



The Factors Affecting Employee Fraud in Thailand's Convenience Store Industry: An Application of the Fraud Triangle Theory

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ABSTRACT

This study aims to investigate employee fraudulent behaviors in Thailand's convenience store industry. Using the fraud triangle theory, three antecedents of employee fraud which are perceived pressure, perceived opportunity, and rationalization are predicted to explain why trusted employees turn themselves into perpetrators. More importantly, this research extends the theory by considering emotional exhaustion which is a workplace attitude that might moderate those predictors and acquire valuable insight to understand why those employees became trust violators. Data was obtained from 809 frontline employees who work in the world's leading convenience store chain in Thailand. The results from a partial least square (PLS) regression analysis confirmed that perceived pressure and rationalization have a positive association with fraudulent behaviors of frontline convenience store employees. Surprisingly, perceived opportunity was found to have a negative association with employee fraud. More importantly, the result from the moderating effect illustrated that the group of employees who have a higher level of emotional exhaustion tend to have higher levels of perceived pressure which in turn associated with a high level of employee fraud. The findings contribute additional evidence to the fraud triangle theory literature in the area of the convenience store industry in Thailand. It is suggested that the company consider proper human resource policies in terms of providing reasonable workloads to reduce work pressure, as well as equipping them with coping and reasoning skills, and providing sufficient support from the company to reduce emotional exhaustion. Advanced technologies that can identify unusual behaviors and transactions are also recommended to lessen the intention of employees to perpetrate embezzlement.

1. INTRODUCTION

Occupational fraud is one of the most remarkable problems that impede the sustainable growth of the company worldwide [1]. In Thailand's context, the country was ranked 101st out of 180 countries in 2022 Corruption Perceptions Index (CPI) [2]. This indicator also points out that Thailand's score (36) was below the global average (43). The result can be postulated that Thailand still facing a considerable level of corruption throughout the country. Among Thailand's business sectors, this study focuses on examining fraudulent behaviors of employees in the convenience store industry. This market represented 18 percent of all retail channels, making it the most important channel to Thailand's second-largest sector of GDP [3, 4]. Therefore, the deviant behaviors such as corruption and fraud of the employees in this industry will directly affect the prosperity of this market which in turn obstruct the productivity of the overall country. Recent research

revealed that retail sector literature pays much attention to the shoplifting behavior of customers while neglecting this kind of behavior from their employees [5]. Therefore, this research aims to investigate how companies understand the causes of these deviant actions by adopting a widely accepted theory in fraud literature – the fraud triangle theory [6], to examine this issue in the convenience stores industry in Thailand which has never been discovered before.

The fraud triangle consists of three antecedents that are the causes of employee fraud in the organization which are perceived pressure, perceived opportunity, and rationalization [7]. A recent metanalytic study of the fraud triangle discovered that these three elements usually occur at the same time when fraud is detected [8]. The perceived opportunity is one of the most influential factors that typically emerge in connection to employee fraud while the rationalization has a higher chance of being missing because the nature of the construct that difficult to assess

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[9]. Nevertheless, scholars and professionals agree that this theory is capable of identifying fraudulent behaviors of employees [8, 9]. However, the fraud behaviors of employees are more complex nowadays. A recent study by Kuo and Tsang [10] Indicated that only the fraud triangle model alone might not be adequate to track various types of occupational fraud. It is recommended to use a combination of other factors such as employee characteristics, organizational characteristics, employee work attitude, and employee behaviors to clarify these complicated acts. For example, the study of Ikurayeke, et al. [11] found that employee dissatisfaction influences workplace theft in the retail industry in Nigeria. Similarly, Korgaonkar, et al. [5] also indicate that job satisfaction and organizational commitment of employees negatively affect intention to steal. Moreover, Chen and Sandino [12] mentioned that the level of wages employees earn associated with the level of employee theft, and Thoms, et al. [13] also found that immediate turnover employees are more likely to steal assets from their employer. For these reasons, it is crucial to study the workplace-related factors that might influence fraudulent behaviors of employees in the convenience store sector that might lead to employee fraud actions. Among those factors, there are some important gaps in the literature that need to be investigated.

For the first gap, the existing research on fraud in the convenience store industry mainly focuses on the fraudulent behavior on the customer's side. However, there is a lack of research that investigates this deviant behavior on the employees' side [5]. There are numerous ways for employees to perform fraudulent behaviors in convenience stores ranging from monetary fraud such as stealing money or property that belongs to the workplace [5, 14] to non-monetary fraud such as bringing company assets to their home for personal usage [15]. This resulted in losses for both the company and society. Thus, it is important to fill this gap in the current fraud literature. Second, while the fraud triangle has wide acceptance from financial, accounting, and criminology scholars with a large number of evidence in the literature [8], it has less attention in human resource management and business administration areas, especially, in Thailand's convenience store industries. Thus, it is crucial to study this group of employees and provide insights in order to implement effective human resource policies and bring this issue under control. The findings of this research will provide essential empirical evidence for both literature and industry. Third, while most previous research focused solely on the original predictors of the fraud triangle theory which are perceived pressure, perceived opportunity, and rationalization, or workplace attitudes that may be associated with employee fraud, this study aims to investigate emotional exhaustion, a prevalent emotional stage caused by continuous stress from dealing with people in people-related work [16]. Employees who are

emotionally exhausted can produce negative impacts on the overall performance of the frontline operation, including fraudulent behaviors in the workplace. Recent research found that frontline employees with high levels of job stress tend to engage in unethical activities focusing on the organization such as utilizing company resources for personal advantages [17]. Therefore, this study proposed that emotional exhaustion tends to strengthen the employee's perceived pressure which in turn leads them to perform fraudulent actions. More importantly, this issue about the mechanism of how stress induces deviant behaviors in the workplace is still scarce in the current literature which makes this study add significant empirical evidence to the fraud triangle literature [17, 18]. Furthermore, this study will provide a recommendation for the company's management regarding the causes of fraudulent behaviors of employees together with suggestions for the management to establish a proper strategic plan and human resource policies for alleviating those deviant actions and consequences, as well as promoting their positive attitudes and behaviors toward the company. The expected benefits of these research findings which aim to reduce negative and promote positive work attitudes, work behaviors, and well-being of employees also align with the Sustainable Development Goals (SDG) in the following areas: Good Health and Well-being (SDG3), Decent Work and Economic Growth (SDG8), Peace, Justice and Strong Institutions (SDG 16), and the recommendation of this research also supports Zero Hunger (SDG2) goal.

2. LITERATURE REVIEW

2.1. Fraud Triangle Theory

The theory was developed from the idea of Cressey [6] in the investigation why trusted persons turn themselves into the perpetrators. This concept believed that the majority of the individuals had a prior legal life. Then, some of them may be involved in an incident that results in a personal financial obligation, which could motivate them to violate organizational trust to solve their non-shareable financial problem [19]. From these principles, Albrecht [7] continuously investigated workplace fraud and found three factors congruent with the previous idea of Cressey [6] and Cressey [19] which are perceived pressure, perceived opportunity, and rationalization. Albrecht [7] later described this ideology as a "fraud triangle". This theory explains how individuals turn themselves from trusted persons into trust violators. Recent research revealed that in order to commit fraud, those three factors usually occur at the same time [8]. Furthermore, previous research indicated that there is no single definition for the three elements of the fraud triangle [8, 20]. The interpretation may alter depending on the industry on which the study focuses.

To date, this theory is not only applicable to the field of accountants and auditors but also currently uses in a variety of areas such as students' online examination fraud in Jordan [21], fraud among computer professionals with financial responsibilities in the United States [22], fraudulent behavior of bank employees who are in the stage of losing their job [23], fraudsters in the automotive company in Malaysia [24], and employee fraud in New Zealand's retail industry [25].

2.2 Perceived pressure and employee fraud in the convenience store industry

The first element of the fraud triangle theory is perceived pressure. It refers to the stage which individuals confront a financial burden that cannot be shared, and which has to be solved in a private manner [6]. Generally, this concept can be categorized into two types which are financial pressure and non-financial pressure [26].

For financial pressure, the sources of pressure may come from personal such as living lifestyle, gambling, drinking, and family emergencies. Next, employment pressure, including continuous compensation structure, management's financial interest, unworthy wages, and external pressure refers to a financial requirement or goal created by an outside organization. For instance, debt covenant (the conditions set by the lender that the borrower must comply with), and expectation from the market [27].

Apart from the financial pressure, Albrecht, et al. [26] indicated that pressure may also come from non-financial factors, the pressure that is not related to actual monetary issues. For example, the need to overstate the performance better than the actual, the challenge to beat the system, and facing work-related frustration. Both financial and non-financial factors can motivate persons to perform fraudulent behaviors in the workplace.

In the convenience store industry, frontline staff have to be responsible for company rules and regulations and deal with massive amounts of clients [28]. These obligations are the source of non-financial factors that elevate employees' pressure. For financial pressure, convenience store employees were regarded as one of the lowest-paying jobs, with limited access to other benefits such as healthcare and other types of leave, including public and religious holiday leave, holiday leave, casual leave, and sick leave [29]. They are typically paid the minimum salary and receive minimum benefits. Therefore, these exacerbate the financial pressure of employees which in turn leads to workplace embezzlement. Previous studies have also demonstrated that both financial and non-financial pressure can cause employees to engage in embezzlement. Othman and Ameer [25] examined the fraud behaviors of employees in New Zealand's small business. The findings indicated that the financial pressure from family, immorality, and extravagant lifestyle were the sources of fraudulent activities. Next, Kalovya [30] investigated

various occupations in Tanzania that experienced fraud cases in the organization. The results showed that financial pressure was a significant predictor of fraud losses in the company. Moreover, Jiang [22] found that employees in financial firms who encounter a high level of work pressure tended to commit fraud. Similarly, Tu, et al. [18] found that the group of salespersons in Indonesia who possess a high level of job stress were influenced to perpetrate deviant behaviors more than the lower group. Thus, the perceived pressure of frontline convenience store employees will have a positive association with employee fraud.

Hypothesis 1: Perceived pressure of frontline convenience store employees has a positive association with employee fraud.

2.3 Perceived opportunity and employee fraud in the convenience store industry

The perceived opportunity is a second element of the theory. It refers to the opportunity for someone in a position of trust to take advantage of that trust to solve their financial problem [31]. To begin their fraudulent actions, fraudsters must see the possibility of committing fraud [26]. If the company has an ineffective board of directors and inadequate internal control such as a lack of a system to detecting misleading behaviors, allowing employees to conceal their unethical actions behind complicated transactions or other parties, these aspects grant perpetrators a great chance to conduct immoral acts without being caught [26, 32]. Perpetrators may utilize particular job knowledge to exploit a vulnerable area and conduct fraud [20]. Moreover, of those three criteria of the fraud triangle, opportunity is the only one that can be seen and controlled by the organization [33]. Therefore, it is important to understand the opportunities for fraud in order to prevent immoral activities from offenders [34].

In our research context, convenience store frontline staff has plenty of opportunities to engage in fraud. Generally, employees at the convenience store have a duty as a frontline (e.g. dealing with customers, organizing shelf display, cashier, and product delivery) and at the store's back office (e.g. stock management, and product disposal) [35]. These situations provide them with an opportunity to be exposed to financial and non-financial fraud. A previous study of [10] indicated various schemes of fraud in the retail industry. One of the most common types of financial fraud is point-of-sale (POS) fraud committed by cashiers. They can profit by changing the price tag from low to high and earning from the difference, reporting the quantity lower than the actual sale, or using an available discount for the bill that customers pay at the normal price and keeping the difference for themselves, or canceling the payment and not putting the money into the cash register. For non-financial fraud, employees may have an opportunity to steal expired products that need to be

disposed of, or to steal products that exceed the store's revenue on that day and not report in the system. Thus, there are plenty of possibilities for convenience shop staff to engage in fraud. Previous research has supported the idea that perceived opportunity is associated with acts of fraud. For example, the research of Almalki [36] found that opportunity was the strongest factor that predicting employees' fraudulent behaviors in the UK retail industry. Additionally, The investigation of fraudsters in Malaysia's financial institutions. The results strongly demonstrated that the opportunity factor was the greatest predictor of fraud tendency [37]. Moreover, Machado and Gartner [38] studied corporate fraud in Brazilian banking institutions, the results indicated that all predictors of the fraud triangle including perceived opportunity were significantly associated with employees' fraudulent acts. For all these reasons, the perceived opportunity of frontline convenience store employees will have a positive relationship with employee fraud.

Hypothesis 2: Perceived opportunity of frontline convenience store employees has a positive association with employee fraud.

2.4 Rationalization and employee fraud in the convenience store industry

The third aspect of the fraud triangle is rationalization which refers to the stage that "individuals rationalize their behavior in order to reduce the negative emotion they experience by doing something contrary to societies or their own beliefs" [39]. This ability allows perpetrators to justify their thoughts to accept their dishonest conduct. Most fraudsters admitted that they realized what they were doing was illegal at all times but they just "kidded themselves" or pretended that this was not illegal [6]. The moral disengagement theory may explain why fraudsters believe that their illegal actions are reasonable by disengaging their moral and self-sanction from this deviant behavior [40]. Then, they expect undesirable consequences regardless of whether they are caught. If the cost of conducting fraud exceeds the benefits, they will not commit fraud. On the other hand, if the benefits outweigh the cost, they will engage in fraudulent behaviors [41]. Moreover, the first-time perpetrators may justify in a different approach. In other words, they might describe themselves as victims of unfortunate circumstances as they have no previous criminal history [20].

In particular, fraud in the convenience industry was discovered for many decades [42]. Comparing the value of fraud, convenience store employees may perceive that fraud within the convenience store is acceptable in light of today's dishonest world [42]. Especially, for non-financial fraud such as consuming near-expired food that must be discarded on a regular basis. Employees may contend that they did not jeopardize the store's financial viability while ignoring the potential hazards of food poisoning that may

be contained in the products and harm themselves and others. In addition, time corruption is caused by the store manager's or company's poor workload management, allowing some of their employees to spend time doing nothing while others work harder than their colleagues [43, 44]. This could cause those hardworking employees to rationalize that since they work harder than others, they must also earn more. This might be a reasonable reason to commit fraud. This study hypothesized that the rationalization of convenience store staff members would be related to their fraudulent behaviors. There are evidence that confirm the relationship between the rationalization of employees and employee fraud in the literature. For instance, Muhandisah and Anisykurlillah [45] examined fraud in real estate and construction companies in Indonesia. The result showed that rationalization predicted financial statement fraud within the company. In addition, Bicer [46] investigated students' fraudulent activities in Istanbul, Türkiye. In their study, rationalization was discovered to be a significant predictor of cheating behaviors. Furthermore, the study of online offenders in Ghana confirmed that rationalization was a significant predictor of romance fraud [47]. Therefore, the authors expected a positive relationship between the rationalization of frontline convenience store employees and employee fraud.

Hypothesis 3: Rationalization of frontline convenience store employees has a positive association with employee fraud.

2.5 The moderating role of emotional exhaustion on the relationship between perceived pressure and employee fraud in convenience store industry

Emotional exhaustion is defined as a state in which "a person gets overly involved emotionally, overextends him or herself, and feels overwhelmed by the emotional demands imposed by other people" [48]. This condition makes individuals feel emotionally drained and unable to recover at the moment in time. This results in poor performance for the firm including absenteeism, turnover intention, and lower job performance [49]. In particular, emotional exhaustion represents a major factor in an entire burnout process [50]. Persons who experience a high level of emotional exhaustion tend to disengage from the activity that they are responsible for and lose their sense of achievement in their duties [51]. For this reason, the company needs to be concerned since there are consequences that are adverse for the organization. Emotionally exhausted employees tend to experience a variety of negative physical and psychological consequences such as subjective distress, health disorders for instance, high levels of blood pressure, upset stomach, tense muscles, colds, and headaches [48, 52]. Apart from the negative effect on individuals, these employees have an impact on the organization as well, including absenteeism,

turnover intention, and poor job performance [53]. The cause of exhaustion literally came from chronic stress from dealing with people in people-related work [54].

In particular, frontline staff of convenience stores are vulnerable to emotional exhaustion. Because of the nature of their work, they must comply with both company regulations and engage with clients [55]. For company regulations, they must obey the regulations and procedures established by the executives and the government [56]. For example, they are expected to always provide customers with pleasant emotions, regardless of how they actually feel inside. Employees whose personalities are compatible with this rule may not experience any unpleasant feelings. On the other hand, employees whose characteristics are inconsistent with this regulation may be forced to portray something that contradicts their actual emotions which causes them an emotionally exhausted [57]. For dealing with clients, convenience store's frontline employees have to interact with a large number of customers daily. These high levels of workload may impair their ability to comply with corporate regulations for customers. In particular, convenience store customers are quite demanding, and this made it hard for convenience store employees to display positive emotions as the company expected [58, 59]. These responsibilities of convenience store frontline employees inevitably expose them to an emotional exhaustion stage. Apart from their current duties, convenience store staff also face a tremendous challenge from the declining numbers of customers who visit brick-and-mortar stores due to the rise of e-commerce and online shopping. Thus, convenience store employees not only serve customers within the store but also have to focus on the online channels as well. Their duties expand to the outside of the store by delivering the products to customers at their home [60]. These increased workloads may be the additional source of stress that causes them emotional exhaustion.

It is obvious that emotional exhaustion yields a negative effect on the company [49, 61]. However, this study focuses on one of the most detrimental effects that has received little attention in convenience store literature, how emotional exhaustion moderates the relationship between perceived pressure and convenience store employee fraud. Convenience store frontline employees whose emotions are entirely depleted are those who have been subjected to prolonged stress at work. Particularly, if these individuals also have personal financial troubles, they are having horrible times at both work and in life. As a result, the stress from work can amplify their personal tension, making them more likely to become the perpetrators. Recent research support our hypothesis that employees with a higher level of emotional exhaustion may have a higher pressure which in turn committing more fraud compared to the lower group. The study of Choi and Heo [62] demonstrated that persons with financial difficulty tend to perceive more emotional exhaustion by illustrating

the positive relationship between financial constraints and emotional exhaustion. In addition, Jawahar, et al. [63] also showed that financial anxiety has a positive association with emotional exhaustion, resulting in lower job performance at all levels of employees. Furthermore, Hutchins [64] indicated that university faculty members who encounter high levels of emotional exhaustion tended to experience an imposter phenomenon which is the fraudulent thought that led person to be an imposter. All these supports lead to the following hypothesis.

Hypothesis 4: Emotional exhaustion positively moderates the positive association between perceived pressure and employee fraud such that the positive effect of perceived pressure on employee fraud is stronger among convenience store employees with higher emotional exhaustion.

3. METHODS

3.1 Target population and sample selection approach

The research context of this study is the world's leading convenience store chain in Thailand. The company currently employs 167,401 people, with more than 100,000 employees working as frontline staff. This study focuses solely on the front-line employees at convenience stores who could engage in fraud due to the nature of the work providing access to both monetary and non-monetary assets of the stores. This makes this population appropriate for our investigation. To date, the company has over 14,000 branches throughout the country and every member of the frontline staff works in shifts. Due to these work characteristics, it seemed impossible to approach them in time. Thus, the online channel is the most practical solution for collecting data. For the sampling method, the authors decided to use snowball sampling to gain access to these frontline employees. Recent research suggested that this method is acceptable when facing the hard-to-reach population [65], making snowball sampling appropriate for this study.

3.2 Data collection procedure

For the data collection procedure, we first got approval from the institutional review board (COA: ECNIDA 2023/0080). Then, we obtained permission to gather the data from the manager or supervisor in charge of the store's front-line staff. After we received approval, the data collection was administered by the co-author, who had extensive experience both working as a frontline employee at the convenience store and as a trainer in this industry. The questionnaire was created by Google Form. Next, our co-author sent the invitation message, the URL, and the QR code of the survey to the social media platform called the LINE application to invite them to participate in the online questionnaire. The message will be posted in the LINE group that employees normally use for

communicating their work and non-work issues. The initial 100 frontline employees were contacted by our co-investigator. After they completed the surveys, they were asked to forward the URL and QR code of the questionnaire to their colleagues. The data collection took place from late June 2023 to early July 2023. After this period, we got 809 completed questionnaires. The demographics of the participants are shown in Table 1.

Table 1. Demographic of the respondents

Variables	Descriptive statistics
Gender	Male: 26.82% Female: 63.41% LGBTQ+: 9.39%
Age (in year)	Mean: 23.66
Job position	Employee: 67.37% Assistant manager: 19.04% Senior assistant manager: 0.49% Manager: 12.48%
Educational level	Below bachelor's degree: 30.90% Bachelor's degree: 68.23% Master's degree and above: 0.49%
Marital status	Single: 86.65% Married: 6.67% Other: 5.93%
Job tenure (in year)	Mean: 4.26

3.3 Measures

Perceived pressure, perceived opportunity, rationalization, and employee fraud were measured by the questionnaires developed by Owusu, et al. [66]. The questions consist of 8 items for perceived pressure, 7 items for perceived opportunity, 8 items for rationalization, and 6 items for employee fraud using five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). The samples of the questions are “My work pressure is high”, “Every transaction done has sufficient documentation and approval”, “I think I am underpaid with the amount of responsibility given to me” and “Sometimes, I use the internet service of the office for personal purposes”.

Emotional exhaustion was measured by Maslach Burnout Inventory (MBI). the questionnaires developed by Maslach and Jackson [67]. The questions consist of 5 items using five-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree). The samples of the questions are “I feel emotionally drained from my work.” and “I feel used up at the end of the workday”.

The study includes control variables that might affect the employee fraud of convenience store frontline employees. These factors are gender (measured by male=1, female=2, LGBTQ+=3), age (measured by actual age in

years), job position (measured by employee=1, assistant manager=2, senior assistant manager=3, manager=4), educational level (measured by below bachelor's degree=1, bachelor's degree=2, master degree and above=3), marital status (measured by single=1, married=2, other=3), and job tenure (measured by actual work experience in years).

3.4 Data analysis

The study analyzes data using partial least square structural modeling (PLS-SEM) since this technique provides numerous benefits that apply to the data in this study. First, it included a variety of statistical methods for data analysis. For instance, path analysis, multiple regression analysis, and validity and reliability testing. Second, due to its resampling technique, PLS-SEM performs well with small sample sizes, producing more robust results. PLS-SEM can handle non-normal data that may appear in the findings. Furthermore, it is compatible with a complex conceptual model that has both moderating and mediating effects, such as this research [68]. The WarpPLS program was used to perform PLS-SEM estimation for this study.

4. RESULTS

This section consists of two parts. The first part is the data quality tests which include validity, reliability, multicollinearity, data normalization, and the common method variance (CMV). Next, the second part of this study is the results from PLS-SEM analysis. This part will cover the results from hypotheses testing and control variables. The details will be presented in this section.

4.1 Data validity and reliability

The quality of the data needs to be ensured before analyzing the results. For validity, first, convergent validity was examined by factor loadings. The results in table 2 indicated that all indicators have values above 0.5 thresholds except two items from the rationalization variable (RAT4 & 5) which had been removed from the analysis. Therefore, other items of this model measure what it was intended to measure [69]. Thus, convergent validity is acceptable. Next, discriminant validity was investigated by the average variance extracted (AVE). According to Fornell and Larker [70] suggestion, the square of the average variance extracted from a particular variable has to be higher than other variables it involved. The results revealed that all variables met this requirement. This finding is reported in table 3.

In addition to the AVEs, this study assessed the quality of discriminant validity by using the heterotrait-monotrait (HTMT) ratios. Henseler, et al. [71] recommended that the HTMT value must be less than 0.9 to confirm that the scales have a quality of discriminant validity. The results indicated that all HTMT ratios pass the threshold. This means the quality of discriminant validity is acceptable. The results are presented in table 4.

Table 2. Factor loadings

	PRES	OPP	RAT	FRAUD	EMOX
PRES1	(0.764)	-0.046	-0.061	-0.006	0.231
PRES2	(0.540)	0.181	0.027	-0.247	-0.067
PRES3	(0.699)	0.004	0.087	-0.195	0.170
	PRES	OPP	RAT	FRAUD	EMOX
PRES4	(0.815)	0.003	-0.100	-0.056	0.352
PRES5	(0.813)	0.055	0.033	-0.061	-0.052
PRES6	(0.805)	0.000	-0.011	0.127	-0.251
PRES7	(0.669)	-0.081	0.092	0.114	-0.271
PRES8	(0.676)	-0.085	-0.039	0.282	-0.178
OPP1	0.081	(0.686)	-0.041	-0.007	0.131
OPP2	0.054	(0.777)	0.044	-0.038	-0.002
OPP3	0.178	(0.765)	-0.014	-0.217	-0.009
OPP4	-0.110	(0.734)	0.017	0.169	-0.138
OPP5	-0.091	(0.853)	-0.030	0.113	-0.040
OPP6	-0.060	(0.866)	-0.081	0.102	-0.025
OPP7	-0.030	(0.758)	0.117	-0.143	0.099
RAT1	0.223	-0.302	(0.633)	-0.075	0.023
RAT2	0.085	-0.053	(0.744)	-0.072	-0.176
RAT3	0.465	-0.149	(0.672)	0.068	-0.034
RAT6	-0.398	0.164	(0.555)	0.167	0.075
RAT7	-0.165	0.208	(0.605)	-0.041	0.197
RAT8	-0.274	0.159	(0.713)	-0.018	-0.030
FRAUD1	-0.047	0.004	-0.005	(0.823)	0.037
FRAUD2	0.049	-0.067	-0.044	(0.897)	-0.098
FRAUD3	-0.064	0.082	0.040	(0.716)	0.274
FRAUD4	0.046	-0.003	0.017	(0.896)	-0.155
EMOX1	-0.001	0.011	-0.046	0.085	(0.814)
EMOX2	-0.016	0.094	0.057	-0.028	(0.855)
EMOX3	-0.028	0.129	0.004	-0.038	(0.888)
EMOX4	0.023	-0.149	0.061	-0.058	(0.852)
EMOX5	0.024	-0.089	-0.078	0.044	(0.859)

Note: PRES=Perceived pressure, OPP=Perceived opportunity, RAT=Rationalization, Fraud=Employee fraud, EMOX=Emotional exhaustion

For reliability, we examine both Cronbach's alpha and composite reliability. The results from Cronbach's alpha coefficient and composite reliability showed that all variables pass the minimum requirement of 0.7 [72] which means the result from each indicator always yields the

same result. This means all constructs of this research are reliable. Results are presented in table 5 below.

Table 3. The average variance extracted (AVE)

	PRES	OPP	RAT	FRAUD	EMOX
PRES	(0.728)	0.199	0.614	0.279	0.571
OPP	0.199	(0.779)	0.364	-0.181	-0.091
RAT	0.614	0.364	(0.657)	0.280	0.461
FRAUD	0.279	-0.181	0.280	(0.836)	0.388
EMOX	0.571	-0.091	0.461	0.388	(0.854)

Note: PRES=Perceived pressure, OPP=Perceived opportunity, RAT=Rationalization, Fraud=Employee fraud, EMOX=Emotional exhaustion

Table 4. HTMT ratio

	PRES	OPP	RAT	FRAUD	EMOX
PRES					
OPP	0.258				
RAT	0.765	0.458			
FRAUD	0.353	0.209	0.373		
EMOX	0.631	0.141	0.573	0.454	

Note: PRES=Perceived pressure, OPP=Perceived opportunity, RAT=Rationalization, Fraud=Employee fraud, EMOX=Emotional exhaustion

Table 5. Cronbach's alpha and composite reliability

	PRES	OPP	RAT	FRAUD	EMOX
Cronbach's alpha	0.870	0.891	0.733	0.854	0.907
Composite reliability	0.899	0.915	0.818	0.902	0.931

Note: PRES=Perceived pressure, OPP=Perceived opportunity, RAT=Rationalization, Fraud=Employee fraud, EMOX=Emotional exhaustion

For multicollinearity, the full variance inflation factor (VIF) is expected not to be higher than 3.3 [73]. The results indicated that the full VIF ranged from 1.044 to 2.540. This means there are no variables that are highly correlated to each other in both vertical dimensions (predictor-to-predictor) and lateral (predictor-to-criterion) dimensions. Thus, multicollinearity is not a serious issue in this model. The findings are reported in table 6.

For data normalization, the Jarque-Bera test of normality were used for the analysis of normality of the data. The results demonstrated that most variables are not normally distributed which make PLS-SEM perform best. The results are shown in table 7.

Table 6. Multicollinearity

Variables	Full VIF
PRES	2.166
OPP	1.640
RAT	2.035
Variables	Full VIF
FRAUD	1.339
EMOX	2.165
AGE	2.467
GEN	1.044
MAR	1.036
EDU	1.260
POS	2.008
TEN	2.540

Note: PRES=Perceived pressure, OPP=Perceived opportunity, RAT=Rationalization, Fraud=Employee fraud, EMOX=Emotional exhaustion, AGE=Age, GEN=Gender, MAR=Marital status, EDU=Educational level, POS=Job position, TEN=Job tenure

Table 7. Data normalization

Variables	Normal-JB	Normal-RJB
PRES	Yes	Yes
OPP	No	No
RAT	Yes	Yes
FRAUD	No	No
EMOX	No	Yes
AGE	No	No
GEN	Yes	No
MAR	No	No
EDU	No	No
POS	No	No
TEN	No	No

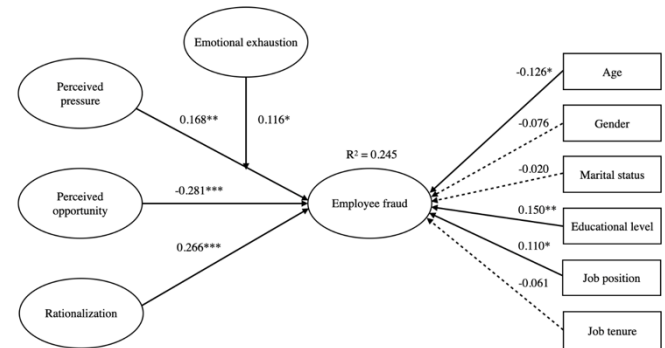
Note: PRES = Perceived pressure, OPP = Perceived opportunity, RAT=Rationalization, Fraud = Employee fraud, EMOX = Emotional exhaustion, AGE = Age, GEN = Gender, MAR = Marital status, EDU=Educational level, POS = Job position, TEN = Job tenure, JB = Jarque-Bera, RJB = Robust Jarque-Bera, Yes=Data is normal, No = Data is non-normal

Lastly, the common method variance (CMV) was examined due to this issue might appear in the cross-sectional data collection. The result from Harman's one-factor solution accounts for 24.54 % which is below the

fifty percent threshold [74]. This means the CMV is not concerned in this study.

4.2 Hypotheses testing results

After the quality of data was confirmed, they are eligible to be used for the analysis. This study proposed 4 hypotheses. The results from the PLS-SEM analysis illustrated that 3 of 4 hypotheses are statistically significant. The results are presented in figure 1. The details of each hypothesis will be discussed in this section.

**Fig. 1. The results from hypotheses testing.**

Note: *, **, *** indicate the p-value is below 0.05, 0.01, and 0.001 respectively.

Hypothesis 1 suggested that the perceived pressure of frontline convenience store employees has a positive association to employee fraud. The results showed a positive relationship between perceived pressure and employee fraud. This indicates that convenience store frontline staff who possess high levels of perceived pressure tend to have higher levels of employee fraud. This hypothesis is statistically significant ($\beta=0.168$, $p=0.002$). Thus, hypothesis 1 is supported.

Hypothesis 2 suggested that the perceived opportunity of frontline convenience store employees has a positive association with employee fraud. The results showed a negative relationship between perceived opportunity and employee fraud. This indicates that convenience store frontline staff who have high levels of perceived opportunity tend to have lower levels of employee fraud. This hypothesis is statistically significant ($\beta=-0.281$, $p<0.001$). Thus, hypothesis 2 is not supported.

Hypothesis 3 suggested that the rationalization of frontline convenience store employees has a positive association with employee fraud. The results showed a positive relationship between rationalization and employee fraud. This indicates that convenience store frontline staff who have high levels of rationalization tend to have higher levels of employee fraud. This hypothesis is statistically significant ($\beta=0.266$, $p<0.001$). Thus, hypothesis 3 is supported.

Furthermore, the relationships of hypotheses 1, 2, and 3 account for approximately 24.5% ($R^2=0.245$) of the model.

Hypothesis 4 suggested that emotional exhaustion positively moderates the positive association between perceived pressure and employee fraud such that the positive effect of perceived pressure on employee fraud is stronger among convenience store employees with higher emotional exhaustion. The results showed a positive moderation of emotional exhaustion on the positive relationship between perceived pressure and employee fraud. This indicates that the convenience store frontline staff who have higher levels of emotional exhaustion tend to perceive higher levels of perceived pressure which in turn leads to higher levels of employee fraud. Thus, hypothesis 4 is supported. The detail of the moderating effect is presented in figure 2.

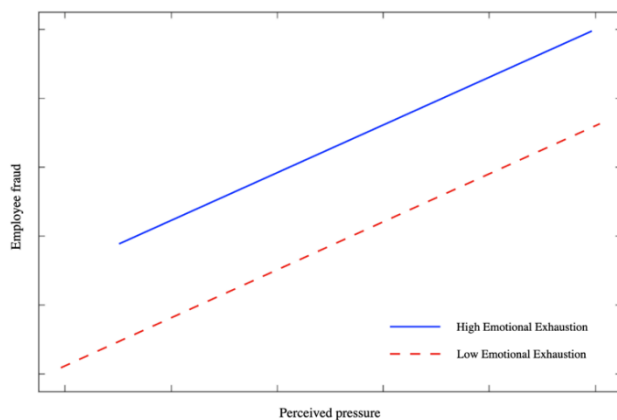


Fig. 2. The moderating effect of emotional exhaustion on the relationship between perceived pressure and employee fraud.

According to figure 2, the bold and dashed line refers to the employee group that has a higher and lower level of emotional exhaustion respectively. This graph explicitly demonstrates that convenience store frontline employees with a higher level of emotional exhaustion experience more perceived pressure, which results to a higher level of employee fraud as compared to another group.

This research also investigated control variables that might affect employee fraud. Most control variables have a negative relationship with employee fraud including age ($\beta=-0.126$, $p=0.017$), gender ($\beta=-0.076$, $p=0.101$), marital status ($\beta=-0.020$, $p=0.369$), and job tenure ($\beta=-0.061$, $p=0.155$). However, the rest of the control variables including educational level ($\beta=0.150$, $p=0.006$) and job position ($\beta=0.110$, $p=0.032$) have positive relationships with the dependent variable. More importantly, the results illustrated that only age, educational level, and job position have a significant association with employee fraud. In sum, the results from partial least square structural equation modeling (PLS-SEM) were summarized in table 8 below.

Table 8. Hypotheses testing results

Hypotheses	Results
Hypothesis 1	Supported
Hypothesis 2	Not supported
Hypothesis 3	Supported
Hypothesis 4	Supported

5. DISCUSSION AND CONCLUSION

This research aims to investigate the fraudulent behavior of convenience store frontline employees by using the fraud triangle. This theory indicates that perceived pressure, perceived opportunity, and rationalization are the predictors of employee fraud in the organization [26]. The results indicated that two predictors, perceived pressure and rationalizations, were positively associated with employee fraud. It can be interpreted that personal pressure on employees can induce them to commit fraud within the convenience store. Moreover, the ability to rationalize the fraudulent behavior of convenience store employees influenced them to neutralize deviant behavior and lead them to commit embezzlement. This is congruent with the previous study of [8] who summarized the research articles using the fraud triangle to detect fraud in the organization. The metanalytic results of 33 studies showed that most research reported perceived pressure and rationalization have a positive relationship to employee fraud. In addition, the results were consistent with the findings by Davis [75], who investigated the fraudulent behaviors of employees in the small retail business. The findings supported that the fraud triangle theory's element, which includes perceived pressure and rationalization, is the cause of employee fraud.

Furthermore, the findings did not support the presence of a positive association between perceived opportunity and employee fraud. Surprisingly, a negative association was discovered. The result of how perceived opportunity negatively related to employee fraud contradicted the findings of most research that showed perceived opportunity as a common antecedent of employee fraud [8]. This suggests that the more fraud opportunities people have, the less likely they are to engage in such deviant behaviors. Although this result opposed both our hypothesis and the previous research, but it still makes sense in the context of our respondents who work for the world's leading convenience store chain in Thailand. The reasons for this reversed finding might be the strict regulations, severe punishment, and the fraud protection technology from the company. For regulation and punishment, the company has a procedure for store managers to brief their teams on what is not permitted in the store on a daily basis. The store managers must sign their names every day to confirm that they are adhering to

this stringent guideline. More importantly, the company clearly states the only punishment for such deviant behaviors is the termination of employment. The fraudsters who are terminated still must be responsible for the damages and any other burdens that they have with the company. Apart from rigid rules and regulations, this convenience chain has been equipped with advanced technology to detect fraud. This may lessen the motivation of the potential fraudsters who disengage any behaviors that might be detected by this innovation. This argument is consistent with the study of Chen [76] who stated that groundbreaking innovations such as blockchain technology revolutionize the efficacy and accuracy of prevention and detection, which in turn drastically reduces the source of fraud in the fraud triangle theory.

In particular, this reversed association between perceived opportunity and employee fraud in this research context can be explained by the social cognitive theory [77]. Generally, social cognitive theory was described as “a psychological perspective on human functioning that emphasizes the critical role played by the social environment on motivation, learning, and self-regulation” [78]. This theory explains how a person’s behavior is affected by their thoughts and outcomes. The core factors of this theory are perceived self-efficacy and outcome expectancy. For the first factor-perceived self-efficacy, individuals who possess a strong self-efficacy have a high confidence in achieving their tasks and surpassing any obstacles. They feel that they can control the situation even if there are constraints in the environment [79]. Next, outcome expectancy is the perception of possible consequences of one’s action. Schwarzer and Luszczynska [79] also mentioned that persons would be concerned about positive or negative consequences, the area of the aftereffect, and the duration in a short or long-term period. Thus, in this study setting, it can be explained that stringent regulations and punishments, along with high-tech fraud-detective systems, can drastically reduce employee self-efficacy to commit fraud even when an opportunity exists. Given the potential negative consequences, it may not be worth confronting the well-prepared fraud control system of the world’s largest convenience store chains. This finding might be a substantial contribution to the convenience store and retail sector to enforce their regulation together with continuously upgrading their fraud control technology to reduce fraudulent behaviors on the most influential factor – perceived opportunity.

This study also examined the effect of emotional exhaustion and how it moderated the positive relationship between perceived pressure and employee fraud. The finding found a positive moderating effect which can be inferred that it strengthens the main effect which could lead employees to commit more fraudulent behavior in the workplace. Figure 2 apparently indicates that employees with high emotional exhaustion experience more pressure,

which leads to higher employee fraud than those with low emotional exhaustion. This finding coincides with previous research of Choi and Heo [62] who demonstrated that persons with financial constraints also have high levels of emotional exhaustion. Moreover, Hutchins [64] discovered that persons with a high degree of fraudulent thought also reported a high level of emotional exhaustion. Similarly, Golparvar, et al. [80] also reported that employees who experienced high levels of stress exhibited higher emotional exhaustion, which promoted deviant behaviors among employees.

Regarding the control variables, age, educational level, and job position are three of the six that have a statistically significant relationship with employee fraud. Firstly, age has a negative association with employee fraud. This indicates that senior workers are less likely to engage in dishonest activity at work. On the other hand, younger employees have a higher rate of embezzlement in the store. This finding congruenced with the study of Lewicki, et al. [81] who found that older employees are more honest than younger employees and associated with less deviant actions. Furthermore, Baumane-Vītoliņa, et al. [82] also reported that older-generation employees in the retail industry have higher honest behaviors than younger generations. Secondly, there is a positive relationship between educational level and employee fraud. This implied that employees with a higher educational level are also more likely to perpetrate fraud than those with a lower educational level. This supported by the research of Peltier - Rivest and Lanoue [83] who reported that even employees with higher educational levels are eligible to discriminate what is right or wrong. However, in a business context, their self-interest can induce them to perform fraudulent behavior with a complex fraud scheme resulting in massive losses to the organization. Lastly, job position also has a positive relationship with employee fraud. This means a higher rank of employees is the group that conducts fraud more than those with a lower rank. This refers to the possibility that high-ranking staff members could bring significant losses from embezzlement since they have better access to the company’s resources. They might utilize their position’s authority to override the control, making it easier for them to perpetrate fraud. Again, this issue was supported by the study of Peltier - Rivest and Lanoue [83] who investigated the employees’ characteristics that related to fraudulent behavior. One of the traits of perpetrators is their position in the company. The finding illustrated that persons who have authority increased the opportunity to commit fraud because they could override or bypass a firm’s internal control more easily than those who are not in the position. Similarly, Zahari, et al. [84] studied embezzlement in public organizations in Malaysia. The findings showed that the executive level of the company engaged in a variety of fraudulent behaviors linked to both financial and non-

financial matters, including taking office supplies and equipment, abusing their position of authority for personal benefit, and performing non-work-related responsibilities. Moreover, the model does not find a significant relationship between the control variables of gender, marital status, and job tenure. This means the variance of these characteristics have no effect to employee fraud in this study.

5.1 Theoretical contributions

This study extended the fraud triangle theory by demonstrating the working condition that intensify employees' perceived pressure which in turn made them commit fraudulent behaviors together with several academic contributions to current literature.

First, there is a lack of evidence in human resource management and business administration areas, especially in the convenience store industry sector in Thailand. This study fills this gap by providing additional insights regarding how frontline employees at convenience stores commit fraud.

Second, this is the first study that discovered the moderating effect of emotional exhaustion on the perceived pressure and employee fraud relationship in the convenience store industry context. Generally, previous research reported that perceived pressure is the most influential factor of employee fraud in developing countries [85]. Emotional exhaustion, which is the chronic stress from people-related work, was found to be a major factor that intensifies perceived pressure which is a personal financial problem of convenience store employees. The employees group that had a high level of emotional exhaustion explicitly had a higher level of perceived pressure which in turn led them to conduct higher fraud in convenience stores. In sum, emotional exhaustion plays as a work-related stress and perceived pressure represents a personal-related stress. These two factors represent stress from both job and life, indicating that this group of employees is dealing with a high degree of continuous stress at all times. This finding contributes extra evidence of how stress-related factors induced employee fraud in Thailand's convenience store context which has not previously been discovered before.

Third, this study found a negative association between perceived opportunity and employee fraud, which contradicts the majority of the evidence in the fraud triangle literature. This reversed relationship can imply that the more fraud opportunities that employees have, the less fraud would be committed. The reason to support this finding is the nature of this research context of the world's leading convenience store chain that enforces rigorous rules and punishments on its employees along with advanced technologies that may identify possible fraud. The result of this study presented a different viewpoint on committing fraud in the context of convenience stores. In addition, this finding provided additional support for the

social cognitive theory in addition to the fraud triangle. According to the theory that individual behaviors are determined by their perceived self-efficacy and outcome expectancy, the presence of fraud opportunities within the store might not motivate them to commit fraudulent acts because they are able to anticipate unfavorable outcomes after being detected by efficient monitoring systems.

5.2 Practical implications

Regarding our results, this research suggests several implications for the management of the convenience store company in the areas of business sustainability, strategic management, and human resource management. These also facilitate the firm to achieve the Sustainable Development Goals (SDGs) of the United Nations, which are described at the end of each recommendation.

First, the convenience store company has to improve workload allocation within the store to prevent both physical and psychological exhaustion that might lead to employee fraud. Due to the nature of frontline staff in the convenience store, they have to deal with extensive numbers of customers on both offline and online channels. This situation produces prolonged stress and directly makes employees emotionally drained. The executive or store manager should equally allocate the duties of the staff in the store and provide an adequate number of staff to prevent excessive workloads that can increase their level of pressure which in turn lead to embezzlement. This suggestion assists the company in promoting employees' health and well-being, improving the quality of this career, and lessening fraudulent actions in the convenience store. These recommendations are congruent with Good Health and Well-being (SDG3), Decent Work and Economic Growth (SDG8), and Peace, Justice and Strong Institutions (SDG 16) goals.

Second, the company can reduce employees' financial pressure by improving compensation through cost management, allocating extra funding for employees' salaries, and improving financial welfare. This might lower the perceived pressure which in turn lessens the intention to commit fraud [12]. This helps the company to increase the employee's positive perception in terms of job security as well as decrease the embezzlement of frontline staff. These implications coincide with Decent Work and Economic Growth (SDG8), and Peace, Justice and Strong Institutions (SDG 16) goals.

Third, the company's management staff should revise its strategy, particularly with regard to sustainable human resource management policy. In order to reduce the emotional exhaustion of frontline employees, the firm should offer trainings that promote certain abilities that may assist frontline employees in coping with emotional exhaustion and elevate their moral status, such as mindfulness, resilience, and optimism [86, 87]. These trainings will enable employees to deal with emotionally

draining stages and effectively utilize their moral judgment to halt their deviant thoughts and initiatives. Another interesting policy is about recruiting criteria. It is recommended to recruit potential candidates that have suitable characteristics such as hospitality, optimism, and a service-minded personality to be frontline staff in the convenience store. These characteristics may help individuals avoid being emotionally fatigued, resulting in reduced fraudulent behavior among frontline convenience store employees. In addition to the recruiting criteria, the organization should look for candidates who desire to work in this position or feel honored to work for the company. Their passion will regulate them from within, preventing them from engaging in abnormal activities towards the firm [88]. This recommendation allows the business to enhance the capability of the frontline staff while also promoting the health and well-being of its employees. These suggestions align with the goals of Decent Work and Economic Growth (SDG 8), Good Health and Well-Being (SDG 3), and Peace, Justice, and Strong Institutions (SDG 16) goals.

Fourth, the strong implementation of rules and regulations along with advanced technologies for detecting fraudulent behaviors is also crucial for making employees realize the serious consequences of fraudulent activities, and every deviant action is monitored and recorded. This could prevent them from performing suspicious behaviors. However, implementation of these issues should be accompanied by appropriate related trainings to ensure that staff comprehend those regulations and technology. This will alleviate their anxiety, which will not diminish their emotional level. Recent research also support the idea of using advanced technology in the organization benefits firm in various sectors [89, 90]. These rigorous implementation of regulations and technologies enable the firm to effectively prevent fraud, which matches with Peace, Justice and Strong Institutions (SDG 16) goal.

Lastly, the waste management policy is recommended to be revised. Food disposal policy is a good standard for convenience store companies to keep consumers safe from food hazards. Whereas this policy may be revised for the benefit of people as well as society by lowering the price before the disposal date to attract more consumers or by giving away food for charity purposes on a certain day when the food is edible. Particularly, in this study context, the convenience store company does not allow their employees to eat these near-expired foods due to the concern of their health. However, this policy can be adapted to employees' welfare by specifying the date that they can take this category of food as a welfare benefit, but any action taken after this date is strictly prohibited. Thus, this approach could reduce the fraudulent behaviors of convenience store's frontline staff. Therefore, such procedures will help the organization efficiently manage near-expiry goods for both customers and employees.

These practices benefit the convenience store company by not only promoting the firm's excellent reputation but also increasing access to food for a broader group of people, which are consistent with the Zero Hunger (SDG2), Good Health and Well-being (SDG3), and Decent Work and Economic Growth (SDG 8) goals.

All of these recommendations will serve as effective organizational supports, allowing the management team to demonstrate to employees that the company is truly concerned about their well-being [91], relieving them of financial and work-related stressors that are the root cause of occupational fraud within the company.

5.3 Limitation

Some limitations need to be considered in this research. First, the data was collected in a single organization. Thus, the generalization of the findings is limited to an entire population. Second, this study used self-report questionnaires for the data collection. This may have a subjective bias from the respondents. Third, the results were analyzed from the cross-sectional data which can be interpreted as a relationship, not the direction of causality. Lastly, even though the respondents were from Thailand's largest convenience store chain, which accounts for the majority of the industry's revenue, the data was obtained from a single company. As a result, the ability to generalize the results to the entire business is limited.

5.4 Future research

There are several areas that can be investigated further. First, employee characteristics that might be associated with employee fraud should be examined such as personality traits or personal skills such as mindfulness, optimism, and resilience. Second, working conditions that could influence fraudulent behaviors include workload, job demand, or pressure from supervisors or the company. Third, this research model may be tested in other convenience store chains and the findings compared to what was found in this study. Lastly, the exploration of this issue should be investigated in collaboration with other convenience store franchise firms in Thailand to compare the outcomes and contribute advantages to this industry.

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