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EFFECTS OF NATURE OF INDUSTRY, NEGATIVE ECOURAGEMENT AND FLAWED FEGULATRY SYSTEM ON ORGANISATIONAL PERFORMANCE: ROLE OF CORRUPTION IN INDONESIA'S CONSTRUCTION SECTOR

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Research Paper

Abstract: The research aims to examine the influence of the nature of the industry, negative encouragement, and a flawed regulatory system on organizational performance through the practice of corruption in the construction industry of Indonesia. To achieve this purpose, cross-sectional self-administered questionnaires were distributed among 350 managers using a convenient sampling technique. The quantitative research approach and Partial Least Squares-Structural Equation Modelling (PLS-SEM) technique were applied for the analysis of the collected data. The results of the regression analysis show that the nature of the industry has a positive and significant impact on organizational performance and the practice of corruption. Similarly, a flawed regulatory framework also has a positive and significant impact on organizational performance and practices of corruption. Negative encouragement also has a positive and significant impact on organizational performance and the practice of corruption. The study reveals that the practice of corruption also has a positive and significant impact on organizational performance. These significant findings contribute to the existing body of literature, providing new insights for future researchers. The research could also assist policymakers and regulators in understanding the importance of these factors to improve organizational performance by addressing corruption practices in the construction industry in Indonesia.

Keywords: Nature of the Industry, Negative Encouragement and Flawed Regulatory System, Corrupt Practices, Organizational Performance.

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1. Introduction

Performance is a description related to the level of achievement in implementing a program of activities or policies aimed at realizing a goal outlined in a strategic plan. (Gray, 2021). Performance, in the corporate context, is frequently associated with the cumulative value of work outcomes realized by all elements within an industry, aligning with the overarching objectives encapsulated in the industry's vision and mission. Moreover, organizational performance is discerned as an attainable level, contingent upon judicious managerial decisions (Baumol, 2002). Managers have control over making strategic decisions, which include technical and operational capabilities that can influence organizational performance (Caillier, 2018). Various outcomes arising from organizational performance can be characterized by both positive and negative effects within the construction industry (Keenan & Rostami, 2021). However, when examining the adverse repercussions, they are undoubtedly intricately linked to the presence of certain activities, notably in the form of corrupt practices (Habiyaremye & Raymond, 2018). Several studies have stated that the practice of corruption in construction is one of the issues in public policy because it can hinder economic development and impede the improvement of the quality of life in the country (Loosemore & Lim, 2015). Corruption is also construed as a longstanding economic malady prevalent in nations globally, persisting in contemporary times (Owusu et al., 2018). On the other hand, if countries have good practices to control corruption, it can makes it easier for policy makers to have a more modern, realistic understanding of the causes and ways to overcome the occurrence of these actions (Graycar & Monaghan, 2015).

In addition to institutional theory, which posits that the engagement in corrupt practices is pivotal for enhancing organizational performance (OP) (Lui, 1985). Consequently, a viewpoint posits the existence of an encompassing relationship between corruption and OP (Treisman, 2007). Various elements constituting corrupt practices encompass political and judicial factors, historical, social, and cultural factors, as well as economic factors (Dreher, 2006). Alternative research contends that influential factors such as the nature of the industry, flawed regulatory systems, and negative encouragement, primarily oriented towards personal gain (Manoharan et al., 2023), may be mitigated through effective corruption control measures.

One of the primary determinants influencing unethical conduct in the construction industry, and subsequently impacting organizational performance, is the nature of the industry. This association arises from inherent characteristics within construction projects, characterized by official bureaucracy, intricate transactions, and the substantial scale of infrastructure investments, all contributing to vulnerability and the potential occurrence of corrupt practices (Addo, 2021). In comparisons over time and among locations, where clear benchmarks are lacking for evaluating distinct project requirements and conditions, the necessity arises to streamline tasks and inflate costs, consequently fostering behaviour in the form of bribery (Lyrio, Lunkes, & Taliani, 2018). Indeed, not only the construction industry but almost all sectors are susceptible to bribery practices, facilitating inappropriate actions. The construction industry plays a significant role in the economic advancement of a country (Yap et al., 2022).

The second factor, which can serve as a precursor to the manifestation of corrupt practices (Yap et al., 2022), is flawed regulatory systems. These flawed systems manifest in the form of deficient permits or licenses, flawed regulations, inadequate sanctions, and lax supervision (Andrews et al., 2019; Ren & Patten, 2019). The

occurrence of regulatory systems, in this context, is attributable to the incapacity of individuals, groups, or industries to uphold a system uncontaminated by other factors that may induce actions violating ethical standards (Power, 2013).

Negative encouragement, identified as the third influential factor in corrupt practices within the construction industry (Petersen, 2021), demonstrates a myriad of diverse negative influences stemming from the environment and geography. The presence of avarice and self-interest serves as a motivational force leading to corrupt acts. The perpetration of such acts often stems from ignorance and a lack of remorse on the part of the individual or group involved. This lack of remorse is rooted in the belief that the actions being undertaken are ethically justifiable. While individuals with lower moral standards find the rationalization process relatively straightforward, those with higher moral standards perceive fraudulent behaviour as psychologically and criminologically intricate, emphasizing the complexity associated with ethical considerations (Othman, Shafie, & Hamid, 2014). The three predictors of corrupt practices exhibit a proximate association with performance, wherein commendable performance is conducive to fostering economic growth.

The preceding discourse has highlighted that the nature of the industry, flawed regulatory systems, and negative encouragement are pivotal factors contributing to corruption, which may, in turn, impact performance positively. However, empirical studies still present several gaps. Prior research predominantly focused on alternative sectors, such as public service offices (Juliao-Rossi, Losada-Otalora, & Católico-Segura, 2023), the manufacturing sector (Athanasouli & Goujard, 2015), and the field of pharmacy and health (Calciolari, Prenestini, & Lega, 2018) utilizing culture as a supporting theory and employing a qualitative approach. There remains a scarcity of quantitative investigations specifically within the construction sector (Owusu et al., 2018). To address these gaps, the current research focuses on the private sector within the construction industry of Indonesia. The rapid growth of construction in Indonesia aligns with the government's commitment to developing facilities and infrastructure for economic advancement. With a focus on the significance of the construction industry and addressing prior gaps, this research aims to examine the influence of the nature of the industry, negative encouragement, and flawed regulatory systems on organizational performance through corrupt practices. Data were collected from 275 construction industry managers in Indonesia using a convenient sampling technique. The study's findings contribute positively to existing literature and offer practical implications for policymakers and regulatory bodies, emphasizing the importance of factors that can enhance the performance of the construction industry by addressing corrupt practices. The subsequent sections of the paper are organized into the following four chapters: literature review, research methodology, data analysis and results, and discussion and conclusion.

2. Literature Review

2.1 Institutional Theory

Institutional theory, initially devised for the regulation of human interactions, encompasses the set of laws, regulations, conventions, and norms enforced by each organization to attain its desired goals (Locatelli et al., 2017; Mwelu et al., 2021). In

the application of institutional theory, three essential elements, namely cognitive culture, rules, and norms, constitute its framework. In this context, cognitive culture pertains to symbols, beliefs, and shared understanding that shape individual behaviour (Denisova-Schmidt & Prytula, 2017; Jun, Kim, & Rowley, 2019; Malec, 2018). Regulatory elements, constituting the second facet of institutional theory, are associated with the enforcement of legally binding contracts that have been mutually agreed upon and signed by both parties (Geels, 2004). The normative element, the third facet of institutional theory, pertains to the professionalism level, encompassing norms and values that constitute a set of rules governing compliance within the construction domain (Mwelu et al., 2021).

2.2 Nature of the Industry

The nature of the industry, regarded as an intrinsic characteristic, comprises several interconnected components forming a complex network. This characteristic, being a form of legacy, signifies the industry's specificity, with the presence of intricate activities that are not easily alterable (Yap et al., 2022). According to (Locatelli et al., 2017; Zhang et al., 2017), the inherent characteristics of an industry can contribute to corrupt practices, indicating that corruption is a discernible outcome when the nature of the industry readily engages in activities such as bribery, misuse of information, nepotism, providing employment or benefits to family members or associates, or seeking donations in exchange for assistance. Elements shaping the industry's nature, as outlined by Le et al. (2014), categorize the industry's characteristics into several dimensions: project uniqueness, intricate transaction chains, official bureaucracy, work concealment due to overlap, and the scale of infrastructure investment. The facets characterizing the industry's nature, as elucidated by Locatelli et al. (2017), represent opportunities individuals exploit for personal gain. This phenomenon is attributed to several factors, including the project's processes, its inherent nature, the financial involvement, and the competitive landscape.

H1: The nature of the industry influences corrupt practices.

2.3 Flawed Regulatory System

Per the perspective of (Mwelu et al., 2021), a flawed regulatory system encompasses crucial aspects, notably the presence of a system deemed as flawed. This indicates the occurrence of unethical conduct, facilitating the manifestation of corrupt practices. The accrual of substantial assets, particularly monetary ones, achieved through personal accomplishments, is linked to the existence of such a flawed system (Power, 2013). This can be perceived as financial stress manifested through business failures or unsuccessful investments in the market, thereby incentivizing wrongdoers to engage in fraudulent activities. When viewed broadly, it reflects a failure of the company or the construction industry to meet expectations, highlighting the need for rectifying or implementing a more effective system to achieve and surpass anticipated outcomes (Fürstenberg, Starystach, & Uhl, 2022).

Several constituents constitute integral components of a flawed regulatory system, encompassing political pressures, excessive involvement of multiple parties, exclusivity towards certain entities, and the perpetuation of an unaltered system (Brennan & McGrath, 2007). The dimensions characterizing a flawed regulatory system, as articulated by Yang et al. (2016), encompass a deficient legal framework, insufficient oversight, inadequate sanctions, and the existence of flawed licenses.

H2: Flawed regulatory systems influence corrupt practices.

2.4 Negative Encouragement

Negative encouragement may be characterized as an absence of remorse and the indifference exhibited by the offender to rationalize errors resulting from the committed offense (Dellaportas, 2013). This serves as a mechanism wherein organizational members establish that fraudulent behaviour is deemed acceptable in their cognitive framework. Individuals with lower moral standards find the rationalization process facile, while those with a higher moral code may find it challenging, necessitating self-convincing through the creation of justifications in the offender's mind (Dellaportas, 2013). Encouragement, both internal and external, manifests in the conduct of fraudsters who adhere to widely accepted norms of civility, fostering trust among individuals. This behaviour is facilitated by the perpetrator's demeanour and character, which adeptly persuades other parties. On the contrary, the individual engaging in deception, as they do not perceive themselves as criminals, must rationalize their transgressions internally before carrying them out.

The contemporary investigation into the fraud triangle centres on comprehending the mechanisms of fraud, frequently originating from individuals with ethical concerns. Organizations prioritize the implementation of rigorous control measures to proactively forestall or promptly detect fraudulent activities, with the objective of discouraging potential perpetrators or detecting any fraudulent behaviour in its incipient stages (Naumann, Bowden, & Gabbott, 2020). Factors contributing to or influencing motives can be categorized into two: the existence of unwarranted resistance, and a pronounced inclination towards strict accounting and an intense pursuit of consensus for the purpose of seamless execution. The dimensions of negative encouragement, as outlined by Zhang et al. (2017), involve the existence of a triangular framework directing the manifestation of motives within an individual. This framework comprises elements such as inherent selfishness and greed, low income, misconceptions about culture, and deficiencies in skills and ethical understanding.

H3: Negative encouragement influences corrupt practices.

2.5 Practice Corruption

Corruption is a deliberate conduct driven by distinct motives to secure mutual benefits, despite its inherent potential to inflict harm on various parties. The engagement in corrupt practices is motivated by diverse considerations primarily aimed at securing personal benefits and advantages (Butt, 2020; de Korte et al., 2021). The underlying causes of corrupt practices perpetrated by individuals or groups, as identified by (De Jong, Henry, & Stansbury, 2009), encompass factors such as poverty, power dynamics, cultural influences, ignorance, societal moral quality, weak state institutions, and co-morbid elements. In terms of the characteristics associated with the occurrence of corrupt practices, as per the observations of (Gunduz & Önder, 2013), these acts typically involve multiple participants, distinguishing them from embezzlement or theft. They tend to be clandestine, marked by obligation and mutual benefit factors, an inclination to conceal behind legal justifications, access to supportive conditions (e.g., power, authority, relationships), fraud against multiple parties, and a perceived contradiction experienced by the actor between their function and role and the existing reality, along with a gap between public interest and the

interests of individuals, groups, or organizations.

H4: Corrupt practices influence organizational performance.

2.6 Organizational Performance

Performance serves as a metric for assessing the attainment of organizational goals, influenced by the interplay among the capacities, motivation, and aspirations of an organization, group, or individual. Organizational performance, on the other hand, encapsulates the entirety of the outcomes achieved by the organization. According to (Nobanee & Ellili, 2020), performance encompasses demonstrated achievements and the capacity to work effectively and efficiently, involving elements such as authority, discipline, and initiative. The proficient management of human resources is a pivotal factor contributing to work achievements and overall organizational performance. (Lee, Azmi, Hanaysha, Alzoubi, & Alshurideh, 2022) further findings indicate that individuals represent highly valuable assets in the context of organizational operations. To date, work performance has primarily been confined to the outcomes achieved by individuals and organizations in pursuit of goals delineated by their respective authorities and responsibilities (Kumar & Pansari, 2015). Assessing an institution's success through its lecturers' performance is crucial, as performance measurement elucidates an individual's capability in fulfilling assigned tasks.

Various factors that contribute to organizational performance aligning with the company's expectations, as outlined by (Camilleri, 2021), encompass facilities as mediums for activities, a focus on resources (both tangible and intangible), and support from all members. The support from all members is particularly crucial as it plays a significant role in fostering success and sustainability, reflecting a sense of care within the organization. Components facilitating robust performance sustainability, as per Sabino et al. (2021), include subjects, involving technological changes, competitors, and customers as initial determining factors, and processes, specifically process capability.

H5: The nature of the industry influences organizational performance.
H6: Negative encouragement influences organizational performance.
H7: Flawed regulatory system has influence on organizational performance.



3. Research Framework

Figure 1.1 Conceptual Framework.

In light of the preceding literature review, the research framework depicted in Figure 1 has been conceptualized by the researchers. Within this framework, the nature of the industry, a flawed regulatory system, and negative encouragement serve as independent variables, practice corruption operates as a mediating variable, while organizational performance is the dependent variable.

4. Methodology

The research aimed to examine the influence of the nature of the industry, a flawed regulatory system, and negative encouragement on both practice corruption and organizational performance. To fulfil this objective, we employed a quantitative research methodology. Quantitative research endeavours to enhance knowledge and comprehension of the social world, utilizing methods that enable the observation of situations or events impacting individuals (Lazaraton, 2005). Quantitative research yields objective data that can be effectively conveyed through statistical analysis and numerical representations (Lazaraton, 2005). Our research adopted an explanatory nature, contributing substantial value by elucidating the underlying reasons behind the observed phenomena (Bentouhami, Casas, & Weyler, 2021). It permits researchers to delve deeper into causation and relationships that may not be immediately apparent through alternative research methodologies. Through elucidating fundamental mechanisms and augmenting our comprehension of intricate issues, explanatory research contributes to informed decision-making and the formulation of effective solutions for real-world challenges (Bentouhami, Casas, & Weyler, 2021). Furthermore, a cross-sectional research design was employed, entailing the collection of data at a singular point in time via a selfadministered questionnaire. Cross-sectional studies are frequently favoured over longitudinal studies due to their expedited implementation. Due to their faster implementation, cross sectional studies are often preferred over longitudinal studies (Spector, 2019).

4.1 Research Instrument

The assessment of the nature of the industry (X1) utilizes instruments outlined by Locatelli et al. (2017), tailored to the specifics of the current research. The measurement of the flawed regulatory systems variable (X2) employs instruments derived from Yang et al. (2016), suitably adapted for this study. Flawed regulatory systems, as perceived by managers, are characterized by defects or violations of established rules. The measurement of negative encouragement is grounded in the work of Zhang et al. (2017), with adjustments made to align with the requirements of this research. The evaluation of practice corruption is rooted in the perspective presented by Owusu et al. (2018), modified to suit the context of this study. The assessment of organizational performance refers to the methodology proposed by McCartney and Fu (2022), adapted to align with the objectives of this research. All of the constructs were measured on five-point Likert Scale. The questionnaire was disseminated to 350 managers in the construction industry, and among them, 290 responses were collected. For the final analysis, 285 questionnaires were deemed valid and eligible for further examination.

5. Data Analysis and Results

5.1 Assessment of Measurement Model

The data was analysed from two perspectives: measurement and structural, utilizing the Partial Least Squares (PLS)-Structural Equation Modelling (SEM) technique through Smart PLS. The measurement model was assessed for convergent and discriminant validity. Convergent validity was evaluated through factor loadings, composite reliability, alpha, and average variance extracted. The recommended benchmarks for these metrics include factor loadings exceeding 0.5, composite reliability surpassing 0.7, Cronbach's alpha exceeding 0.7, and average variance extracted surpassing 0.5. All the values surpass the previously discussed thresholds. Specifically, the Average Variance Extracted (AVE) values for NTI, FRS, NE, PC, and OP are 0.886, 0.816, 0.840, 0.835, and 0.735, respectively. These values imply that all indicators of each variable are adequately captured by the latent variable. The Composite Reliability (CR) results indicate values above 0.7, with NTI at 0.939, FRS at 0.930, NE at 0.913, PC at 0.938, and OP at 0.893. These CR values affirm the reliability of all instruments.

Moreover, for discriminant validity, the Heterotrait-Monotrait (HTMT) values should be below 0.85 or 0.90. The aforementioned values are summarized in Tables 1 and 2 for reference.

Codings	Loadings	CR	AVE	S.E	P value
NTI1	0.941	0.939	0.886	0.051	< 0.001
NTI2	0.941			0.051	< 0.001
FRS1	0.893	0.930	0.816	0.051	< 0.001
FRS2	0.905			0.051	< 0.001
FRS3	0.912			0.051	< 0.001
NE1	0.916	0.913	0.840	0.051	< 0.001
NE2	0.916			0.051	< 0.001
PC1	0.913	0.938	0.835	0.051	< 0.001
PC2	0.938			0.051	< 0.001
0C3	0.890			0.051	< 0.001
OP1	0.848	0.893	0.735	0.052	< 0.001
OP2	0.881			0.051	< 0.001
OP3	0.842			0.052	< 0.001

Table.1: Convergent Validity.

Note: NTI-nature of industry, FRS-flawed regulatory system, NE-negative encouragement, PC-practice corruption, OP-organization performance.

Table.2: Discriminant Validity.								
	NTI	FRS	N.E	РС	OP			
NTI	0.941							
FRS	0.833	0.903						
N.E	0.753	0.768	0.916					
PC	0.679	0.707	0.775	0.914				
OP	0.735	0.726	0.702	0.655	0.857			

Note: NTI-nature of industry, FRS-flawed regulatory system, NE-negative encouragement, PC-practice corruption, OP-organization performance.

5.2 Assessment of Structural Model

Following the evaluation of the measurement model, the subsequent step involves testing the study hypotheses. The research hypotheses were tested utilizing the bootstrap resampling technique with 5000 iterations. The results from the Partial Least Squares Structural Equation Modelling (PLS-SEM) analysis reveal that the Nature of Industry (NI) exhibits a positive and significant impact on both Practice Corruption (PC) and OP. This suggests that the inherent characteristics of the industry may cultivate an environment conducive to corrupt practices, influencing overall performance.

Similarly, the Flawed Regulatory System (FRS) demonstrates a positive and significant impact on both PC and OP. This indicates that deficiencies in oversight and governance contribute to the prevalence of corruption, potentially impeding organizational effectiveness within the construction sector.

Furthermore, Negative Encouragement (NE) exhibits a positive and significant impact on both PC and OP. This underscores the detrimental influence of external pressures or discouraging factors that perpetuate corrupt behaviours, ultimately affecting the operational and organizational outcomes of the industry.

It is crucial for the construction industry in Indonesia to address these identified factors in order to mitigate corruption, enhance regulatory frameworks, and improve overall performance, thereby fostering sustainable growth and development. The aforementioned results are depicted in Figure 2.



Figure 1.2 Effect Test Results.

Note: NTI-nature of industry, FRS-flawed regulatory system, NE-negative encouragement, PC-practice corruption, OP-organization performance.

6. Discussion

Operational performance (OP) plays a pivotal role in introducing novel elements to the construction industry, particularly in systems encompassing goods and services in Indonesia. This, undoubtedly, hinges on the pivotal role of leaders or managers who

exhibit a profound motivation in executing their performance-related activities. A robust motivation to attain optimal performance serves as the cornerstone of success in the construction industry. To this end, the NI, FRS, and NE emerge as critical factors that can influence OP by mitigating PC. Consequently, the research aims to examine the impact of NI, FRS, and NE on OP through the mediation of PC in the construction industry in Indonesia. The NI demonstrates a positive and significant impact on PC. This positive and significant influence of NI on PC underscores the distinctive characteristics inherent in the Indonesian construction sector. These results indicate that the intricate network involving contractors, subcontractors, and suppliers, along with decentralized decision-making processes within the Indonesian construction industry, creates opportunities for rent-seeking behaviour and corrupt practices. The competitive and often adversarial nature of contracts, combined with information asymmetry and project complexity, contributes to an environment conducive to corruption. These findings align with prior empirical research suggesting that the nature of corruption influences corrupt practices, thereby diminishing organizational performance (Addo, 2021).

The outcomes of data analysis reveal that FRS similarly exerts a positive and significant influence on PC. This noteworthy impact of FRS on PC underscores the susceptibilities arising from governance inadequacies within the Indonesian construction context. Scholarly investigations have consistently highlighted the existence of regulatory loopholes, insufficient enforcement, and bureaucratic inefficiencies as contributing factors that facilitate corrupt practices (Slijepčević, Rajh, & Budak, 2020). This has detrimental consequences for both project outcomes and the overarching performance of the industry, resulting in elevated project expenses, delays, and compromised infrastructure quality, thereby impeding economic development. These findings align with prior research (Bachelard, 2010; Gadowska, 2010; Tvedten & Picardo, 2018), which similarly asserted that a flawed regulatory system contributes to the occurrence of practice corruption. Additionally, NE exhibits a positive and significant impact on PC. This significant influence of NE on PC underscores the role of external pressures or discouraging factors that perpetuate corrupt practices within the Indonesian construction industry Kohler and Dimancesco (2020). demonstrate the impact of pervasive social norms, client expectations for expeditiousness, and the anticipation of unofficial payments on decision-making and behaviours within construction projects. The normalization of corrupt practices, whether due to societal acceptance or client demands, fosters a deleterious environment that not only affects project-specific outcomes but also undermines trust and integrity within the industry. Consequently, this hampers the overall performance and growth of the industry. These conclusions find support in pertinent studies (Li, Tang, & Huhe, 2016; Petersen, 2021), which similarly assert that NE exhibits a positive influence on the occurrence of corrupt practices within organizations.

The results additionally demonstrate that PC has a positive and significant impact on OP. These findings align with the institutional theory of PC, often described as habits and categorized under intrinsic and extrinsic motivation. This theory carries significant influence on performance as it pertains to behaviours naturally occurring in the social environment, where individuals tend to act in accordance with internal motivations and external stimuli from the environment or other entities (Gray, 2021; Habiyaremye & Raymond, 2018; Nguyen et al., 2022). The results are in line with previous studies (Alola et al., 2021; Kirya, 2020) which also stated that PC has an influence on OP. On the contrary, subsequent results indicated that negative

encouragement positively and significantly influences OP. These findings imply that the impact of negative encouragement on OP prompts thought-provoking considerations for the Indonesian construction sector. It suggests that uncertainty or critical evaluation may instigate a more cautious approach, leading to improved decision-making and risk mitigation strategies. In the construction industry, a careful outlook might nurture a culture of thorough planning, rigorous quality control, and risk management, thereby contributing positively to overall OP, despite the counterintuitive nature of negativity's impact. Some prior research (Grimaldi, Fernandez, & Carrasco, 2021) supports the idea that the nature of the industry influences organizational performance.

Finally, NE also exhibits a positive and significant impact on OP. The research outcomes, highlighting the positive and significant influence of NE on the OP of the Indonesian construction industry, suggest a distinctive dynamic within this sector. Such findings may indicate that constructive criticism or challenges to conventional thinking foster a culture of improvement and resilience. In a challenging field like construction, critical feedback might stimulate innovative problem-solving, encourage thorough planning, and drive a culture of continuous improvement that could ultimately enhance overall organizational performance, despite the unexpected positivity associated with negativity. This is because negative encouragement reflects aspects where managers display unethical behaviour, lack certain skills, have low ethical standards, experience a sense of low income, and harbour significant selfishness and greed, all of which contribute to its impact on organizational performance. Earlier studies (Butt, 2020; de Korte et al., 2021) assert that negative encouragement impacts organizational performance.

7. Implications

The research provides both practical and theoretical contributions. Theoretical contributions involve enhancing existing literature by elucidating the interconnections among factors such as the NEI, FRS, and NE, with their subsequent impact on PC and OP. The study emphasizes the contextual significance of these factors within the Indonesian construction industry, prompting further exploration into personalized interventions, behavioural economics, and governance models to counter the negative effects of corruption and enhance OP. In the realm of construction management, the study identifies the influence of various variables on organizational performance, emphasizing the need for behaviours aligned with rules and norms to achieve success in terms of benefits, time, quality, safety, and comfort for all stakeholders.

From a practical standpoint, these findings provide valuable insights for policymakers and industry stakeholders to formulate effective strategies for eradicating corruption and enhancing OP within the Indonesian construction industry. Recognizing the significant impacts of the NI, FRS, and NE on PC and OP underscores the need for comprehensive reforms in regulatory frameworks, the promotion of ethical leadership, and the reshaping of industry culture. Addressing governance deficiencies, regulatory loopholes, and societal norms that perpetuate corrupt behaviours is crucial. Practical implications involve the development of targeted policies, training programs, and awareness campaigns to instigate a cultural shift toward integrity, transparency, and innovation within the construction sector.

Stakeholders should collaborate to create an environment that encourages ethical behaviour, discourages negative influences, and fosters a culture of continuous improvement and best practices, thereby enhancing overall OP and ensuring sustainable growth in the Indonesian construction industry.

8. Limitations and Future Directions

This research exclusively concentrated on the construction industry, which has adopted and been reaccredited with the implementation of a clearly defined standard, namely ISO 37001:2016. The construction industry demonstrates a profound understanding of the benefits accrued and is cognizant of the challenges associated with certain behaviours that breach ethical norms. The findings of this research cannot be universally applied to all industries, necessitating further in-depth investigations for subsequent studies. Moreover, the study primarily focused on the direct mediating effects, overlooking other potential variables such as national culture, among others, that could act as moderators between independent and dependent variables. Future research could benefit from a more comprehensive approach by incorporating both quantitative and qualitative methodologies, as the current study exclusively utilized a quantitative research approach.

9. Conclusion

The study was conducted on the construction industry of Indonesia to present a comprehensive understanding of the relationship between the NI, a FRS, NE on the practice of corruption, and OP. Employing a quantitative design and utilizing the PLS analysis technique to test the effect of each hypothesis, the study collected responses from 285 managers in the construction industry, spread across all regions in Indonesia. The results of the PLS- SEM techniques show a positive and significant impact of NI, FRS, and NE on adopting corrupt practices within the industry, leading to detrimental effects on project outcomes and hindrances to overall performance. Furthermore, PC also has a positive and significant impact on OP. On the other hand, NI, PC, and FRS also have positive and significant impacts on OP. The study's findings emphasize the urgency of addressing systemic weaknesses, enhancing regulatory frameworks, and fostering a culture of improvement and resilience within the Indonesian construction sector to promote ethical conduct and OP. Limitations include the industry-specific focus and the need for future studies exploring various other industries, considering moderating variables, and adopting mixed-method approaches for comprehensive insights.

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References

- Addo, A. (2021). Controlling petty corruption in public administrations of developing countries through digitalization: An opportunity theory informed study of Ghana customs. The Information Society, 37(2), 99-114. https://doi.org/10.1080/01972243.2020.1870182
- Alola, U. V., Alola, A. A., Avci, T., & Ozturen, A. (2021). Impact of Corruption and Insurgency on Tourism Performance: A Case of a Developing Country. International Journal of Hospitality & Tourism Administration, 22(4), 412-428. https://doi.org/10.1080/15256480.2019.1650686
- Andrews, T. G., Rowley, C., Nimanandh, K., & Buranapin, S. (2019). Corruption in Asia Pacific business organizations: insights on causes, conditions, consequences and treatment. Asia Pacific Business Review, 25(4), 459-469. https://doi.org/10.1080/13602381.2019.1628504
- Athanasouli, D., & Goujard, A. (2015). Corruption and management practices: Firm level evidence. Journal of Comparative Economics, 43(4), 1014-1034. https://doi.org/10.1016/j.jce.2015.03.002
- Bachelard, J. Y. (2010). The Anglo-Leasing corruption scandal in Kenya: the politics of international and domestic pressures and counter-pressures. Review of African Political Economy, 37(124), 187-200. https://doi.org/10.1080/03056244.2010.483903
- Baumol, W. J. (2002). The free-market innovation machine: Analyzing the growth miracle of capitalism. Princeton university press. https://press.princeton.edu/books/paperback/9780691116303/the-freemarket-innovation-machine
- Bentouhami, H., Casas, L., & Weyler, J. (2021). Reporting of "Theoretical Design" in Explanatory Research: A Critical Appraisal of Research on Early Life Exposure to Antibiotics and the Occurrence of Asthma. Clinical Epidemiology, 13(null), 755-767. https://doi.org/10.2147/CLEP.S318287
- Brennan, N. M., & McGrath, M. (2007). Financial statement fraud: Some lessons from US and European case studies. Australian accounting review, 17(42), 49-61. https://doi.org/10.1111/j.1835-2561.2007.tb00443.x
- Butt, G. (2020). Without walls: performance art and pedagogy at the 'Bauhaus of the North'. Theatre, Dance and Performance Training, 11(2), 126-144. https://doi.org/10.1080/19443927.2020.1746926
- Caillier, J. (2018). The Priming Effect of Corruption and Bureaucracy Bashing on Citizens' Perceptions of an Agency's Performance. Public Performance & Management Review, 41(2), 201-223. https://doi.org/10.1080/15309576.2018.1431138
- Calciolari, S., Prenestini, A., & Lega, F. (2018). An organizational culture for all seasons? How cultural type dominance and strength influence different performance goals. Public Management Review, 20(9), 1400-1422. https://doi.org/10.1080/14719037.2017.1383784
- Camilleri, M. A. (2021). Evaluating service quality and performance of higher education institutions: a systematic review and a post-COVID-19 outlook. *International Journal of Quality and Service Sciences, 13*(2), 268-281. https://doi.org/10.1108/IJQSS-03-2020-0034
- De Jong, M., Henry, W. P., & Stansbury, N. (2009). Eliminating corruption in our engineering/construction industry. Leadership and Management in

Engineering, 9(3), 105-111. https://doi.org/10.1061/(ASCE)1532-6748(2009)9:3(105)

- de Korte, J. Q., Bongers, C. C. W. G., Hopman, M. T. E., Teunissen, L. P. J., Jansen, K. M. B., Kingma, B. R. M., Ballak, S. B., Maase, K., Moen, M. H., van Dijk, J.-W., Daanen, H. A. M., & Eijsvogels, T. M. H. (2021). Performance and thermoregulation of Dutch Olympic and Paralympic athletes exercising in the heat: Rationale and design of the Thermo Tokyo study: The journal Temperature toolbox. Temperature, 8(3), 209-222. https://doi.org/10.1080/23328940.2021.1925618
- Dellaportas, S. (2013). Conversations with inmate accountants: Motivation, opportunity and the fraud triangle. Accounting Forum, 37(1), 29-39. https://doi.org/10.1016/j.accfor.2012.09.003
- Denisova-Schmidt, E., & Prytula, Y. (2017). Trust and Perceived Corruption Among Ukrainian Firms. Eastern European Economics, 55(4), 324-341. https://doi.org/10.1080/00128775.2017.1312455
- Dreher, A. (2006). Does globalization affect growth? Evidence from a new index of globalization. Applied Economics, 38(10), 1091-1110. https://doi.org/10.1080/00036840500392078
- Fürstenberg, A., Starystach, S., & Uhl, A. (2022). Culture and corruption: An experimental comparison of cultural patterns on the corruption propensity in Poland and Russia. European Journal of Criminology, 20(5), 1719-1739. https://doi.org/10.1177/14773708221081017
- Gadowska, K. (2010). National and international anti-corruption efforts: the case of Poland. Global Crime, 11(2), 178-209. https://doi.org/10.1080/17440571003669191
- Geels, F. W. (2004). From sectoral systems of innovation to socio-technical systems: Insights about dynamics and change from sociology and institutional theory. Research Policy, 33(6), 897-920. https://doi.org/10.1016/j.respol.2004.01.015
- Gray, N. (2021). When anti-corruption fails: the dynamics of procurement in contemporary South Africa. Review of African Political Economy, 48(169), 369-384. https://doi.org/10.1080/03056244.2021.1932789
- Graycar, A., & Monaghan, O. (2015). Rich Country Corruption. International Journal of Public Administration, 38(8), 586-595. https://doi.org/10.1080/01900692.2014.949757
- Grimaldi, D., Fernandez, V., & Carrasco, C. (2021). Exploring data conditions to improve business performance. Journal of the Operational Research Society, 72(5), 1087-1098. https://doi.org/10.1080/01605682.2019.1590136
- Gunduz, M., & Önder, O. (2013). Corruption and Internal Fraud in the Turkish Construction Industry. Science and Engineering Ethics, 19(2), 505-528. https://doi.org/10.1007/s11948-012-9356-9
- Habiyaremye, A., & Raymond, W. (2018). How do foreign firms' corruption practices affect innovation performance in host countries? Industry-level evidence from transition economies. Innovation, 20(1), 18-41. https://doi.org/10.1080/14479338.2017.1367626
- Juliao-Rossi, J., Losada-Otalora, M., & Católico-Segura, D. F. (2023). MNEs' corporate governance disclosure: a strategic response to corrupt environments. Corporate Governance: The International Journal of Business in Society, 23(1), 72-108. https://doi.org/10.1108/CG-12-2021-0465
- Jun, I.-W., Kim, K.-I., & Rowley, C. (2019). Organizational culture and the tolerance of corruption: the case of South Korea. Asia Pacific Business Review, 25(4), 534-553. https://doi.org/10.1080/13602381.2019.1589728

- Kumar, V., & Pansari, A. (2015). Measuring the benefits of employee engagement. *MIT Sloan management review*, *56*(4), 67. http://mitsmr.com/1R4Unsb
- Keenan, M., & Rostami, A. (2021). The impact of quality management systems on construction performance in the North West of England. International Journal of Construction Management, 21(9), 871-883. https://doi.org/10.1080/15623599.2019.1590974
- Kirya, M. T. (2020). Promoting anti-corruption, transparency and accountability in the recruitment and promotion of health workers to safeguard health outcomes. Global Health Action, 13(sup1), 1701326. https://doi.org/10.1080/16549716.2019.1701326
- Kohler, J. C., & Dimancesco, D. (2020). The risk of corruption in public pharmaceutical procurement: how anti-corruption, transparency and accountability measures may reduce this risk. Global Health Action, 13(sup1), 1694745. https://doi.org/10.1080/16549716.2019.1694745
- Lazaraton, A. (2005). Quantitative research methods. In Handbook of research in second language teaching and learning (pp. 209-224). Taylor and Francis. https://www.taylorfrancis.com/chapters/edit/10.4324/9781410612700-16/quantitative-research-methods-anne-lazaraton
- Le, Y., Shan, M., Chan Albert, P. C., & Hu, Y. (2014). Overview of Corruption Research in Construction. Journal of Management in Engineering, 30(4), 02514001. https://doi.org/10.1061/(ASCE)ME.1943-5479.0000300
- Lee, K., Azmi, N., Hanaysha, J., Alzoubi, H., & Alshurideh, M. (2022). The effect of digital supply chain on organizational performance: An empirical study in Malaysia manufacturing industry. *Uncertain Supply Chain Management, 10*(2), 495-510. http://dx.doi.org/10.5267/j.uscm.2021.12.002
- Li, H., Tang, M., & Huhe, N. (2016). How does democracy influence citizens' perceptions of government corruption? A cross-national study. Democratization, 23(5), 892-918. https://doi.org/10.1080/13510347.2015.1039995
- Locatelli, G., Mariani, G., Sainati, T., & Greco, M. (2017). Corruption in public projects and megaprojects: There is an elephant in the room! International Journal of Project Management, 35(3), 252-268. https://doi.org/10.1016/j.ijproman.2016.09.010
- Loosemore, M., & Lim, B. (2015). Inter-organizational unfairness in the construction industry. Construction Management and Economics, 33(4), 310-326. https://doi.org/10.1080/01446193.2015.1057193
- Lui, F. T. (1985). An equilibrium queuing model of bribery. Journal of political economy, 93(4), 760-781. https://doi.org/10.1086/261329
- Lyrio, M. V. L., Lunkes, R. J., & Taliani, E. T. C. (2018). Thirty Years of Studies on Transparency, Accountability, and Corruption in the Public Sector: The State of the Art and Opportunities for Future Research. Public Integrity, 20(5), 512-533. https://doi.org/10.1080/10999922.2017.1416537
- Malec, T. E. (2018). Introduction to theory of culture-related spatial development. Cogent Arts & Humanities, 5(1), 1557583. https://doi.org/10.1080/23311983.2018.1557583
- Manoharan, K., Dissanayake, P., Pathirana, C., Deegahawature, D., & Silva, R. (2023). Assessment of critical factors influencing the performance of labour in Sri Lankan construction industry. International Journal of Construction Management, 23(1), 144-155. https://doi.org/10.1080/15623599.2020.1854042
- McCartney, S., & Fu, N. (2022). Bridging the gap: why, how and when HR analytics can impact organizational performance. Management Decision, 60(13), 25-47.

https://doi.org/10.1108/MD-12-2020-1581

- Mwelu, N., Davis, P. R., Ke, Y., Watundu, S., & Jefferies, M. (2021). Success factors for implementing Uganda's public road construction projects. International Journal of Construction Management, 21(6), 598-614. https://doi.org/10.1080/15623599.2019.1573481
- Naumann, K., Bowden, J., & Gabbott, M. (2020). Expanding customer engagement: the role of negative engagement, dual valences and contexts. *European Journal of Marketing*, 54(7), 1469-1499. https://doi.org/10.1108/EJM-07-2017-0464
- Nobanee, H., & Ellili, N. (2020). Anti-bribery information: extent and impact on banking performance of UAE Islamic and conventional banks. *Journal of Financial Crime*, *27*(2), 683-695. https://doi.org/10.1108/JFC-11-2019-0144
- Nguyen, H. T., Trang Vu, K., Nguyen, L. Q. T., & Luu, H. N. (2022). CEO culture, corruption and firm performance. Applied Economics Letters, 29(7), 630-634. https://doi.org/10.1080/13504851.2021.1881429
- Othman, Z., Shafie, R., & Hamid, F. Z. A. (2014). Corruption Why do they do it? Procedia - Social and Behavioral Sciences, 164, 248-257. https://doi.org/10.1016/j.sbspro.2014.11.074
- Owusu, E. K., Chan, A. P. C., DeGraft, O.-M., Ameyaw, E. E., & Robert, O.-K. (2018). Contemporary Review of Anti-Corruption Measures in Construction Project Management. Project Management Journal, 50(1), 40-56. https://doi.org/10.1177/8756972818808983
- Petersen, G. (2021). Early democratization, corruption scandals and perceptions of corruption: evidence from Mexico. Democratization, 28(2), 333-352. https://doi.org/10.1080/13510347.2020.1819246
- Power, M. (2013). The apparatus of fraud risk. Accounting, Organizations and Society, 38(6), 525-543. https://doi.org/10.1016/j.aos.2012.07.004
- Ren, Y., & Patten, D. M. (2019). The Impact of Governmental Pressure on Corporate Corruption Spending: Evidence from China. Social and Environmental Accountability Journal, 39(2), 124-136. https://doi.org/10.1080/0969160X.2019.1621763
- Sabino, L. R., Reis Neto, M. T., Morais, G. M., & Santos, V. F. d. (2021). Leadership, Communication, and Resistance Influence Organizational Performance. Latin American Business Review, 22(3), 265-286. https://doi.org/10.1080/10978526.2021.1897469
- Slijepčević, S., Rajh, E., & Budak, J. (2020). Determinants of corruption pressures on local government in the EU. Economic research-Ekonomska istraživanja, 33(1), 3492-3508. https://doi.org/10.1080/1331677X.2020.1774793
- Spector, P. E. (2019). Do Not Cross Me: Optimizing the Use of Cross-Sectional Designs. Journal of Business and Psychology, 34(2), 125-137. https://doi.org/10.1007/s10869-018-09613-8
- Treisman, D. (2007). What have we learned about the causes of corruption from ten years of cross-national empirical research? Annu. Rev. Polit. Sci., 10, 211-244. https://doi.org/10.1146/annurev.polisci.10.081205.095418
- Tvedten, I., & Picardo, R. (2018). 'Goats eat where they are tied up': illicit and habitual corruption in Mozambique. Review of African Political Economy, 45(158), 541-557. https://doi.org/10.1080/03056244.2018.1546686
- Yang, J., Chen, J., Le, X., & Zhang, Q. (2016). Density-oriented versus development-oriented transit investment: Decoding metro station location selection in Shenzhen. Transport Policy, 51, 93-102. https://doi.org/10.1016/j.tranpol.2016.04.004

- Yap, J. B. H., Lee, K. Y., Rose, T., & Skitmore, M. (2022). Corruption in the Malaysian construction industry: investigating effects, causes, and preventive measures. International Journal of Construction Management, 22(8), 1525-1536. https://doi.org/10.1080/15623599.2020.1728609
- Zhang, B., Le, Y., Xia, B., & Skitmore, M. (2017). Causes of Business-to-Government Corruption in the Tendering Process in China. Journal of Management in Engineering, 33(2), 05016022. https://doi.org/10.1061/(ASCE)ME.1943-5479.0000479