

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

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

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ABSTRACT

This study reviews the effectiveness of interventions compared to traditional sanctions in improving tax and regulatory compliance, highlighting the challenges tax gap in Indonesia. Model deterrence Traditional methods, while effective in the short term, carry high costs and have the potential to erode trust. In contrast, behavioral public administration with nudge (simplification of procedures, reminders, social norms) have been shown to be more cost-effective and effective in encouraging voluntary compliance, especially in environments with high public trust. However, the effectiveness, limited by low tax morale, decay effects, and the cultural-institutional context. Traditional sanctions remain important for serious offenders, but can damage long-term trust. Academically, this study enriches the public administration literature by emphasizing behavioral insights, bridging deterrence theory with a behavioral perspective. Policy implications include a shift to behavioral informed regulation, contextual design, and hybrid models (nudge+ sanctions) for optimal balance. Leveraging digital technology is also crucial for efficiency. In conclusion, a hybrid approach is the optimal strategy for sustainable compliance.

Keywords: Nudge, Tax Compliance, Regulatory Compliance, Traditional Sanctions, Behavioral Public Administration, Deterrence Theory, Voluntary Compliance

ABSTRAK

Penelitian ini meninjau efektivitas intervensi dibandingkan dengan sanksi tradisional dalam meningkatkan kepatuhan pajak dan regulasi, dengan menyoroti tantangan kesenjangan pajak di Indonesia. Metode tradisional berbasis deterrence, meskipun efektif dalam jangka pendek, memiliki biaya tinggi dan berpotensi merusak kepercayaan publik. Sebaliknya, administrasi publik perilaku dengan nudge (penyederhanaan prosedur, pengingat, norma sosial) terbukti lebih hemat biaya dan efektif dalam mendorong kepatuhan sukarela, terutama di lingkungan dengan tingkat kepercayaan publik yang tinggi. Namun, efektivitasnya terbatas oleh rendahnya moral pajak, efek penurunan kepatuhan seiring waktu, dan konteks budaya-institusional. Sanksi tradisional tetap penting untuk pelanggaran berat, tetapi dapat merusak kepercayaan jangka panjang. Secara akademik, penelitian ini memperkaya literatur administrasi publik dengan menekankan wawasan perilaku, menjembatani teori deterrence dengan perspektif perilaku. Implikasi kebijakan mencakup pergeseran menuju regulasi berbasis perilaku, desain yang kontekstual, dan model hibrida (nudge + sanksi) untuk mencapai keseimbangan optimal. Pemanfaatan teknologi digital juga penting untuk efisiensi. Kesimpulannya, pendekatan hibrida merupakan strategi optimal untuk kepatuhan yang berkelanjutan.

Kata kunci: Nudge, Kepatuhan Pajak, Kepatuhan Regulasi, Sanksi Tradisional, Administrasi Publik Perilaku, Teori Deterrence, Kepatuhan Sukarela

1. INTRODUCTION

Tax compliance is a key foundation for the sustainability of the public administration system, as state revenues from taxes are a vital instrument for financing development and public services. However, data shows that Indonesia still faces serious challenges. According to a World Bank report, the tax gap Indonesia's VAT and corporate income tax revenues reach 6.4% of GDP, equivalent to approximately IDR 944 trillion per year (World Bank, 2023). This low compliance directly impacts the tax-to-GDP ratio, which is relatively low compared to other

ASEAN countries. Indonesia records a tax ratio of around 9–11%, while Thailand, the Philippines, Vietnam, and Malaysia are in the 11–16% range (World Bank, 2022).

Table 1
Comparison of Tax to GDP Ratio in ASEAN

Country	Tax-to-GDP Ratio (%)
Indonesia	9–11
Thailand	14–16
Philippines	14–15
Vietnam	13–14
Malaysia	11–12

Source: World Bank (2022)

The table above shows that Indonesia still has a large gap in increasing tax revenue through improved compliance. For decades, the model deterrenceThe tax authorities' primary strategy for suppressing non-compliance is emphasizing sanctions, audits, and fines. While this strategy may improve compliance in the short term, its long-term effectiveness remains questionable. For example, in the UK, tax upon income that is deducted directly through the PAYE (Pay-As-You-Earn) system is only around 1%, whereas in self-reported income (self-reported income) reaches 13% (OECD, 2022). This fact suggests that compliance is more influenced by system design and ease of administration, rather than just the threat of sanctions. In addition, the sanctions-based approach incurs high administrative costs for tax authorities, including audits, inspections, litigation, and enforcement. In this context, the traditional model is considered inefficient and potentially weakens tax compliance. trust public towards institutions as (OECD, 2022).

In response to the limitations of traditional models, the approach of behavioral public administration started to develop, with nudge as one of the more subtle and behavior-based policy instruments. The OECD (2019) report notes that more than 95% of tax administration in OECD countries already using behavioral insights and analytical data to improve taxpayer compliance. This approach has proven to be more effective cost-effective because it focuses on simplifying procedures, sending reminders (reminders), and the use of social norms to encourage voluntary compliance.

Cross-sector research also shows that interventions nudge their own median effect size around 21% in increasing compliance behavior or positive community actions, although the level of effectiveness varies depending on the context and design of the intervention (Sunstein, 2019). This shows that potentially complement, and in certain contexts, even surpass the effectiveness of traditional sanction models in increasing taxpayer and regulatory compliance.

The literature on tax compliance has so far been dominated by the framework of classical economic theory which emphasizes the assumption of full rationality (full rationality) and approach deterrence. This model assumes that taxpayers will comply if the threat of audits, fines, and sanctions outweighs the potential benefits of tax avoidance. While this perspective provides an important basis for fiscal policy design, the approach has drawbacks. limitations because it ignores psychological, social, and cognitive factors that influence taxpayer behavior.

On the other hand, more recent literature has begun to explore the behavioral insights-based nudge approach, which views compliance as the result of a complex interaction between incentive structures and behavioral factors. Several experimental studies have shown that simple interventions, such as reminders, social norms, or procedural simplification, can

significantly improve compliance at relatively low implementation costs. However, empirical evidence on the effectiveness of nudges remains fragmented and highly context-dependent. In particular, two research gaps stand out. First, there is no clear consensus on the relative effectiveness of nudges compared to traditional sanction approaches, especially in the long run. Second, cross-country studies are still limited, making generalization of findings difficult, given differences in institutional capacity, compliance culture, and levels of public trust in tax authorities.

Based on these gaps, this study attempts to answer the main questions: **“To what extent do nudge interventions improve taxpayer and regulatory compliance compared to traditional sanctions-based approaches?”** This study aims to systematically review empirical evidence on the effectiveness of nudge interventions compared to traditional sanctions in the context of tax and regulatory compliance. The primary focus is on analyzing various forms of nudge interventions, such as reminders, default settings, procedural simplification, and the use of social norms, and comparing them with sanction-oriented deterrence models. Furthermore, this study seeks to evaluate the limitations and opportunities of each approach, both in the short and long term, and across various tax administration systems globally. From an academic perspective, this study contributes conceptually to the development of public administration theory, particularly within the behavioral public administration framework, by emphasizing the importance of behavioral psychology in promoting fiscal compliance. Furthermore, this study is also expected to provide evidence-based policy recommendations for governments and tax authorities in designing more effective, efficient, and sustainable strategies to improve taxpayer compliance.

2. METHODS

2.1 Study Design

This research uses narrative review with the approach integrative, which allows the author to combine empirical findings and theoretical concepts from various sources to build a comprehensive picture of the effectiveness compared to the traditional sanctions approach. Narrative review was chosen because the focus of the research is on understanding the context, mechanisms, and implications of policy, not on meta-analytic quantitative estimates.

2.2 Literature Criteria

This study establishes the following literature selection criteria:

1. **Data source:** Peer-reviewed journal articles, policy reports, and working papers from trusted international institutions such as the OECD, World Bank, and IMF.
2. **Publication timeframe:** 2008–present, refers to the period after the publication of the seminal work *Nudge* by Thaler & Sunstein, which became the starting point for the development of the behavioral approach in public administration.
3. **Research context:** Focus on tax compliance (tax compliance) and other relevant regulatory compliance, including environmental, transportation, and health regulations.

2.3 Search Strategy

Literature searches were conducted systematically through several academic and institutional databases, including:

- **Database:** Scopus, Web of Science.
- **Keywords:** “nudge”, “tax compliance”, “regulatory compliance”, “deterrence”, “behavioral public administration”.
- **Keyword combination:** Boolean operators (AND, OR) are used to ensure relevant research coverage, for example “nudge AND tax compliance” or “behavioral public

administration AND regulatory compliance”.

2.4 Selection and Analysis Process

The literature selection and analysis process is carried out in three stages:

1. **Identification:** Collect all relevant articles and reports according to the criteria.
2. **Filtering:** Selecting based on topic relevance, methodological quality, and research context. Studies that focus on interventions nudge and/or traditional sanctions are prioritized.
3. **Thematic Analysis:** Selected studies were analyzed thematically to extract information on the type of intervention, compliance targets (taxpayers vs. regulatory actors), and the relative effectiveness of the intervention.

The analysis was carried out with comparative study based nudge and sanctions-based studies, using a theoretical framework MINDSPACE (Messenger, Incentives, Norms, Defaults, Salience, Priming, Affect, Commitments, Ego) or EAST framework (Easy, Attractive, Social, Timely) to categorize behavioral interventions. This framework helps identify the mechanisms behind the effectiveness of nudge and assess its potential application in different public administration contexts.

3. RESULTS

3.1 Key Findings from the Literature

The results of the literature analysis showed significant differences in effectiveness between interventions nudge and traditional sanctions approaches to improving tax and regulatory compliance. The findings are categorized by intervention type and compliance context.

3.2 Effectiveness of Nudge

The application of nudge interventions in tax compliance has gained scholarly attention due to their effectiveness and relatively low implementation cost. Three primary nudge interventions have been identified as prominent: simplification of administrative procedures, reminders issued via various communication channels, and the activation of social norms.

Firstly, the simplification of administrative forms and procedures, such as tax forms, has been shown to reduce administrative errors and compliance costs significantly. By making these forms more straightforward, governments can minimize barriers that might deter compliance. For instance, studies have demonstrated that streamlined processes lead to higher compliance rates, as individuals find it less burdensome to understand and complete their filing requirements (Fonseca & Grimshaw, 2017).

Secondly, reminders—sent via SMS, email, or postal mail—have proven to be effective in increasing timely filing and payment of taxes. Research indicates that such reminders significantly enhance compliance rates by nudging individuals to take action they might otherwise delay or forget (Antinyan & Asatryan, 2024). For example, Antinyan and Asatryan's meta-analysis emphasizes that simple reminder letters can lead to considerable increases in tax compliance among treated municipalities (Antinyan & Asatryan, 2024) (Mascagni et al., 2017).

The third intervention leverages social norms, where information about the compliance levels of peers can motivate individuals to align their behavior and comply voluntarily with tax regulations. Findings suggest that when taxpayers are aware of the average compliance within their community, they may feel compelled to conform, leading to enhanced compliance (Cahyonowati et al., 2022; (Wenzel, 2005). For instance, research by Wenzel demonstrates that misperceptions of social norms can be corrected through interventions that provide feedback on the actual behaviors of peers, resulting in increased compliance (Wenzel, 2005).

In terms of effectiveness, these nudges are particularly impactful in the short term, showing compliance increases ranging from 5% to 20% as observed in various field experiments (Antinyan & Asatryan, 2024). While the immediate effects of these interventions are significant, their long-term effectiveness can be contingent upon factors such as the prevailing social context, public trust, and the intensity of the nudges applied (Alm et al., 2023). For example, Alm et al. discuss how social context and norms evolve, indicating that sustained interventions may need to adapt over time to maintain their effectiveness (Alm et al., 2023). In conclusion, the simplification of procedures, timely reminders, and the use of social norms represent key strategies for enhancing tax compliance through behavioral nudges. Their effectiveness is well-documented in literature, providing a foundation for governments to employ these strategies to promote compliance effectively.

3.3 Limitations of Nudge

Nudge interventions are increasingly utilized in public policy settings to influence individual behaviors towards desirable outcomes. However, the effectiveness of these interventions can be limited by various factors, particularly in contexts characterized by low motivation, such as low tax morale, the decay of effects over time, and the influence of cultural and institutional contexts.

One significant limitation regarding nudges pertains to their effectiveness in low tax-morale environments. Research indicates that in communities with minimal intrinsic motivation for tax compliance, nudges alone may fall short in instilling voluntary compliance. For instance, Antinyan and Asatryan's meta-analysis highlights that simply applying nudges without reinforcing motivations to comply may not yield significant results in these contexts (Antinyan & Asatryan, 2024). Furthermore, their findings suggest that reliance on nudges alone can lead to suboptimal outcomes where social norms or civic duty are absent (Antinyan & Asatryan, 2024).

An additional limitation is the decay effect of nudges, which refers to the diminishing influence over time if not regularly reinforced through complementary strategies. Evidence from multiple studies suggests that the effects of nudges often attenuate shortly after their introduction. For example, a study by He et al. showed that the initial impacts of nudges were substantial but lessened over time, prompting users to revert to previous behaviors without sustained reinforcement (He et al., 2023). Similarly, Roozenbeek et al. explored decay effects related to various nudges, documenting that their influence dissipates quickly, necessitating ongoing reinforcement to maintain effectiveness (Roozenbeek et al., 2021). This aligns with findings from Leong et al., indicating that many nudge effects, such as those in environmental conservation measures, witness accelerated decay, underscoring the need for long-term strategies (Leong et al., 2024).

Cultural and institutional contexts also significantly shape the efficacy of nudge interventions. Variations in public trust in government and the effectiveness of administrative institutions critically influence responses to nudges. Research demonstrates that in settings where governmental trust levels are low, the impact of nudges can be undermined due to skepticism regarding the motives or effectiveness of the interventions (Castro & Scartascini, 2015). Moreover, societal norms play an essential role; Mol et al. found that when applying social norm nudges in non-student samples, the anticipated effects were muted, suggesting that situational context and community norms directly modulate the efficacy of these nudges (Mol et al., 2021). This observation is further supported by findings from Dimant et al., who argue that the context can alter the intended outcomes of norm-based nudges, highlighting the importance of tailoring interventions to specific cultural values and expectations (Dimant et al., 2020). In conclusion, while nudge interventions present a promising tool for influencing behavior in public policy, their limitations must be acknowledged and addressed. Challenges posed by low tax morale contexts, decay effects over time, and varying cultural and

institutional norms necessitate a nuanced approach. Policymakers should consider integrating complementary strategies that reinforce nudges to sustain their effectiveness and ensure that these interventions are contextually appropriate and responsive to the communities they aim to serve.

3.4 Effectiveness of Traditional Sanctions

Sanctions as deterrent measures in the context of tax compliance have been extensively researched, revealing both their immediate effectiveness and broader implications on taxpayer behavior. Short-term traditional sanctions, such as fines or audits, can effectively deter deliberate tax evasion; however, the literature points to considerable limitations related to their long-term efficacy and potential impacts on public trust.

Evidence suggests that while traditional sanctions can compel compliance among deliberate evaders, their long-term effectiveness is often limited. Studies indicate that reliance on sanctions may cultivate an environment where compliance is motivated primarily by fear rather than a genuine commitment to legal obligations. For example, Hofmann et al. found that while sanctions can stimulate voluntary cooperation, they risk diminishing trust in tax authorities, which could undermine overall compliance efforts over time (Hofmann et al., 2014). Additionally, Piquero et al. highlight a complex interplay between punishment and compliance, noting that the effects of deterrence can vary widely. Some studies argue that excessive sanctions might worsen compliance by fostering resentment rather than adherence (Piquero et al., 2011).

Moreover, trust plays a crucial role in shaping taxpayer compliance outcomes. Batrancea et al. propose that citizens who trust tax authorities are more likely to support compliance initiatives, including audits and stricter sanctions, indicating that trust moderates the efficacy of such measures (Batrancea et al., 2019). Conversely, perception of excessive punitive actions from tax authorities can engender negative sentiments among taxpayers, potentially leading to decreased compliance. The findings of Suhendar and Hakim suggest that overly harsh sanctions may provoke backlash instead of compliance, underscoring the necessity for a balanced approach that promotes trust while encouraging adherence (Suhendar & Hakim, 2021).

Recent studies also emphasize the relationship between taxpayer awareness, the perceived severity of sanctions, and subsequent compliance behavior. Research indicates that heightened awareness of tax obligations and potential penalties can significantly influence compliance rates among taxpayers (Yuesti et al., 2023; Putra et al., 2023). However, an excessive emphasis on punitive measures may alienate taxpayers, highlighting the importance of integrating supportive strategies, such as tax education and improved communication from tax authorities, to enhance compliance without eroding trust (Rahmah et al., 2021). In conclusion, while traditional sanctions can yield immediate compliance among taxpayers, their long-term effectiveness is questionable, often contingent on levels of trust and the perceived fairness of their application. Therefore, tax authorities must balance deterrent strategies with efforts that promote voluntary compliance through trust and understanding.

4. DISCUSSION

4.1 Interpretation of Findings

The effectiveness of nudge interventions in tax compliance, particularly in low-stakes compliance contexts and societies characterized by high levels of public trust, rests on behavioral psychological principles. Research indicates that procedural simplification, reminders, and the establishment of social norms significantly enhance voluntary compliance among taxpayers who generally intend to meet their obligations but face psychological or procedural barriers. For instance, Gobena highlights the role of trust and procedural justice as significant antecedents to voluntary tax compliance, asserting that individuals may feel

naturally inclined to comply when they perceive the government's actions as fair and legitimate (Gobena & Dijke, 2017). Similarly, Alm emphasizes that understanding the psychological motivations and social dynamics of taxpayers is vital for effective policy-making, which can bolster both compliance rates and trust in tax systems (Alm, 2018).

Conversely, traditional sanctioning approaches remain pertinent in tackling hardcore non-compliers who actively evade obligations. Studies reveal that while deterrent measures like sanctions effectively suppress non-compliance, they often contribute to a climate of distrust between taxpayers and authorities. This relationship is echoed in Hofmann et al.'s exploration of the interplay between coercive power and legitimacy in tax compliance, which suggests that relying solely on punitive measures may lead to a decline in social legitimacy and trust (Hofmann et al., 2014). Furthermore, Wright et al. argue that the efficiency of sanctions can be undermined by perceptions of their application, indicating a need for careful consideration in their use (Wright et al., 2022). Notably, the use of coercive measures can achieve immediate compliance yet fail to cultivate a long-term cooperative relationship with taxpayers (Mohammed & Tangl, 2023).

The critical insight emerging from these findings is the ambivalence in compliance policy design, which juxtaposes the need for immediate compliance against the imperative for fostering legitimacy and ethical governance. Coercive measures offer a straightforward route to compliance but might be detrimental in the long run, as they risk eroding public trust. In contrast, behavioral approaches rooted in psychological insights promote a more sustainable compliance culture through ethical engagement and community-based strategies. The balance between coercive efficacy and ethical governance thus presents a complex dilemma that necessitates consideration of both immediate and long-term impacts on public trust and relations.

In summary, the effective design of compliance interventions hinges on an understanding of the interplay between psychological, procedural, and social factors. While coercive measures can serve critical functions in immediate compliance, nudge interventions grounded in behavioral psychology may offer more sustainable solutions that enhance government trust and legitimacy, particularly in contexts where public compliance is aided by positive psychological engagement.

4.2 Relationship to Theory

This finding confirms the fundamental differences between deterrence theory and behavioral insights. Deterrence theory focuses on the threat of sanctions and the rational calculations of individuals to prevent violations, whereas behavioral public administration emphasizes understanding individual behavior in social and psychological contexts, as well as the influence of policy design on taxpayer decisions. In this framework, behavioral public administration acts as a conceptual bridge between classical normative public administration theory and the individual behavioral perspective. This approach allows for the design of public policies that emphasize not only monitoring and sanctions, but also strengthen intrinsic motivation and voluntary compliance.

4.3 Policy Implications

Based on the review's findings, there are several practical implications for tax administration and public regulation. First, there is a need to shift from a full-scale sanction model to a behavioral-informed regulation model, where administrations utilize nudge interventions as part of a holistic compliance strategy, combining voluntary reinforcement with enforcement mechanisms. Second, policy design must be contextual, taking into account social, political, and institutional conditions, including the level of public trust in authorities, institutional capacity, and the existing culture of compliance. Third, implementing a hybrid model, a combination of nudges and traditional sanctions, can achieve an optimal balance

between effectiveness, cost, and public legitimacy. Finally, the use of digital technologies such as e-tax, e-filing, or e-regulation has the potential to strengthen the effectiveness of nudge interventions while reducing administrative costs, thus supporting a more efficient and sustainable compliance system.

4.4 Limitations of the Review

Several limitations of this study need to be noted. First, the nature of narrative review tends to be more subjective than the quantitative meta-analysis approach, so the interpretation of the findings can be influenced by the author's perspective. Second, there are literary limitations, because most of the sources analyzed are available in English, so contexts and practices in non-English speaking countries may be underrepresented. Third, generalization of findings is limited because not all study findings can be universally applied across countries or public administration systems. Cultural variations, levels of social compliance, and institutional capacity significantly influence the effectiveness of interventions, requiring caution when drawing conclusions across contexts.

4.5 Future Research Agenda

The results of this review open up several important directions for further research. First, systematic cross-country field experiments are needed to compare the effectiveness of nudges and traditional sanctions in various social, cultural, and institutional contexts. Second, further research should evaluate the long-term effects of nudge interventions, including their ability to sustain compliance and the potential for decay if the intervention is not periodically reinforced. Third, the integration of nudges with digital governance is a promising area of research, particularly examining the interaction between behavioral interventions, digital technology, and regulatory innovations (e-tax, e-regulation) in improving voluntary compliance and public administration efficiency. This research direction is expected to broaden conceptual and practical understanding of effective and sustainable compliance strategies.

5. CONCLUSION

This article has systematically reviewed the empirical evidence regarding the effectiveness of interventions compared to traditional sanctions approaches in the context of tax and regulatory compliance. The main findings clearly indicate that nudge, through strategies such as simplifying procedures, sending reminders, and leveraging social norms, have proven more effective in encouraging voluntary compliance among taxpayers and regulatory actors. These interventions work by leveraging principles of behavioral psychology to overcome cognitive and procedural barriers that often prevent individuals from fulfilling their obligations, particularly in low-risk compliance contexts and societies with high levels of public trust.

However, it is important to note that the effectiveness limitations, especially in an environment with low tax morale, the existence of a decay effect (decay effect) over time if not periodically reinforced, as well as the influence of varying cultural and institutional contexts. On the other hand, traditional sanctions, such as fines and audits, remain relevant and effective in punishing serious violators who actively evade their obligations. However, exclusive reliance on sanctions can incur high administrative costs and potentially erode public trust in tax authorities, ultimately harming long-term compliance.

From an academic perspective, this research makes a significant contribution by enriching the public administration literature, particularly within the framework behavioral public administration. This emphasizes the fundamental difference between deterrence theory, which focuses on the threat of sanctions and rational calculations, with an approach/behavioral insights which emphasizes understanding individual behavior within a social and psychological context. Thus, this article bridges classical normative public administration theory with an individual behavioral perspective, enabling the design of public

policies that emphasize not only monitoring and sanctions but also strengthen intrinsic motivation and voluntary compliance.

Based on these findings, strong policy implications emerge. First, there is an urgent need to transition from a full sanctions model to a behavioral-informed regulatory more holistic approach, where interventions nudge integrated with law enforcement mechanisms. Second, policy design must be contextual, taking into account the unique social, political, and institutional conditions in each region, including the level of public trust in authorities, institutional capacity, and the existing culture of compliance. Third, the implementation of a hybrid model, which strategically combines nudge to encourage voluntary compliance and traditional sanctions to address serious violations, can produce an optimal balance between effectiveness, cost, and public legitimacy. Finally, the use of digital technologies, such as e-tax, e-filing, or e-regulation, has great potential to strengthen the effectiveness of interventions while reducing administrative costs, thereby supporting the creation of a more efficient and sustainable compliance system in the future.

6. REFERENCES

- Alm, J., Burgstaller, L., Domi, A., März, A., & Kasper, M. (2023). Nudges, boosts, and sludge: using new behavioral approaches to improve tax compliance. *Economies*, 11(9), 223. <https://doi.org/10.3390/economies11090223>
- Alm, J. (2018). What motivates tax compliance?. *Journal of Economic Surveys*, 33(2), 353-388. <https://doi.org/10.1111/joes.12272>
- Antinyan, A. and Asatryan, Z. (2024). Nudging for tax compliance: a meta-analysis. *The Economic Journal*, 135(668), 1033-1068. <https://doi.org/10.1093/ej/ueae088>
- Antinyan, A. and Asatryan, Z. (2024). Nudging for tax compliance: a meta-analysis. *The Economic Journal*, 135(668), 1033-1068. <https://doi.org/10.1093/ej/ueae088>
- Batrancea, L., Nichita, A., Olsen, J., Kogler, C., Kirchler, E., Hoelzl, E., ... & Žukauskas, Š. (2019). Trust and power as determinants of tax compliance across 44 nations. *Journal of Economic Psychology*, 74, 102191. <https://doi.org/10.1016/j.joep.2019.102191>
- Cahyonowati, N., Ratmono, D., & Juliarto, A. (2022). The moderating role of social norms on tax compliance model: a laboratory experimental evidence in indonesia. *Contemporary Economics*, 16(4), 410-423. <https://doi.org/10.5709/ce.1897-9254.491>
- Castro, L. and Scartascini, C. (2015). Tax compliance and enforcement in the pampas evidence from a field experiment. *Journal of Economic Behavior & Organization*, 116, 65-82. <https://doi.org/10.1016/j.jebo.2015.04.002>
- Dimant, E., Kleef, G., & Shalvi, S. (2020). Requiem for a nudge: framing effects in nudging honesty. *Journal of Economic Behavior & Organization*, 172, 247-266. <https://doi.org/10.1016/j.jebo.2020.02.015>
- Fonseca, M. and Grimshaw, S. (2017). Do behavioral nudges in prepopulated tax forms affect compliance? experimental evidence with real taxpayers. *Journal of Public Policy & Marketing*, 36(2), 213-226. <https://doi.org/10.1509/jppm.15.128>
- Gobena, L. and Dijke, M. (2017). Fear and caring: procedural justice, trust, and collective identification as antecedents of voluntary tax compliance. *Journal of Economic Psychology*, 62, 1-16. <https://doi.org/10.1016/j.joep.2017.05.005>
- He, G., Pan, Y., Park, A., Sawada, Y., & Tan, E. (2023). Reducing single-use cutlery with green nudges: evidence from china's food-delivery industry. *Science*, 381(6662). <https://doi.org/10.1126/science.add9884>
- Hofmann, E., Gangl, K., Kirchler, E., & Stark, J. (2014). Enhancing tax compliance through coercive and legitimate power of tax authorities by concurrently diminishing or facilitating trust in tax authorities. *Law & Policy*, 36(3), 290-313. <https://doi.org/10.1111/lapo.12021>

- Hofmann, E., Gangl, K., Kirchler, E., & Stark, J. (2014). Enhancing tax compliance through coercive and legitimate power of tax authorities by concurrently diminishing or facilitating trust in tax authorities. *Law & Policy*, 36(3), 290-313. <https://doi.org/10.1111/lapo.12021>
- Leong, C., Buurman, J., & Tay, S. (2024). Two steps forward, one step back: negative spillovers in water conservation. *Behavioural Public Policy*, 1-20. <https://doi.org/10.1017/bpp.2024.25>
- Mascagni, G., Nell, C., & Monkam, N. (2017). One size does not fit all: a field experiment on the drivers of tax compliance and delivery methods in Rwanda. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3120363>
- Mohammed, H. and Tangl, A. (2023). Taxation perspectives: analyzing the factors behind viewing taxes as punishment—a comprehensive study of taxes as service or strain. *Journal of Risk and Financial Management*, 17(1), 5. <https://doi.org/10.3390/jrfm17010005>
- Mol, J., Botzen, W., Blasch, J., Kranzler, E., & Kunreuther, H. (2021). All by myself? testing descriptive social norm-nudges to increase flood preparedness among homeowners. *Behavioural Public Policy*, 8(1), 121-153. <https://doi.org/10.1017/bpp.2021.17>
- OECD. (2019). Tax administration 2019: Comparative information on OECD and other advanced and emerging economies. OECD Publishing. <https://www.oecd.org/tax/administration/tax-administration-23077727.htm>
- OECD. (2022). Tax co-operation for the 21st century. OECD Publishing. https://www.oecd.org/content/dam/oecd/en/publications/reports/2022/05/tax-co-operation-for-the-21st-century_1b608f3e/9bec2f89-en.pdf
- Piquero, A., Paternoster, R., Pogarsky, G., & Loughran, T. (2011). Elaborating the individual difference component in deterrence theory. *Annual Review of Law and Social Science*, 7(1), 335-360. <https://doi.org/10.1146/annurev-lawsocsci-102510-105404>
- Putra, L., Loist, C., Butarbutar, N., Efendi, E., & Sudirman, A. (2023). The influence of service quality and tax sanctions on taxpayer compliance. *International Journal of Business Law and Education*, 4(2), 952-959. <https://doi.org/10.56442/ijble.v4i2.268>
- Rahmah, R., Sutrisno, T., & Baridwan, Z. (2021). Quality services moderation on the moral impact of taxpayers and tax penalties on taxpayer compliance. *Atestasi Jurnal Ilmiah Akuntansi*, 4(2), 145-153. <https://doi.org/10.33096/atestasi.v4i2.762>
- Roozenbeek, J., Freeman, A., & Linden, S. (2021). How accurate are accuracy-nudge interventions? a preregistered direct replication of pennycook et al. (2020). *Psychological Science*, 32(7), 1169-1178. <https://doi.org/10.1177/09567976211024535>
- Suhendar, D. and Hakim, D. (2021). Taxpayer compliance based on awareness and policy. *Accounting Analysis Journal*, 10(1), 18-24. <https://doi.org/10.15294/aaaj.v10i1.42043>
- Sunstein, C. R. (2019). *Behavioral science and public policy*. Cambridge University Press.
- Wenzel, M. (2005). Misperceptions of social norms about tax compliance: from theory to intervention. *Journal of Economic Psychology*, 26(6), 862-883. <https://doi.org/10.1016/j.joep.2005.02.002>
- World Bank. (2022). World Bank urges Indonesia to boost tax revenue. World Bank Report. <https://noi.pikiran-rakyat.com/economic/pr-4049194631/world-bank-criticizes-indonesias-low-tax-revenue-challenges-and-solutions?page=all>
- World Bank. (2023). Estimating VAT and CIT gaps in Indonesia. World Bank. <https://reproducibility.worldbank.org/index.php/catalog/212/study-description>
- Wright, A., Dollery, B., Kortt, M., & Leu, S. (2022). The effect of varying sanction values on future compliance with unemployment benefit requirements: an empirical analysis using Australian administrative data. *Public Administration Quarterly*, 46(2), 155-177. <https://doi.org/10.37808/paq.46.2.4>

Yuesti, A., Adiyadnya, M., Agung, A., & Antari, N. (2023). Moderation analysis of taxpayer's awareness level of taxpayer compliance..
<https://doi.org/10.4108/eai.10-10-2023.2342195>