative review not only identifies empirical findings but also offers a useful conceptual framework for future theory and policy development.

2.2. Literature Search Strategy

The literature search process was conducted using a systematic and step-by-step strategy to ensure relevance and adequate coverage of the research focus. The primary search was conducted through three leading academic databases:Scopus, Web of Science, And Google ScholarThese three sources were chosen because they include highly reputable journals relevant to the fields of public administration, public policy, behavioral economics, and other applied social sciences.

To ensure comprehensive coverage of the topic, the search was conducted using the following keyword combinations:“nudge”, “behavioral public administration”, “tax compliance”, “regulatory compliance”, And “behavioral intervention”. The use of these keywords is designed to encompass literature that explicitly addresses behavior-based interventions in the context of public policy, particularly in the domain of taxation and regulation.

The search time limit is set at the period2008 to 2025, for strong methodological reasons. 2008 marked the publication of Thaler and Sunstein's book, Nudge, which marked the beginning of the development of nudge theory in public policy. Therefore, this timeframe is considered relevant.n to trace the theoretical development, empirical application, and institutional adoption of the nudge approach over a reasonably representative and contemporary time span.

2.3. Inclusion and Exclusion Criteria

In order to make the literature selection process more focused and valid, strict inclusion and exclusion criteria were established. Criteria Inclusion Includes:

- Academic articles that explicitly discuss the application of nudges in tax, regulatory, or other public policy context.
- Empirical, experimental, or conceptual studies published in peer-reviewed journals or reputable academic proceedings.
- Literature containing analysis of effectiveness, mechanisms, or factors that influence success nudge interventions to increase public compliance.

Meanwhile, exclusion criteria includes:

- Studies that discuss nudges in context commercial or private, such as consumer marketing, business management, or digital commercial applications.
- Literature that is opinion-based, blogs, or non-academic sources that have not gone through a peer-review process.
- Articles that only briefly mention nudges without any substantial discussion of their context or mechanisms within the public policy system.

With these criteria, this research focuses exclusively on nudges designed and implemented by public entities and aimed at improving compliance with regulations of an administrative, fiscal, or legal nature.

2.4. Synthesis Approach

The literature that has been selected is analyzed using short for the purpose thematic and conceptual, which allows for the development of a synthesis based on similarities in intervention type, application context, and empirical findings. In this process, each article was reviewed to identify the type of nudge used.the intervention design, the outcomes measured (e.g., compliance levels, behavioral changes, or citizen perceptions), and the social or institutional conditions underlying the success or failure of the intervention.

As the main classification framework, this study uses two behavioral frameworks that have been widely adopted in public policy, namely:

- MINDSPACE(Messenger, Incentives, Norms, Defaults, Salience, Priming, Affect, Commitments, Ego) developed by the British government,
- as well as EAST(Easy, Attractive, Social, Timely), which is a simplified form of MINDSPACE for practical policy use.

These two frameworks were chosen because they provide a systematic classification structure for diverse and applicable nudge types. Using these frameworks, this study was able to identify patterns of nudge effectiveness across various regulatory contexts and offer a comprehensive thematic mapping to support the development of behavior-based policy theory and practice.

3. RESULTS

3.1. Typology of Nudges in Tax and Regulatory Contexts

The typology of nudges applied within tax and regulatory contexts plays a crucial role in enhancing compliance and decision-making behavior among individuals and businesses. Behavioral nudges can be classified into several categories based on their intervention mechanisms and the psychological processes they engage. Default Nudges are particularly effective due to human tendencies toward inertia and the desire to avoid the cognitive load associated with decision-making. Pre Filled tax forms serve as an exemplary case, as they minimize the effort required from taxpayers to complete their obligations. Research confirms that implementing default options, such as a pre-set contribution rate in retirement saving plans, significantly elevates compliance rates, highlighting the powerful impact of cognitive ease on behavioral outcomes (Benartzi et al., 2017; Fonseca & Grimshaw, 2017). This principle underscores the importance of designing interventions that harness default settings to facilitate better decision-making in tax compliance.

Reminder Nudges are another prevalent form of behavioral intervention, focusing on delivering timely prompts through digital channels, such as SMS and email. These nudges function to counteract procrastination and forgetfulness, addressing the common barriers to timely tax payments. Evidence shows that personalized and periodic reminders effectively reduce instances of late payments, thus enhancing overall compliance with tax obligations (Antinyan & Asatryan, 2019; John & Blume, 2018). The strategic timing and customization of these reminders are pivotal in achieving desired behavioral changes among taxpayers.

Social Norm Nudges exploit individuals' innate desire for social acceptance and conformity, leveraging the information that many peers behave in compliance with regulations. For instance, messages indicating high compliance rates among one's peers—like stating that "90% of citizens pay their taxes on time"—can significantly enhance tax compliance by engendering feelings of social obligation (Bhanot, 2021; Sparkman & Walton, 2017). This has been reinforced by studies showing that perceived norms not only inform behavior but also motivate individuals to align with these norms to gain social acceptance (Bellé & Cantarelli, 2021; Nahmias, 2019).

Salience and Framing Nudges utilize strategic presentation changes to capture attention and influence perceptions. By emphasizing the benefits of compliance or the penalties associated with non-compliance, regulators can guide taxpayers' understanding of their responsibilities and the consequences of their actions (Wachner et al., 2021; Weimer et al., 2022). Research demonstrates that effectively framing information enhances the likelihood of it being noticed and taken seriously by taxpayers, thereby improving compliance rates. In conclusion, the various types of nudges—default settings, reminders, social norms, and framing techniques—map onto specific psychological principles that govern human behavior. Effective tax compliance interventions leverage these nudges to facilitate better decision-making and enhance regulatory compliance.

3.2. Effectiveness across Different Contexts

The effectiveness of nudges, as a behavioral intervention strategy, significantly varies across different contexts, particularly between developed and developing countries. Factors such as socio-economic conditions, institutional frameworks, and cultural norms play crucial roles in determining the success of nudging strategies.

3.2.1. Differences Between Developed and Developing Countries

Research indicates that nudges tend to be more successful in developed nations, which typically possess advanced digital administrative infrastructures and higher levels of tax literacy and awareness. For instance, Sunstein et al. highlight that citizens in developed countries are generally more familiar with governance mechanisms and public policies, thereby facilitating a higher acceptance of nudges implemented by regulatory bodies (Sunstein et al., 2018). In contrast, developing countries face challenges such as limited access to technology and prevalent skepticism towards government effectiveness, which can reduce the effectiveness of nudges. Kasdan notes that the contextuality of public preferences illustrates how cultural disparities and infrastructural issues must be carefully considered when applying nudging strategies across different nations (Kasdan, 2020).

3.2.2. Institutional and Cultural Influences

The institutional structures and cultural values of a society heavily influence the effectiveness of nudging. Societies characterized by collectivist values, such as those influenced by Confucian traditions, tend to respond more favorably to social norm nudges compared to their individualistic counterparts. This is supported by evidence from various studies demonstrating the importance of social contexts in behavior change interventions (Undarwati & Why, 2025; , Miranda et al., 2019). Additionally, the presence of transparent and responsive bureaucracies enhances the effectiveness of nudging initiatives. When citizens trust their government, as suggested by Dessel et al., they are more likely to respond positively to behavior-based strategies aimed at improving societal outcomes (Dessel et al., 2022).

3.2.3. Trust in Government as a Key Factor

Trust in government emerges as a critical moderator in the successful implementation of nudges. Citizens' readiness to accept and comply with government-mandated nudges is compromised when there is skepticism regarding government motivations or competency. This relationship is illustrated through studies indicating that lower trust correlates with diminished effectiveness of behavioral interventions (Loibl et al., 2018; , Wang et al., 2022). Engaging the public in the regulatory process, as emphasized by Sunstein et al., tends to increase the perceived legitimacy and effectiveness of nudges, fostering a more favorable environment for their implementation (Sunstein et al., 2018).

In summary, the effectiveness of nudges is not solely dependent on their design or intent; it is intricately linked to the socio-economic landscape, institutional trustworthiness, and cultural values of the populations they aim to influence. Successfully navigating these contextual factors is essential for enhancing the impact of nudging strategies in both developed and developing nations.

3.3. Key Moderators

In the realm of behavioral nudges within tax compliance, several moderators significantly affect how individuals respond to these interventions. Understanding the role of each moderator enables policymakers to enhance the efficacy of nudges in promoting tax compliance.

3.3.1. Level of Public Trust

Public trust is crucial in the context of behavioral nudges. High levels of trust in government increase the likelihood that citizens perceive tax-related nudges as genuine attempts to enhance public welfare rather than as manipulative tactics. Research has highlighted the mediating role of trust between public governance quality and taxpayer compliance, indicating that greater trust correlates positively with adherence to tax regulations (Alkali et al., 2022). Conversely, low trust can foster skepticism and resistance towards governmental nudges, diminishing their impact (Batrancea et al., 2019). In fact, studies confirm that trust mediates the relationship between procedural justice and voluntary tax compliance, suggesting that trust in authorities can lead to higher compliance rates when citizens feel treated fairly (Faizal et al., 2019; Gobena & Dijke, 2016).

3.3.2. Tax Education and Literacy

Tax education and literacy significantly influence how individuals engage with nudges. Higher levels of tax literacy provide taxpayers with the understanding necessary to interpret and respond positively to more complex nudges (Adem et al., 2024). This educational background empowers individuals to recognize compliance incentives, enhancing their willingness to engage with the tax system. Furthermore, literate taxpayers are better equipped to discern the fairness and efficacy of nudges, thereby increasing alignment with tax policies designed to promote compliance (Nasution et al., 2020).

3.3.3. Digitalization of Public Services

The advancement of digital infrastructures enables a more personalized approach to disseminating nudges. Through tools such as mobile applications and online platforms, governments can deliver tailored messages that resonate with specific demographic variables (Mudamakin & Rupilu, 2022). Digital platforms also facilitate immediate feedback and reminders about tax obligations, which are often more effective than traditional communication methods (Ayoola et al., 2023). For example, studies suggest that integrating technology into tax administration not only boosts compliance rates but also improves overall taxpayer satisfaction by making processes more transparent and efficient (Surugiu et al., 2021).

3.3.4. Bureaucratic Capacity and Implementation

The effectiveness of nudges largely depends on the bureaucratic capacity to implement and sustain these interventions. Where bureaucratic capabilities are weak or poorly coordinated, the intended benefits of nudging strategies can be undermined. A robust bureaucratic framework ensures the continuous design, application, and evaluation of nudge strategies, which is essential for achieving long-term compliance (Adem et al., 2024). Furthermore, research indicates that a structured bureaucratic approach helps mitigate risks of confusion and mistrust among taxpayers, thus fostering a more conducive environment for compliance (Lefèbvre et al., 2014).

In summary, the key moderators—public trust, tax education and literacy, the digitalization of public services, and bureaucratic capacity—are integral to the effectiveness of nudges aimed at improving tax compliance. As policies evolve to incorporate nudging techniques, a detailed understanding of these factors can significantly enhance their application and reception among taxpayers.

4. DISCUSSION

4.1. Synthesis of Key Findings

This literature review confirms that the use of behavioral nudges generally has a positive impact on improving compliance with tax and regulatory systems. The nuanced effects of nudges in tax compliance are shaped by various factors, particularly the type of intervention utilized and the contextual background in which these nudges are implemented. Evidence suggests that nudges stemming from social norms and salience techniques are among the most effective in promoting tax compliance. For instance, messages that underscore the compliance rates of the majority can elicit a profound sense of social responsibility among taxpayers, thereby encouraging adherence to tax obligations (Bott et al., 2017; Cullis et al., 2012). Additionally, framing tax compliance in a manner that emphasizes social norms can positively influence taxpayer behavior. Studies have shown that taxpayers are motivated not only by their moral obligations but also by a desire to align with perceived social expectations, showcasing the significance of contextual and psychological factors in driving compliance (Alm et al., 2023; Traxler, 2010; Bott et al., 2020).

The impact of different nudging tactics does not uniformly translate into effectiveness across all scenarios. While forces like default nudges and reminder nudges can be useful, their efficacy is often contingent upon supporting infrastructural elements, such as streamlined administrative procedures or effective communication systems (Benartzi et al., 2017; Hallsworth et al., 2017). The presence of robust technologies, such as automated tax filing systems and reminders, can enhance the outcome of these nudges, demonstrating a necessity for a conducive administrative context for successful implementation (Fonseca & Grimshaw, 2017). Moreover, empirical evidence highlights that moral appeals—communicating the ethical dimensions of tax compliance—can evoke motivations comparable to those triggered by legal deterrents, reinforcing the importance of moral suasion in this context (Bott et al., 2017; Bott et al., 2020).

In summary, the selection of tax interventions requires careful consideration of the target population's characteristics and the existing administrative architecture. Understanding the nuanced interplay between social norms, nudge effectiveness, and infrastructure can lead to more tailored and effective tax compliance strategies. Current literature emphasizes that effective behavioral interventions must draw on empirical insights related to tax morale, social dynamics, and the operational context to achieve better compliance outcomes (Antinyan & Asatryan, 2019; Antinyan & Asatryan, 2024).

4.2. Theoretical Contributions

This research makes an important contribution to theory development in behavioral public administration by strengthening the integration between behavioral economics and public administration. This study broadens the understanding of nudge theory not only as a tool for individual behavior, but also as part of a complex institutional and administrative system. Thus, this study proposes that the effectiveness of nudges should be viewed through the lens of the interaction between intervention design and the surrounding institutional context. This expansion also encourages a more holistic conceptual framework, one that focuses not only on individual behavior but also takes into account organizational aspects, bureaucratic culture, and the socio-political dynamics that influence public policy implementation. With this approach, behavioral nudges are not merely micro-strategies but an integral part of adaptive and responsive public administration reform.

4.3. Policy Implications

From a policy practice perspective, these findings emphasize that behavior-based policy design must be tailored to the local context, including cultural factors, levels of public trust, and institutional capacity. A one-size-fits-all approach is ineffective and can even generate resistance if interventions fail to consider local social and administrative characteristics. Furthermore, the study's findings suggest that combining a nudge strategy with a clear and firm law enforcement approach can result in more stable and sustainable compliance rates. This hybrid approach allows the government to harness the power of psychological and social incentives while formally enforcing regulations, thus creating a balance between voluntary and coercive public compliance.

4.4. Limitations of Existing Studies

Although numerous experimental studies demonstrate the potential of nudges, the existing literature has significant limitations. Most studies are small-scale experiments with limited contexts, thus limiting the generalizability of their results to broader populations. Furthermore, there are very few longitudinal studies examining the long-term impact of these behavioral interventions on adherence. The lack of cross-national studies also hinders understanding how differences in culture, political systems, and public administration influence the success of nudges. This limitation indicates the need for more comprehensive and globally standardized research to provide more universal and adaptive policy recommendations.

4.5. Future Research Directions

Given this gap, future research is recommended to conduct comparative studies across countries with different socio-political and administrative backgrounds. This approach will enhance understanding of the variability in nudge effectiveness and identify best practices that can be adapted cross-culturally. Furthermore, expanding the research focus to non-tax regulatory systems, such as environmental regulations, business licensing, and the healthcare sector, will open up new opportunities for applying behavioral nudges. This is crucial for testing whether the same principles apply in different public policy domains. Finally, advances in digital technology and artificial intelligence (AI) open the possibility of developing more personalized and adaptive nudges in real time. Further research is needed to explore the potential and challenges of AI-based digital nudging, including the ethical and privacy issues involved.

5. CONCLUSION

This study confirms that behavioral nudges have significant potential to increase public compliance with tax and regulatory systems. Various types of behavioral-based interventions can have a positive impact in a more efficient and humane manner than traditional coercive approaches. However, the effectiveness of these nudges is not universal and depends heavily on the type of nudge applied, the institutional context in which the policy is implemented, and the social and psychological characteristics of the target population.

The findings of this study provide important theoretical and practical contributions. Theoretically, this study strengthens the integration between behavioral economics and public administration, while extending the framework of nudge theory to complex institutional and administrative contexts. Practically, the research findings provide guidance for policymakers in designing interventions that are more adaptive and sensitive to local contexts, taking into account factors such as public trust, culture, and bureaucratic capacity.

Thus, the use of behavioral insights in public policy not only promises increased compliance but also encourages the creation of a more inclusive, responsive, and sustainable administrative system. This study is expected to serve as a foundation for further research and policy implementation that prioritizes a humane and evidence-based approach to addressing today's public administration challenges.

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