

The effect of pressure, opportunity, and rationalisation on asset misappropriation in public organisations: Evidence from emerging markets



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ABSTRACT

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This study aims to analyse the factors affecting asset misappropriation from the Fraud Triangle Theory perspective: pressure, opportunity, and rationalisation. Pressure, the first facet, is dissected into financial and non-financial strains, including the taxing burden of work. To represent opportunity and rationalisation, proxies are utilized—weak internal control mirrors opportunity, while poor organizational culture encapsulates rationalisation. Employees who were chosen as samples are employees with a position or authority to carry out certain tasks. A questionnaire was distributed to 400 respondents, and only 206 questionnaires were returned and processed for analyses in this study. The results of this study indicate that organisational culture significantly influences asset misappropriation incidences in Malaysian public organisations. However, financial pressure, work pressure, and internal control factors do not significantly affect the misappropriation of assets. This study underscores the importance of mitigating asset misappropriation by focusing on curbing employees' negative rationalization. Strengthening internal control measures and ensuring equitable task assignments emerge as crucial strategies. The outcomes contribute to the limited discourse on asset misappropriation, especially in the context of government agencies in emerging markets. As organizations strive to foster a secure environment, addressing cultural aspects and refining internal controls emerge as pivotal avenues for minimizing asset misappropriation risks.

Contribution/ Originality: This study stands out because it focuses on a crucial research gap—asset misappropriation in emerging markets. It tackles the lack of studies in this area and provides valuable insights into financial misconduct dynamics in public organizations within emerging economies.

1. INTRODUCTION

Fraud poses a major challenge for various organizations worldwide. Researchers globally are actively studying this issue because of the increasing number of documented fraud cases and the negative impact it has on businesses. Despite the implementation of numerous systems by supervisory institutions, high-profile fraud instances persist. It is interesting to note that internal fraud, also known as occupational fraud, by employees, management, and even owners, appears to be more common than external fraud.

The Association of Certified Fraud Examiners (ACFE) divides occupational fraud into three categories: fraudulent financial statements, asset misappropriation, and corruption. Based on the latest ACFE report, asset misappropriation is the most prevalent fraud scheme, which constituted 86 percent of the fraud cases investigated between January 2020 and September 2021 in 133 countries [1]. However, researchers' attention is primarily focused on the fraudulent financial statement, which is classified as the costliest fraud scheme, thus leading to significantly less attention being paid to asset misappropriation, despite the fact that it is more prevalent.

The ACFE [1] defines asset misappropriation as "the misuse of assets or theft of property of a business or other parties." According to Tepper, et al. [2] and Detert and Burris [3], manipulative conduct in an organisation can be caused by the behaviours and choices made by those in power who illegally violate ethical principles, leading to deception and fraud. Asset misappropriation can cause long-lasting damage, particularly to the image of the public sector and the confidence of citizens in the government.

As reported in PwC's Global Economic Crime and Fraud Survey 2020: Malaysia Edition, asset misappropriation is one of the top-most disruptive types of fraud experienced by Malaysian organisations between 2018 and 2020 [4]. Malaysia has been plagued with different high-level embarrassments, including the case of the billions of ringgit that were laundered. Under the civil forfeiture complaints, high-ranking members of 1MDB and their accomplices were accused of stealing more than USD4.5 billion from the company between 2009 and 2015 in a criminal operation involving international money laundering and embezzlement. It has also been claimed that some of the stolen money was used to pay bribes.

The Malaysian Anti-Corruption Commission (MACC) in its 2018 annual report lists several types of asset misappropriation incidents, such as theft of cash on hand, skimming, theft of cash receipts, fraudulent disbursements, such as billing schemes, personal purchases, cheque tampering, and various classes of misconduct. Among all, about 39.5 percent of civil servants were reported to have been prosecuted, representing the highest percentage. In addition, Auditor General of Malaysia [5] reveals that high asset misappropriation has occurred at the federal, state, and even local government levels. For instance, more than 300 items amounting to Malaysian Ringgit (MYR) 1.3 million are still missing. This has resulted in a complete waste of resources, thereby reducing economic growth and the quality of life, undermining government credibility, and adversely affecting its effectiveness. Thus, there is an urgent need to identify the factors contributing to asset misappropriation occurring in the public sector, which could help the government combat fraud by implementing more effective and robust policies to detect and prevent asset misappropriation.

Even though top administrators have been involved in the lowest number of asset theft cases, the total amount involved is consistently high, thus affecting government revenue. In 2016, a case involving the highest amount was committed by the secretary of a government department. According to Datuk Seri Ahmad Khusairi Yahaya, who was the MACC Kuala Lumpur branch director at the time, the investigations that began in January 2016 were able to uncover five cases involving MYR20 million. Aside from high government officials, people working for private associations and agencies have also been accused of falsifying claims and engaging in fraud.

In 2022, the ACFE reported that 44 percent of fraudsters were living beyond their means, and 33 percent were experiencing financial difficulties [1]. These results imply that the perpetrators are facing pressure, thus giving them grounds to commit fraud. Since offenders are familiar with the work environment and routine tasks, they can find any possible loophole to take advantage of the weaknesses or opportunities presented to them. Besides, wrongdoings appear to have become a culture and norm, causing the employees to presume that they are entitled to do so and that their wrongful acts are acceptable (rationalisation).

Fraud, through asset misappropriation committed by top administrators, is genuinely surprising people in general, as it manifests a betrayal of trust by those supposedly chosen explicitly for their initiative, capacity, uprightness, and righteous character. Therefore, the purpose of this research is to fill in the gaps by identifying and assessing the determinants of asset misappropriation occurrences in the Malaysian Federal Ministries using the

Fraud Triangle Theory as a theoretical framework. Expanding this primary framework highlights the primary purpose of this research, which is to investigate the connection that exists between financial pressure and work pressure, internal control and organisational culture, and asset misappropriation.

The subsequent sections of this work are organised as follows: The formulation of the study's hypotheses follows a thorough analysis of the pertinent literature in this season. Section 3 of this study centres on the research methods employed to examine the hypotheses, while Section 4 provides an account of the findings derived from the descriptive, correlation, and regression analyses. Section 5 presents a comprehensive analysis and interpretation of the obtained results. Finally, Section 6 presents the concluding remarks and suggestions for future research pertaining to board structure, along with the practical implications, specifically for regulatory bodies.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1. Asset Misappropriation

The misappropriation of assets by employees is commonly observed in relatively tiny and insignificant quantities, which can effectively conceal the underlying misconduct that is challenging to identify [6]. The asset misappropriation scheme pertains to situations in which individuals engage in fraudulent activities with the intention of pilfering or misusing resources belonging to an organisation. Wells [7] proposed an elaborate and comprehensive classification system for fraudulent activities, wherein he categorised asset misappropriation into two primary classifications: cash theft and non-cash theft. The initial classification encompasses various forms of illicit acquisition of funds, including cash theft, larceny, skimming, and fraudulent expenditure. In contrast, the subsequent classification pertains to the misappropriation of non-monetary assets, specifically inventories.

Public sector-related fraud cases have always been and will continue to be a thorn in any administration around the world. According to the MACC [8], 35 percent of fraudsters work in the public sector, representing a five percent rise from 2010. Research by KPMG Forensic [9] in Malaysia has found that 62 percent of respondents think fraud is a big concern for local firms, and another 83 percent have encountered it in their organisations. Furthermore, Ernst and Young [10] claimed that state-run administrations and partnerships alike concur that fraud, asset theft, pay-off, and defilement are bad for businesses and society, and concrete steps should be taken to reduce their occurrence.

In 2018, the MACC revealed that fraud cases in the public sector cover all levels of government officials, particularly top management and other stakeholders. Amongst all, asset misappropriation is the most common and costly for organisations, whereby theft of cash is the most common asset misappropriation scheme. Cash has been involved in nearly 85 percent of all asset misappropriation cases [11].

2.2. Pressure – Financial Pressure and Work Pressure

One of the reasons people cheat is due to perceived pressure. Pressure or motivation refers to the interaction of people with a situation to attain a goal [12]. According to Rae and Subramaniam [13], workers tend to commit fraud due to greed and personal financial demands. Thus, pressure can be financial or non-financial in nature. Holderness Jr, et al. [14] discovered that organisational financial performance significantly impacts the management's decision to invest in asset misappropriation controls. Nonetheless, perceived pressure further creates the force that can increase the likelihood of such occurrences.

Albrecht, et al. [15] argued that money stress is a major motivator for cheating. Zimelman, et al. [16] agreed that financial pressure is the most common form of pressure to commit fraud. Some people may lose their sanity or judgment and conduct deception to solve their problems. Greed, personal debt, living beyond one's means, poor credit, financial loss, and unforeseen financial needs are the most prevalent financial pressures that increase the probability of asset misappropriation occurrences. Said, et al. [17]. Yusrianti, et al. [18] argued that the most common form of pressure to commit fraud is financial pressure and highlighted that around 95 percent of fraud

incidences involve financial pressure or motivation to perform wrongdoings. According to Koomson, et al. [19], financial stress could be attributed to a rise in the cost of living, the need to maintain organisational reputation, or personal demands.

Amara and Khelif [20] concurred that financial problems are the main reasons individuals commit fraud. Yusrianti, et al. [18] further argued that financial pressure motivates one to commit fraud, as evidenced by a positive and significant association between the element and asset misappropriation. According to Siahaan, et al. [21], in some circumstances, a perpetrator may unwillingly commit fraud due to unbearable financial pressure. Thus, the study hypothesises that:

H1 (a): Financial pressure positively affects an individual's tendency to commit asset misappropriation.

In terms of non-financial pressure, an individual may face very high expectations and targets in his or her job, which puts a lot of pressure on him or her, which is also known as work pressure. Work pressure is defined as a qualitative condition of stress related to the execution of present and/or foreseeable work tasks. According to Roe and Zijlstra [22], workload is the most important factor affecting work pressure. Organisations may also experience pressures that are filtered down to their employees. Workplace stress has a huge impact that creates pressure on individuals and increases their tendency to misappropriate organisational assets [19]. Individuals with work overload face the burden of having to meet deadlines and experiencing pressure, consequently leading them to engage in asset misappropriation.

Using an organisation's properties for personal benefit due to the inability to handle personal concerns outside of office hours has a positive link with the tendency to commit asset misappropriation [19]. According to Koomson, et al. [19], individuals might experience very high expectations and targets from work, thus posing a lot of pressure on them. Fathi, et al. [23], in particular, showed that pressure encountered at work could cause employees to use their organisation's assets for personal gain, reflected by a positive relationship with the likelihood of employees committing fraud. Siahaan, et al. [21] identified one of the pressures leading to asset misappropriation as work-related, in which one feels oppressed by one's work in terms of workload and treatment at work. This could be the reason that leads an employee to express dissatisfaction with the organisation by committing fraud. Thus, it is hypothesised that:

H1(b): Work pressure positively affects an individual's tendency to commit asset misappropriation.

2.3. Opportunity – Weak Internal Control

Internal control has a crucial role to play in preventing and detecting the misappropriation of assets, making it crucial for governments to strengthen related policies [24]. Good corporate governance practices as internal control mechanisms can significantly reduce the extent of fraud incidences [25, 26]. According to Siahaan, et al. [21], inadequate internal control provides an opportunity for wrongdoings to occur, thereby failing to prevent criminals from justifying their illicit activities. Therefore, an adequate level of internal control could reduce the opportunity for individuals to misappropriate assets [19].

Opportunity is defined as the capacity and power of an employee to identify vulnerabilities and optimize the potential for fraud [13]. Consistent with the Fraud Triangle Theory, scholars' findings have revealed that the lack of internal control is a contributing factor to the increasing likelihood of asset misappropriation. According to Majid, et al. [27], the absence of adequate internal controls is one of the contributing factors that can result in the theft of company property. Therefore, management could improve the tone at the top by implementing strong internal controls in an effort to detect and prevent asset misappropriation [24].

Poor internal controls, such as the non-separation of duties, cause overwhelming power and control by an individual and could lead to fraud and the inability to monitor performance in relation to budgets, forecasts, and timelines [18]. Employees might be hesitant to commit asset misappropriation if the organisation has sound

internal control practices, since the likelihood of being caught is high in the presence of strong internal controls [19]. Consequently, the following proposition can be formulated in light of this idea:

H: Weak internal control positively affects an individual's tendency to commit asset misappropriation.

2.4. Rationalisation – Poor Organisational Culture

Rationalisation is related to the thought of employees working to accomplish an objective under their current circumstances [12]. It permits an individual to commit fraud by looking for legitimisation for his or her dishonest deeds, thereby defending his or her perception of such activities [7]. According to Cressey [28], misappropriating assets at work is possible for some people, as they could make excuses to justify their actions, maintain the mindset of having done nothing wrong, and still be trusted individuals in the organisation. Indicators of an unethical organisational culture and aggressive attitude towards the company's assets include dishonest management and personality [29]. The ACFE [11] states that employees are more likely to commit fraud if top management does not uphold and prioritise high ethical standards. Thus, top managers should establish and maintain an ethical corporate culture that incorporates their basic organisational principles and motivates people to do the right thing. Ocansey and Ganu [30]. Suh, et al. [31] argued that in order to reduce fraud occurrences, the practice of a strong ethical culture appears to be more effective than monitoring controls. Normalising illegal behaviour in the workplace environment has created a tendency for the perpetrators to rationalise their wrongful acts [32]. Therefore, acceptance of the organisational culture in terms of fraud is a significant contributor to its legitimisation [33]. Besides, perpetrators tend to rationalise their dishonest behaviour in order to avoid the feeling of guilt Yusrianti, et al. [18]. Müceldili, et al. [34] underlined organisational culture as an indicator of the frequency of fraudulent incidents and activities occurring in a company. Hence, the next hypothesis states that:

H: Poor organisational culture positively affects an individual's tendency to commit asset misappropriation.

Prior studies have argued that the elements of Fraud Triangle Theory could not account for why people commit fraud or how strongly a particular component contributes to it, Kassem and Higson [35]. The elements, such as opportunity and rationalisation, have been shown to be related to one another. In addition, prior studies have claimed that fraud can be triggered by a wide range of contextual and complex phenomena at the individual, situational, and organisational levels and not just be due to one's personal characteristics [7]. Lack of self-awareness, influential circumstances, and rationalisation, bolstered by moral sense, have all been cited by Murphy and Dacin [36] as factors contributing to the development of fraudulent behaviour. This viewpoint infers that the three elements of the traditional Fraud Triangle Theory are interconnected. The power of one's deeds will increase under the favourable circumstances. Opportunity acts as a buffer between one's financial stress and the decision to commit deception. One who engages in acts of misappropriation of assets will grow in strength under the impact of opportunity. Hence, the following hypothesis is suggested based on this understanding:

H: Financial pressure, work pressure, weak internal control, and poor organisational culture positively affect an individual's tendency to commit asset misappropriation.

3. RESEARCH METHODOLOGY

3.1. Population and Sample Selection

The study's population was ascertained by finding the aggregate number of employees throughout the 25 ministries in Malaysia. This was accomplished by utilising staff data extracted from the Federal Government Expenditure Report of 2020. During the period of data collection, a total of 1,363,679 individuals were employed across 25 federal ministries. The provided information was utilised in order to calculate the sample size and determine the most suitable sampling methodology for the present study. The researchers determined the sample size by employing the Yamane [37] formula, as referenced in Adefila [38]. The employed methodology yielded a sample size of 400 participants, representing the entire population of employees as previously specified. Sekaran and

Bougie [39] assert that a majority of research endeavours would require a sample size exceeding 30 but falling short of 500. Consequently, the chosen sample size of 400 was considered sufficient for the purposes of this inquiry.

In this investigation, purposive sampling, which is also referred to as judgement sampling, was implemented. It is a non-random approach that does not necessitate a predetermined quantity of informants or foundational theories. Here, a researcher only needs to determine what needs to be learned and then seek out the people who can and are willing to supply the information through their knowledge or experience [40]. Based on the total sample size of (400 respondents), this study set out to select public officials from 25 federal ministries in Putrajaya at random. They must be willing to participate and share the necessary information based on their expertise and experience with fraudulent situations and how the organisation minimised the frequency of such wrongdoings.

3.2. Data Collection

Primary data was used in this study as it could answer the research questions and, subsequently, describe the demographics of the population. The data was quantifiable and could be used to systematically describe massive collections of items while also producing replicable knowledge. The study adopted the descriptive method based on its ability to delineate the research subject without changing it and provide higher accessibility and better capacity for collecting data on a broader scale. Meanwhile, a survey or questionnaire denotes the implemented research strategy to learn about the general characteristics of a community. This study opted for a Google Form questionnaire as an instrument to collect the primary data, which was distributed via email and messaging apps, such as WhatsApp, Telegram, Facebook Messenger, and other appropriate social media platforms.

A questionnaire could help to determine the cause of an event or phenomenon, thereby providing a rapid, cost-effective, and dependable method of testing knowledge on a specific population. Accordingly, this study collected data based on a total planned sample size of 400 respondents using the purposive sampling technique from 25 Federal Ministries, including the Prime Minister's Department. According to Wong, et al. [41], the questionnaire is the most common data-gathering tool or instrument used in quantitative investigations, particularly surveys. Each respondent is supposed to answer an identical set of questions in a specific order, and this method has emerged as an efficient method for gathering data from a large sample.

The method also allows the data obtained to be readily and structurally analysed. The questionnaire in this study was graded using a 7-point Likert scale, encompassing: 1 - strongly disagree, 2 - disagree, 3 - moderately disagree, 4 - undecided, 5 - moderately agree, 6 - agree, and 7 - strongly agree. The Likert scale measure is highly reliable due to the number of forced scales that respondents must examine, resulting in them selecting only one item without allowing responses using the middle alternative of whether they should either not want to answer or answer without thinking [42].

3.3. Variables Measurement

In this study, the dependent variable is the incidence of asset misappropriation, and the independent variables include financial pressure and work pressure, weak internal control that creates opportunity, and poor organisational culture, that make individuals rationalise their wrongful acts. The summary of each tested variable is presented in Table 1:

3.4. Data Analysis

The data acquired in this study were subjected to descriptive analysis, which revealed the respondents' information, such as their demographic background. The validity and reliability of the measurements were then checked using various statistical methods, such as factor analysis, and the stated hypotheses were tested. The data set generated was next analysed using Pearson's correlation, and regression analysis for the independent variables and the dependent variable in Malaysian Federal Ministries to test the proposed hypotheses.

Table 1. Summary of variables description.

Variables	Acronym	Measurement	References
Dependent variable (DV)			
Incident of asset misappropriation	AM	Using a 7-point likert scale spanning from strongly disagree to strongly agree.	Majid, et al. [27] and Bakri, et al. [43]
Independent variables (IVs)			
Financial pressure	FP	Using a 7-point likert scale ranging from very unfair to very fair.	Zimbelman, et al. [16]
Work pressure	WP	Using a 7-point likert scale ranging from very unfair to very fair.	Zimbelman, et al. [16]
Weak internal control	WIC	Using a 7-point likert scale ranging from strongly disagree to strongly agree.	Sitorus and Scott [44]
Poor organizational culture	POC	Using a 7-point likert scale ranging from strongly disagree to strongly agree.	Sitorus and Scott [44]

4. RESULTS

To ensure an adequate geographical base, this study utilised the Google Form, which is known for its features that are more convenient and efficient and that could be disseminated to respondents via various formats (e.g., WhatsApp, email, telegram, and other social media), to facilitate the respondents answering the questions at any time and from anywhere.

For the purpose of this research paper, a questionnaire was created and distributed randomly to a population of 400 respondents. The sample's total eligible respondents were divided by the sample's total number of successfully completed responses to determine the response rate. By the end of the time period, a total of 206 respondents had managed to answer the questionnaire, constituting a response rate of 51.5 percent (206 of the completed responses divided by 400 of the targeted respondents). According to Yusrianti, et al. [18], such a response rate is excellent as the rate is above 50 percent. Results of each analysis are discussed in the following sub-sections:

Table 2. Panel A: descriptive statistics for part A – demographics information.

Profile	Respondents	
	Frequency	Percentage (%)
List-wise n = 206		
Gender		
Male	87	42.2
Female	119	57.8
Age group		
25 years and below	39	18.9
26 to 35 years old	68	33.0
36 to 46 years old	66	32.0
47 to 55 years old	22	10.7
56 years and above	11	5.3
Education level		
Sijil Pelajaran Malaysia (SPM)	22	10.7
Sijil Tinggi Persekolahan Malaysia (STPM)	13	6.3
Diploma	49	23.8
Bachelor's degree	102	49.5
Professional	2	1.0
Master's degree	16	7.8
Doctorate degree (Ph.D.)	2	1.0
Years of work experience		
Less than 3 years	42	20.4
3-4 years	28	13.6
5-6 years	21	10.2
More than 6 years	115	55.8
Average monthly income		
Less than MYR1,500	22	10.7
MYR1,501 to MYR3,000	65	31.6
MYR3,001 to MYR5,000	62	30.1
More than MYR5,000	57	27.7

4.1. Descriptive Statistics Analysis

Descriptive analysis is a test used to summarise and analyse vast amounts of data in a form the reader can understand. The analysis makes it easier for researchers to evaluate the data results from respondents, as it involves the conversion of raw data that may be complicated and difficult for the reader to understand into simpler and more relevant conclusions.

Table 2, Panel A, presents the descriptive statistics for Part A of the questionnaire, which represents the demographic information of the respondents. Based on the results, the majority of the respondents are female (57.8 percent), while the remaining 42.2 percent are male. In terms of age group, most are from the 23-35-year age group at 33 percent, followed by 36-46 years (32%), 25 years and below (18.9%), and 47-55 years (10.7%). The smallest percentage of respondents is aged 56 years and older, at 5.3 percent.

Education-wise, most respondents have a bachelor's degree (49.5%), followed by a diploma (23.8%) and SPM certificate (10.7%), while 8.8 percent have a master's degree and professional certificate. A total of two (1%) are Ph.D. holders among the respondents. The largest portion of responses constitutes those with a bachelor's degree, and thus, the researcher concluded the respondents have competent knowledge and educational background.

In terms of work experience, 55.8 percent of the respondents have more than six years of experience, followed by less than three years (20.4%), 3-4 years (13.6%), and 5-6 years (10.2%). Thus, a high response rate was generated from experienced public sector employees who have more knowledge of their work, indicating senior respondents have more experience facing the situation at work, exposing themselves to the tendency of committing asset misappropriation.

Next, the average monthly income category shows that the highest percentage of respondents (31.6%) earn MYR1,501- 3,000, closely followed by MYR 3,001-5,000 at 30.1 percent. Respondents who earn more than MYR 5,000 monthly constitute 22.7 percent, while the remaining 10.7 percent earn less than MYR 1,500.

The descriptive statistics for Part B of the questionnaire are presented in Appendix A, which includes the number of items, mean scores, and standard deviations for each item in the construct. The mean value for each item that measures the degree of importance ranges from 1.3058 to 2.9660. Appendix B presents the descriptive statistics for items in Part C, whereby the mean value ranges from 1.6699 to 5.8107.

With respect to the determinants of asset misappropriation, most factors have mean scores lower than two and the highest of four, which indicates that factors like financial pressure, work pressure, internal control, and organisational culture are not considered important when discussing asset misappropriation. The values of the standard deviation in Part B and Part C of the questionnaire range from 0.99200 to 2.15493, indicating that the data are clustered tightly around the mean values and are reliable. The table shows that the standard deviation value for each item is less than 2.5, suggesting consistency in the score distribution.

Table 2. Panel B: Descriptive statistics for all tested variables.

Variable	Mean	Standard deviation	
Asset misappropriation	1.788	1.020	5
Financial pressure	4.021	1.695	2
Work pressure	3.977	1.393	3
Internal control	2.210	1.314	4
Organisational culture	5.413	1.164	1

Table 2, Panel B, presents descriptive statistics for all variables under analysis. The overall mean of 5.413 for the organisational culture factor indicates that respondents agree to a large extent with the statements describing that opportunity motivates individuals to participate in fraudulent behaviour in the workplace. The perceived opportunity construct with the statement "Every transaction is properly recorded and documented" received the highest mean score of 5.8107. This is followed by statements, "For a complete document transaction, it is compulsory to obtain

approval from an accountable senior member,” with a mean score of 5.7524, and “Individual position, roles, and responsibilities are clearly defined,” with a mean value of 5.6650. The findings indicate that employees believe that there are mechanisms that have been implemented at the workplace to provide acceptable assurance of work done and to detect any wrongdoing by them.

According to the findings of previous research, a deficient internal control system provides them with the opportunity to engage in fraudulent behaviour. A mean score of 2.210 for internal control indicates that individuals are rational in their actions most of the time. Interestingly, in the Malaysian public sector environment, individual employees rationalise that there is nothing wrong with the fraudulent behaviour because others are doing it too and nothing has ever happened to them. The respondents also agreed that, “By having an intention to pay back the money or resource taken from the workplace, I believe it is normal to use the money first and pay it back later,” with a mean of 1.6699.

Apart from external pressures, the study finds that the statement, “My work requires me to achieve the Key Performance Indicators (KPIs) that have been set by the organisation,” has a mean score of 4.7330, and the statement, “I am required to be multitasking in carrying out different tasks at the same time,” has the highest mean score of 4.7476. These imply that the majority of employees are pressured to meet stringent deadlines at their jobs, which creates a great deal of stress for them. As a result, individuals work relentlessly to achieve this goal, as failure to do so can result in job loss. In addition, the survey finds that most people tend to focus on many things at once, which makes them more stressed.

4.2. Reliability and Validity Test

The main purpose of establishing reliability and validity in research is to ensure the reliability and repeatability of the data and that the conclusions are accurate. This study conducted reliability and validity tests to examine the relationships as stated in the hypotheses. According to [Mariel, et al. \[45\]](#), the accuracy of estimates of welfare change produced from valuation methods is determined by their reliability and validity. Both are frequently expressed using the archery metaphor of shooting arrows at a target. The validity of the questionable items belonging to certain variables was investigated using factor analysis in this study.

Table 3. Panel A: Factor analysis.

Kaiser-Meyer-Olkin measure of sampling adequacy		0.588
Bartlett’s test of sphericity	Approx. chi-square	297.771
	Degree of freedom (DF)	0.10
	Significance probability (Sig.)	<0.001

Table 3. Panel B: Reliability test.

Variable	Cronbach’s alpha
Financial pressure	0.536
Work pressure	0.526
Organisational culture	0.712
Internal control	0.546
Asset misappropriation	0.606

Table 3, Panel A, indicates the amount of data required for factor analysis is met with the sample size generated (n = 206). The factorability of 40 questions in total was first assessed. According to [Kaiser \[46\]](#), a basic minimum of 0.5 is recommended, with values between 0.5 and 0.7 being mediocre, between 0.7 and 0.8 being good, between 0.8 and 0.9 being excellent, and over 0.9 being wonderful. Table 3, Panel A, reveals that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.588, which denotes it as average, and Bartlett’s Test of

Sphericity indicates significance (Chi-Square = 297.771, $p < .001$). As a result, the sample size was determined to be appropriate for factor analysis because the test generally supported the variables of the current investigation.

The significance of reliability testing lies in the consistency with which the instrument's components are measured [47]. An indicator of excellent internal consistency and dependability is when the items comprising the scale "hang together" and assess the same construct [48]. Typically, reliability is assessed using Cronbach's Alpha; the resulting values must fall within the interval of 0 to 1. A value in proximity to 1 signifies consistency in the outcome; conversely, a value opposite to 1 indicates a lack of consistency.

Table 3, Panel B, shows Cronbach's Alpha value for each variable, whereby the highest reported value is obtained by opportunity at 0.712. At 0.606, asset misappropriation follows this. As the values are between 0.60 and 0.74, the reliability of the questions provided for both variables is good and adequate. The remaining three variables, namely financial pressure, work pressure, and rationalization, generated Cronbach's Alpha values of more than 0.50. This reveals that the questions are fair and acceptably reliable. Thus, one might conclude that the respondents had common thoughts on the factors that could contribute to the tendency to commit asset misappropriation among public sector employees.

4.3. Pearson Correlation Analysis

This study used multivariate analysis (regression analysis) to explain the outcomes. Prior to performing the multivariate analysis, the Pearson correlation value was computed. According to Goodwin and Leech [49], this is a useful process to determine the strength of the relationship between two variables. In general, Pearson correlation results can vary between -1.00 and +1.00 [50], whereby a value close to +1.00 indicates a perfectly positive association between the two tested variables, while that of -1.00 implies a perfectly negative link. Contrarily, a correlation of 0.00 indicates the absence of any relationship between the two variables [50]. According to Cohen [51], a correlation of $r = .10$ to $.29$ suggests a small correlation, $r = .30$ to $.49$ indicates a medium correlation, and $r = .50$ to 1.0 infers a big correlation.

Table 4. Pearson correlations matrix.

n = 206	AM	FP	WP	IC	OC
AM	1				
FP	0.183**	1			
WP	0.201**	0.563**	1		
IC	0.748**	0.327**	0.372**	1	
OC	-0.086	0.194**	0.179*	-0.080	1

Note: i. Independent variables: (Constant); Pressure – Financial pressure (FP), Work pressure (WP); Opportunity – Internal control (IC); Rationalisation – Organisational culture (OC).
 ii. Dependent variable: Tendency to Commit Asset Misappropriation (AM).
 iii. * and ** denote significance at the 0.05 and 0.01 level, respectively (2-tailed).

Table 4 depicts the correlations among all tested variables, namely financial pressure, work pressure, internal control, organisational culture, and asset misappropriation. The information depicts the highest correlation between internal control and asset misappropriation, with a coefficient value of $r = 0.748$, $p < .001$. This result indicates that the internal control factor increases the tendency to commit asset misappropriation.

Interestingly, asset misappropriation is also positively and significantly correlated with financial pressure and work pressure, with coefficient values of $r = 0.183$, $p = .008$, and $r = 0.201$, $p < .004$, respectively. Thus, it suggests that as financial pressure and work pressure levels increase, the tendency to commit asset misappropriation also increases. Another finding is that both financial pressure and work pressure are significantly correlated with all variables in this study, whereby the highest value is between these variables themselves with a coefficient value of $r = 0.563$, $p < .001$. This is followed by a correlation between these variables

and internal control, respectively, with a coefficient value of $r = 0.327$, $p < .001$ for financial pressure and $r = 0.372$, $p < .001$ for work pressure.

The positive correlations posit that greater levels of financial pressure and work pressure increase the probability of an individual rationalising his or her wrongdoings. According to Maji [52], the belief that cheating is common and acceptable causes rationalisation factors to emerge. Work pressure expressed in the form of pressure to uphold a positive reputation or be respected as a nice person, together with financial pressure, form a concrete motivation for one to rationalise that fraudulent actions can be tolerated.

Furthermore, both financial and work pressures are positively and significantly correlated with opportunity, with values of $r = 0.194$, $p = .005$, and $r = 0.179$, $p = .10$, respectively. According to Zahra, et al. [53], various industrial or work characteristics may independently, or in combination, pressure individuals to conduct fraud and create particularly appealing opportunities for those who intend to commit such acts. Therefore, work-related pressure seemingly makes the opportunity appear pleasing in the eyes of the wrongdoers, which perhaps worsens with the existence of financial pressure.

4.4. Regression Analysis

Table 5 shows the outcomes of regression analytical tests performed for the independent variables (i.e., financial pressure, work pressure, organisation culture, and internal control) and the dependent variable (i.e., tendency to commit asset misappropriation).

Table 5. Multiple regression analysis.

Variable	Unstandardised coefficients		Standardised coefficients	t	Sig.
	B	Std. error	Beta		
1 (Constant)	0.748	0.254		2.945	0.004
FP	-0.020	0.035	-0.330	-0.057	0.571
WP	-0.053	0.043	-0.072	-1.235	0.218
IC	-0.003	0.042	-0.004	-0.074	0.941
OC	0.609	0.040	0.785	15.255	<0.001
R ²					0.567
Adjusted R ²					0.558
Std. error					0.678

Table 5 displays a p-value of 0.001, indicating a significantly positive association between rationalisation and asset misappropriation. Thus, an increase in the former is linked to an increment in the latter element, thereby demonstrating how rationalisation in Federal Ministries could impact asset misappropriation. This result is in tandem with Yusrianti, et al. [18], in that rationalisation has a positive relationship with asset misappropriation tendencies in the public sector.

Contrarily, other variables included in this study, namely financial pressure, work pressure, and opportunity, are found to be not significant. Regarding financial pressure and work pressure, the results obtained are consistent with Aprilia [54], who argued that financial pressure has no effect on fraudulent activities. Diansari and Wijaya [55] also found that external pressure, measured by leverage, influences fraud incidents, whereas personal financial needs do not yield the same effect. The findings are, however, not in line with Yusrianti, et al. [18], as they highlighted a significantly positive relationship between pressure and the tendency to commit asset misappropriation. Based on the data collected, a majority of the respondents in the study do not have high levels of financial pressure and work pressure. This could be the reason for the insignificant findings in this study, thus rendering H1(a) and H1(b) to be rejected. Another possible explanation for the insignificant finding could be due to the interrelationship among the variables. For example, both financial pressure and work pressure report

significantly positive correlations with asset misappropriation while simultaneously yielding insignificant results in the regression analysis.

With respect to opportunity, the result of this study indicates that opportunity does not influence the tendency to commit asset misappropriation. This is in tandem with the findings of Yusrianti, et al. [18] that opportunity does not have a positive impact on asset misappropriation. According to Nold and Michel [56], opportunity is required in the Fraud Triangle Theory, but it is not sufficient for “high-level” criminal offences. The finding is, however, inconsistent with that of Siahaan, et al. [21]. Moreover, internal control has no effect on the influence of opportunity on asset misappropriation. In other words, even though an organisation has developed effective fraud prevention measures, it may experience breakdown due to management override and collusion if they are not properly understood and applied. Thus, H2 is rejected.

Overall, based on the R-square value stated in Table 5, the variables tested in this study could explain 55.8 percent of the variation in predicting the factors that contribute to asset misappropriation. Conversely, this also indicates that factors that are not addressed could contribute to the remaining 44.2 percent of the factors contributing to asset misappropriation among public officers in the Malaysian Federal Ministries. Thus, additional research might need to be undertaken to investigate the other variables.

5. DISCUSSION

The primary goal of this study is to investigate the association between pressure (i.e., financial and work), opportunity (proxied by weak internal control), and rationalisation (proxied by poor organisational culture) and the tendency to commit asset misappropriation in Malaysian Federal Ministries. This survey was generated based on 206 respondents from various departments across 25 Federal Ministries in Putrajaya. In summary, the outcomes of this study show only one independent variable, which is rationalisation, has a significant association with asset misappropriation. This implies that it is the most important element that influences the tendency to commit asset misappropriation in Malaysian Federal Ministries. A model was then constructed to look at asset misappropriation in the public sector in an emerging nation, and the strength of the Fraud Triangle Theory was assessed in view of the latter variable.

Additionally, the lack of preventative strategies for counter-action programmes that should be implemented to prevent asset misappropriation activities could be attributed to the weakness and ignorance of organisations. Hence, the Federal government needs to consider upgrades to asset misappropriation prevention programmes. This could be done, for example, by conducting sufficient asset misappropriation prevention courses and putting in place a standard requirement for a respectable degree of execution to ensure overall effectiveness and efficiency.

6. CONCLUSION

By examining the influence of Fraud Triangle Theory on the subject, this study investigated asset misappropriation in the public sector. Thus, it significantly contributes to the literature, particularly in the public sector. Furthermore, this study has various practical implications, from being a source of knowledge for formulating fraud prevention policies and asset misappropriation detection to strengthening the internal control systems in emerging nations.

Based on the findings generated in the regression analysis, it could be concluded that rationalisation influences the tendency for officers in the Malaysian Federal Ministries to commit asset misappropriation. Financial pressure and work pressure both show a significant correlation with the said tendency, but both variables, as well as the opportunity variable, yield insignificant results in the regression analysis, indicating that the inter-relationships among these tested variables may have influenced these factors. Arguably, asset misappropriation is a significant concern in Malaysia. Aside from the immediate impact of revenue loss, it can pose a negative influence on one's

morale and reputation. As previously discussed, even if the instances appear minor or insignificant, they will result in a massive waste of governmental resources if they remain neglected.

Finally, the efforts to curb asset misappropriation must be emphasised via training, rules, policy enforcement, and controls, which should all be combined to create a robust basis for preventing fraud. Nonetheless, the goal is not to replace existing anti-corruption efforts but to focus on neglected areas, i.e., to nurture and instill a strong organisational culture free from fraud. With this emphasis in place, it is hoped that the best remedy can be prescribed based on knowledge in order to strengthen the institutionalisation of government policies to combat fraud in the public sector. One also aspires to instill awareness that protecting the public sector's revenue and assets is a full-time job that every government servant should take seriously.

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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.

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APPENDIXES

Appendix A. Descriptive statistics for part B – Asset misappropriation.

Statement	Mean	Std. deviation	
B1-Using office facilities such as Internet services for personal purpose	2.966	1.865	1
B2-Using computer and printer at workplace for personal reason	2.500	1.631	2
B3-Taking office items such as stationaries back home for personal use	1.612	1.224	5
B4-Utilising office assets such as organisation's cars for personal reason	1.452	1.212	6
B5-Doing personal work during office hours	2.456	1.497	3
B6-Using organisation's money to purchase personal needs	1.306	0.992	10
B7-Making claims to the organisation which include personal expenses	1.350	1.038	7
B8-Breaching rules of the organisation related to asset usage	1.379	1.008	9
B9-Purposely making overstated claims such as medical or entertainment claims	1.330	1.025	8
B10-Using benefits given by the organisation for personal use	1.539	1.275	4

Appendix B. Descriptive statistics for part C – Financial pressure, work pressure, internal control, and Organisational culture.

Statement	Mean	Std. deviation	
C1-Since everyone has been using workplace items for personal use, I think that is a normal thing to do	2.316	1.544	24
C2-I have the intention of borrowing office assets and returning it when I am done with it	2.228	1.784	25
C3-With the amount of effort and work I do for the organisation; I believe the organisation did not compensate me enough	2.675	1.868	22
C4-I feel I am not being appreciated. Despite the high responsibility given to me at work, there is no appreciation from the organisation	2.723	1.844	21
C5-Although I use it for personal purpose, I am using the office assets for good purpose	2.379	1.835	23
C6-I feel there is nothing wrong in using office assets to help my family and friends who need the help	2.039	1.629	26
C7-I think there would be no loss incurred to the organisation if I use small amount of organisation resources and assets for my personal use, since I will return it	2.112	1.653	27
C8-By using the office assets, it could be counted as a reward for my hard work in the organisation	1.927	1.478	29
C9-It does not affect anyone when I am using office assets for personal use	2.029	1.592	28
C10-By having an intention to pay back the money or resource taken from the workplace, I believe it is normal to use the money first and pay it back later	1.670	1.324	30
C11-I face a lot of challenges in my work	3.961	1.826	17
C12-My work requires me to achieve the key performance indicator (KPI) that have been set by the organisation	4.733	1.778	11
C13-My work task difficulty is very high	4.214	1.674	13
C14-I am required to be multitasking in carrying out different tasks at	4.748	1.836	10

Statement	Mean	Std. deviation	
the same time			
C15-I am often not able to achieve my KPI and complete the task given	2.772	1.650	20
C16-Pressure at work always brings me tension and frustration in my emotion	3.432	1.916	19
C17-At times, I must reduce my expenditure on necessities to ensure my salary is enough until end of month	4.121	2.155	16
C18-There are situations where I am not able to pay for my family expenses since it's too expensive which exceeds my salary income	3.485	2.081	18
C19-I am accountable for my family expenditure	4.190	2.041	15
C20-The case of inflation that causes an increase in cost of living has put a lot of pressure on me	4.301	1.891	12
C21-For a complete document transaction, it is compulsory to obtain approval from accountable senior member	5.752	1.489	2
C22-Timing to record a business transaction must follow the time frame given	5.660	1.511	4
C23-Individual position, roles and responsibilities are clearly defined	5.665	1.485	3
C24-Appropriate segregation, monitoring and supervision of work are followed accordingly	5.568	1.436	6
C25-Rules and regulation, and guidelines of the organisation are properly documented and communicated to employees thoroughly	5.655	1.373	5
C26-Security cameras are installed to monitor all activities that takes place in the workplace	4.214	2.051	14
C27-Every transaction is properly recorded and documented	5.811	1.364	1
C28-A proper supervision is conducted for over usage of organisation facilities such as telephone and Internet connections	4.995	1.752	9
C29-Good physical control monitoring over asset usage in the workplace	5.252	1.563	8
C30-Proper monitoring conducted to ensure no employee taking advantage of medical certificates and other employee incentives given	5.558	1.486	7

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