

# The Interactive Effect of Covid-19 Pandemic, Political Cost, and Executive Compensation on Earnings Management

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## ABSTRACT

This study investigates whether the COVID-19 pandemic, government Covid aids and incentive policies, and executive compensation affected the quality of the reported earnings in the leisure and hospitality industry. The pattern of changes in the Discretionary Accrual, DACC, was used as a proxy for the quality of reported earnings. It was examined whether this pattern changed during COVID-19 and was affected by government aid policies and executive compensation. An empirical analysis of 324 American leisure and travel industry data was conducted using multiple regression analysis for the pre-Pandemic period of 2018-2019 and the Pandemic period of 2020-2021. The results indicate that the pattern of DACC changed during the Pandemic period, and firms engaged in income-decreasing earnings management (EM). Furthermore, the change in the pattern was significantly affected by government aid and incentives policies and executive compensation.

## KEYWORDS

COVID-19, Leisure and Hospitality, Earnings Management, Political Costs, Executive Compensation

## INTRODUCTION

The COVID-19 Pandemic affected human lives and businesses more than any other recent crisis. Governments mandated lockdowns, and many companies shut down or reduced their activities significantly. The crisis that started with the first case of COVID-19 on January 21, 2020, just got worse through several waves, and by the end of January 2021, the Pandemic had produced 26 million confirmed cases and caused the loss of more than 459,000 lives. (CDC, 2022). It hit the leisure and hospitality industry the most since all in-person leisure and travel activities were halted. Based on information from the U.S. Travel Association (2021), almost 40% of the jobs lost during the Pandemic were from the leisure and hospitality industry, with a loss of about 50% of its revenue, which amounted to 2.86 trillion (Abbas et al., 2021).

The environment during the COVID-19 crisis was very emotional, in which the media, government, and social activists encouraged people to help each other. A collective response was required from businesses, society, individuals, and the government to manage the crisis and support those affected. Many companies variously helped the public. According to USA Today (2020), major retailers such as Walmart, Target, and Amazon changed their regular business practices to accommodate employees and customers for their basic needs. Amazon helped the public by donating \$7 million in test kits. Apple sourced and procured 20 million masks and delivered them to healthcare workers. Audible gave its core product free to children nationwide and did not charge to stream a collection of educational and entertaining children's literature. Bank of America refunded overdraft fees, late fees, deferred mortgage payments, and suspended foreclosures, evictions, and repossessions. The government

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offered significant financial aid to individuals and corporations during the uncertain period of the 2020 pandemic. The unique nature of the COVID-19 Pandemic and its wide-ranging impact increased the need for more empathy and understanding from all, including business leaders, as this crisis did not only cause a financial shock to the economy. Instead, it affected human lives and businesses more than any other recent crisis due to the following reasons:

- The COVID-19 Pandemic health crisis negatively affected all people in many ways. People were not only dealing with financial and economic challenges but also with devastating health concerns formed by the fear of infection and facing disastrous long-term unknown disease consequences.
- The Pandemic was an unprecedented crisis that affected all elements of society, from health to the economy to social life. Moreover, it required people to adjust to rapidly altering situations, intensifying the public's anxiety.
- It negatively affected our daily lives and mental health as it required complete isolation and social and physical seclusion that caused tremendous mental and emotional distress to everyone. In many waves, it created the terror of losing loved ones and subsequent psychological effects. In addition, it created challenges for employees inside and outside of organizations combined with financial distress of being laid off and other economic issues.
- It led to more than 1.7 million lost lives worldwide, according to the World Health Organization (WHO), as of December 31, 2020, and over 79 million confirmed cases of COVID-19.

As the travel industry was expected to be one of the last ones to recover from the Pandemic and the prospects of this industries firm's operations were uncertain, financial statements were crucial and the primary source of information. Shareholders and financial analysts were looking for this information to understand the extent of the losses to make sound financial decisions. Also, these reports were used to determine compensation amounts paid to the executives and eligibility for government financial aid and incentive programs. The significance of the management compensation was tied to the firm's earnings, and the government set the policy that firms facing financial challenges could take advantage of the offered aid and incentives. Therefore, executives had an incentive to manipulate earnings.

First, the companies were expected to take advantage of the government financial aid programs. But, because the eligibility criteria were to face financial challenges, management needed to show lower income or higher losses during the Pandemic to be eligible for the aid and incentives. This created a motive for the executives to overstate losses for opportunistic reasons. Second, the Pandemic caused firms to have lower incomes causing management compensations and bonuses to be reduced or eliminated. Therefore, executives could take a big bath in accounting through accrual manipulation to show improved financial performance and earn more compensation and rewards in the following years. In addition, increased losses during the Pandemic would not be blamed on the mismanagement of the executives but on economic downturns.

Agency theory states that management is separated from the owners, and information asymmetry in firms causes managers to possess more material knowledge than the principle. The higher the information asymmetry, the higher the EM (Richardson, 2000). According to Watts and Zimmerman (1986), management is interested in managing earnings to serve its purposes. Therefore, they influence accounting practices to control various proxies such as the bonus plan, debt-equity ratio, revenue, and income or losses. Based on prior studies, government policies have been found to affect EM behaviors by firms (Chen et al., 2020; Dantas et al., 2017; Hu et al., 2012; Cai et al., 2022; Tandiono, 2016; Wang et al., 2023). Executive compensation has also been found to be a significant factor in management judgments on financial reporting (Baker, 1999; Barton, 2001; Dechow et al., 2010; Hassan,

2014; Healy, 1985; Marantika et al., 2021, Park, 2019). Generally, when companies face financial difficulties, they are motivated to employ tactics of managing their earnings to alter their economic status, driven by pressures from the market (Chen et al., 2010; Dimitropoulos & Asteriou, 2009; Habib et al., 2013).

However, since the Covid-19 was not just an economic downturn, its catastrophic health crisis may have triggered a natural sense of sympathy in business leaders to avoid engaging in EM activities to harm further and add to people's suffering by presenting untrue financial information that would mislead the users. Thus, this study aims to test whether the firms engaged in EM considering this period's unique situation or whether the executives' empathy level modified their self-interest behaviors. Specifically, whether the quality of the financial information was changed by EM and whether such changes were affected by the government aid and incentive policy and executive compensation amounts.

This research provides significant contributions in multiple areas. First, it expands the existing literature on the relationship between COVID-19 and corporate finance. Considering empathy and sympathy expectations from the business leaders, this study contributes to advancing the knowledge by evaluating the Agency theory and the Positive accounting theories' self-interest behaviors predictions during the 2020 pandemic. While the majority of previous studies have mainly focused on implications for the broader economy of COVID-19 (Ashraf, 2020; Ashraf and Goodell, 2022; Belghitar et al., 2022; Eichenbaum et al., 2021; Guerrieri et al., 2022; Sabo et al., 2021), this study specifically examines the impact of the Pandemic on the financial decision-making of individual firms. Second, this research contributes to the field of EM by utilizing the unique circumstances created by the Pandemic and uncovers how government aid and incentive policies, and executive compensation affected EM during a health Pandemic where empathetic behavior was expected from business leaders to reduce public suffering. Last, this study addresses the role of firm's corporate governance and management empathy and sympathy training and sheds light on the government's need to implement more effective financial aid and incentive policies considering existing limited resources during a health and economic crisis.

This paper continues: the next section presents the literature review, theoretical background, and hypothesis development. Then, the following section describes data collection, empirical model, and test results; section five discusses the results and their applications.

## LITERATURE REVIEW

According to Scott (2009, p. 403), EM (EM) is "the choice of accounting policies or actions that can affect earnings to achieve a specific objective." Davidson et al. (1987, p 92) described EM as deliberate steps taken by management, within the limitations of GAAP, to "bring about the desired level of reported earnings."

EM can be income-decreasing or income-increasing, depending on the purpose of EM, both of which reduce the quality of financial reporting. Big Bath EM is a strategy firms use to manipulate their financial statements to overstate losses to show lower earnings in a particular period, creating increased earnings in future periods. This strategy involves taking a significant amount of write-offs or accounting charges in a single period, which can reduce current profits but allow the company to report higher profits in the future when these charges are not present. The idea is that by taking a "big bath" and a large charge against earnings in the current period, a company can smooth out its earnings over time and potentially improve its future earnings without actually improving the underlying performance of the business, which makes the firm future earnings growth look better, and potentially avoid adverse market reactions to volatile earnings in the current or future periods.

According to Makarem and Roberts (2020), businesses use BBEM to smooth earnings over several years to prevent earnings increases in one particular year. Many studies found that firms increase losses when facing low or negative earnings and financial difficulties (Gonçalves et al., 2019; Hope & Wang, 2018). Employing goodwill impairment techniques has been used to smooth income when facing decreased earnings (Albersmann et al., 2020; Choi and Nam, 2020; Gros and Koch, 2018; Hassine & Jilani, 2017; Lazar, 2019). Deng (2019) found that goodwill impairment was directly related to management compensation tied to earnings. The higher the proportion of unfulfilled management compensation, the higher the probability and the amount of goodwill impairment. Choi and Nam (2020) found that goodwill impairment decisions were correlated with the management incentive of BBEM, managing share prices, and expected future cash flows. The researchers also found that these companies exhibited outstanding market performance two years after reporting Goodwill's related impairment information because of the reversal of accruals. Based on prior research, unbilled receivables were also used to reduce earnings (Jung et al., 2018; Kwon and Lee, 2019). The economic crisis was found to be influencing the use of BBEM (Ayedh et al., 2019; De Oliveira Leite et al., 2020; Hao et al., 2019; Kjærland et al., 2021; Miranda-Lopez and Valdovinos-Hernandez; 2019; Mollik et al., 2020; Ozili, 2021; Oskouei & Sureshjani, 2021). CEO characteristics and turnover related to BBEM (Albersmann et al., 2020; Cheng et al., 2021; Lazar, 2019). Buchholz et al. (2020) found that management manipulated earnings more related to a specific period, especially at the time of CEO turnover, where the new CEO could make the previous one responsible for poor performance and bargain for higher compensation. External financing needs and debt-to-asset ratio of affect BBEM (Dudycz and Prażników, 2020; Hassine and Jilani, 2017; Ponce and Huamaccto, 2021). Political costs also have been influencing the use of BBEM, especially when sensitivity to these costs is high (Byard et al., 2007; Moratis & Van Egmond, 2018; Yang & Tang, 2021; Yip et al., 2011; Yung & Root, 2019). Almashaqbeh et al. (2018) found that companies use EM techniques to reduce their profit to avoid political risks. Yu et al. (2015) also found that EM increased when companies increased their minimum wages. According to Kim (2021), firms are more likely to use accrual-based EM during the presidential election period to avoid political risks and use real EM during the non-election period. Ebrahimi et al. (2021) research confirmed that firms with high-level political risks engage in a higher accrual-based EM. The researcher concluded that riskier firms are more inclined to use real EM instead of accrual basis EM, as real EM is more challenging to detect. In addition, a nonlinear -U-shaped relationship is discovered between EM and political costs. This means that executives engage in EM when external monitoring is limited and the cost of political risk is high. As the political risk exposure increases, management reduces EM until political risk reaches an optimal level. After the optimal level, management manipulates earnings regardless of increased external monitoring because of the incentives, such as meeting an earnings benchmark.

Liu and Sun (2022) investigated the effect of the COVID-19 Pandemic on EM and the value relevance of earnings in the U.S. The study found that firms used income-decreasing accruals during the pandemic, and the value relevancy of earnings decreased. Ljubisavljević and Jakobsson (2022) revealed the effect of COVID-19 on EM in Sweden firms and stated that these firms used income-decreasing accruals during Covid-19. Recently, Ryu and Chae (2022) investigated the effect of COVID-19 on EM in the distribution and service industries in Korea and found that firms used income-increasing accruals during COVID-19, indicating that firms overstated their earnings. Also, the study found that the extent of EM was more significant in smaller firms with few shareholders due to relaxed monitoring conditions by foreign investors who play a crucial role as watchdogs in detecting and preventing EM practices. A study by Lassoued and Khanchel (2021), conducted for a sample of European firms, indicated a significant income-increasing EM during 2020 to restore investor trust needed to strengthen economic improvement. Xiao and Xi (2021) also found an increase in accrual-based EM for a sample of Chinese firms during the 2020 pandemic. This finding suggests that firms

manage earnings upward by alleviating the stated losses. A study of American firms found that socially responsible firms are more likely to manage their earnings upward than their counterpart (Lassoued and Khanchel, 2022). Jordan et al. (2021) found no evidence that EM occurred overall in 2020, and Azizah (2021) found Indonesian firms not practicing EM during the Covid compared to the pre Covid period.

Prior research also shows that government policies can affect EM behaviors for firms. Wang et al. (2023) argued that Chinese firms with greater investment prospects used EM strategies to gain access to increased external financing. Utilizing a dataset from 2002 to 2009 of 8,765 firms, Hu et al. (2012) found that policies enacted by the China Securities Regulatory Commission (CSRC) can prompt managers of publicly listed firms to engage in EM. This behavior is driven by the desire to either evade negative consequences, such as delisting or to fulfill requirements, such as refinancing. Dantas et al. (2017) observed that reductions (increases) in government guarantees are linked to substantial increases (decreases) in banks' EM practices meaning that government guarantees have a significant impact on the quality of information that banks disclose to capital markets. Utilizing data from China, Chen et al. (2020) investigated the impact of government-level incentives to enhance GDP growth on EM at the firm level. They found evidence illustrating how firms resort to EM techniques to bolster GDP growth in their provinces. According to Tandiono (2016), government policies influence large, strategically important firms that operate nationwide and provide public services such as public transportation. To secure government subsidies or reduce taxes, these firms often engage in the practice of EM.

Executive compensation is another major factor that has been found effective on EM. Prior studies found that when management compensation is contingent on a firm's financial results, executives manipulate income to increase compensation (Barton, 2001; Dechow et al., 2010; Healy, 1985; Marantika et al., 2021). Sari et al. (2022) studied the relationship between management compensation and EM practices and found that management compensation and bonus plan positively affect the use of EM. However, the company ownership structure reduces the probability of using EM. According to Healy (1985), firms used EM when their determined bonus was achieved, or the minimum condition for the bonus was not attained. In addition, Barton (2001) found a positive relationship between DACC and CEOs' executive compensation.

## **THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT**

Positive accounting theory explains how financial reporting affects different parties involved in the firms and what roles EM plays in that context. Sunder (1997) demonstrated that a firm is a sequential group of various contracts, and accountants are an integral part of those contracts for writing, monitoring, and enforcing them. Thus, the accounting methods used for reporting and monitoring these contracts can affect the outcome of the contracts and cash flow distribution among the parties. These contracts could include management bonus contracts, debt covenants, and political costs that can financially affect the firm and its management (Watts & Zimmerman, 1986). This situation incentivizes managers to select the accounting methods that maximize cash flow distribution to the executives. Parshakov and Shakina (2020) explained that positive accounting theory implies that firms are interested in revealing data that strengthens their positions and ranks in their interaction with other parties. Therefore, management may choose accounting methods that overstate or understate the reported earnings to benefit from the contractual relationships. Fox et al. (2006) argued that positive accounting theory suggests managers even lobby with accounting standard-setting agencies to select specific accounting methods as mandatory accounting standards that favor managers' benefits. Investors are not perfect decision-makers, and their decisions are based on the economic aspects of an investment and the information available about the firm's performance. Thus, they

heavily rely on the financial information presented by the firm. Accordingly, managers may take advantage of the choices available for financial reporting and smooth earnings over several periods to show a positive financial performance improvement by manipulating accruals (Garane and Mwangi, 2018; Makarem et al., 2018; Ogilby et al., 2020; Wu et al., 2018).

The Agency theory discusses that "information asymmetry" between management and the business owner produces an opportunity for the management to influence earnings. Management manipulates income more when information asymmetry is higher (Richardson, 2000). According to Habib (2004), FASB's lax accounting standards allow management to choose between various accounting methods for opportunistic reasons.

The Stakeholder theory explains corporate responsibility toward employees, customers, and communities and indicates that an organization should consider all stakeholders' interests to achieve its organizational goals (Freeman, 1984). Accordingly, a corporation's morale should improve during the Covid-19 pandemic, and managers should distance themselves from self-interest actions and move toward mutual and collective goals and interests. Several researchers have discussed the effect of the Covid-19 Pandemic on corporate executives' behaviors and concluded that corporations became more ethical and responsible during the pandemic. For example, He and Harris (2020, p: 3) explain, "Fortunately, we have observed that many companies not only have resisted unethical business practice during this crisis but have proactively engaged in various corporate social responsibility activities." Manuel and Herron (2020) argue that corporations engaged more in philanthropy during the Pandemic and made financial and nonfinancial contributions to support individuals fighting the virus and helping patients and people in need, such as medical care workers, food banks, and schools. Mahmud et al. (2021) explored business responses to the COVID-19 Pandemic and found that corporations supported their employees and expressed responsibility toward their customers and communities during the COVID-19 pandemic.

Although people had high moral expectations from corporate executives during the COVID-19 period and expected firms to consider community welfare, the Pandemic provided an opportune time for companies, particularly those in the leisure and travel industry, to employ EM manipulation potentially. Considering the global travel restrictions and the consequent expectation of substantial losses for leisure and travel industry companies in 2020, investors would also anticipate negative financial performance. This scenario offered these companies a favorable environment to engage in EM behavior.

Therefore, the first hypothesis is:

**H1:** There is a significant relationship between the Covid-19 Pandemic and EM during the Covid-19 pandemic.

According to the US Travel Association (2021), during the pandemic, the US government enacted laws that provided several aid and incentive programs, such as the American Government Rescue Plan Act and the End of Year Omnibus Bill for the travel and tourism industry. Government Aid included Paycheck Protection Program (PPP), Economic Injury Disaster Loans (EIDL), Employee Retention Tax Credit (ERTC), Shuttered Venue Operators Grant (SVOG) Program, and Airline Payroll Support. PPP plan provided forgivable loans of up to \$12 million, and Economic Injury Disaster Loans (EIDL) offered low-interest loans to businesses, including travel-related entities, to mitigate temporary revenue losses. The loan amounts were determined based on the company's economic injury, up to a maximum of \$2 million. The interest rate for EIDL loans was 3.75% for businesses and 2.75% for nonprofits, with repayment terms of up to 30 years. The Economic Development Administration also provided \$3 billion in grants to eligible entities, including \$750 million for communities impacted by job loss in the travel, tourism, or outdoor recreation sectors. In addition, small Business Administration (SBA) Express Loans

were offered for \$1 million. Shuttered Venue Operators Grant (SVOG) included \$16.2 billion in grants to shuttered venues, granting businesses equal to 45 percent of their gross earned revenue. Established by the Consolidated Appropriations Act of 2021, the Coronavirus Economic Relief for Transportation Services (CERTS) program authorized \$2 billion in grant assistance to support payroll and other operational expenses of eligible transportation service providers that suffered revenue loss due to the coronavirus pandemic. Qualified companies included motorcoach, school buses, passenger vessels, and pilotage companies. The incentives included Destination Marketing Organizations (DMOs) Support, in which grants were provided to DMOs to promote tourism and attract visitors to different destinations across the country, and Tax Relief Measures, which offered various tax relief incentives to support businesses in the travel industry. These measures included allowing businesses to carry back net operating losses and claim refunds for previous tax years, providing liquidity during the pandemic, and Business Expenses Deductions which allowed businesses to deduct certain business-related expenses, such as restaurant meals, at a higher rate. In addition, the coronavirus Fiscal Recovery Fund of 350 billion, EDA grants of \$3 billion, Airline Payroll Support of \$15 billion, and Airport Relief of \$8 billion.

However, eligibility for these government aids and incentives required substantial economic injury due to the pandemic. The loan amount was determined based on the business's economic injury and financial needs. Funds could be used to pay for working capital expenses, such as payroll, rent, utilities, and other operating costs. In other words, financial distress level could determine the eligibility and the amount of aid and incentives. As a result, it is predicted that the government policy in accessing the aids and incentives eligibility criteria has affected the firms engaging in EM. For this purpose, operating cost is used as a proxy for government policy during the Covid as the higher the operating cost, the lower the income and the higher facing financial challenges.

Thus, the second hypothesis is defined as follows:

**H<sub>2</sub>:** There is a significant relationship between government aids policies and EM during the Covid-19 pandemic.

Based on prior study's findings that executive compensation is a significant factor influential on EM (Barton, 2001; Dechow et al., 2010; Marantika et al., 2021), it is reasonable to predict that losses during the Pandemic 2020 resulted in minimal or elimination of the management bonuses tied to earnings. This situation could have motivated managers to choose EM techniques to report higher losses during the Pandemic to benefit from the accrual reversal in the subsequent years. Park (2019) found that firms engaged in EM to meet or exceed the target when a type of benchmarking was used for management's compensation. According to Healy (1985), firms used EM when the minimum condition for their bonus was not attained. Barton (2001) found a significant relationship between DACC earnings management and executives' compensation, as executive compensation is directly related to the firm's financial performance, and the higher the income, the higher the management compensation.

Accordingly, the third hypothesis is defined as follows:

**H<sub>3</sub>:** There is a positive relationship between management compensation and EM during the Covid-19 pandemic.

## METHODOLOGY

Following DeFond and Jiambalvo (1994); Elleuch Hamza and Kortas (2019); Liu (2019); Sehwat, et al., (2019), the cross-sectional version of Modified Jone's model is used to study EM during the pandemic.

For this purpose, fixed design-quantitative methods were utilized, specifically a causal-comparative design.

### DATA COLLECTION

2451 Data was collected from Compustat based on the North American Industry Classification System (NAICS) codes for all American public companies in the leisure and travel industries for 2013-2020. This data was used for the estimation period to approximate the DACC based on the modified Jones model. The testing period consisted of 324 data the pre-Pandemic period of 2008 and 2009 and the Pandemic period of 2020 and 2021. 2021 is included in the Pandemic period as most government aid and incentive programs were extended to 2021 since the emergence of new virus variants posed a significant challenge, as these variants were often more transmissible and sometimes more resistant to existing vaccines and treatments. This situation significantly impacted global economies and societies, with ongoing disruptions to travel, education, and work and long-term health effects for most. So, despite progress in combating the pandemic, 2021 was still a part of the Pandemic period.

### ACCRUAL ESTIMATION AND HYPOTHESIS TESTING

First, total accrual was calculated using the Jones Model 1 through SPSS:

$$TACC_t = (\Delta CA_t - \Delta Cash) - \Delta CL_t + \Delta CLD_t - DEP_t \quad (1)$$

Where:

TACC<sub>t</sub> = Total accruals in year t.

ΔCA<sub>t</sub> = change in current assets in year t.

ΔCash = change in cash and cash equivalents in year t,

ΔCL<sub>t</sub> = change in current liabilities in year t.

ΔCLD<sub>t</sub> = change in short-term debt included in current liabilities in year t.

DEP<sub>t</sub> = depreciation and amortization expense in year t.

Second, DACC was estimated using model 2 using multiple regression analysis. The dependent variable was the scaled total accrual for the year, and the independent variables were the numerical changes in the revenues, receivables, and PPE for the respective years. This regression analysis provided the coefficients (β<sub>i</sub>) for each independent variable in model two and provided the residual value, which is the DACC for each year. In addition, the regression assumptions of linear relationship, multicollinearity, independency of residuals, homoscedasticity, normal distribution, and Cook's test were verified.

$$TACC_t/A_{t-1} = \beta_0 (1/A_{t-1}) + \beta_1 ((\Delta REV_t - \Delta REC_t)/A_{t-1}) + \beta_2 (PPE_t/A_{t-1}) + \epsilon_t \quad (2)$$

Where:

TACC = Total accruals in year t-1.

ΔREV<sub>t</sub> = Revenues in year t less revenues in year t-1.

ΔREC<sub>t</sub> = Net receivables in year t less net receivables in year t-1.

PPE<sub>t</sub> = Property plant and equipment in year t.

A<sub>t-1</sub> = Total assets in year t-1.

β<sub>0</sub>, β<sub>1</sub>, β<sub>2</sub> = Estimated parameters.

ε<sub>t</sub> = Residuals / DACC in year t.



Third, the absolute value of the residuals was calculated and used as  $|DACC_t|$  for hypothesis testing. Finally, Hypothesis testing was conducted by multiple regression analysis using model 3 where  $|DACC_t|$  was used as the dependent variable and independent variables were the period of the pandemic, government aid and incentive policy, and executive compensation during the Covid .

This model tested the significance of the Pandemic period on  $|DACC_t|$  to find whether companies' accruals changed significantly during the Covid-19 period. For this purpose, the changes in the DACC were analyzed from the pre-Pandemic period of 2018 and 2019 to the Pandemic period of 2020 and 2021 to see whether the change occurred and if it was significant. Also, the operational expenses for the pre-Pandemic and Pandemic period were used as a proxy for the government aid and incentive policy, as the higher the reported operating expenses, the lower the income and the higher the degree of facing financial challenges, which would increase the likelihood of eligibility for increased government financial aid programs. So, the operational expense was used to explore whether it affected the changes in the DACC significantly. In addition, executive compensation was expected to affect the  $|DACC_t|$  as management's loss of bonuses during the Pandemic may have motivated them to take a big bath in accounting to show higher earnings in later years tied to their bonuses. So, executive compensations of the pre-Pandemic and the Pandemic period were used for this purpose.

Moreover, two control variables of leverage and ROI are included in this study. Leverage is a significant motive for EM (Anagnostopoulou and Tsekrekos, 2017; Jang and Kim, 2017; Kim and Lee, 2015; Sercu et al., 2006), and ROA has been found to affect EM significantly (Ado et al., 2020; Alqatan, 2019; Kalbuana et al., 2021; Zimon et al., 2021).

$$|DACC_t| = \theta_0 + \theta_1 Year_t + \theta_2 GP*Year_t + \theta_3 Comp*Year_t + \theta_4 Lev_t + \theta_5 ROA_t \quad (3)$$

Where:

$|DACC|$  = Absolute value of the DACC at time t

Year = Period of the Pandemic at time t

GP\*Year = Interaction of the government aid and incentive policy (operating expense) and year

COMP\*Year = Interaction of the executive compensation and year

Lev = Leverage at time t

ROA = Return on Assets at time t

Table one shows the descriptive statistics for dependent, independent, and control variables. The mean of DACC is -.016, with a standard deviation of .055. The mean of executive compensation is 19408.914, with a standard deviation of 15589.165. The mean of operating expenses is 4405.451, with a standard deviation of 6938.774. Table 1 also presents means and standard deviations for control variables.

The correlations among these variables are depicted in Table 2. The absolute value of the DACC as the dependent variable has the highest correlation with the year. Meaning that the year of the Pandemic had the highest effect on the use of  $|DACC_t|$ . Both independent variables of GPYear, with the proxy of operating expense, and CompYear, compensation, have a significant correlation with the absolute value of DACC, meaning that these two variables have a substantial impact on  $|DACC_t|$  as well.

Table 3 depicts the results of the multiple regression analysis in model 3. The results show that the coefficient for the pandemic, Year,  $\beta = .009$ , with the t value of  $t = 7.27$  and significance of  $P < .05$ . Therefore, there is a significant effect from the period of the Pandemic on  $|DACC_t|$ . These results present support for the first hypothesis that the firms manipulated earnings during the period of the pandemic.

**Table 1.** Descriptive Statistics

	Min	Max	Mean	Stand. Dev.
<b>DACC</b>	-.253	.358	-.016	.055
<b>Comp</b>	439.80	97578.74	19408.914	15589.165
<b>GP</b>	3.536	39744.000	4405.451	6938.774
<b>Lev</b>	.000	3.89	.528	.479
<b>ROA</b>	-.91	4.000	.025	.123

**Notes:**

DACC= Discretionary accruals

Comp = Executive compensation

GP = Government aid policy with the proxy of operating expenses

Lev = Leverage

ROA= Return on Asset

**Table 2.** Correlations

	DACC	Comp*Year	GP*Year	Year	ROA	Lev
<b> DACC </b>		.478*	.423*	.576*	.111*	.412*
<b>Comp*Year</b>			.624*	.565	.181*	.595*
<b>GP*Year</b>				.426*	.168*	.381*
<b>Year</b>					.217*	.685*
<b>ROA</b>						.314*

**Notes:** \*Significance <= .01

|DACC| = Absolute value of DACC

Comp\*Year = Interaction between year and executive compensation

GP\*Year = Interaction between year and operating expenses as a proxy for government aid policy

Lev = Leverage

ROA = Return on assets

The coefficient for the interaction between government policy and the Pandemic year is  $\beta = 7.133E^{-7}$ , with a t-value of  $t = 2.675$  and significance of  $P < .05$ . Therefore, there is a significant effect from the government aid and incentive policy on the  $|DACC_t|$ . These results present support for the second hypothesis.

Also, the coefficient for the interaction between executive compensation and the Pandemic year is  $\beta = 2.115E^{-7}$ , with a t-value of  $t = 2.356$  and significance of  $P < .05$ . Therefore, executive compensation had a significant effect on the  $|DACC_t|$ . This result presents support for the third hypothesis.

Therefore, the multiple regression analysis indicated a significant relationship between the year of the Pandemic and EM, indicating that companies in the leisure and travel industries used DACC for EM purposes. The results also indicate that operating expenses significantly affected discretionary accruals, and executive compensation had a significant effect of DACC as well. This indicates that since managers did not expect much compensation due to the shutdown of business activities and the created lower income or losses, they manipulated their earnings downwards during the Pandemic to at least take advantage of the government aid and incentives. Therefore, firms could qualify for government aid programs during the Pandemic by accrual reduction and benefit from the accrual reversal in subsequent years to show higher income and consequently collect higher compensations. Moreover, attributing the exaggeration of losses to executive mismanagement would not be justified, as the public did not anticipate significant profits from companies during the COVID-19 pandemic.

**Table 3.** Regression Results

	Beta	T	Sig.	Tolerance	VIF
<b>Comp*Year</b>	2.215E <sup>-7</sup>	2.356	.019	.448	2.232
<b>Oper*Year</b>	7.133E <sup>-7</sup>	2.675	.008	.598	1.671
<b>Year</b>	.009	7.270	.000	.485	2.061
<b>ROA</b>	-.013	-.626	.532	.897	1.115
<b>Lev</b>	-.003	-.651	.516	.443	2.258

**Notes:** \*Significance <= .01

R Square = .382, Adjusted R Square = .372, Standard Error of the Estimate = .04517, Durbin-Watson = 1.788.

Dependent Variable:

The absolute value of DACC

Independent variables:

Year = Year of pandemic, 2021=1, 2020=2, 2019=3 and 2018 = 4.

Comp\*Year = Interaction between year and executive compensation

GP\*Year = Interaction between year and operating expenses, as a proxy for government aid policy

Lev = Leverage ratio

ROA = Return on assets

Therefore, the multiple regression analysis indicated a significant relationship between the year of the Pandemic and EM, indicating that companies in the leisure and travel industries used DACC for EM purposes. The results also indicate that operating expenses significantly affected discretionary accruals, and executive compensation had a significant effect of DACC as well. This indicates that since managers did not expect much compensation due to the shutdown of business activities and the created lower income or losses, they manipulated their earnings downwards during the Pandemic to at least take advantage of the government aid and incentives. Therefore, firms could qualify for government aid programs during the Pandemic by accrual reduction and benefit from the accrual reversal in subsequent years to show higher income and consequently collect higher compensations. Moreover, attributing the exaggeration of losses to executive mismanagement would not be justified, as the public did not anticipate significant profits from companies during the COVID-19 pandemic.

## SUMMARY AND DISCUSSION

This study investigated whether travel and leisure industry managers engaged in earnings management during the 2020 pandemic. The findings show significant relationships between the discretionary accruals and independent variables of executive compensation and government aid and incentive policy, with operating expense as a proxy. This means firms used discretionary accruals for earnings management during the Covid period. Moreover, discretionary accruals decreased during the pandemic; therefore, income-decreasing earnings management was used.

By delving into the distinctive circumstances of the COVID-19 Pandemic and its ramifications for government, corporate governance, accounting bodies, and emerging markets (EM), this study makes a substantial and valuable contribution to the existing body of literature.

The findings have important implications for improving the efficiency of government aid and incentive policies. While the government provided unprecedented financial assistance to corporations to cover operating expenses during the pandemic, this study reveals that corporations overstated their losses through discretionary accruals. As a result, the intended goals of safeguarding investors and fostering a healthy securities market were compromised, potentially harming the nation's capital and financial statement users due to a lack of stringent and effective control mechanisms. The study suggests that the government should establish more efficient criteria for determining eligibility for

financial assistance in the event of a similar health crisis due to the firms engaging in EM. Furthermore, the findings of this research can help Accounting standard-setting bodies, such as FASB, enhance Financial Accounting Standards by limiting accounting method choices and estimations while mandating disclosure of any changes in earnings during periods of adopting new accounting policies or standards.

Additionally, this research highlights the involvement of top management and business leaders in earnings manipulation, despite the expectation that they would serve the community, display empathy, and exhibit exemplary actions during an economic and health crisis. The study underscores the negative consequences of such manipulations, including misleading investors, exacerbating their hardships, and misallocating limited public funds. It emphasizes the need for corporate governance to take rigorous actions to mitigate earnings manipulation, emphasizing more effective board involvement through independent board members and audit committees. Strengthening board traits such as size, independence, gender diversity, and financial expertise can enhance its effectiveness in monitoring financial statement preparation during health crises and pandemics, thereby identifying and assessing financial reporting risks.

Furthermore, providing regular ethics training and fostering a culture of information accuracy and transparency can help ensure compliance with ethical standards. Accurate financial reporting benefits society, including protecting the public interest, promoting public trust, stimulating economic growth, facilitating regulatory compliance, preventing fraud, and enabling fair tax collection and social income distribution. Consequently, the board of governance must act more effectively to mitigate the negative consequences of earnings manipulation.

This study focused on the travel and leisure industries severely impacted by the pandemic. Future research can expand on these findings by investigating other important factors influencing corporations' engagement in earnings manipulation during the pandemic.

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