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COVID-19 Pandemic and Fraudulent Financial Reporting Motives in Emerging Markets: A Comparative Study

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Abstract:
The study aims to investigate and comparatively identify the effects of the COVID-19 pandemic on fraudulent reporting motives in three emerging markets, namely Iran, Iraq, and Egypt. The present research method is a descriptive survey. The statistical population consists of independent auditors in three countries, and field methods and questionnaires have been used to collect data. The results indicate that COVID-19 pandemic affects management motives for committing fraud. They include respectively: sudden personal financial needs, need to receive financial resources for firm, pressure from owners in family companies, tax incentives, greed, government pressure in state-owned firms, concealing financial distress, avoidance of exclusion or deterioration in stock market, trust and self-esteem, tendency to increase compensation/payment of the management, pressure due to threats and compulsion, concealment of personal and illegal exploitation of assets, implementation or going beyond analysts' forecasts, high levels of market competition, revenge, manager's culture and values, management ideology or beliefs, and comparison of social status. This is the first study to investigate and compare the impact of the COVID-19 pandemic on fraudulent reporting incentives in emerging markets. Further, this study was conducted in three countries of Iran, Iraq, and Egypt, which have different contextual conditions (political, economic, cultural, etc.), indicating the impact of environmental conditions on the effects of Covid outbreaks. It can help stakeholders, including legislators, capital market regulators and auditors in other markets, especially emerging markets, to deal with the risk of fraudulent reporting during the COVID -19 and other similar crises.

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1. Introduction

COVID -19 (The pandemic) has become a global disaster (Cennimo, 2020; Kaka, 2020) and a significant threat to the global economy (Sikder et al., 2020; Kaka, 2020) with significant effects on financial and economic markets worldwide (Ali et al., 2020) even more severe than the major financial crises of 2007-2008 (Wójcik and Ioannou, 2020) resulting in different problems and risks (Zhang et al., 2020) such as increased concern and uncertainty, instability and a sharp drop in stock prices, increased pressure on companies and employees along with a high decrease in their revenues and liquidity (Goodell, 2020; Karpoff, 2020; Sansa, 2020; Albitar et al., 2021; šušak, 2020; Parsons, Winrow and Moyser, 2020; Tysiac, 2021; Wang, 2020; Waraich, 2020; Zhang et al., 2020; Barua, 2020). These special circumstances have put many companies at risk of bankruptcy (Albitar et al., 2021) and may have increased their incentives to manipulate financial statements and ultimately engage in fraudulent financial reporting (Thorps and Harding, 2020; van Ruth, 2020), resulting in higher risk to auditors and the markets. According to fraud theories (Cressey,1953; Wolfe and Hermonson, 2004; Horwarth, 2011) as well as agency theory literature (e.g., Healy, 1985; Holthausen, 1990; Watts and Zimmerman, 1990), different pressures and incentives can motivate companies to engage in fraudulent financial reporting, which can be expected in the case of the pandemic. The effects of the pandemic on the incentives for fraudulent financial reporting are not investigated by prior researchers, especially in emerging markets requiring more research in this area. This provides the main reason for conducting the current study.

The incentives for fraudulent financial reporting may also intensify in the next few years as some of the destructive effects of the pandemic remain and increase over time (Niesche, 2020; Cohn, 2021; Mitchell and Dougall, 2020; Karpoff, 2020; Dorris, 2020; Tysiac, 2021; Ariyanto et al., 2021). It provides another justification for this research.

Numerous reports have been published on the consequences of Covid-19 global outbreaks in industrialised and developed countries (Alao and Gbolagade, 2020). Less attention has been given to its devastating consequences of it on the economies of emerging countries (Stiglitz, 2020; Bhuiyan et al., 2021), although the consequences have been more severe and damaging to these countries (Rashwan and Alhelou, 2020), especially, the status and performance of companies (Barua, 2020; Fernandes, 2020). These conditions can increase companies' motivation for fraudulent financial reporting and thus reduce the quality of financial reporting resulting in increased auditors' risk. Therefore, it is necessary to conduct more studies in this field, especially in emerging markets with different characteristics (such as market efficiency) than developed markets.

Many emerging markets have seen a sharp decline in foreign investments and decreased tourism industry revenues, and their foreign trade has been severely

damaged because of the pandemic (Wójcik and Ioannou, 2020). This may intensify and provide more incentives for fraudulent financial reporting in these markets. In the emerging markets, shareholders and creditors often have less protection and participate in less efficient markets than in developed ones (Walczak, 1999). Consequently, the conflicts of interest are different from developed markets (Bagherpour et al., 2014), resulting in different types and levels of fraudulent financial reporting (Sallal et al., 2021). Therefore, in emerging markets such as Iran, Iraq, and Egypt, the effects of the pandemic on incentives for fraudulent financial reporting can be different from developed markets. This provides another justification for doing the research.

In general, COVID-19 is a new phenomenon. Many of its effects on various individual, social, economic, etc., aspects of human life are still unknown, which can pose a significant challenge for auditors and those responsible for governance (Arnold, 2020). In regard to financial reporting, it is crucial to consider and disclose all the significant related effects (Poole, 2020), and auditors should be fully aware of the factors affecting fraud motives, especially in financial reporting and strategies to combat it (Zhou et al., 2019). So, it is necessary to conduct research in this area to help them prevent adverse events such as corporate bankruptcy and financial crises. Finally, according to the review of the studies conducted in Iran, Iraq, and Egypt, no research has been conducted so far, providing another justification for doing this research. Based on the presented arguments, the study aims to investigate the effects of the pandemic on fraudulent reporting motives in these emerging markets.

2. Theoretical Foundations and Research Background

The literature review shows that different theories are developed to explain why fraud occurs and what factors are involved. The three most cited theories are the fraud triangle theory (Cressey,1953), fraud diamond theory (Wolfe and Hermonson, 2004), and fraud pentagon theory (Horwarth, 2011). According to the fraud triangle theory, there should be three key elements when a fraud is committed: pressure (incentive), opportunity, and rationalization. Fraud diamond theory tried to improve the triangle theory by considering a new element, namely "capability". According to the pentagon theory, five elements can be affected: pressure, opportunity, rationalization, competence, and arrogance. In other words, these elements facilitate incurring fraud.

Pressure is the incentive or factor that motivates an individual (IAASB, 2009). Opportunity refers to the unique position or condition that allows a person to commit fraud; rationalization is justifying misconduct (Rae and Subramaniam, 2008). Capability includes special skills and capacities that enable people to do something others cannot do (Gepp,2015). Prior research (e.g., Goodell, 2020; Karpoff, 2020; Sansa, 2020) indicates that the pandemic has increased pressure

on companies; therefore, based on the fraud theories, it can intensify incentives for fraudulent financial reporting (Thorps and Harding, 2020). In addition, according to ISA 240, different pressures such as obtaining the expected profits or financial outcomes, especially when the consequences of failure to meet the expected financial goals are severe for executives, can lead to fraudulent financial reporting, which is the case during the pandemic as many companies have faced different and increased pressures (e.g., Levy, 2020).

The agency theory literature also indicates that there is a conflict of interests between managers and shareholders (Jensen and Meckling, 1976, Watts and Zimmerman, 1986), small and large shareholders (Claessens and Fan, 2002, Fan and Wong, 2005) and shareholders and debtholders (Jensen and Meckling, 1976, Chow, 1982, Watts and Zimmerman, 1983) resulting in agency costs. According to the agency theory literature, management may engage in manipulation of financial statements because of self-interest or to enhance the firm's value (Healy, 1985, Holthausen, 1990, Watts and Zimmerman, 1990, Christie and Zimmerman, 1994, DeFond and Jiambalvo, 1994, Holthausen et al., 1995, Gaver et al., 1995, Dechow et al., 1996, Beneish and Vargus, 2002, Gul et al., 2003b, Bergstresser and Philippon, 2006), accounting-based contracts such as management compensation (Healy, 1985, Holthausen et al., 1995, Gaver et al., 1995, Gul et al., 2003b, Bergstresser and Philippon, 2006) and debt contracts (Watts and Zimmerman, 1986, DeFond and Jiambalvo, 1993, DeFond and Jiambalvo, 1994), reduceing risk of their replacement for poor performance (Christie and Zimmerman, 1994, Kaplan and Minton, 1994, Kang and Shivdasani, 1995), to signal their private information about future prospects (Healy and Palepu, 1993, Chaney and Lewis, 1995) and to increase share prices (Teoh et al., 1998, Dechow and Skinner, 2000).

Different research (e.g., Wang, 2020; Waraich, 2020; Albitar et al., 2021) show that because of the pandemic, financial markets(kaka, 2021; Zhang et al., 2020; Baret et al., 2020) and almost all industries(Levy, 2020) face problems and challenges such as a sudden decline in stock prices (Sansa, 2020), revenue and liquidity (Bora and Basistha, 2021; Barua, 2020; Ivanov, 2020), which can intensify conflicts of interest resulting in increased incentives for fraudulent financial reporting (van Ruth, 2020).

In situations of financial stress, management may not disclose unfavourable information and try to manipulate the financial reports (Schwarts and Menon, 1985; Kluger and Shields, 1989) to window-dress financial statements to increase their compensation (e.g., Healy, 1985; Holthausen et al., 1995), job security, avoid breaking borrowing contracts, or decreasing regulatory costs (Healy and Wahlen, 1999). These incentives may have increased during the pandemic.

Reviewing the fraud literature indicates that fraud involves the human effort to deceive others, and there are different incentives and motives for fraudulent financial reporting, which can be classified as financial and non-financial (Sallal

et al., 2021). Financial incentives mainly include a desire to increase rewards and salaries (Wengler, 2016), concealment of personal and unauthorised use of assets (Kazemian et al., 2019), sudden personal financial need, concealment of the financial insolvency of the company, the need to maintain financial resources for the company, pressure from ownership structure (state-owned companies and family companies) (Kassem, 2018), tax incentives (Rahimikia et al., 2017) and exceeding analysts' forecasts (Shi et al., 2017).

Non-financial incentives consist of greed (Kakati and Goswami, 2019), comparison of social status, revenge (Ramamoorti et al., 2009), manager's ideology or beliefs, manager culture and values, trust and self-esteem (Widhoyoko, 2017), pressure on management to maintain the position and reputation of the company in the stock exchange, compliance with the terms and agreements (rights) of ownership or merger (Gordon et al., 2007), pressure due to threats and coercion (Sunardi and Amin, 2018), high-level market competition (Shi et al., 2018). Regarding the presented theoretical arguments, it is expected that the pandemic has increased these incentives.

Auditors need to understand the incentives for fraud and their impacts on financial statements (Kassem and Higson, 2015). Therefore, identifying the factors affecting fraudulent reporting motives can help auditors maintain professional credibility and reputation, avoid litigation risk (Akther and Xu, 2020), and provide high quality reports.

Previous studies (Goodell, 2020; Karpoff, 2020; Sansa, 2020; Albitar et al., 2021; šušak, 2020; Parsons et al., 2020; Tysiac, 2021; Wang, 2020; Waraich, 2020; Zhang et al., 2020) have shown that the prevalence of the pandemic around the world has led to a number of problems, including increased investor concern and uncertainty, instability and a sharp drop in stock prices, and increased pressure on companies and their employees. These special circumstances have put many companies at risk of bankruptcy (Albitar et al., 2021) and have increased their incentives to manipulate financial statements and ultimately fraudulent financial reporting (Thorps and Harding, 2020; van Ruth, 2020). These motives may intensify in the next few years as some of the destructive effects of the pandemic become long-term over time (Tysiac, 2021; Niesche, 2020; Cohn, 2021; Mitchell and Dougall, 2020; Ariyanto et al., 2021; Karpoff, 2020; Dorris, 2020).

In line with the studies conducted in Iran, Iraq, and Egypt, it can be said that no research has been so far conducted to investigate the pandemic effects on fraudulent reporting motives. Such investigations may have accounting and auditing implications for businesses and the developing world economy (Kaka, 2021). For this reason, it is necessary to investigate and identify the pervasive impact of the pandemic on fraudulent reporting incentives in several developing countries, such as Iran, Iraq, and Egypt, so that we can help auditors properly assess the risk of fraudulent reporting during crises because fraudulent financial

reporting is one of the most important topics in economics (Choi and Gipper, 2021) and one of the tools that investors use to more closely monitor the company's activities (Teguh and Kristanto, 2020).
Based on the above arguments, the following questions arise:
Has the COVID-19 pandemic affected management motivations for fraudulent reporting? And how?

3. Research Methodology

The study is descriptive and survey-based and applied in terms of purpose and its period is 2021. The statistical population includes independent auditors (partners, managers, senior supervisors, and supervisors). Based on the information obtained from this sample, 420 questionnaires (140 questionnaires in each country) were distributed, and finally, 245 questionnaires (80, 90 and 75 questionnaires in Iran, Iraq and Egypt, respectively) were collected and used. Percentages were used in descriptive analysis and chi-square test (x2) to examine the differences between the frequencies of a variable with more than two levels; then, the data were analysed by the Friedman test to compare the average ranking of different groups.

4. Findings

In this section, the results of the statistical analysis are presented. Hence, first, we have the descriptive statistics of the respondents to the questionnaires, and then data will be analyzed using the inferential statistics methods.

4.1 Descriptive statistics

This section presents demographic information related to respondents, including sex, age, education, the field of study, auditing experience, and professional position (Table 1). According to the research data, 82% of respondents are male (Iraq 81%, Iran 80%, and Egypt 87%). The highest frequency is for people aged less than 40, with about 48% (Iraq 27%, Iran 61%, and Egypt 61%) of the sample. Most of the auditors, 45% (Iraq 34%, Iran 50%, and Egypt 52%) have master's degrees, and the highest frequency for work experience of people in auditing is 5-15 years with about 45% (Iraq 43%, Iran 52%, and Egypt 40%). The highest frequency related to the professional position is for Iraq (43%), then employed individual auditors ranked second (40 and 39%), and supervisors in Iran and Egypt, respectively. The professional position of independent auditors between Iran and Egypt is different from that of Iraq. The difference is between the audit organization formation Act and auditing firms affiliated with the official association of accountants between Iran, Egypt, and Iraq.

Table1. The demographic information of respondents

demographic information		Iraq		Iran		Egypt		Entire sample	
		Frequency	percentage	Frequency	percentage	Frequency	percentage	Frequency	percentage
Sex	Male	73	81	64	80	65	87	202	82
	Female	17	19	16	20	10	13	43	18
Age	Less than 40	24	27	49	61	46	61	119	48
	41-50	24	27	11	14	18	24	53	22
	More than 51	42	46	20	25	11	15	73	30
Education	Bachelor's	0.0	0.0	16	20	19	25	35	14
	Graduate diploma	10	11	0.0	0.0	7	9	17	7
	Master's	31	34	40	50	39	52	110	45
	PhD	49	54	24	30	10	13	83	34
Auditing experience	5-15	39	43	42	52	30	40	111	45
	15-25	24	27	22	28	29	39	75	31
	More than 25	27	30	16	20	16	21	59	24
Professional position	Partner	24	27	16	20	11	15	51	21
	Manager	0.0	0.0	28	35	17	23	45	18
	Senior supervisor	0.0	0.0	4	5.0	18	24	22	9
	Supervisor	0.0	0.0	32	40	29	39	61	25
	Singular rank 1	27	30	0.0	0.0	0.0	0.0	27	11
	Singular rank 2	39	43	0.0	0.0	0.0	0.0	39	16
	Total	00	100	80	100	75	100	245	100

4.2. Results of the research test

Before assessing the study's hypotheses, the reliability and validity of the research questionnaires will be analyzed. When ample evidence is obtained, we can evaluate research hypotheses. These factors are depicted in Table 2 in the form of Cronbach's Alpha, composite reliability coefficient, and average variance extracted. First, Cronbach's Alpha, an index for measuring internal consistency, is used to calculate the questionnaire's reliability. The mean correlation of existing questions is computed via a survey tool. The alpha coefficient is between 0 and 1 in terms of value. The Alpha coefficient in the questionnaire is 0.851, which is an appropriate interval.

In this paper, the content validity and construct of the questionnaire are assessed to examine the questionnaire's reliability. The index of mean extracted variance and the Fornell-Larcker criterion is used to assess the reliability of the construct. The AVE index in Table 6 expresses that the mean extracted variance of each aspect has a value of more than 0.5, so the convergent validity of the model is confirmed. As shown in Table 2, the AVE value for model variables is more than 0.5, so we can declare that the cross-validation commonality is used for convergent validity.

Table 2. The findings related to reliability and validity of the study

Questionnaire	Cronbach's Alpha	Composite reliability coefficient	AVE
Iran	0.851	0.901	0.811
Iraq	0.834	0.889	0.803
Egypt	0.868	0.912	0.817

Three indicators are used to examine the goodness of fit of the present study, which is displayed in Table 3. We can argue that the model fitting for data is appropriate, and the obtained results can be reliable.

Table 3. The goodness of fit criterion

Criterion	Value			Acceptable value
	Iran	Iraq	Egypt	
Chi-Square	0.051	0.053	0.049	Less than 0.08
NFI	0.815	0.817	0.828	The closer to 1, the better
Q^2	For all variables more than 0.50			More than 0.30

This section depicts results related to the effect of the Covid-19 pandemic test on fraudulent reporting motives in Iraq, Iran, Egypt, and totally (Table 4). It is worth mentioning that in these sections, only the effect of Covid on fraudulent reporting motives under three options of reductive, incremental, and no-effect are assessed, and the intensity of such an effect will be analyzed in the following. As can be seen in the Table, the p-value of the Chi-Square Test in the entire sample for factors mentioned in this paper is smaller than the error level of the test (0.05), so with 95% of confidence, we can say that the dispersion of auditors' opinion about the effect of Covid-19 on fraudulent reporting motives has a significant difference, so research question related to that is confirmed. Hence, the Covid-19 pandemic influenced the assessed motives of fraudulent reporting management in the case study.

Table 4. The effect of the Covid-19 pandemic on management motives for fraudulent reporting in Iraq, Iran, Egypt and entirely

Factors	Iraq		Iran		Egypt		The entire sample	
	chi -square	Value p	chi –square	Value p	chi -square	Value p	chi –square	Value p
Desire to increase management's remuneration/bonus	38.600	.000	25.400	.000	15.800	.000	76.200	.000
Need to get/maintain finance for the business	34.200	.000	16.133	.000	16.133	.000	110.867	.000
Meeting or beating analysts' forecasts	30.200	.000	29.400	.000	8.600	.000	60.200	.000
Conceal the company's financial distress	29.400	.000	21.800	.000	22.533	.000	96.800	.000
Cover up assets misappropriated for personal use	29.400	.000	9.600a	.000	29.400	.000	64.800	.000
Avoid de-listing from stock exchanges	33.800	.000	15.200	.000	13.333	.000	80.600	.000
Personal sudden money need for	19.200	.000	10.800	.000	22.533	.000	120.467	.000
Pressure from government in	38.400	.000	21.600	.000	19.200	.000	101.400	.000

state-owned firms								
Pressure from owners in family businesses	29.600	.000	38.600	.000	19.200	.000	111.267	.000
Ego and self-esteem	34.200	.000	7.400	.000	19.200	.000	76.467	.000
Pressure from Coercion	25.400	.000	7.800	.000	19.200	.000	69.267	.000
High level of competition in the market	29.400	.000	18.600	.000	7.800	.000	47.400	.000
Greed	26.133	.000	15.800	.000	19.200	.000	106.867	.000
Social status comparison	15.800	.000	7.400	.000	7.333	.000	24.800	.000
Taking revenge	11.400	.003	6.200	.003	4.800	.003	36.867	.003
Ideology	11.400	.003	9.600	.003	11.400	.003	30.200	.003
Culture and norms	26.600	.000	9.800	.000	6.200	.000	34.400	.000
Tax incentive	43.400	.000	33.800	.000	13.333	.000	110.867	.000

Table 5. The effect of the Covid-19 pandemic on management motives for fraudulent reporting in Iraq, Iran, Egypt and entirely

Factors	Iraq		Iran		Egypt		The entire sample	
	chi -square	Value p	chi –square	Value p	chi -square	Value p	chi –square	Value p
Desire to increase management's remuneration/ bonus	38.600	.000	25.400	.000	15.800	.000	76.200	.000
Need to get/maintain finance for the business	34.200	.000	16.133	.000	16.133	.000	110.867	.000
Meeting or beating analysts' forecasts	30.200	.000	29.400	.000	8.600	.014	60.200	.000
Conceal the company's financial distress	29.400	.000	21.800	.000	22.533	.000	96.800	.000
Cover up assets misappropriated for personal use	29.400	.000	9.600a	.000	29.400	.000	64.800	.000
Avoid de-listing from stock exchanges	33.800	.000	15.200	.001	13.333	.000	80.600	.000
Personal sudden need for money	19.200	.000	10.800	.001	22.533	.000	120.467	.000

Pressure from government in state-owned firms	38.400	.000	21.600	.000	19.200	.000	101.400	.000
Pressure from owners in family businesses	29.600	.000	38.600	.000	19.200	.000	111.267	.000
Ego and self-esteem	34.200	.000	7.400	.025	19.200	.000	76.467	.000
Pressure from Coercion	25.400	.000	7.800	.020	19.200	.000	69.267	.000
High level of competition in the market	29.400	.000	18.600	.000	7.800	.020	47.400	.000
Greed	26.133	.000	15.800	.000	19.200	.000	106.867	.000
Social status comparison	15.800	.000	7.400	.025	7.333	.031	24.800	.000
Taking revenge	11.400	.003	6.200	.045	4.800	.028	36.867	.000
Ideology	11.400	.003	9.600	.008	11.400	.003	30.200	.000
Culture and norms	26.600	.000	9.800	.007	6.200	.045	34.400	.000
Tax incentive	43.400	.000	33.800	.000	13.333	.000	110.867	.000

Regarding the study's objective, if the observed incremental ratio for each motive is more than 50%, we can declare that the Covid-19 pandemic influenced the incremental effect and caused the motive to increase during the pandemic. The obtained results (Table 5) show that, in general, according to the opinions of independent auditors in all three countries, the factor of personal sudden need for moneyand pressure from the owners' side in family firms (87%), need for financial resources for the firm (86%), greed and tax motives (85%), government pressure in state-owned firms (84%), covering up financial distress (82%), avoiding delisting from stock exchanges (78%), desire to increase management's remuneration/bonus and management benefits and self-confidence (77%), pressure due to threat (75%), concealing personal and unauthorized utilization of assets (74%), meeting or going beyond the prediction of analysts (71%), high competition level in the market (67%), culture and values of the manager (62%), taking revenge (60%), manager's ideology or beliefs (59%), comparing social status (58%) have increased during the pandemic.

Table 6. The range of effects of the Covid-19 pandemic on management motives for fraudulent reporting- the entire sample

Motives	Cumulative			Motives	Cumulative		
	Incremental	No-effect	Reductive		Incremental	No-effect	Reductive
Need to get finance for the firm	86	10	4	Personal abrupt need for money	87	13	5
Pressure from owners' side in family firms	87	9	4	Tax incentives	85	10	5
Greed	85	12	3	Government pressure in state-owned firms	84	9	7
Concealing the financial distress of the firm	82	9	9	Avoid delisting from stock exchanges	78	14	8
Desire to increase management's remuneration/bonus	77	13	10	Trust and self-confidence	77	13	10
Pressure due to threat	75	17	8	Cover up assets misappropriated for personal use (embezzlemen)	74	13	13
Meeting or going beyond analysts' prediction	71	8	21	The high competition level in the market	67	11	22
Manager's culture and values	62	11	27	Taking revenge	60	32	8
Manager's ideology or beliefs	59	29	12	Comparing social status	58	17	25

Moreover, according to the comments of independent auditors, in countries of Iran, Iraq, and Egypt factors of greed (97,67, 90%), tax motives (90,83, 83%), need for receiving/maintaining financial resources for the firm (84, 87, 87%), desire to increase management's remuneration/bonus (87, 77, 67%), pressure from owners in family firms (80, 87, 93%), personal sudden need for money(90,80, 90%), high level of competition in the market (90, 70, 50%), government pressure in state-owned firms (87, 74, 90%), meeting or going beyond analysts' prediction (80, 80, 53%), concealing financial distress of the firm (80, 73, 93%), culture and values of the manager (77, 60, 50%), concealing personal and unauthorized utilization of assets (80, 60, 80%), Avoid delisting from stock exchanges (83, 67, 83%), trust and self-confidence (83, 57, 90%), pressure due to threat (77, 57, 90%), management's ideology or beliefs (57, 60, 60%), comparing social status (67, 57, 50%), taking revenge (60, 50, 70%) have increased during the Covid-19 pandemic (Table 6). Hence, from the independent auditors' perspective, in all three countries, the pandemic has had an incremental effect on management motives for fraudulent reporting, though the range of effects has differed in the said countries.

Table 7. The range of effects of covid-19 on management motives for fraudulent reporting in Iraq, Iran, and Egypt

Motives	Iraq			Iran			Egypt		
	Incremental	No-effect	Reductive	Incremental	No-effect	Reductive	Incremental	No-effect	Reductive
Desire to increase management's remuneration/bonus	87	3	10	77	13	10	67	23	10
Need to get finance for the firm	84	3	13	87	13	0	87	13	0
Meeting or going beyond analysts' prediction	80	3	17	80	10	10	53	10	37
Concealing financial distress of the firm	80	10	10	73	10	17	93	7	0
Cover up assets misappropriated for personal use (embezzlement)	80	10	10	60	20	20	80	10	10
Avoid de-listing from stock exchanges	83	7	10	67	20	13	83	17	0
Personal abrupt need for money	90	10	0	80	20	0	90	10	0
Government pressure in state-owned firms	87	6	7	74	13	13	90	10	0
Pressure from owners' side in family firms	80	10	10	87	10	3	93	7	0
Trust and self-confidence	83	10	7	57	20	23	90	10	0
Pressure due to threat	77	13	10	57	27	16	90	10	0
High competition level in the market	80	10	10	70	13	17	50	10	40
Greed	97	3	0	67	23	10	90	10	0
Comparing social status	67	23	10	57	17	27	50	15	35
Taking revenge	60	30	10	50	37	13	70	30	0
Manager's ideology or beliefs	57	37	6	60	20	20	60	30	10
Manager's culture and values	77	3	20	60	17	23	50	37	13
Tax incentives	90	7	3	83	7	10	83	17	0

The results of the Freidman Test to assess the effect of covid-19 on fraudulent financial reporting motives and its ranking in terms of influence are presented in Table 7. Results show that in total, the personal sudden need for money has the maximum effect and ranks 1 (10.67) and after that is the need for receiving financial resources for the firm (10.51), pressure from owners in family firms (10.48), tax motive (10.46), greed (10.44), government pressure in state-owned firms (10.31), concealing financial distress of the firm (10.14), avoid delisting from stock exchanges (9.88), trust and self-confidence (9.67), desire to increase management's remuneration/bonus (9.61), pressure due to threat (9.48), concealing personal and unauthorized utilization of assets (9.29), meeting or going beyond the prediction of analysts (8.83), high competition level in the market (8.62), taking revenge (8.31), culture and values of the manager (8.26), manager's ideology or beliefs (8.12), comparing social status (7.91).

Moreover, according to the comments of auditors, in countries of Iraq, Iran, and Egypt factors of greed ranked first, tenth, and third (11.02, 9.42, 10.88), tax motives ranked second, third, and seventh (10.38, 10.7, 10.28%), personal sudden need for money ranked third, fourth, first (10.32, 10.58, 11.12), government pressure in state-owned firms ranked 4, 7, and 4 (10.12, 9.97, 10.85), desire to increase management's remuneration/bonus ranked 5, 6, and 10 (9.98, 10.05, 8.78), avoid delisting from stock exchanges ranked 6, 9, and 7 (9.88, 9.48, 10.28), trust and self-confidence ranked 7, 15, and 5 (9.87, 8.37, 10.78), need for receiving/maintaining financial resources for the firm ranked 8, 1, and 6 (9.73, 11.23, 10.57), concealing personal and unauthorized utilization of assets ranked 9, 12, and 8 (9.67, 8.77, 9.45), high level of competition in the market ranked 9, 11, and 15 (9.67, 9.27, 6.93), pressure from owners in family firms ranked 10, 2, and 4 (9.58, 11.02, 10.85), concealing financial distress of the firm ranked 11, 8, and 2 (9.5, 9.83, 11.1), meeting or going beyond analysts' prediction ranked 12, 5, and 14 (9.38, 10.17, 6.95), pressure due to threat ranked 13, 14, and 4 (9.08, 8.52, 10.85), culture and values of the manager ranked 14, 13, and 12 (8.97, 8.7, 7.1), comparing social status ranked 15, 16, and 13 (8.3, 8.33, 7.08), taking revenge ranked 17, 17, and 9 (7.82, 7.9, 9.2) management's ideology or beliefs ranked 17, 13, and 11(7.73, 8.7, 7.93). In general, results indicate that greed in Iraq, the need for receiving/maintaining financial resources for the firm in Iran, and the personal sudden need for money in Egypt have been influenced the most during the pandemic and can be among the major motives for fraudulent financial reporting. The difference may be due to these three countries' environmental situations, including cultural and economic.

Table 8. The average rank and priority of covid-19 pandemic effect on fraudulent reporting motives in totally

Priority no.	In total	
	Motives	Mean rank
1	Personal abrupt need for money	10.67
2	Need to get finance for the firm	10.51
3	Pressure from the owners' side in family firms	10.48
4	Tax incentives	10.46
5	Greed	10.44
6	Government pressure on state-owned firms	10.31
7	Concealing the financial distress of the firm	10.14
8	Avoid delisting from stock exchanges	9.88
9	Trust and self-confidence	9.67
10	Desire to increase management's remuneration/bonus	9.61
11	Pressure due to threat	9.48
12	Cover up assets misappropriated for personal use (embezzlement)	9.29
13	Meeting or going beyond analysts' prediction	8.83
14	The high competition level in the market	8.62
15	Taking revenge	8.31
16	Manager's culture and values	8.26
17	Manager's ideology or beliefs	8.12
18	Comparing social status	7.91

Table 9. The average rank and priority of covid-19 pandemic effect on fraudulent reporting motives in Iraq

Iraq	
Motives	Mean rank
Greed	11.02
Tax incentives	10.38
Personal abrupt need for money	10.32
Government pressure on state-owned firms	10.12
Desire to increase management's remuneration/bonus	9.98
Avoid delisting from stock exchanges	9.88
Trust and self-confidence	9.87
Need to get finance for the firm	9.73
Cover up assets misappropriated for personal use (embezzlement)	9.67
The high competition level in the market	9.67
Pressure from the owners' side in family firms	9.58
Concealing the financial distress of the firm	9.5

Meeting or going beyond analysts' prediction	9.38
Pressure due to threat	9.08
Manager's culture and values	8.97
Comparing social status	8.3
Taking revenge	7.82
Manager's ideology or beliefs	7.73

Table 10. The average rank and priority of covid-19 pandemic effect on fraudulent reporting motives in Iran

Iran	
Motives	**Mean rank**
Need to get finance for the firm	11.23
Pressure from the owners' side in family firms	11.02
Tax incentives	10.7
Personal abrupt need for money	10.58
Meeting or going beyond analysts' prediction	10.17
Desire to increase management's remuneration/bonus	10.05
Government pressure on state-owned firms	9.97
Concealing the financial distress of the firm	9.83
Avoid delisting from stock exchanges	9.48
Greed	9.42
The high competition level in the market	9.27
Cover up assets misappropriated for personal use (embezzlement)	8.77
Manager's ideology or beliefs	8.7
Manager's culture and values	8.7
Pressure due to threat	8.52
Trust and self-confidence	8.37
Comparing social status	8.33
Taking revenge	7.9

Table 11. The average rank and priority of covid-19 pandemic effect on fraudulent reporting motives in Egypt

Egypt	
Motives	**Mean rank**
Personal abrupt need for money	11.12
Concealing the financial distress of the firm	11.1

Greed	10.88
Pressure from the owners' side in family firms	10.85
Government pressure on state-owned firms	10.85
Pressure due to threat	10.85
Trust and self-confidence	10.78
Need to get finance for the firm	10.57
Avoid delisting from stock exchanges	10.28
Tax incentives	10.28
Cover up assets misappropriated for personal use (embezzlement)	9.45
Taking revenge	9.2
Desire to increase management's remuneration/bonus	8.78
Manager's ideology or beliefs	7.93
Manager's ideology or beliefs	7.1
Comparing social status	7.08
Meeting or going beyond analysts' prediction	6.95
The high competition level in the market	6.93

The fraudulent reporting motives comprise four components: personal motivation, governmental and environmental factors, personal characteristics, and market factors. Each factor was obtained through several questions and averaging. Hence, personal motivation via 5 questions, governmental and environmental factors via 3, personal characteristics 4, and market factors 6. Table 11 displays the components of fraudulent reporting motives and the number of questions used.

Table 12. The components, number of questions, Cronbach's Alpha, and results of factor analysis

Components	No. of questions	Cronbach's Alpha	Factor analysis
Personal motivation	5	0.731	0.887-0.685
Governmental and environmental factors	3	0.816	0.97(-0.645
Personal characteristics	4	0.804	0.995-0.748
Market factors	6	0.901	0.997-0.879

Further, in Table 12 the Cronbach's Alpha of each section is calculated. Since that value is between 0.645 and 0.997, the questionnaire enjoys an appropriate internal structure. After assessing the effect of Covid on fraudulent reporting and determining the incremental, reductive, and no-effect status, the severity of the effect is analyzed. Hence, this section includes five extremely low, low, medium, high, and extremely high options. Table 13 shows the descriptive statistics of each component and four indicators for total data of the three countries via the questionnaire.

Table 13. The descriptive statistics of hidden variables of the study

Components	No. of observations	Mean	Standard deviation	Minimum	Maximum
Personal motivation	202	2.84	0.78	1.94	4.52
Desire to increase management's remuneration/bonus	202	2.69	1.24	2.01	4.48
Taking revenge	202	2.49	0.74	3.15	4.27
Cover up assets misappropriated for personal use (embezzlement)	202	3.5٩	0.42	1.89	4.14
Personal abrupt need for money	202	3٧03	0.48	1.75	3.39
Comparing social status	202	2.42	1.02	1.24	4.81
Governmental and environmental	202	3.12	0.88	1.89	4.38
Tax incentives (paying less than real tax)	202	2.81	1.23	1.23	4.57
Government pressure in state-owned firms	202	2.74	1.08	2.48	4.14
Pressure from owners' side in family firms	202	3.81	0.23	2.01	3.48
Personal characteristics	202	2.83	0.28	1.75	4.08
Trust and self-confidence	202	2.63	0.26	1.13	4.48
Manager's ideology or beliefs	202	3.46	0.48	1.79	3.48
Manager's culture and values	202	2.43	0.21	2.08	4.18
Greed	202	2.79	0.09	1.48	3.98
Market factors	202	3.48	0.27	2.23	4.55
Pressure due to threat	202	3.61	**0.18**	3.02	4.09
High competition level in the market	202	2.50	0.35	2.04	4.72
Meeting or going beyond analysts' prediction	202	2.89	0.23	1.48	3.89
Concealing financial distress of the firm	202	2.99	0.13	2 4	4 0
Need to get/maintain finance for the firm	202	3.14	**0.22**	3.08	4.72
Avoid de-listing from stock exchanges	202	3.77	0.28	3.48	4.89

As shown in Table 14, the correlation between fraudulent reporting components is computed. All four components of fraudulent reporting motives, including personal motivation (PEM), governmental-environmental factors (GAE), personal characteristics (PCH), and market factors (MRK), have a positive and significant effect on each other. FFR is a fraudulent reporting motive calculated by averaging these main indicators.

Table 14. The correlation matrix of fraudulent reporting motive factors for all countries

FFR	MRK	PCH	GAE	PEM	
				1.000	PEM
			1.000	0.317**	GAE
		1.000	0.175**	0.215*	PCH
	1.000	0.312***	0.271*	0.181***	MRK
1.000	**0.052*** **	**0.414*** **	**0.336*** **	**0.088*** **	FFR

Note: ***, **, and * are significance level of 99, 95, and 90%, respectively

In figure 1, the output and manner of the effect of implicit and explicit variables of the questionnaire of all three countries are depicted, given the Table results. Similarly, in Figures 2, 3, and 4, the output of the PLS Software is drawn to show the effect of implicit and explicit variables of the questionnaire on Iran, Iraq, and Egypt.

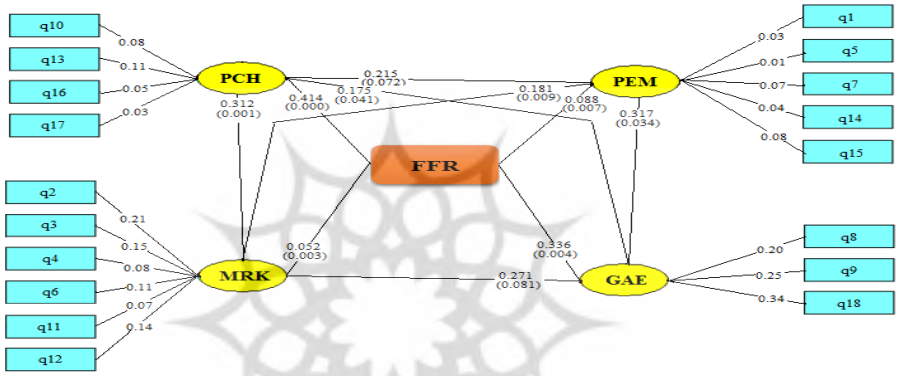

Figure 1. The manner of the effect of implicit and explicit variables of the questionnaire of all three countries on each other

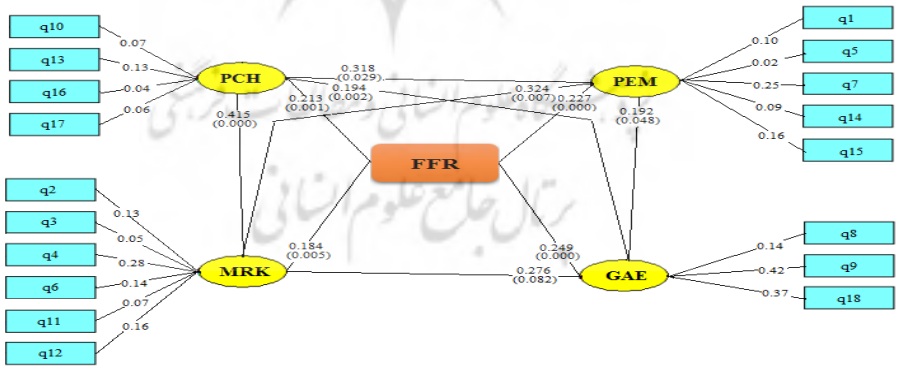

Figure 2. The manner of the effect of implicit and explicit variables of the questionnaire of Iran on each other

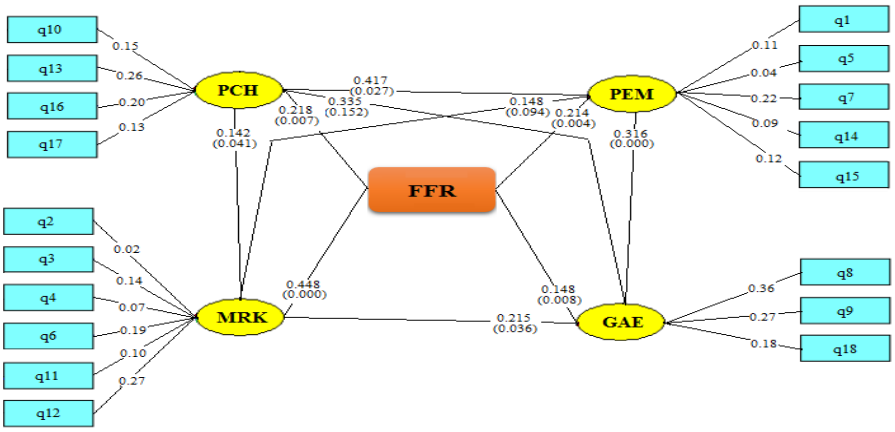

Figure 3. The manner of the effect of implicit and explicit variables of the questionnaire of Iraq on each other

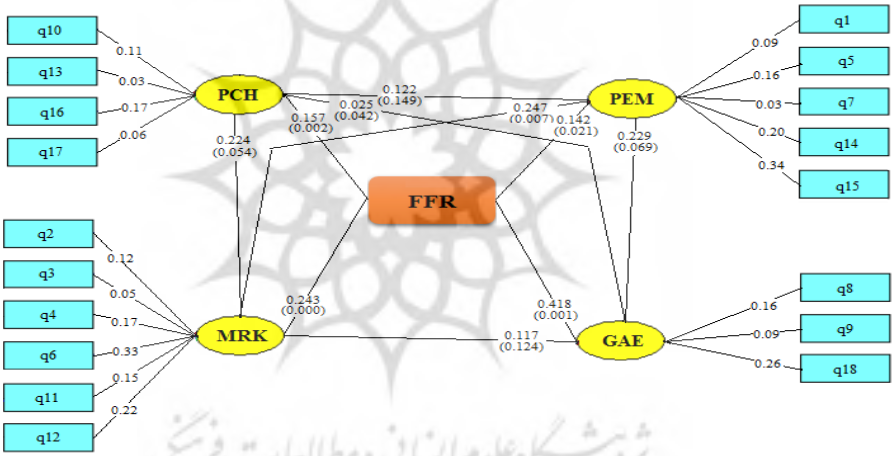

Figure 4. The manner of the effect of implicit and explicit variables of the questionnaire of Egypt on each other

After that, the effect of each component is computed individually and by considering the control variables of gender, education, work experience in auditing, and professional position in fraudulent reporting in Table 15.

Table 15. The determining the effect coefficient of each component of fraudulent reporting

Effect path	Effect coefficient	t-value	Result
PEM ⟶ FFR	0.639	4.36***	Confirmed
GAE ⟶ FFR	0.268	2.85***	Confirmed
PCH ⟶ FFR	0.385	3.45***	Confirmed
MRK ⟶ FFR	0.132	2.00**	Confirmed

Note: ***, **, and * are significance level of 99, 95, and 90%, respectively

Given Table 15, each main factor can influence the fraudulent reporting index via OLS regression. Personal motivation (PEM) has the maximum effect given the obtained result. Market factors have less effect, compared to the other four indicators, on fraudulent reporting.

5. Conclusion

The obtained results generally show that the Covid-19 pandemic influenced the evaluated motives of fraudulent reporting management and has had an incremental effect on management motives for fraudulent reporting. The finding is similar to Thorps and Harding (2020) and Van Ruth (2020). The factor of personal sudden need for money and pressure from owners in family firms need to maintain financial resources for the firm, greed, tax motives, government pressure in state-owned firms, concealing financial distress of the firm, avoiding delisting from the Stock Exchange, desire to increase management's remuneration/bonus, trust and self-confidence, pressure due to threat, concealing personal and unauthorized utilization of assets, meeting or going beyond analysts' prediction, high level of competition in the market, manager's culture and values, taking revenge, management ideology or beliefs, and comparing the social status during the pandemic have increased. During the pandemic crisis, fraud in organizations dealing with unprecedented economic challenges, including reducing working hours, unemployment, and failure to reimburse debts, will increase. This occurred because people and firms may express higher risk under severe personal or organizational pressures and commit unethical behaviors. According to the results, we can claim that personal sudden need for money has the maximum effect on fraud in financial reporting during the pandemic. The result conforms with Cohn (2021) and Niesche (2020). The managers may sometimes manipulate financial statements or commit fraud due to personal and abrupt need for money and incompetency in facing the conditions. According to the study's findings indicating an increase in fraudulent reporting motives during the pandemic and subsequent increased risk to the markets, i.e., audit and capital, we recommend that standard setters and related regulators try to customize current standards and regulations to new conditions. In addition, auditors should attempt to identify and analyze the said incentives and related threats during the audit process.

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همه گیر COVID-19 و انگیزه های گزارشگری مالی تقلبی در بازارهای نوظهور: مطالعه تطبیقی

چکیده:
هدف این مطالعه بررسی و شناسایی مقایسه‌ای اثرات همه‌گیری کووید-19 بر انگیزه‌های گزارشگری متقلبانه در سه بازار نوظهور ایران، عراق و مصر با استفاده از روش توصیفی پیمایشی است. جامعه آماری شامل حسابرسان مستقل در سه کشور بوده و برای جمع آوری داده ها از روش های میدانی و پرسشنامه استفاده شده است. نتایج نشان می دهد که همه‌گیری کووید-19 بر انگیزه های مدیریت برای ارتکاب تقلب تأثیر می گذارد. آنها به ترتیب عبارتند از: نیازهای مالی شخصی ناگهانی، نیاز به دریافت منابع مالی برای شرکت، فشار از سوی مالکان در شرکت های خانوادگی، مشوق های مالیاتی، طمع، فشار دولت در شرکت های دولتی، کتمان مشکلات مالی، اجتناب از اخراج یا کاهش طبقه در بازار سهام، اعتماد و عزت نفس، تمایل به افزایش پاداش/پرداخت به مدیریت، فشار ناشی از تهدید و اجبار، کتمان استفاده شخصی و غیرقانونی از دارایی ها، اجرا یا فراتر رفتن از پیش بینی های تحلیلگران، سطوح بالای رقابت در بازار، انتقام جویی، فرهنگ و ارزش های مدیر ، ایدئولوژی یا باورهای مدیریت و مقایسه موقعیت اجتماعی. این اولین مطالعه ای است که تأثیر همه گیری کووید-19را بر انگیزه های گزارش گری متقلبانه در بازارهای نوظهور بررسی و مقایسه می کند. همچنین این مطالعه در سه کشور ایران، عراق و مصر انجام شد که شرایط محیطی متفاوتی (سیاسی، اقتصادی، فرهنگی و ...) دارند که بیانگر تأثیر شرایط محیطی بر اثرات شیوع کووید است. این می تواند به ذینفعان، از جمله قانونگذاران، تنظیم کنندگان بازار سرمایه و حسابرسان در سایر بازارها، به ویژه بازارهای نوظهور، کمک کند تا با خطر گزارش گری متقلبانه در طول کووید-19 و سایر بحران های مشابه مقابله کنند.

واژه های کلیدی: گزارش تقلبی؛ مشوق های مدیریتی؛ پاندمی کووید 19؛ ایران؛ عراق؛ مصر.