

Corruption in the Construction Industry in Ranau, Sabah: An Exploratory Study of Perceived Causes, Effects, and Preventive Strategies

Azizan Abdul Aziz, Muhamad Zaihafiz Zainal Abidin, Nur Emma Amira

Centre of Studies for Surveying and Management, Faculty of Built Environment, Universiti Teknologi
MARA (UiTM), 40450 Shah Alam, Selangor, Malaysia

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ABSTRACT

Corruption within the construction industry poses a persistent challenge to project performance, public trust, and governance integrity in Malaysia. This study investigates the causes, effects, and preventive strategies associated with corrupt practices among contractors registered with the Construction Industry Development Board (CIDB) in Ranau, Sabah, a district characterised by rapid infrastructure growth but limited empirical scrutiny of this issue. Grounded in the Opportunity-Motivation-Rationalisation (OMR) framework, the study employed a quantitative survey design involving 217 CIDB-registered contractors across grades G1 to G7, selected through purposive and snowball sampling. Data were analysed using descriptive statistics, Cronbach's alpha reliability coefficients, and the Relative Importance Index (RII). Findings indicate that structural and institutional factors, specifically ineffective internal controls and weak enforcement of anti-corruption legislation, are perceived as the most critical causes of corruption (RII = 0.73). Quality deterioration, financial instability, and safety standard compromise are identified as the most severe consequences (RII = 0.74). Regulatory oversight, penalty enforcement, and systematic project auditing are ranked as the highest-priority preventive measures (RII = 0.74). These findings are consistent with the OMR proposition that opportunity-enabling conditions, combined with weak institutional oversight, function as the primary driver of corruption. Practical implications are directed towards CIDB Malaysia, the Malaysian Anti-Corruption Commission (MACC), and the Sabah Public Works Department (JKR Sabah) as key institutional actors responsible for translating these findings into targeted policy action.

Keywords: corruption; construction industry; OMR framework; Relative Importance Index; Malaysia

INTRODUCTION

Malaysia's construction sector is a cornerstone of national economic development, contributing substantially to gross domestic product (GDP), capital formation, employment generation, and the delivery of physical infrastructure that underpins social welfare (Khan et al., 2014; Olanrewaju & Abdul-Aziz, 2015). Since independence, the sector has expanded continuously, driven by successive national development plans and sustained public investment in infrastructure (Sambasivan & Soon, 2007). Yet alongside this economic significance lies a persistent vulnerability. The construction industry is consistently identified as among the most corruption-prone sectors globally, owing to its characteristic complexity, multi-stakeholder contractual arrangements, large and often opaque financial flows, and prolonged project timelines (Ameyaw et al., 2021; Stansbury, 2005; Transparency International, 2011).

In Malaysia, this vulnerability is compounded by sector-specific structural conditions. Project procurement frequently involves multiple layers of subcontracting that obscure accountability, and political networks often influence contractor selection. These conditions are reinforced by a cultural landscape in which informal payments are sometimes rationalised as standard business practice, allowing corrupt behaviour to become normalised over time (Abdul-Aziz & Mohmad, 2010; Othman et al., 2020; Yap et al., 2020). The consequences extend beyond individual projects: corruption erodes the quality of public assets, inflates

infrastructure costs, undermines investor confidence, and diminishes the social return on public expenditure. High-profile cases in Sabah, including procurement irregularities at the Sabah Water Department (Karunanithy, 2021; Malay Mail, 2020), demonstrate that these risks are not confined to large urban centres but extend to peripheral districts where institutional monitoring capacity is comparatively weaker.

Ranau, located in the interior of Sabah, exemplifies this challenge. The district has experienced sustained growth in construction activity driven by rural development programmes, agricultural infrastructure investment, and public works expansion. This growth, however, has not been accompanied by commensurate improvements in regulatory enforcement, contractor accountability mechanisms, or the institutional capacity of oversight bodies operating at the district level. Despite the recognised importance of understanding how corruption manifests in these contexts, empirical research on construction corruption in Ranau specifically remains scarce. The absence of such evidence constrains the ability of practitioners, regulators, and policymakers to design anti-corruption strategies that are contextually appropriate and operationally feasible.

The present study addresses this gap through a quantitative perception survey administered to 217 CIDB-registered contractors in Ranau, Sabah. The study is structured using the Opportunity-Motivation-Rationalisation (OMR) framework, a well-established model in fraud and corruption research that classifies corruption drivers and preventive interventions according to their functional role in enabling, incentivising, or justifying corrupt behaviour. Three research objectives guide the inquiry: (i) to identify the primary perceived causes of corrupt practices among contractors in Ranau; (ii) to assess the perceived effects of those practices on construction project performance and industry outcomes; and (iii) to evaluate the priority and perceived effectiveness of preventive strategies from the perspective of industry practitioners.

The study makes two contributions to the existing literature. First, it provides district-level empirical data from a peripheral Malaysian construction context that has previously received no dedicated empirical attention. Second, by applying the OMR framework as an interpretive lens, it moves beyond descriptive cataloguing of perceptions to generate theoretically grounded insights about the structural conditions that sustain corruption in this setting, thereby enabling more targeted policy prescription.

LITERATURE REVIEW

Conceptualising Corruption in the Construction Industry

Corruption is most broadly defined as the abuse of entrusted authority for illegitimate personal or organisational gain (Transparency International, 2020). Within the construction industry, this definition encompasses a wide spectrum of behaviours, including collusion in bid pricing during procurement and tender evaluation, fraudulent progress claims, kickbacks to certifying professionals, falsification of quality inspection records, and the manipulation of contractor registration and licensing processes (Bowen et al., 2012; Stansbury, 2005). The breadth of this spectrum reflects the complexity of the construction project lifecycle, in which opportunities for misconduct arise across multiple stages from planning and design through procurement, execution, and commissioning (Sohail & Cavill, 2008).

The Transparency International Bribe Payers Index (2011) identified construction as the most bribery-prone industry globally, a finding corroborated by empirical studies across diverse national contexts. Research in Ghana reported kickbacks and tender manipulation as dominant corrupt practices, particularly concentrated at the procurement stage (Ameyaw et al., 2017). Studies in South Africa documented collusion, fraud, and bribery as persistent systemic issues, with qualitative evidence pointing to cultural and organisational normalisation of corrupt conduct (Bowen et al., 2012). Research in Turkey identified corruption as particularly prevalent in public construction contracts, with weak contract management and limited enforcement creating enabling conditions (Gunduz & Önder, 2013). Studies conducted in China similarly identified institutional fragility and political-commercial linkages as primary structural enablers (Zou, 2006).

Within the Malaysian context, research on construction corruption is limited in volume partly due to the sensitivity of the subject matter, with practitioners often reluctant to disclose experiences of corrupt conduct directly (Le et al., 2020; Locatelli et al., 2017). Existing studies have nevertheless identified a consistent set of

contributing factors including project complexity, political interference in contracting decisions, inadequate due diligence processes, and cultural contexts in which the boundary between professional hospitality and bribery is frequently blurred (Abdul-Aziz & Mohmad, 2010; Othman et al., 2020; Yap et al., 2020). Mohd Nordin et al. (2012) identified four dominant corruption behaviours in Malaysian construction, namely bribery, favouritism, abuse of power, and fraud, and found that institutional weaknesses rather than individual moral failings formed the primary enabling environment for these behaviours.

The Opportunity-Motivation-Rationalisation (OMR) Framework

The OMR framework identifies the conditions under which illicit conduct becomes likely, and serves as the conceptual foundation for this study. Its origins lie in Cressey's (1953) criminological research, which proposed that individuals in positions of trust violate that trust when three conditions converge. The first is a financial problem the individual cannot resolve or disclose through legitimate means. The second is a perceived opportunity to resolve it without detection. The third is the capacity to justify the act to oneself as consistent with one's own values.

In later applications to organisational and sectoral corruption, the first construct has commonly been rendered as motivation rather than pressure. This reflects a broadening of the concept: motivation in organisational settings extends beyond acute personal financial distress to include competitive disadvantage, remuneration conditions, and pressures exerted through professional hierarchies (Bowen et al., 2012; Mohd Nordin et al., 2012). The present study adopts this broadened formulation.

A separate line of development produced the fraud diamond. Wolfe and Hermanson (2004) added capability as a fourth element, arguing that the original three conditions may be insufficient without the individual capacity to execute and conceal the act. This study retains the three-construct OMR structure rather than the fraud diamond for two reasons. The research objectives concern sectoral and institutional conditions rather than individual perpetrator characteristics. Capability is also difficult to operationalise through a perception survey without individual-level behavioural data. The OMR framework as applied here therefore holds that corrupt behaviour is not random, but arises from the convergence of opportunity, motivation, and rationalisation.

The first condition is opportunity, which refers to the structural and situational conditions that make corrupt behaviour feasible, low-risk, and difficult to detect or sanction. In the construction sector, opportunity conditions typically include weak oversight and auditing systems, opaque procurement processes, limited whistleblower protection, absent or unenforced codes of conduct, and fragmented supervisory chains that allow misconduct to go undetected (De Jong et al., 2009; Stansbury, 2005).

The second condition is motivation, which encompasses the personal or organisational incentives that prompt an actor to engage in corrupt behaviour. Motivational factors include financial pressure arising from low wages or business viability threats, competitive disadvantage relative to rivals perceived as engaging in corruption, and the anticipated personal or organisational benefits of corrupt conduct (Kenny, 2007; Oluseye et al., 2011).

The third condition is rationalisation, which describes the cognitive, cultural, and social mechanisms that allow individuals to justify corrupt behaviour to themselves and others. Rationalisation mechanisms include the normalisation of bribery as a standard business cost, a perception that corrupt behaviour is victimless or universally practised, and cultural contexts in which informal payments carry no social stigma (Getz & Volkema, 2001; Mohd Nordin et al., 2012).

Applied to the construction sector in developing country contexts, the OMR model generates an analytical expectation: that opportunity-related factors are likely to appear more salient in environments where institutional oversight capacity is weak, since structural enabling conditions are more pervasive than individual motivational or rationalisation triggers. Prior empirical applications of OMR-derived frameworks to construction corruption are consistent with this prediction (Bowen et al., 2012; Mohd Nordin et al., 2012). The present study examines whether this pattern holds in the Ranau context, where institutional oversight operates at a district level with limited resources.

Causes of Corruption in the Construction Sector

The literature identifies a multi-level set of causes operating at structural, organisational, and individual scales. At the structural level, weak enforcement of anti-corruption legislation, opaque licensing and tendering procedures, inadequate supervisory frameworks, and the absence of credible deterrent sanctions create opportunity conditions that make corrupt behaviour both feasible and rational from a risk-reward perspective (Ameyaw et al., 2021; Kenny, 2007; Zou, 2006). These structural conditions are particularly pronounced in contexts where anti-corruption institutions lack enforcement capacity, where political networks intersect with commercial contracting, and where project complexity exceeds the monitoring capacity of available oversight bodies.

At the organisational level, the absence of effective internal controls, clear codes of professional conduct, and ethical leadership creates conditions in which corrupt practices can persist within firms without detection or institutional sanction (Ameyaw et al., 2017; Mohd Nordin et al., 2012). In the Malaysian construction sector, Yap et al. (2020) identified 18 major causes of corruption including greed, relationships between contracting parties, lack of ethical standards, intense competitive pressure, and the involvement of large financial flows. The study found that relational and institutional factors were collectively more influential than individual character failings, a finding consistent with the opportunity dimension of the OMR framework.

At the individual level, financial pressures arising from low wages and competitive tendering environments can constitute motivational triggers for corrupt behaviour, particularly among smaller contractors operating on thin margins (Oluseye et al., 2011; Sohail & Cavill, 2008). Cultural factors play a rationalisation role: where informal payments are historically normalised as standard practice, and where consequences for offenders are perceived as negligible, individuals are more likely to engage in corrupt behaviour and to justify it as an unavoidable cost of participation in the market (Getz & Volkema, 2001). In Ranau specifically, the intersection of rapid public investment, limited institutional monitoring at the district level, and closely networked contractor communities creates conditions spanning all three OMR dimensions.

Effects of Corruption on Construction Project Outcomes

The consequences of corruption in construction operate across multiple levels of impact. At the project level, corruption has been empirically associated with cost overruns, schedule delays, substandard workmanship, safety violations, compromised structural integrity, and in extreme cases outright project abandonment (Damoah et al., 2018; Kenny, 2009). Transparency International (2011) estimated that bribery inflates construction project costs by between 10 and 30 per cent while proportionally reducing final asset quality, implying that corruption functions as an implicit tax on public infrastructure investment. The consequences are compounded in contexts where the corrupted assets serve public welfare functions: roads and bridges with compromised structural integrity endanger lives; healthcare and education facilities built below specification fail the communities they are intended to serve.

At the firm level, participation in corruption exposes contractors to reputational damage, legal liability, and debarment from future contracting opportunities. Reduced worker morale arising from normalised corrupt practices within an organisation diminishes productivity and retention, creating additional operational costs that further erode project performance (Damoah et al., 2018). At the systemic level, pervasive corruption redistributes resources from productive investment to rent-seeking activities, suppresses market competition by disadvantaging contractors who maintain ethical standards, and reduces the social return on public expenditure in ways that are difficult to reverse once normalisation has taken hold (Le et al., 2020).

In Malaysia, research by Yap et al. (2020) documented that corruption's effects on the construction sector include not only direct project performance failures but also broader institutional erosion, with corruption undermining confidence in the CIDB contractor grading system and the integrity of public procurement. In the context of Ranau, where infrastructure development directly conditions community access to transport, utilities, and social services, these systemic effects carry heightened developmental significance.

Preventive Strategies

The literature classifies anti-corruption interventions in construction according to the OMR dimension they principally target. Opportunity-reducing measures are the most extensively documented: these include transparent public procurement processes, mandatory disclosure of project documentation and contract terms, independent third-party auditing of project expenditure and progress, enforced contractor debarment registries, and strengthened monitoring functions within regulatory bodies (De Jong et al., 2009; Sohail & Cavill, 2008; Transparency International, 2020). Motivation-reducing measures address the financial and competitive pressures that incentivise corrupt behaviour, including fair and equitable wage structures, merit-based and transparent tendering processes, and reduction of the competitive disadvantage experienced by ethical contractors (Kenny, 2007; Oluseye et al., 2011). Rationalisation-reducing measures target the cultural and cognitive mechanisms that sustain corrupt conduct, including ethics training programmes, professional codes of conduct with enforced compliance requirements, ethical leadership modelling at the organisational and project levels, and the cultivation of institutional cultures of integrity (Ameyaw et al., 2017; Mohd Nordin et al., 2012).

In the Malaysian institutional context, both CIDB and the MACC have introduced formal anti-corruption instruments including integrity declarations at tender submission, contractor performance rating systems, and corporate integrity pledge programmes. The MACC has identified enforcement consistency at the district level as a structural gap in anti-corruption governance (MACC, 2021). Empirical evidence indicates that both regulatory enforcement capacity and cultural normalisation of informal payments function as co-occurring enablers in peripheral Malaysian construction markets (Owusu et al., 2019).

Research Gap and Conceptual Framework

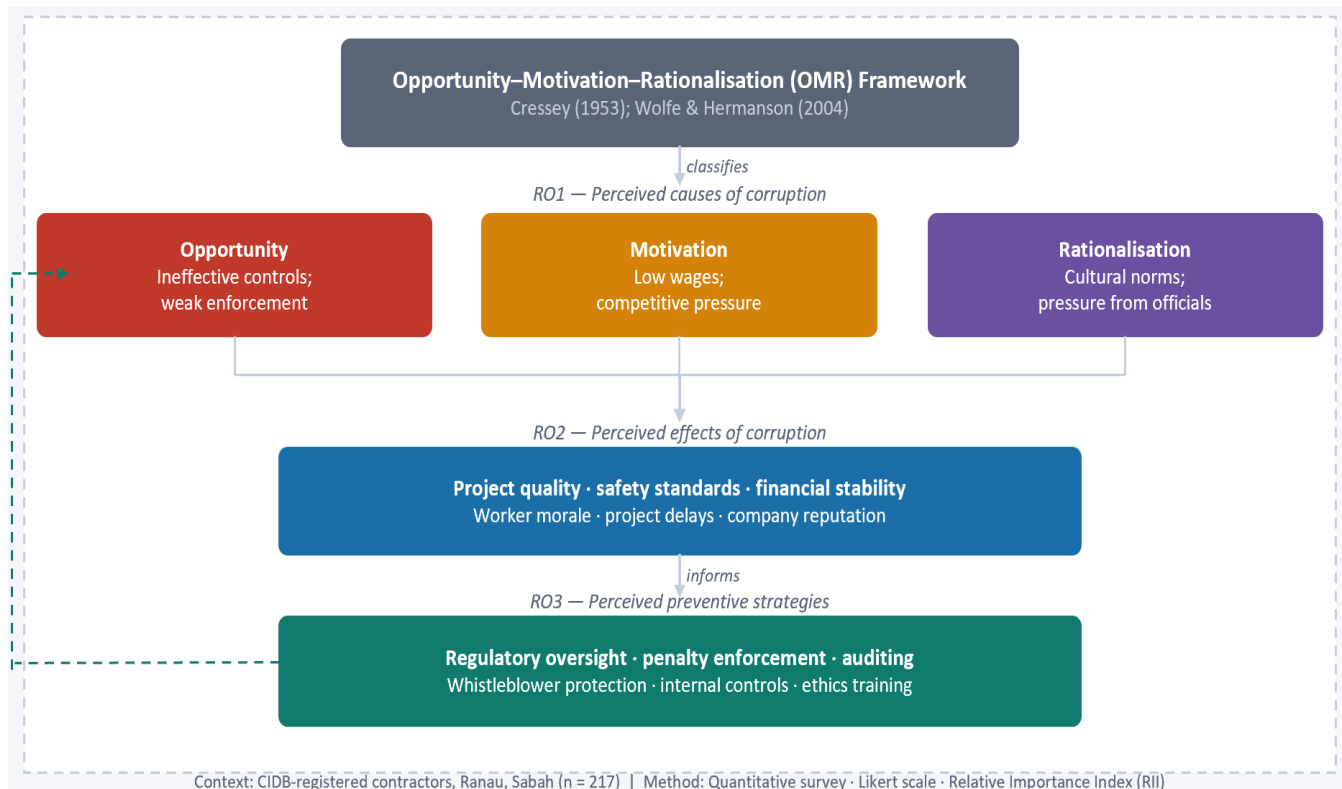
Three gaps in the existing literature motivate the present study. First, empirical research on construction corruption in Malaysia has been conducted predominantly at national or state scale, with no published study, to the authors' knowledge, providing district-level data from Sabah. This geographic concentration limits policymakers' ability to design interventions calibrated to the institutional conditions of peripheral districts, where oversight capacity, contractor network density, and public investment pace differ substantially from urban centres. Ranau represents precisely this underserved context: a district experiencing sustained infrastructure growth in the absence of commensurate regulatory capacity, and without any dedicated empirical evidence on how corruption manifests within its contractor population.

Second, while the OMR framework has been applied to construction corruption internationally (Bowen et al., 2012; Mohd Nordin et al., 2012), few studies have used it to test the relative dominance of opportunity, motivation, and rationalisation conditions within a specific and bounded institutional setting. Existing studies document perceptions without generating theoretically grounded explanations for why particular driver categories prevail. This limits their prescriptive utility: without understanding which OMR dimension dominates, targeted intervention design is not possible.

Third, most documented anti-corruption strategies in the construction literature are prescriptive and normative in origin, derived from regulatory frameworks or expert recommendations rather than from the ranked preferences of practitioners operating within the relevant institutional context. Empirical evidence on which preventive measures contractors in peripheral Malaysian districts regard as most effective and feasible remains absent, creating a gap between policy prescription and operational reality.

This study addresses these three gaps through a quantitative perception survey of CIDB-registered contractors in Ranau, Sabah. As illustrated in Figure 1, the conceptual framework employs the OMR model (opportunity, motivation, and rationalisation) as driver constructs that collectively enable corrupt behaviour. Corrupt behaviour serves as a mediating mechanism generating project-level, firm-level, and systemic impacts, while preventive interventions function as a policy response layer targeting each OMR dimension.

Figure 1. Conceptual framework of the study



METHODOLOGY

Research Design

The analytical structure of this study, as depicted in Figure 1, maps each research objective to a specific OMR construct, enabling the instrument design, data collection, and findings interpretation to remain theoretically grounded throughout. This study adopts a cross-sectional quantitative survey design. The quantitative approach enables systematic capture of the distribution of corruption perceptions across a defined contractor population and facilitates index-based prioritisation of factors, consistent with established practice in empirical studies of construction corruption perception (Ameyaw et al., 2017; Mohd Nordin et al., 2012). The cross-sectional design allows findings to be benchmarked against comparable studies in other national and regional contexts, supporting analytical comparison and theoretical testing.

Population and Sampling

The target population comprised all active contractors registered with CIDB Malaysia in Ranau, Sabah, spanning grades G1 through G7 (N ≈ 537; CIDB Malaysia, 2024). The grading system ranges from G1, which encompasses small-scale contractors with annual turnover below RM200,000, through G7, which encompasses the largest contractors with turnover exceeding RM10 million. The inclusion of all grades was deliberate: corruption risk, exposure, and institutional access vary systematically across contractor tiers, and a grade-inclusive sample ensures that the full spectrum of practitioner experience is represented.

The required sample size was determined using the Krejcie and Morgan (1970) sampling table, which yields a recommended sample of 217 respondents for a population of approximately 537 at 95% confidence level and 5% margin of error. Respondents were recruited using a combination of purposive and snowball sampling. Purposive sampling ensured inclusion of CIDB-registered contractors actively engaged in projects in Ranau at the time of data collection. Snowball sampling allowed initial participants to refer professional peers within their contractor networks, an approach appropriate for research on sensitive topics within interconnected professional communities (Naderifar et al., 2017). The study acknowledges that non-probability sampling introduces potential selection bias, and that social desirability effects (the tendency of respondents to

underreport involvement in or knowledge of corrupt practices) are an inherent limitation of perception-based corruption surveys (Sohail & Cavill, 2008). These constraints are acknowledged as boundary conditions on the generalisability of findings.

Data Collection Instrument

Data were collected via a structured self-administered questionnaire comprising four sections. Section A captured the respondents' professional profile, including CIDB contractor grade, years of active engagement in the Ranau construction industry, organisation size by number of employees, and annual project volume. Sections B, C, and D contained six items each measuring perceived causes of corruption, perceived effects of corruption on project performance, and perceived effectiveness of preventive strategies respectively. All items used a five-point Likert scale anchored at 1 (strongly disagree) and 5 (strongly agree). Item content was derived from the systematic literature review, drawing particularly on established instruments used by Ameyaw et al. (2017), Mohd Nordin et al. (2012), and Yap et al. (2020), and adapted to reflect the Ranau construction context. The questionnaire was distributed digitally via Google Forms through WhatsApp and Telegram, platforms with high penetration among construction professionals in Sabah.

Data Analysis

Completed responses were analysed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics including mean, standard deviation, minimum, and maximum were computed for all items. Internal consistency reliability was assessed using Cronbach's alpha, with values above 0.70 accepted as indicating adequate reliability (Hair et al., 2019). The Relative Importance Index (RII) was calculated for each item to enable systematic factor prioritisation using the formula:

$$RII = \Sigma W / (A \times N)$$

where W represents the weighting assigned by each respondent on the five-point scale, A is the highest possible weight (5), and N is the total number of respondents (217). RII values range from 0 to 1, with higher values indicating greater perceived importance (Lim & Alum, 1995). Items within each thematic section were subsequently ranked by descending RII value. Where two or more items share an identical RII, secondary ranking was determined by standard deviation, with lower standard deviation indicating greater respondent consensus assigned a higher rank. It is noted that the RII and the accompanying statistics are descriptive rather than inferential in nature; findings should therefore be interpreted as indicating perceived importance rankings rather than statistically confirming causal dominance among OMR dimensions.

RESULTS

Respondent Profile

All 217 respondents were CIDB-registered contractors actively operating in Ranau, Sabah, at the time of data collection. The distribution across contractor grades was as follows: G1 (n = 68, 31.3%), G2 (n = 51, 23.5%), G3 (n = 38, 17.5%), G4 (n = 24, 11.1%), G5 (n = 18, 8.3%), G6 (n = 11, 5.1%), and G7 (n = 7, 3.2%). This profile reflects the national CIDB registration pattern, in which small-to-medium contractors classified as G1 through G3 constitute the majority of registered entities. Respondents with 6 to 10 years of active engagement formed the largest cohort, the majority represented organisations with fewer than 20 employees, and most were involved in one to five construction projects annually.

Causes of Corruption (Research Objective 1)

Consistent with the framework presented in Figure 1, the RII rankings were interpreted against their pre-assigned OMR dimensions to identify which driver category dominates in the Ranau context. Table 1 presents the descriptive statistics and RII rankings for the six perceived causes of corruption. The Cronbach's alpha of 0.903 indicates high internal consistency across items.

Table 1: Descriptive Statistics and RII Rankings — Perceived Causes of Corruption (n = 217)

Causes of Corruption	Min	Max	Mean	Std Dev	RII	Rank
Ineffective internal controls within companies	1	5	3.66	1.183	0.73	1
Poor enforcement of anti-corruption laws	1	5	3.66	1.259	0.73	2
Lack of ethics and integrity training	1	5	3.62	1.169	0.72	3
Pressure from higher authorities or officials	1	5	3.57	1.153	0.71	4
Cultural norms and practices	1	5	3.53	1.251	0.71	5
Low wages for construction workers	1	5	3.39	1.301	0.68	6

Note: Cronbach's alpha = 0.903; n = 217; RII = Relative Importance Index (0–1 scale). Source: Primary survey data. Items ranked by descending RII; ties resolved by ascending standard deviation.

Two causes share the highest rank with identical mean scores of 3.66 and RII values of 0.73. Ineffective internal controls within companies is placed first on the basis of its lower standard deviation (1.183), indicating greater respondent consensus, while poor enforcement of anti-corruption laws ranks second (SD = 1.259). These are followed by lack of ethics and integrity training (RII = 0.72; Rank 3), pressure from higher authorities or officials (RII = 0.71; Rank 4), cultural norms and practices (RII = 0.71; Rank 5), and low wages for construction workers (RII = 0.68; Rank 6).

Effects of Corruption (Research Objective 2)

Table 2 presents the descriptive statistics and RII rankings for the six perceived effects of corruption on construction project performance. The Cronbach's alpha of 0.907 indicates high internal consistency.

Table 2: Descriptive Statistics and RII Rankings — Perceived Effects of Corruption (n = 217)

Effects of Corruption	N	Mean	Std Dev	RII	Rank
Corruption affects the quality of construction projects	217	3.71	1.214	0.74	1
Corruption contributes to financial instability	217	3.71	1.214	0.74	1
Corruption impacts safety standards and regulations	217	3.71	1.214	0.74	1
Corruption reduces worker morale and productivity	217	3.67	1.183	0.73	2
Corruption results in delays in project completion	217	3.62	1.264	0.72	3
Corruption damages the reputation of companies	217	3.62	1.188	0.72	3

Note: Cronbach's alpha = 0.907; n = 217; RII = Relative Importance Index (0–1 scale). Source: Primary survey data. Items ranked by descending RII; ties resolved by ascending standard deviation.

Three effects share the joint highest rank with identical mean scores of 3.71 and RII values of 0.74: corruption affecting the quality of construction projects, corruption contributing to financial instability, and corruption impacting safety standards and regulations. These are followed by reduced worker morale and productivity (RII = 0.73; Rank 2), project completion delays (RII = 0.72; Rank 3), and reputational damage to companies (RII = 0.72; Rank 3).

Preventive Strategies (Research Objective 3)

Table 3 presents the descriptive statistics and RII rankings for the six preventive strategies. The Cronbach's alpha of 0.907 indicates high internal consistency.

Table 3: Descriptive Statistics and RII Rankings — Perceived Preventive Actions (n = 217)

Preventive Action	Min	Max	Mean	Std Dev	RII	Rank
Implement stricter regulatory oversight	1	5	3.71	1.215	0.74	1
Increase penalties for corrupt practices	1	5	3.71	1.215	0.74	1
Conduct regular audits of construction projects	1	5	3.71	1.217	0.74	1
Establish whistleblower protection programmes	1	5	3.66	1.183	0.73	2
Enhance internal controls within companies	1	5	3.66	1.183	0.73	2
Provide ethics and integrity training for personnel	1	5	3.57	1.249	0.71	3

Note: Cronbach's alpha = 0.907; n = 217; RII = Relative Importance Index (0–1 scale). Source: Primary survey data. Items ranked by descending RII; ties resolved by ascending standard deviation.

Three preventive measures share the joint first rank with mean scores of 3.71 and RII values of 0.74: implementing stricter regulatory oversight, increasing penalties for corrupt practices, and conducting regular audits of construction projects. Whistleblower protection programmes and enhanced internal controls share second rank (RII = 0.73), and providing ethics and integrity training for personnel ranks third (RII = 0.71).

DISCUSSION

Interpreted through the OMR framework, the two top-ranked causes of corruption — ineffective internal controls and poor enforcement of anti-corruption laws — are primarily opportunity-related. They describe structural and organisational conditions that make corrupt behaviour feasible and reduce the probability of detection or sanction. This finding supports the OMR expectation that structural enabling conditions are salient in contexts with weak institutional oversight, and mirrors the pattern reported by Bowen et al. (2012) in South Africa and Mohd Nordin et al. (2012) in Malaysia. The lowest-ranked cause is low wages, which represents a motivation-related factor. This suggests that individual financial desperation is a less salient driver than systemic enabling conditions in the Ranau context. Cultural normalisation of corruption, classified under the rationalisation dimension, occupies a mid-range position (Rank 5), consistent with Getz and Volkema's (2001) observation that cultural factors amplify rather than independently generate corruption.

Moderate standard deviations across cause items indicate that while respondents broadly agree on overall rankings, individual perceptions vary. This variation likely reflects differences in contractor grade, project exposure, and direct experience with corrupt practices. Specifically, the higher standard deviation for poor enforcement of anti-corruption laws compared to ineffective internal controls points to greater variance regarding regulatory oversight, likely stemming from uneven enforcement exposure across contractor tiers. A deeper substantive interpretation of this divergence requires future qualitative research.

The co-ranking of quality deterioration, financial instability, and safety compromise as the most severe consequences is a substantively important finding. It signals that practitioners in Ranau perceive corruption as simultaneously threatening the physical integrity of constructed works, the financial viability of projects and firms, and the safety of construction workers and end users. This multidimensional perception extends beyond the common framing of corruption as primarily a cost or schedule problem and provides a compelling public-interest justification for enforcement prioritisation. This finding aligns with Kenny (2009) and Damoah et al.

(2018), both of whom document that construction corruption produces failures across quality, cost, schedule, and safety dimensions simultaneously. The high Cronbach's alpha of 0.907 for effects items indicates that respondents perceive these consequences as tightly interrelated, suggesting that corruption produces cascading rather than isolated failures.

The dominance of regulatory and punitive measures in the preventive strategy rankings directly mirrors the cause analysis. When opportunity is identified as the primary corruption driver, practitioners logically prioritise opportunity-reducing interventions such as tighter oversight, credible sanctions, and systematic auditing as the most effective remedial response. This internal coherence between cause perception and preventive preference constitutes an important coherence check: practitioners hold internally consistent mental models of how corruption operates and how it should be addressed, and their perceptions align with the theoretical predictions of the OMR framework. The second-ranked position of whistleblower protection and enhanced internal controls reflects measures that target both opportunity and individual reporting mechanisms simultaneously. The relatively lower priority of ethics and integrity training, targeting the rationalisation dimension, is consistent with the finding that cultural normalisation is a mid-range rather than primary driver. However, its mean score of 3.57, which is above the Likert scale midpoint, indicates that it is perceived as a valuable supplementary measure, supporting a multi-layered intervention approach.

CONCLUSION

This study investigated corruption perceptions among CIDB-registered contractors in Ranau, Sabah, employing the Opportunity-Motivation-Rationalisation (OMR) framework to structure analysis across three research objectives. The findings present a coherent and internally consistent picture: structural and institutional factors, specifically ineffective internal controls within companies and weak enforcement of anti-corruption legislation, are perceived as the dominant drivers of corrupt behaviour in this district. Corruption's consequences are perceived as simultaneously threatening project quality, financial stability, and physical safety. Practitioners prioritise regulatory oversight, penalty enforcement, and systematic auditing as their highest-priority preventive responses, a preference that aligns directly with the OMR expectation that opportunity-enabling conditions are the primary corruption driver.

These findings carry targeted implications for three institutional actors. For CIDB Malaysia, the results support strengthening the contractor grading renewal process to include mandatory internal control compliance audits, particularly for G1 through G3 contractors who represent the majority of the Ranau contractor population and operate with the weakest institutional oversight exposure. For the MACC, the findings provide empirical justification for investing in district-level enforcement capacity in high-growth peripheral areas such as Ranau, where the pace of infrastructure investment has outpaced the development of monitoring institutions. For JKR Sabah, the high practitioner priority placed on regular project audits supports institutionalising independent progress verification as a standard condition in public construction contracts at the district level. These findings at the contractor tier complement recent qualitative evidence from professional bodies, which identifies tendering processes and procedural ambiguity as primary integrity risks across Malaysia's built environment (Rabe et al., 2025).

Several limitations constrain the interpretation of these findings. First, while purposive and snowball sampling were necessary to access this sensitive, hard-to-reach population, they introduce systematic selection bias. Contractors actively involved in corrupt practices were probably less likely to participate; the sample may therefore primarily reflect more institutionally engaged and ethically reflective respondents. Consequently, these findings likely underestimate both the prevalence of corruption and the strength of rationalisation mechanisms among highly involved actors. Second, social desirability bias may have suppressed honest reporting regarding sensitive motivators such as financial pressure. Rather than invalidating the results, these constraints establish boundary conditions on their generalisability and underscore the need for future mixed-methods verification.

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