International Journal of Public Policy and Administration Research
2025 Vol. 12, No. 3, pp. 168-184
ISSN(e): 2312-6515
ISSN(p): 2313-0423
DOI: 10.18488/74.v12i3.4342

Factors and impacts of corruption in Malaysia: Developing the Malaysian national anti-corruption strategy 2024-2028

Muhammad Iqmal Hisham Kamaruddin[1]
Aimi Fadzirul Kamarubahrin[2+]
Nathasa Mazna Ramli[3]
Ummi Salwa Ahmad Bustamam[4]
Mustafa Mohd Hanefah[5]

[1,3,4,5]*Faculty of Economics and Muamalat, Universiti Sains Islam Malaysia, Nilai, Malaysia.*
[1]*Email: iqmalhisham@usim.edu.my*
[3]*Email: nathasa@usim.edu.my*
[4]*Email: ummisalwa@usim.edu.my*
[5]*Email: mustafa@usim.edu.my*
[2]*Faculty of Forestry and Environment, Universiti Putra Malaysia, Serdang, Malaysia.*
[2]*Email: aimifadzirul@upm.edu.my*


(+ Corresponding author)

Article History
Received: 25 April 2025
Revised: 9 July 2025
Accepted: 21 July 2025
Published: 5 August 2025

Keywords
Anti-corruption
Corruption strategy
Fraud diamond theory
NACS
PESTEL analysis.

ABSTRACT

This study examines the causal relationships between the elements of the Fraud Diamond Theory (FDT) pressure, opportunity, rationalization, and capability and their impact on corruption in Malaysia, using the PESTEL analysis, which includes politics, economy, society, technology, environment, and law. A national survey was conducted involving 2,042 Malaysian respondents across all 14 states in Malaysia. For analysis, Partial Least Squares Structural Equation Modeling (PLS-SEM) was adopted to test the hypotheses. The findings reveal that all FDT elements significantly influence corruption across the PESTEL components. Specifically, the social component is most impacted by the pressure element. Meanwhile, the opportunity element is highly associated with political impact. Additionally, rationalization has a strong impact on law. Similarly, law is also the component most affected by the capability factor. These findings were later used as input in the development of the latest Malaysian National Anti-Corruption Strategy (NACS) 2024-2028. Furthermore, the implications align with Sustainable Development Goal (SDG) 16, which advocates for strong institutions, justice, and reduced corruption.

Contribution/Originality: This study is among the pioneering research on corruption that justifies the impact of corruption through PESTEL analysis. Specifically, the interconnectedness between micro-level drivers from FDT elements and macro-level impacts from the PESTEL analysis was adopted in this study.

1. INTRODUCTION

Symptoms of corruption in Malaysia are increasingly prevalent nowadays. Based on Figure 1, statistics from the Malaysian Anti-Corruption Commission (MACC) indicate that the average number of corruption cases has been rising since the Malaysian Movement Control Order (MCO) in 2020 until 2021. In 2022, corruption cases increased by 6.38 percent, totaling 909 cases compared to the previous year's 851 cases (Jones, 2022; MACC, 2023). Additionally, the Corruption Perception Index (CPI), issued by Transparency International (TI), shows a declining trend: from a score of 53 in 2019, dropping to 51 in 2020, 48 in 2021, and further to 47 in 2022. However, there was

a slight improvement in the CPI for 2023, with Malaysia ranked 57th and scoring 50, remaining unchanged in the CPI for 2024 (TI-Malaysia, 2025).

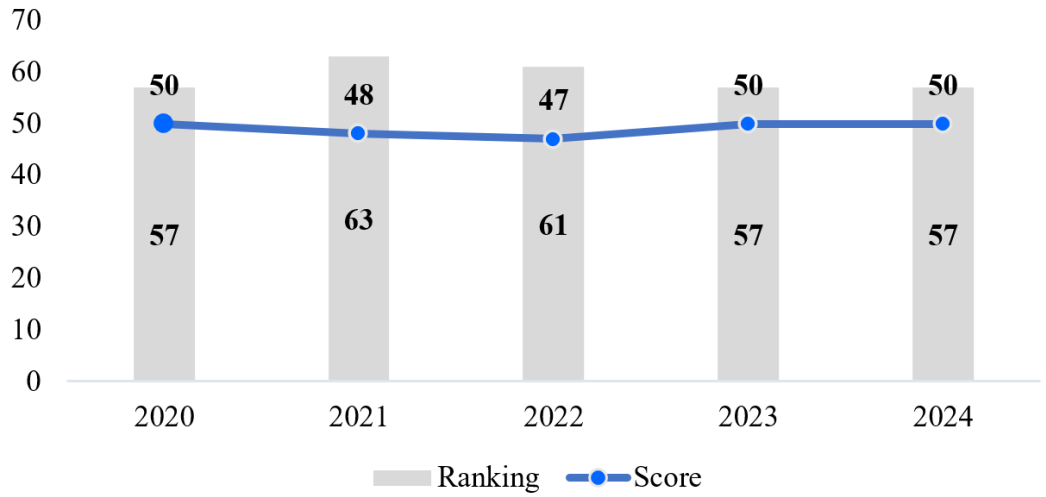

Figure 1. Malaysian corruption perceptions index (CPI) 2020-2024.
Source: TI-Malaysia (2025).

According to CPI scores, lower scores indicate higher corruption levels in a country, while higher scores indicate cleaner practices. This trend suggests that corruption in Malaysia has been increasing annually. If unchecked, this corruption could significantly impact the country across social, economic, and national security aspects (Ab Rahman, Aziz, Salleh, & Kamarulzaman, 2023). However, these index scores only reflect a country's relative position on the global corruption scale and may not accurately measure the effectiveness of anti-corruption efforts within a country. The United Nations Office on Drugs and Crime (UNODC) Practical Guide for Developing and Implementing a National Anti-Corruption Strategy concurs with this opinion by suggesting that index scores must not be overstated when designing anti-corruption strategies (UNODC, 2021).

The Triangle Theory (FTT) (Cressey, 2017) and Fraud Diamond Theory (FDT) (Wolfe & Hermanson, 2004) are two of the most referenced hypotheses claiming to explain why fraud happens. FTT is a highly debated hypothesis in fraud war literature (Arkorful, Lugu, Arkorful, & Charway, 2022; Ratmono & Frendy, 2022; Saluja, 2024; Saluja, Aggarwal, & Mittal, 2022; Suprapto & Agustia, 2023). FDT highlights the convergence of multiple factors that promote fraud (Ratmono & Frendy, 2022). FDT was developed as an improved FTT (Ozcelik, 2020). Wolfe and Hermanson (2004) are of the view that a fourth factor needs to be considered to detect and combat fraud beyond opportunity, pressure and rationalization.

SDG 16 aims to promote peaceful and inclusive societies for sustainable development, ensure access to justice for all, and establish effective, accountable, and inclusive institutions at all levels. Since corruption incurs significant economic costs and adversely affects public service delivery, it has been identified as a critical threat to achieving SDG 16 (Bowra, Saeed, Gorodensky, & Kohler, 2022). Corruption significantly undermines the effectiveness of any given governance structure and has thus become a focal point for governance reforms (Hunter, Uwaydah Mardini, El-Seblani, & Elsayed, 2020).

Focusing solely on governance reforms as a solution creates a circular logic: while reforms should address corruption, corruption itself may undermine these very reform efforts (Khan, Abbass, Qun, & Asif, 2024; Manara, Nübold, van Gils, & Zijlstra, 2023; Plaček, Ochrana, Vaceková, Langr, & Půček, 2022; Quah, 2022a, 2022b). Existing research on corruption has extensively utilized FTT and FDT to understand the motives behind fraudulent activities, focusing on individual-level drivers such as pressure, opportunity, and rationalization (Cressey, 2017; Wolfe & Hermanson, 2004). However, these studies often fail to connect these factors to broader systemic impacts, such as their influence on political, economic, and social systems. Similarly, while PESTEL

analysis has been widely applied to assess macro-environmental impacts, it is rarely used to examine corruption dynamics comprehensively.

This research advances the existing body of knowledge by synthesizing the Fraud Diamond Theory (FDT) with PESTEL analysis, thereby establishing an integrated framework that links individual-level motivations to broader systemic outcomes. Through a detailed exploration of the interplay between the four elements of FDT pressure, opportunity, rationalization, and capability and the six dimensions of PESTEL (political, economic, social, technological, environmental, and legal), this study provides a more comprehensive understanding of corruption within the Malaysian context. Unlike prior studies that tend to examine either individual behaviors or macro-level impacts in isolation, this approach highlights the dynamic interrelationship between micro-level drivers and macro-level consequences.

Moreover, this research addresses a significant gap in the literature by presenting empirical evidence from Malaysia, a country where corruption continues to pose substantial challenges with profound effects on governance, economic resilience, and social progress. The findings offer valuable insights that inform the formulation of practical, evidence-based strategies for Malaysia's National Anti-Corruption Strategy (NACS) 2024–2028, thereby serving as an important resource for policymakers. The structure of this paper is as follows: Section Two reviews relevant literature and theoretical foundations; Section Three outlines the research methodology and data sources; Section Four presents the study's results; and the final section provides a conclusion along with policy recommendations.

2. LITERATURE REVIEW

The Fraud Triangle Theory (FTT) (Cressey, 2017) and the Fraud Diamond Theory (FDT) (Wolfe & Hermanson, 2004) are the two most cited hypotheses that have tried to explain the causes of fraud. Both theories explain the determinants of dishonest action. The reasons why people commit fraudulent and unethical acts were the focus of Cressey (2017) work, which he later formalized as the FTT. Based on this hypothesis, pressure, opportunity, and rationalization are the three fraud requirements.

Wolfe and Hermanson (2004), however suggested adding a fourth component to the original three to make the original FTT more effective in fraud prevention and detection. They added 'capability' as the fourth component to the four-component FDT. In particular, they suggested that, in addition to the other three, fraud cannot be successful unless the perpetrator is capable.

Therefore, FDT can be termed a more evolved or expanded form of FTT, introducing "capability" into the three core components of fraud (Arel, Tomas III, & Stark, 2023; Arkorful et al., 2022; Ratmono & Frendy, 2022). There have been four building blocks described as being behind corruption: (i) pressure; (ii) opportunity; (iii) rationalization; and (iv) capability (Wolfe & Hermanson, 2004). In short, both FTT and FDT models can be employed to explain 'why' and 'how' individuals become involved in corrupt practices.

On the other hand, PESTEL analysis has been extensively used as a tool for determining the impacts of corrupt practices. Francis Aguilar created the PESTEL analysis, a strategic planning model that examines both micro and macro effects, in 1967 (Khan, Ali, Petrillo, & De Felice, 2023). PESTEL analysis has been used in cases of systemic reforms to combat corruption, particularly among government agencies, which include: (i) political; (ii) economic; (iii) social; (iv) technological; (v) environmental; and (vi) legal (Astafurova & Golomanchuk, 2021).

There are several advantages to adopting PESTEL analysis, including its simplicity and ease of use, its ability to enhance understanding of causal effects, its encouragement of strategic thinking to mitigate effects, its aid in anticipating future difficulties and taking preemptive action, and its ability to identify new opportunities and effectively exploit them (Akman, 2020). In this study, it is believed that PESTEL analysis will provide necessary insights into corruption challenges, including both positive and negative implications of corruption, and will help in developing possible strategies to combat corruption (Yusop, 2018).

Thus, this study will investigate the relationship between corruption factors based on FDT elements (opportunity, pressure, rationalization, and capability) and corruption impacts based on PESTEL analysis (political, economic, social, technological, environmental, and legal).

2.1. Pressure Factor and PESTEL Impacts

The first factor is pressure, whether financial or work-related. Every corrupt individual faces some pressure to commit unethical behavior (Abdullahi & Mansor, 2018; Arkorful et al., 2022). Ratmono and Frendy (2022) pointed out that since the pressure to commit corruption may not be real, it is important to use the word "perceived". Perceived pressure can manifest in various forms, especially in unshakeable financial needs (Avortri & Agbanyo, 2020).

Financial pressure is recognized as the most common factor leading entities to engage in unethical actions. Specifically, about 95% of all corruption cases are perpetrated due to individuals' financial pressures (Arel et al., 2023; Belloumi & Alshehry, 2021; Demetriades & Owusu-Agyei, 2022; Ratmono & Frendy, 2022). Khamainy, Ali, and Setiawan (2022) states that pressure is a significant factor in committing corruption.

Moreover, Radević, Alfirević, and Lojpur (2022) define the pressure to commit fraud as "the source of heat for the fire." However, having this pressure does not serve as a reason for someone to commit corruption. Quah (2022a) and Quah (2022b) also argue that pressure could be related to financial, non-financial, political, and social factors. Political and social pressures occur when a person feels that they cannot afford to fail due to their status or reputation (Gouvêa Maciel & Santos, 2024). Meanwhile, economic pressure causes individuals or organizations to commit corruption, especially to demonstrate their financial stability (Natalis, 2020).

According to Yusop (2018), pressure relates to employees' motivation to commit corruption due to greed or personal financial pressures. Similarly, Ratmono and Frendy (2022) believe that personal and corporate pressures are key motives for committing corruption. The interaction of these factors leads individuals to commit corruption (Nguyen, 2023; Nor & Mohamed, 2024; Paar-Jakli & Molina, 2023). Demetriades and Owusu-Agyei (2022) categorize pressure into four groups, including economic, vice, job-related, and other pressures. Khamainy et al. (2022) opine that pressure can be either a positive or negative force. This leads to the following hypothesis:

H_{1a}: The pressure factor significantly impacts politics in Malaysia.

H_{1b}: The pressure factor significantly impacts the economy in Malaysia.

H_{1c}: The pressure factor significantly impacts society in Malaysia.

H_{1d}: The pressure factor significantly impacts technology in Malaysia.

H_{1e}: The pressure factor significantly impacts the environment in Malaysia.

H_{1f}: The pressure factor significantly impacts the law in Malaysia.

2.2. Opportunity Factor and PESTEL Impacts

The second factor is opportunity, where individuals are inclined to engage in corruption when they perceive an accessible 'path' with minimal risk of being caught. Opportunities arise from weaknesses in internal controls, bureaucratic inefficiencies, lack of oversight, absence of task segregation systems, and broad discretionary powers (Arkorful et al., 2022; Radević et al., 2022; Ratmono & Frendy, 2022). For example, an application process burdened with multiple layers of approval (bureaucracy or red tape) can lead to delays, creating opportunities for clients seeking expedited service to offer bribes.

Similarly, overly complex procedures may prompt officials to expedite processes in exchange for certain fees (Avortri & Agbanyo, 2020). In the field of accounting, this is termed as internal control weaknesses (Liu, Wang, & Wang, 2023). The concept of perceived opportunity suggests that people will take advantage of circumstances available to them (Khamainy et al., 2022). In most cases, the lower the risk of being caught, the more likely it is that corruption will take place (Cressey, 2017). Several factors contribute to the existence of opportunities to commit

corrupt activities within an organization, such as employee negligence, policy breaches, and the lack of disciplinary actions (Demetriades & Owusu-Agyei, 2022).

Wolfe and Hermanson (2004) explains "opportunity" as the ability to override corruption controls. Manara et al. (2023) alarms that opportunity refers to the ability and power of an employee to recognize weaknesses in the organizational system and exploit them to make corruption possible. Furthermore, Khamainy et al. (2022) argues that, even when pressure is extreme, financial corruption cannot occur unless an opportunity is present. Accordingly, the following hypothesis is then evaluated.

H_{2a}: The opportunity factor significantly impacts politics in Malaysia.

H_{2b}: The opportunity factor significantly impacts the economy in Malaysia.

H_{2c}: The opportunity factor significantly impacts social aspects in Malaysia.

H_{2d}: The opportunity factor significantly impacts technology in Malaysia.

H_{2e}: The opportunity factor significantly impacts the environment in Malaysia.

H_{2f}: The opportunity factor significantly impacts law in Malaysia.

2.3. Rationalization Factor and PESTEL Impacts

The third factor is the rationalization of their actions. Individuals involved in corruption do not see themselves as criminals; instead, they consider themselves honest people caught in unfortunate circumstances (Wolfe & Hermanson, 2004). They justify their misconduct with seemingly logical reasons. In this context, the concept of rationalization indicates that individuals must formulate morally acceptable ideas to themselves before engaging in unethical behavior (Charlopova, Andon, & Free, 2020). It refers to the justification and excuses that differentiate immoral conduct from criminal activity. Rationalizations are often used during pleas to protect individuals from self-blame or to argue that there was no criminal intent (Abbas, Qaisar, Ali, Alturise, & Alkhalifah, 2022). If individuals cannot justify dishonest actions, they are unlikely to engage in corruption. Rationalization is difficult to detect because it involves the individual's mindset, which cannot be directly observed (Kamaruddin et al., 2025).

Meanwhile, individuals who commit fraud possess a particular mindset that enables them to justify or excuse their corrupt actions (Çollaku, Ramushi, & Aliu, 2024; Khamainy et al., 2022). Rationalization is the justification of corrupt behavior due to individuals' lack of personal integrity, moral reasoning, or adherence to social norms (Avortri & Agbanyo, 2020; Peralta-Borray, Acuña, & Zapata, 2024). The propensity to commit corruption depends on ethical values as well as the personal attitudes of individuals (Wolfe & Hermanson, 2004). Hsiao, Vogt, and Quentin (2019) concluded that a bridge between incentive/pressure and opportunity is created when an individual can rationalize corrupt behavior. Hence, the following hypotheses are postulated.

H_{3a}: The rationalization factor significantly impacts politics in Malaysia.

H_{3b}: The rationalization factor significantly impacts the economy in Malaysia.

H_{3c}: The rationalization factor significantly impacts social aspects in Malaysia.

H_{3d}: The rationalization factor significantly impacts technology in Malaysia.

H_{3e}: The rationalization factor significantly impacts the environment in Malaysia.

H_{3f}: The rationalization factor significantly impacts the law in Malaysia.

2.4. Capability Factor and PESTEL Impacts

The fourth factor is the capability to commit corruption. In other words, corruption will not occur if individuals lack the ability to do so. Capability arises when an individual holds a position of power within an organization, possesses the knowledge to manipulate work processes, has confidence that their actions will go undetected or unpunished, and can overcome any guilt associated with their wrongdoing (Alhaimer, 2024; Arel et al., 2023). Factors such as position, intelligence, ego, coercion, deceit and stress support this capability (Wolfe & Hermanson,

2004). In fact, not every individual who has motivation, opportunity, and realization will commit corruption due to a lack of capability to carry it out or conceal it (Cheliatsidou, Sariannidis, Garefalakis, Azibi, & Kagias, 2023).

Arellano-Gault, Trejo, and Rojas-Salazar (2024) and Arkorful et al. (2022) suggest that this element is particularly crucial in cases of large-scale or long-term corruption. Furthermore, Gouvêa Maciel and Santos (2024) and Amegavi, Quarshie, and Mensah (2022) believe that only individuals with extremely high capability can understand internal controls, identify their weaknesses and exploit them to plan and carry out corruption. Similarly, Khamainy et al. (2022) argue that rationalization and capability are interconnected, with the strength of each element influencing the others. Therefore, this paper assumes that.

H_{4a}: The capability factor significantly impacts politics in Malaysia.

H_{4b}: The capability factor significantly impacts the economy in Malaysia.

H_{4c}: The capability factor significantly impacts social aspects in Malaysia.

H_{4d}: The capability factor significantly impacts technology in Malaysia.

H_{4e}: The capability factor significantly impacts the environment in Malaysia.

H_{4f}: The capability factor significantly impacts law in Malaysia.

3. METHODOLOGY

This study examines the causal relationships between the elements of the FDT and their impact on corruption in Malaysia using PESTEL analysis. For data collection, a quantitative approach is employed, with primary data serving as the main source. Specifically, a nationwide cross-sectional survey has been adopted to gain broad and general insights into current corruption factors and their impacts, particularly in the Malaysian context (Kamaruddin et al., 2025).

3.1. Population and Sample

This nationwide cross-sectional survey was conducted from November to December 2023 throughout Malaysia. Samples were randomly selected using enumeration blocks and living quarters provided by the Department of Statistics Malaysia (DOSM). The study population consisted of the public across Malaysia, and the sample was determined using a sampling framework based on the citizen population across five zones: Northern Malaysia, Central Malaysia, Southern Malaysia, East Coast Malaysia, and East Malaysia.

Sample selection was conducted by the research team using the stratified random sampling technique, with a total sample size of n = 2,000 (400 samples x 5 zones) for the entire Malaysian population. This sample size was determined considering various factors affecting study activities, such as limited costs, human resources, and time constraints. Therefore, selecting 2,000 participants was deemed sufficient, meeting the minimum sample size requirement of 384 individuals per population exceeding 100,000 people in each zone (Krejcie & Morgan, 1970).

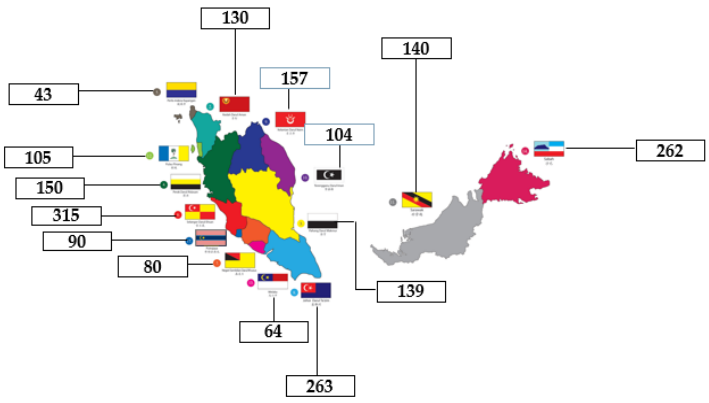

Figure 2. Sample distribution by state in Malaysia.

During the data purification process, an additional 2% of participants were included due to their willingness to participate during data collection. The final number of respondents included in the analysis for this study was 2,042 (see Figure 2). This adjustment did not affect the research requirements as the sample calculation already accounted for a 5% dropout rate.

3.2. Questionnaire Design

The survey consisted of the following components: Part A included socio-demographic information capturing respondent characteristics such as gender, age, marital status, race, education level, and household income. Part B focused on the factors influencing corruption in Malaysia based on FDT, covering pressure, opportunity, rationalization, and capability (Kamaruddin et al., 2025; Wolfe & Hermanson, 2004). Meanwhile, the application of PESTEL analysis elements to examine the impacts of corruption in Malaysia, covering politics, economy, social, technology, environment, and law, was covered in Part D (Astafurova & Golomanchuk, 2021; Blanco-Alcántara, García-Moreno Rodríguez, & López-de-Foronda Pérez, 2022; Yusop, 2018). Responses were rated on a five-point Likert scale, ranging from Strongly Disagree (1) to Strongly Agree (5).

3.3. Data Analysis Technique

For analysis, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed, widely recognized in applied studies as an effective tool for examining causal-predictive associations in models for theory development and testing (Amusa & Hossana, 2024; Hair et al., 2021a; Sarstedt et al., 2022). PLS-SEM is ideally suited to construct and test explanatory-predictive theories because of its strengths in prediction and explanation (Sarstedt et al., 2022). By using indirect approaches to exhibit relationships between variables and measures, this method supports the estimation of a system of equations for the proposed research model (Hair et al., 2021a).

4. RESULTS AND DISCUSSIONS

4.1. Respondents' Background

In the end analysis, 2,042 participants in total were utilized. Demographic details of the participants are given in Table 1. The greatest proportion of responders (35.1%) belonged to the age group of 18-30 years, and 59.0% were males. The majority of respondents were single (70.0%) and of Malay ethnicity (81.1%). They had completed education up to the high school level (SRP/SPM) (35.0%), and 73.3% belonged to the bottom 40% (B40) household income group.

Table 1. Respondents' background.

Respondents' background	Item	Frequency (*n*)	Percentage (%)
Gender	Male	1,200	59.0
	Female	842	41.0
Age	18 - 30 years	717	35.1
	31 - 40 years	713	34.9
	41 - 60 years	596	29.2
	Above 61 years	16	0.8
Marital status	Married	1,430	70.0
	Single	557	27.3
	Divorced	55	2.7
Race	Malay	1,656	81.1
	Sabah native	128	6.3
	Indian	99	4.8
	Chinese	80	3.9
	Sarawak native	76	3.7
	Others	3	0.3
Level of education	High school (SRP/ SPM)	714	35.0
	Bachelor's degree	583	28.6

Respondents' background	Item	Frequency (*n*)	Percentage (%)
	STPM/ Matriculation/ Diploma	476	23.3
	Master's degree	134	6.6
	Philosophy doctorate	83	4.1
	Others (Vocational certification)	52	2.5
Household income category	B40 (RM2,560 - RM5,249)	1,500	73.3
	M40 (RM5,250 - RM11,819)	426	20.8
	T20 (RM11,820 and above)	116	5.7

4.2. Measurement Model

Under PLS-SEM, the first stage is to develop the measurement model. Several tests are conducted to assess the accuracy of the measurement model, including internal consistency reliability (Cronbach's alpha), composite reliability (CR), convergent validity (average variance extracted, @AVE), and discriminant validity (heterotrait-monotrait ratio, @HTMT, and Fornell-Larcker criterion).

Based on Table 2, all CA and CR values exceed 0.7, suggesting high reliability (Cheung, Cooper-Thomas, Lau, & Wang, 2024; Hair et al., 2021b). Meanwhile, for convergent validity, all factor loadings had values higher than the minimum threshold (0.5), ranging from 0.785 to 0.938, and were significant at the 0.001 level, as suggested (Hair et al., 2021b).

Table 2. Reliability and convergent validity test.

Variables	Cronbach's alpha	Composite reliability (*rho_a*)	Composite reliability (*rho_c*)	Average variance extracted (AVE)
Capability	0.953	0.957	0.961	0.780
Economy	0.948	0.951	0.959	0.796
Environment	0.957	0.958	0.967	0.853
Law	0.962	0.962	0.971	0.868
Opportunity	0.928	0.929	0.944	0.736
Politics	0.958	0.959	0.965	0.799
Pressure	0.910	0.922	0.927	0.617
Rationalization	0.980	0.981	0.983	0.879
Social	0.922	0.922	0.941	0.762
Technology	0.947	0.949	0.958	0.791

Note: Cronbach alpha (CA) > 0.7; Composite reliability (CR) > 0.7; Average variance extracted (AVE) > 0.05.

Finally, a discriminant validity test was performed before assessing the fit of the measurement model. Discriminant validity is established when HTMT values for each construct are below 0.90 (Henseler, Ringle, & Sarstedt, 2015). Based on the HTMT results in Table 3, all factors and impacts of the corruption constructs have HTMT values below the threshold, which is acceptable. Additionally, the Fornell and Larcker criterion was tested by ensuring that the value of the square root of each AVE is greater than the correlation values between latent variables. According to the Fornell and Larcker results in Table 4, the values of the square root of AVE for all factors and impacts of corruption were as targeted.

Table 3. Discriminant validity (HTMT) test.

Variable	Capability	Economy	Environment	Law	Opportunity	Politics	Pressure	Rationalization	Social	Technology
Capability										
Economy	0.449									
Environment	0.439	0.772								
Law	0.459	0.793	0.782							
Opportunity	0.747	0.482	0.448	0.467						
Politics	0.492	0.766	0.652	0.743	0.513					
Pressure	0.671	0.499	0.477	0.491	0.734	0.496				
Rationalization	0.448	0.151	0.151	0.072	0.403	0.149	0.352			
Social	0.502	0.885	0.788	0.856	0.53	0.802	0.543	0.124		
Technology	0.456	0.851	0.815	0.856	0.491	0.716	0.507	0.12	0.868	

Note: HTMT <0.90.

Table 4. Discriminant validity (Fornell and Larcker) test.

Variable	Capability	Economy	Environment	Law	Opportunity	Politics	Pressure	Rationalization	Social	Technology
Capability	**0.883**									
Economy	0.431	**0.892**								
Environment	0.424	0.737	**0.924**							
Law	0.445	0.759	0.752	**0.932**						
Opportunity	0.706	0.454	0.425	0.443	**0.858**					
Politics	0.473	0.732	0.626	0.714	0.484	**0.894**				
Pressure	0.627	0.468	0.45	0.471	0.674	0.469	**0.785**			
Rationalization	0.427	0.145	0.145	0.07	0.384	0.143	0.311	**0.938**		
Social	0.475	0.829	0.742	0.806	0.492	0.754	0.506	0.119	**0.873**	
Technology	0.438	0.808	0.778	0.819	0.462	0.683	0.477	0.115	0.813	**0.89**

Note: Square root of AVE (Bolded) values > other correlation value between latent variables.

4.3. Structural Model

After the measurement model fit all reliability and validity tests, hypothesis testing was conducted on the structural model to generate t-values, β-values, and p-values. The strength of the relationship between constructs was measured by β-values, while the significance of the relationship was measured by t-values. These values are used to determine whether the analysis findings support the hypotheses. Therefore, a summary of the findings for hypothesis testing between factors and impacts of corruption in this study is presented in Table 5. The structural model for this study, developed using SmartPLS-SEM, is shown in Figure 3.

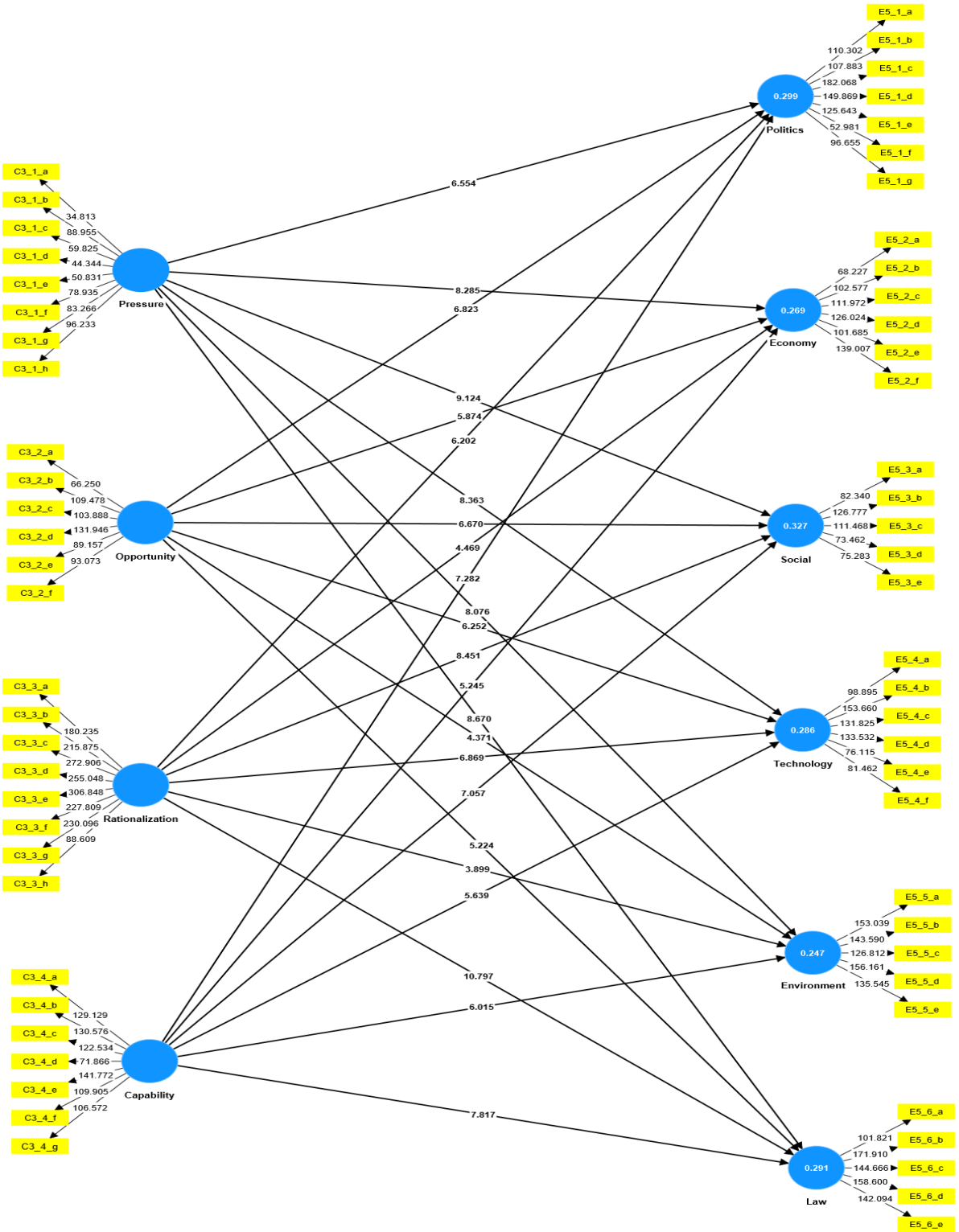

Figure 3. Structural model.

Table 5. Hypotheses testing results.

Hypotheses		Beta values (β)	t-values	p-values	Results
H1a	Pressure → Politics	0.207	6.554	0.000	Supported
H1b	Pressure → Economy	0.259	8.285	0.000	Supported
H1c	Pressure → Social	0.273	9.124	0.000	Supported
H1d	Pressure → Technology	0.266	8.363	0.000	Supported
H1e	Pressure → Environment	0.254	8.076	0.000	Supported
H1f	Pressure → Law	0.268	8.670	0.000	Supported
H2a	Opportunity → Politics	0.221	6.823	0.000	Supported
H2b	Opportunity → Economy	0.191	5.874	0.000	Supported
H2c	Opportunity → Social	0.210	6.670	0.000	Supported
H2d	Opportunity → Technology	0.202	6.252	0.000	Supported
H2e	Opportunity → Environment	0.145	4.371	0.000	Supported
H2f	Opportunity → Law	0.162	5.224	0.000	Supported
H3a	Rationalization → Politics	-0.105	6.202	0.000	Supported
H3b	Rationalization → Economy	-0.081	4.469	0.000	Supported
H3c	Rationalization → Social	-0.138	8.451	0.000	Supported
H3d	Rationalization → Technology	-0.123	6.869	0.000	Supported
H3e	Rationalization → Environment	-0.072	3.899	0.000	Supported
H3f	Rationalization → Law	-0.177	10.797	0.000	Supported
H4a	Capability → Politics	0.233	7.282	0.000	Supported
H4b	Capability → Economy	0.168	5.245	0.000	Supported
H4c	Capability → Social	0.215	7.057	0.000	Supported
H4d	Capability → Technology	0.181	5.639	0.000	Supported
H4e	Capability → Environment	0.193	6.015	0.000	Supported
H4f	Capability → Law	0.239	7.817	0.000	Supported

Based on Table 5, the results demonstrate that all Fraud Diamond Theory (FDT) factors—pressure, opportunity, rationalization, and capability significantly influenced the six PESTEL components (political, economic, social, technological, environmental, and legal) in the Malaysian context. This aligns with findings from previous studies in developing countries, such as Spyromitros and Panagiotidis (2022), who observed similar impacts of corruption on economic growth and governance in sub-Saharan Africa and Southeast Asia. However, unlike countries with high levels of institutional oversight, Malaysia's unique political and socio-economic structure amplifies certain corruption impacts, particularly in the political and economic domains.

4.3.1. Pressure on PESTEL

Corruption in Malaysia is deeply intertwined with political, economic, and social factors. Politically, money politics and undue influence in government contracts contribute significantly to corruption, as seen in high-profile cases like 1MDB. The study confirms a strong link between political pressure and corruption ($\beta = 0.207$, $p = 0.000$), similar to trends in countries with weak political funding regulations like Brazil and Nigeria (Quah, 2022a). Economically, corruption is driven by opportunity and capability ($\beta = 0.259$, $p = 0.000$), leading to inflated project costs and misappropriation of public funds, mirroring procurement issues in India (Saluja, 2024). Socially, corruption exacerbates income inequality and reduces trust in institutions ($\beta = -0.138$, $p = 0.000$), particularly affecting marginalized communities, as seen in studies from sub-Saharan Africa (Hsiao et al., 2019).

Beyond these, corruption also hinders technological progress, environmental sustainability and legal integrity. Bureaucratic corruption delays digital transformation ($\beta = 0.266$, $p = 0.000$), limiting the adoption of e-governance tools as observed in Indonesia (Natalis, 2020). Environmental corruption, particularly in illegal logging and deforestation ($\beta = 0.254$, $p = 0.000$), weakens enforcement efforts, similar to Brazil's challenges (Shaari, Esquivias, Ridzuan, Fadzilah Zainal, & Sugiharti, 2022). Legally, corruption erodes judicial independence and enables selective law enforcement ($\beta = 0.268$, $p = 0.000$) as seen in Eastern Europe (Plaček et al., 2022). Malaysia's ongoing reforms

in digital governance, environmental policies, and judicial processes highlight the urgent need for stronger enforcement mechanisms and whistleblower protections to combat corruption effectively.

4.3.2. Opportunity on PESTEL

The results indicate that the opportunity dimension influences all PESTEL factors, supporting the view that corrupt practices tend to flourish where monitoring is minimal and enforcement is lax. Specifically, opportunity has a significant effect on politics (H2a: $\beta = 0.221$, $p = 0.000$), the economy (H2b: $\beta = 0.191$, $p = 0.000$), social factors (H2c: $\beta = 0.210$, $p = 0.000$), technology (H2d: $\beta = 0.202$, $p = 0.000$), the environment (H2e: $\beta = 0.145$, $p = 0.000$), and law (H2f: $\beta = 0.162$, $p = 0.000$).

Such outcomes align with Demetriades and Owusu-Agyei (2022), emphasizing that uncontrolled opportunities can lead to corruption and misuse of authority. Similarly, Manara et al. (2023) presented comparable results, indicating that corruption at various levels is facilitated through unchecked opportunities within governance institutions. According to Avortri and Agbanyo (2020), procedural inefficiencies and lax enforcement in Indonesia and Nigeria create conditions where administrative officials exploit procedural loopholes for personal gain.

Corruption is not just individual misconduct and becomes institutionalized in political and economic institutions when governance mechanisms fail to provide sufficient checks, according to Khamainy et al. (2022). This concurs with Jones (2022), who explained that discretionary decision-making in the public sector, especially in government-connected companies, tends to be associated with corruption in Malaysia. The same patterns have been noted in other developing countries where corruption is allowed to continue due to poor regulatory mechanisms and discretion (Spyromitros & Panagiotidis, 2022). These findings indicate that Malaysian corruption is part of a global pattern where institutionalized abuse of political, economic, and legal systems is enabled by the absence of accountability within institutions.

4.3.3. Rationalization on PESTEL

The results indicate that all PESTEL factors are significantly influenced by the rationalization factor, which manifests through individuals using self-serving logic to justify corrupt behavior, thereby perpetuating unethical practices. Specifically, rationalization negatively impacts politics (H3a: $\beta = -0.105$, $p = 0.000$), the economy (H3b: $\beta = -0.081$, $p = 0.000$), social factors (H3c: $\beta = -0.138$, $p = 0.000$), technology (H3d: $\beta = -0.123$, $p = 0.000$), the environment (H3e: $\beta = -0.072$, $p = 0.000$), and law (H3f: $\beta = -0.177$, $p = 0.000$).

These findings are consistent with prior research, including Charlopova et al. (2020), which identified that fraudsters justify corruption by asserting that what they did was required or needed in their particular situation. According to Peralta-Borray et al. (2024), corrupt actors tend to construct moral excuses to reduce their guilt and avoid taking responsibility for their actions. Like in other rising economies, there is rationalization on the part of the government officials in Malaysia who view bribery as a required practice in bureaucracy (Avortri & Agbanyo, 2020).

Furthermore, when legal institutions fail to hold anyone accountable, corruption may be institutionalized, as reflected in the substantial influence of rationalization on legal structures (H3f: $\beta = -0.177$, $p = 0.000$). Çollaku et al. (2024) pointed out that the rationalization of corruption makes it hard to abide by ethical principles, which causes long-term systemic corruption.

According to earlier research by Spyromitros and Panagiotidis (2022) in economic environments, people rationalize deceptive actions to sustain their competitive advantage and thereby exhibit economic misbehavior. Since resistance to reforms based on accountability usually results from deeply rooted defenses against corrupt activities, the negative association between rationalization and technology (H3d: $\beta = -0.123$, $p = 0.000$) also demonstrates barriers towards attempts at online transparency (Hsiao et al., 2019). These results indicate that, as

patterns in other systems of governance around the world also show, rationalization is essential in promoting corruption in political, economic, and legal institutions.

4.3.4. Capability on PESTEL

The results indicate that all aspects of PESTEL are significantly influenced by the capability aspect of corruption. This suggests that individuals with the necessary knowledge, authority, and belief are more likely to engage in corrupt practices. Specifically, capability significantly affects politics (H4a: $\beta = 0.233$, $p = 0.000$), the economy (H4b: $\beta = 0.168$, $p = 0.000$), social factors (H4c: $\beta = 0.215$, $p = 0.000$), technology (H4d: $\beta = 0.181$, $p = 0.000$), the environment (H4e: $\beta = 0.193$, $p = 0.000$), and law (H4f: $\beta = 0.239$, $p = 0.000$).

These results are in agreement with FDT propounded by Wolfe and Hermanson (2004), who presented the argument that fraud cannot occur unless the culprit can take opportunities. Likewise, Alhaimer (2024) ascertained in what ways influencers in power leverage institutions for gain by taking advantage of knowledge of institutional weaknesses. Senior officials tend to use their powers to bypass regulatory barriers in Malaysian political corruption, a practice also common in loosely controlled states (Gouvêa Maciel & Santos, 2024).

Moreover, the tight link between law and capability (H4f: $\beta = 0.239$, $p = 0.000$) indicates that criminals are able to use legal loopholes to escape detection. That is what Arellano-Gault et al. (2024) also discovered when they found that criminal networks flourish as long as criminals are aware of enforcement vulnerabilities. The strong economic effect (H4b: $\beta = 0.168$, $p = 0.000$) corroborates the findings of Amegavi et al. (2022), who found that professionals in the banking industry affect economic policy for unlawful purposes. The impact of capacity on technology (H4d: = 0.181, $p = 0.000$) is also in line with Liu et al. (2023), who stated that knowledgeable people can evade online security measures to carry out fraud. The results confirm global patterns in institutional corruption, indicating that corruption is not only opportunistic but also, in most cases, involves individuals with the ability and skill sets to exploit weaknesses.

5. CONCLUSION

In contributing to the development of the Malaysian National Anti-Corruption Strategy (NACS) 2024-2028 program, this research aims to address existing gaps by examining aspects related to corruption and their consequences. Among the four building blocks of the FDT pressure, opportunity, rationalization, and capability these are the most relevant predictors for corruption issues in Malaysia, based on data from 2,042 Malaysians. Additionally, it was found that corruption affects all elements of PESTEL politics, economics, society, technology, environment, and law particularly within the Malaysian context.

Corruption in Malaysia is connected to the political, private, and public sectors. Forceful recommendations include compelling political aspirants to declare their assets, prohibiting political appointments for government-linked companies, and introducing a political fundraising bill to deter money politics. To put an end to scandals involving conflicts of interest and regain public trust, legislators accused of corruption must resign.

Since the general public believes that government officials are usually deceitful, extreme measures such as integrity programs, moral fortification, and HR administration improvements are required. Where there are allegations of corruption, transparency is essential, and the media must report to educate the public. Bureaucratic delays should be addressed by utilizing online services, and government wages must be realigned to match the current economic scenario. Better rural development strategies should also be implemented to reduce unemployment, crime, and the rural-urban divide.

Lack of adequate policies and internal controls is correlated with corruption in the private sector. Clearly set standards, regular risk analysis, and the implementation of an Anti-Bribery Management System (ABMS) are necessary to combat this. Digitalization of processes can enhance productivity and minimize the potential for

corruption. To enhance corporate integrity and ensure compliance with the law, the private sector also needs to develop Corporate Social Responsibility (CSR) programs that deter corruption.

In the public domain, heightened awareness of anti-corruption issues necessitates involving all stakeholder groups, including prominent and influential players such as religious clerics. Strategies should focus on promoting virtue and integrity to sensitize the public, which involves applying anti-corruption messaging in mosques, churches, public speeches, or podcasts. Coordination between anti-corruption initiatives and programs targeting specific populations, with an appropriate approach, is essential for their effectiveness. Additionally, the national agenda should prioritize anti-corruption efforts. Offering financial incentives, such as tax deductions, to individuals who report corruption can be an effective way to encourage public participation in the fight against corruption.

This study emphasizes the importance of corruption-free political governance for political stability and sustainable development in Malaysia. A systematic approach and effective policies are necessary to improve public sector accountability. Although Malaysia has strong anti-corruption laws, their enforcement needs to be strengthened. Key areas for improvement include law enforcement upgrades, transparency, ethics training, streamlined management, whistleblower protection, and stricter penalties to enhance the effectiveness of anti-corruption efforts.

Future research is necessary due to various limitations in this study. Firstly, the cross-sectional design of the survey makes it challenging to establish cause-and-effect relationships, especially concerning findings related to corruption. Secondly, research on corruption is sensitive, and during the survey phase, some respondents hesitated to disclose information due to fear and suspicion about potential consequences. Lastly, time and budget constraints posed limitations, despite the need to cover the entire population sample in Malaysia within a relatively short period.

Funding: This research is supported by Malaysian Anti-Corruption Commission (MACC) and Universiti Sains Islam Malaysia (USIM) (Grant number: USIM/SPRM/FEM/LUAR-K/42023).
Institutional Review Board Statement: The Ethical Committee of the Universiti Sains Islam, Malaysia has granted approval for this study on 9 November 2023 (Ref. No. USIM/SPRM/FEM/LUAR-K/42023).
Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.
Data Availability Statement: The corresponding author can provide the supporting data of this study upon a reasonable request.
Competing Interests: The authors declare that they have no competing interests.
Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

REFERENCES

Ab Rahman, A., Aziz, M. Y. A., Salleh, A. Z., & Kamarulzaman, A. N. (2023). The symptoms of corruption and implications for the Malaysian community according to the shariah perspective. *Journal of Fatwa Management and Research, 28*(2), 87-103. https://doi.org/10.33102/jfatwa.vol28no2.538

Abbas, H. S. M., Qaisar, Z. H., Ali, G., Alturise, F., & Alkhalifah, T. (2022). Impact of cybersecurity measures on improving institutional governance and digitalization for sustainable healthcare. *Plos One, 17*(11), e0274550. https://doi.org/10.1371/journal.pone.0274550

Abdullahi, R., & Mansor, N. (2018). Fraud prevention initiatives in the Nigerian public sector: understanding the relationship of fraud incidences and the elements of fraud triangle theory. *Journal of Financial Crime, 25*(2), 527-544. https://doi.org/10.1108/JFC-02-2015-0008

Akman, M. K. (2020). Defence management and PESTLE analysis. *Ante Portas–Security Studies, 1*(14), 93-102. https://doi.org/10.33674/3201910

Alhaimer, R. (2024). Exploring the attitudes of Kuwait's residents toward the role of corruption and anti-corruption entities (Nazaha) in Kuwait. *Public Integrity, 26*(3), 305-321. https://doi.org/10.1080/10999922.2023.2176054

Amegavi, G. B., Quarshie, A., & Mensah, J. K. (2022). Mitigating corruption in sub-Saharan Africa: does heterogeneity in corruption levels matter? *Public Integrity*, *24*(2), 229-242. https://doi.org/10.1080/10999922.2021.1917171

Amusa, L. B., & Hossana, T. (2024). An empirical comparison of some missing data treatments in PLS-SEM. *Plos One*, *19*(1), e0297037. https://doi.org/10.1371/journal.pone.0297037

Arel, B., Tomas III, M. J., & Stark, L. (2023). The effect of fraud diamond capability measures on fraud occurrence. *Journal of Forensic Accounting Research*, *8*(1), 141-159. https://doi.org/10.2308/JFAR-2021-024

Arellano-Gault, D., Trejo, L. J., & Rojas-Salazar, G. (2024). Deconstructing corruption through its aporias. *Public Integrity*, *26*(1), 82-97. https://doi.org/10.1080/10999922.2022.2123050

Arkorful, V. E., Lugu, B. K., Arkorful, V. A., & Charway, S. M. (2022). Probing the predictors of fraud using the fraud diamond theory: Empirical evidence from local governments in Ghana. *Forum for Development Studies*, *49*(2), 291-318. https://doi.org/10.1080/08039410.2022.2080759

Astafurova, O., & Golomanchuk, A. (2021). Data and factors analysis of anti-corruption environment components of Russian public authorities. *SHS Web of Conferences*, *109*, 01007. https://doi.org/10.1051/shsconf/202110901007

Avortri, C., & Agbanyo, R. (2020). Determinants of management fraud in the banking sector of Ghana: the perspective of the diamond fraud theory. *Journal of Financial Crime*, *28*(1), 142-155. https://doi.org/10.1108/JFC-06-2020-0102

Belloumi, M., & Alshehry, A. S. (2021). The causal relationships between corruption, investments and economic growth in GCC countries. *Sage Open*, *11*(4), 21582440211054425. https://doi.org/10.1177/21582440211054425

Blanco-Alcántara, D., García-Moreno Rodríguez, F., & López-de-Foronda Pérez, Ó. (2022). The corruption problem in Europe. In *Fraud and Corruption in EU Funding: The Problematic Use of European Funds and Solutions* (pp. 1-24). Cham: Springer.

Bowra, A., Saeed, G., Gorodensky, A., & Kohler, J. C. (2022). An exploration of anti-corruption and health in international organizations. *Plos One*, *17*(8), e0269203. https://doi.org/10.1371/journal.pone.0269203

Charlopova, I., Andon, P., & Free, C. (2020). How fraud offenders rationalize financial crime. In *Corporate fraud exposed* (pp. 39-59). England: Emerald Publishing Limited.

Cheliatsidou, A., Sariannidis, N., Garefalakis, A., Azibi, J., & Kagias, P. (2023). The international fraud triangle. *Journal of Money Laundering Control*, *26*(1), 106-132. https://doi.org/10.1108/JMLC-09-2021-0103

Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2024). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal of Management*, *41*(2), 745-783. https://doi.org/10.1007/s10490-023-09871-y

Çollaku, L., Ramushi, A. S., & Aliu, M. (2024). Fraud intention and the relationship with selfishness: the mediating role of moral justification in the accounting profession. *International Journal of Ethics and Systems*. https://doi.org/10.1108/IJOES-10-2023-0220

Cressey, D. R. (2017). The criminal violation of financial trust. In White-collar criminal. In (pp. 3-19). New York: Routledge.

Demetriades, P., & Owusu-Agyei, S. (2022). Fraudulent financial reporting: An application of fraud diamond to Toshiba's accounting scandal. *Journal of Financial Crime*, *29*(2), 729-763. https://doi.org/10.1108/JFC-05-2021-0108

Gouvêa Maciel, G., & Santos, I. (2024). Citizens' and politicians' definitions of corruption, corruption survey quality, and political will for anti-corruption reform: The Portuguese case put to the test. *Public Integrity*, 1-14. https://doi.org/10.1080/10999922.2024.2322317

Hair, J. F., Astrachan, C. B., Moisescu, O. I., Radomir, L., Sarstedt, M., Vaithilingam, S., & Ringle, C. M. (2021a). Executing and interpreting applications of PLS-SEM: Updates for family business researchers. *Journal of Family Business Strategy*, *12*(3), 100392. https://doi.org/10.1016/J.JFBS.2020.100392

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021b). Evaluation of reflective measurement models. In: Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook. In (pp. 75-90). Cham: Springer.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, *43*, 115-135. https://doi.org/10.1007/s11747-014-0403-8

Hsiao, A., Vogt, V., & Quentin, W. (2019). Effect of corruption on perceived difficulties in healthcare access in sub-Saharan Africa. *Plos One*, *14*(8), e0220583. https://doi.org/10.1371/journal.pone.0220583

Hunter, M., Uwaydah Mardini, R., El-Seblani, A., & Elsayed, S. (2020). Anti-corruption, transparency and accountability: Case study of healthcare in the Arab countries. *Global Health Action*, *13*(sup1), 1704529. https://doi.org/10.1080/16549716.2019.1704529

Jones, D. S. (2022). Challenges in combating corruption in Malaysia: Issues of leadership, culture and money politics. *Public Administration and Policy*, *25*(2), 136-149. https://doi.org/10.1108/PAP-01-2022-0002

Kamaruddin, M. I. H., Kamarubahrin, A. F., Bustamam, U. S. A., Ramli, N. M., Hanefah, M. M., Razali, R. M., . . . Haron, H. (2025). Pembanterasan rasuah di malaysia: Isu, cabaran dan hala tuju: *fighting corruption in Malaysia: Issues, challenges and directions*. Putrajaya: Malaysian Anti-Corruption Commission (MACC).

Khamainy, A. H., Ali, M., & Setiawan, M. A. (2022). Detecting financial statement fraud through new fraud diamond model: the case of Indonesia. *Journal of Financial Crime*, *29*(3), 925-941. https://doi.org/10.1108/JFC-06-2021-0118

Khan, F., Abbass, K., Qun, W., & Asif, M. (2024). Investigating capital flight in South Asian countries: The dual influence of terrorism and corruption. *Plos One*, *19*(3), e0295695. https://doi.org/10.1371/journal.pone.0295695

Khan, U. U., Ali, Y., Petrillo, A., & De Felice, F. (2023). Macro-environmental factors and their impact on startups from the perspective of developing countries. *International Journal of Sustainable Engineering*, *16*(1), 166-183. https://doi.org/10.1080/19397038.2023.2238754

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30*(3), 607-610.

Liu, J., Wang, Y., & Wang, Z. (2023). Multidimensional drivers: Exploring contractor rule violations in the construction industry. *Engineering, Construction and Architectural Management*, *30*(4), 1496-1518. https://doi.org/10.1108/ECAM-10-2021-0928

MACC. (2023). *Progress of the national anti-corruption plan (NACP) 2019-2023*. Putrajaya: Malaysian Anti-Corruption Commission (MACC).

Manara, M. U., Nübold, A., van Gils, S., & Zijlstra, F. R. (2023). Exploring the path to corruption–An informed grounded theory study on the decision-making process underlying corruption. *Plos One*, *18*(9), e0291819. https://doi.org/10.1371/journal.pone.0291819

Natalis, N. (2020). Behavioral strategy analysis using the fraud diamond theory approach to detecting corporate fraud in Indonesia. *International Journal of Business and Management Invention*, *9*(4), 66-74.

Nguyen, T. X. (2023). Anti-corruption and bank performance: Evidence from a socialist-oriented economy. *Plos One*, *18*(10), e0292556. https://doi.org/10.1371/journal.pone.0292556

Nor, M. I., & Mohamed, A. A. (2024). Investigating the dynamics of tax evasion and revenue leakage in somali customs. *Plos One*, *19*(6), e0303622. https://doi.org/10.1371/journal.pone.0303622

Ozcelik, H. (2020). An analysis of fraudulent financial reporting using the fraud diamond theory perspective: an empirical study on the manufacturing sector companies listed on the Borsa Istanbul. In *Contemporary Issues in Audit Management and Forensic Accounting* (Vol. 102, pp. 131-153). Leeds: Emerald Publishing Limited.

Paar-Jakli, G., & Molina, A. D. (2023). Democracy, authoritarianism, and political corruption: Elite cartel corruption in Hungary and Italy. *Public Integrity*, 1-19. https://doi.org/10.1080/10999922.2023.2256091

Peralta-Borray, D. A., Acuña, J. S., & Zapata, S. (2024). A grounded theory of tolerance of corruption in public organizations: emotion, rationalization and whistleblowing–the Colombian case. *Qualitative Research in Organizations and Management: An International Journal*, *19*(3), 203-225. https://doi.org/10.1108/QROM-09-2023-2603

Plaček, M., Ochrana, F., Vaceková, G., Langr, I., & Půček, M. (2022). Shedding light on three "moral cancer" cases from the Czech Republic: Corruption in communist and post-communist regimes. *Public Integrity*, *24*(7), 730-746. https://doi.org/10.1080/10999922.2021.1988407

Quah, J. S. (2022a). Lee Kuan Yew's role in minimising corruption in Singapore. *Public Administration and Policy*, *25*(2), 163-175. https://doi.org/10.1108/PAP-04-2022-0037

Quah, J. S. (2022b). Leadership and culture in combating corruption: A comparative analysis. *Public Administration and Policy*, *25*(2), 193-207. https://doi.org/10.1108/PAP-05-2022-0043

Radević, I., Alfirević, N., & Lojpur, A. (2022). Corruption, public trust and medical autonomy in the public health sector of Montenegro: Taking stock of the COVID-19 influence. *Plos One*, *17*(9), e0274318. https://doi.org/10.1371/journal.pone.0274318

Ratmono, D., & Frendy. (2022). Examining the fraud diamond theory through ethical culture variables: A study of regional development banks in Indonesia. *Cogent Business & Management*, *9*(1), 2117161. https://doi.org/10.1080/23311975.2022.2117161

Saluja, S. (2024). Identity theft fraud-major loophole for FinTech industry in India. *Journal of Financial Crime*, *31*(1), 146-157. https://doi.org/10.1108/JFC-08-2022-0211

Saluja, S., Aggarwal, A., & Mittal, A. (2022). Understanding the fraud theories and advancing with integrity model. *Journal of Financial Crime*, *29*(4), 1318-1328. https://doi.org/10.1108/JFC-07-2021-0163

Sarstedt, M., Hair, J. F., Pick, M., Liengaard, B. D., Radomir, L., & Ringle, C. M. (2022). Progress in partial least squares structural equation modeling use in marketing research in the last decade. *Psychology & Marketing*, *39*(5), 1035-1064. https://doi.org/10.1002/MAR.21640

Shaari, M. S., Esquivias, M. A., Ridzuan, A. R., Fadzilah Zainal, N., & Sugiharti, L. (2022). The impacts of corruption and environmental degradation on foreign direct investment: New evidence from the ASEAN+ 3 countries. *Cogent Economics & Finance*, *10*(1), 2124734. https://doi.org/10.1080/23322039.2022.2124734

Spyromitros, E., & Panagiotidis, M. (2022). The impact of corruption on economic growth in developing countries and a comparative analysis of corruption measurement indicators. *Cogent Economics & Finance*, *10*(1), 2129368. https://doi.org/10.1080/23322039.2022.2129368

Suprapto, F. M., & Agustia, D. (2023). The analysis of fraudulent financial statements prevention using hexagon's fraud and government internal auditor as moderating variable in local government in Indonesia. *Forum for Development Studies*, *50*(3), 513-537. https://doi.org/10.1080/08039410.2023.2232365

TI-Malaysia. (2025). *Corruption perception index in Malaysia*. Kuala Lumpur: Transparency Index Malaysia (TI-Malaysia).

UNODC. (2021). *Corruption risks in public procurement in the context of Covid-19 in Pacific Island countries*. Vienna, Austria: United Nations Office on Drugs and Crimes (UNODC).

Wolfe, D. T., & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. *The CPA Journal*, *74*(12), 38-42.

Yusop, Z. (2018). *PESTEL analysis*. Paper presented at the 1st National Conference on Multidisciplinary Research and Practice 2018 (pp. 34-39). Kuala Lumpur: Kolej Universiti Poly-Tech MARA.