Influence of Managerial Ethical Values on Perceived Earnings Quality: Evidence from Japan

Masumi Nakashima[1♣]
Management Communication Department, Bunkyo Gakuin University, Japan.

ABSTRACT

This paper explores whether managerial ethical values and incentives/ pressures affect perceived earnings quality through structural equation modeling based on responses provided by chief financial officers (CFOs) of public firms in Japan. This study develops the research framework by applying the Theory of Planned Behavior, the Upper Echelon Theory, and the Fraud Triangle Theory. In this model, managerial decisions are viewed as intentions and earnings quality as behavior or the outcome of intentions. In this study, managerial ethical values are quantified as the tone at the top (TATT), and the simultaneous analysis results support my theoretical model and show that subjective norms and behavioral beliefs influence earnings management intentions. It was found that perceived TATT has a significant and positive effect on perceived earnings quality, and perceived incentives/ pressures have a significant negative influence on perceived earnings quality. Overall, my model implies that since incentives/pressures induce management to improve earnings quality, individuals with stronger ethical values should be appointed as managers; moreover, an ethical environment can be fostered by strengthening accounting standards.

Keywords: managerial ethical values, tone at the top, structural equation modeling, Theory of Planned Behavior, Upper Echelon Theory.

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♣ Corresponding author: Masumi Nakashima; Business Administration, Bunkyo Gakuin University, Tokyo, Japan; Email: mnakashima@bgu.ac.jp

INTRODUCTION

Statement of Financial Accounting Concepts No. 8 (FASB 2010, OB17) describes that changes in its economic resources and claims (accruals earnings)[1] during a period provides a better basis for assessing the entity's past and future performance than information solely about cash receipts and payments during that period. The results of archival studies (Bowen et al., 1986; Dechow et al. 1998; Nakashima & Ziebart, 2006) support the above assertion of the FASB's (2010) conceptual framework. In other words, it has been clarified not only in theory but also in empirical studies that earnings is the most significant concept.

In addition, a great deal of archival evidence with theoretical framework has been accumulated on the qualitative aspects of earnings (Dechow & Dichev, 2002; Francis et al., 2008; Nakashima, 2015). However, the determinants of earnings quality have not been agreed upon in practice. Earnings quality is impacted by two factors: an innate component that reflects the inherent features of business models and operating environments and a discretionary component (hereafter, earnings management)[2] that reflects the financial reporting process (Francis et al., 2008). Dichev et al. (2013) found that innate and discretionary factors that impact earnings quality each account for 50% of chief financial officers' (CFOs) perceptions in the U.S. According to Nakashima (2019), Japanese CFOs indicated that while 30% of earnings quality is impacted by firm characteristics such as a firm's business model, industry, and macroeconomic conditions, 70% of earnings quality is influenced by discretionary factors.

Dichev et al. (2016) indicated that the potential determinants of earnings quality range from internal, controllable factors, such as corporate governance, to unavoidable factors, such as industry membership. Nakashima (2019) found that CFOs believe that more than 70% of all Japanese CFOs do not employ discretion and that accounting standards limit their ability to report higher levels of earnings quality. However, CFOs predicted that 50% of other Japanese firms use discretion.

1 Because Conceptual Statement No. 8 uses the terminology, changes in its economic resources and claims indicates as accrual earnings, earnings is used as changes in its economic resources and claims in this study.

2 Among the factors that impact earnings quality, the discretionary component of earnings quality is called "earnings management" in this study. The discretionary component is called the financial reporting process or reporting sources by (Francis et al., 2008).

This study, therefore, focussed on factors controllable by management, that is, discretionary determinants of earnings quality that account for 70% of overall earnings quality. Based on CFOs' responses, this study investigated the discretionary determinants of earnings quality by implementing structural equation modeling (SEM) to validate the relationships between earnings quality and its determinants simultaneously. Data was collected through a survey of 115 questionnaires sent to CFOs of public firms in Japan.

A research framework was developed by applying the theory of planned behavior (Ajzen, 1991) supported by the upper echelon theory (Hambrick & Mason, 1984) and the fraud triangle theory (Cressey, 1953) to explain managers' earnings management intentions and behavior. A manager's intentions are regarded as decision-making and behavior as perceived earnings quality based on the theory of planned behavior. The (discretionary) determinants of the reporting process of earnings quality include managerial decisions (Francis et al., 2008). The theory of planned behavior was integrated with the upper echelon theory to explain that managerial ethical values influence managers' decisions regarding earnings management and the fraud triangle theory to predict that incentives/pressures affect managerial decisions.

Since Francis et al. (2008) indicated that earnings management activities have both positive and negative effects on earnings quality as an outcome, it was assumed that earnings quality as an outcome of managerial decisions. The theoretical model development placed the theory of planned behavior within a management environment and validated the relationship between the determinants of earnings quality and perceived earnings quality simultaneously, choosing earnings management as a determinant of the quality of earnings.

This study contributes to the literature in several ways. First, the discretionary determinants of earnings quality based on the survey results were used to measure each latent variable through SEM. Since it is difficult to identify the determinants of earnings quality through unobservable managerial decisions from publicly available information, this study employed the survey results regarding managers' perceptions as significant information. Second, this study found that perceived managerial ethical values and incentives/pressures were significantly associated with perceived earnings quality. These findings are consistent with the results of Brown et al. (2016), Carpenter and Reimers (2005), and Cohen et al. (2010), which predicted the intentions of accountants and managers by applying the theory of planned behavior.

The remainder of this paper proceeds as follows. Section 2 presents the core research framework and hypotheses development. Section 3 describes the methodology used. Section 4 discusses the empirical results. The final section summarizes this study and presents its conclusions.

THEORY AND HYPOTHESES DEVELOPMENT

Core Framework Based on Theory of the Planned Behavior

This study focused on factors influencing a manager's intention to manage earnings for misrepresentation purposes. The accounting discretion granted to managers is potentially valuable because it allows them to reflect inside information. This leads to shareholder value maximization (Bowen et al., 1986; Palep & Healy, 2013). However, unethical managers use discretion to manipulate earnings for their private gains. This results in the concealment of firms' true performance. It misleads external users of financial statements and makes these statements less valuable (Bowen et al., 1986; Hamilton et al., 2018; Palep & Healy, 2013). Informative earnings management and earnings manipulation differ based on managers' intentions when they make decisions regarding financial reporting (Hamilton et al., 2018).

Managerial intentions are unobservable to external users of financial statements. Thus, this study applied the theory of planned behavior to explain a manager's intentions for misrepresentation, that is, to predict the effect of personal internal factors such as subjective norms and behavioral beliefs. The theoretical framework was developed by integrating the theory of planned behavior with the fraud triangle and upper echelon theory to model managers' intentional behavior to manage earnings for misrepresentation. According to the theory of planned behavior (Ajzen, 1985), intentional behavior is motivated by four factors: perceived subjective norms, perceived behavioral control, behavioral beliefs and attitudes. In this model, the fraud triangle theory was used to identify incentives/pressures that can determine subjective norms, and the upper echelon theory was used to identify managerial ethical values that determined behavioral beliefs.

Studies in nonaccounting fields, such as Randall and Gibson (1991) and McMillan and Conner (2003), have already applied the theory of planned behavior to explain ethical behavioral intentions. Regarding accounting research, although several studies about professional accountants' whistleblowing intentions (Brown et al., 2016; Chiu, 2003; Trongmateerut & Sweeney, 2013) have been conducted, there are few studies on managers' fraudulent financial reporting activities that use the theory of planned behavior. Brown et al. (2016) model professional accountants' intentions to blow the whistle on accounting fraud based on the theory of planned behavior supported by the fraud triangle theory. The authors' results supported the development of the theory and showed that attitudes and perceptions of control over whistleblowing were positively associated with the intention to blow the whistle (Brown et al., 2016).

Carpenter and Reimers (2005) applied the theory of planned behavior to managers' decisions regarding fraudulent financial reporting and provided evidence that attitudes, subjective norms and perceived control influence managerial decision making, which was in violation of generally accepted accounting principles. Cohen et al. (2010) found that unethical managerial behaviors were associated with corporate fraud based on evidence in press articles by integrating the theory of planned behavior with the fraud triangle theory.

As shown in Figure 1, this study attempted to capture perceived behavioral beliefs, which was measure based on managerial ethical values, and subjective norms, which were measured by incentives/pressures to reflect managerial intentions. Ajzen (1991) stated that perceived behavioral control refers to people's perceptions of the ease or difficulty of performing a behavior of interest. Therefore, the intention underlying earnings management depends on perceived control. The theory proposes that if a manager perceives control over a situation and its outcome, he or she will not intend to manage earnings.

Ajzen (1991) indicated that an individual's attitude towards a behavior is the degree to which he or she has a favorable or unfavorable evaluation or appraisal of the behavior in question. Subjective norms are perceived social pressures to perform or not perform a behavior. Ajzen (1985) stated that people believe that specific individuals or groups think they should or should not perform certain behaviors. In this model, ethical managerial values promoting the performance of a behavior determined behavioral beliefs, and incentives/pressures determined subjective norms.

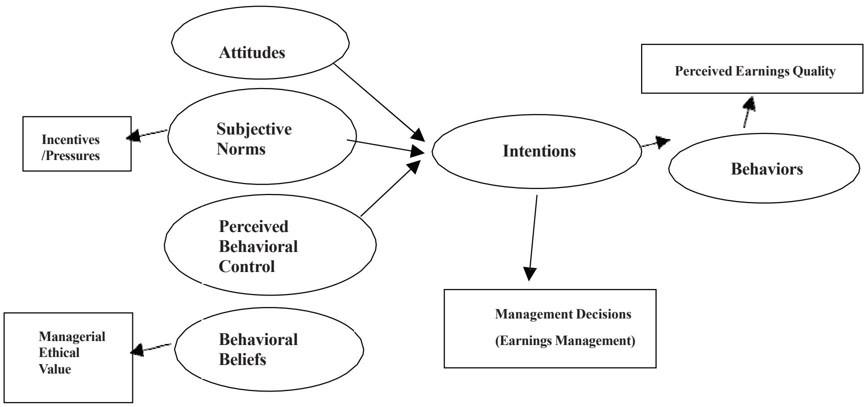

Figure 1: Core Framework Based on Theory of the Planned Behavior
Notes: The core framework is developed based on the theory of planned behavior (Ajzen, 1985)

Brown et al. (2016) model included three factors, namely, perceived behavioral control, subjective norms, and attitudes, as the attitudes/ rationalizations of fraud triangle theory. Ajzen (1991) highlighted that attitudes develop from beliefs about their object. Brown et al. (2016) indicated that an attitude is a person's judgment of a behavior determined by his or her beliefs about the consequences of that behavior. They regarded attitude as an individual internal element of the theory of planned behavior that influenced behavioral intentions. However, since attitude and perceived behavioral control were included in behavioral beliefs in this model, attitude and perceived behavioral control was removed from the SEM testing.

An Integrated Framework with Upper Echelon and Fraud Triangle

The upper echelon theory and fraud triangle theory were integrated into the primary framework. Following the upper echelon theory (Hambrick & Mason, 1984), organizational outcomes are partially predicted by managerial background characteristics (Hambrick & Mason, 1984). While the upper echelon theory has been widely applied in management literature, accounting research has recently inferred and developed hypotheses by applying upper echelon theory to explain economic and social phenomena. Plöckinger et al. (2016) reviewed accounting studies that used the upper echelon theory using meta- analysis and found that the results supported the aforementioned prediction. Qi et al. (2018) found that top management demographic characteristics were significantly associated with earnings management and may affect a firm's financial reporting quality. Employing Chinese data, Qu (2020) found that the characteristics of members and the chairperson were significant when explaining a firm's probability of accounting misstatements and earnings management. Hiebl (2014) found that CEOs' characteristics, such as age and tenure, and backgrounds were associated with factors related to management accounting and control systems.

Brown et al. (2016) integrated the theory of planned behavior with the fraud triangle to model accountants' intentions to blow the whistle. The author identified external opportunities and incentives and attitudes/rationalizations related to the fraud triangle, including perceived control, subjective norms, and attitudes. In the model, only incentives/pressures related to the fraud triangle theory can influence managerial intention as subjective norms of the theory of planned behavior.

Figure 2 shows the integrated framework. The fraud triangle factor, incentives/pressures, and the upper echelon theory factor, managerial ethical value, contribute to influencing managerial decisions. Those two theories aided the theory of planned behavior factors, namely, subjective norms and behavioral beliefs, in explaining the impact of managerial earnings management for misrepresentation on earnings quality.

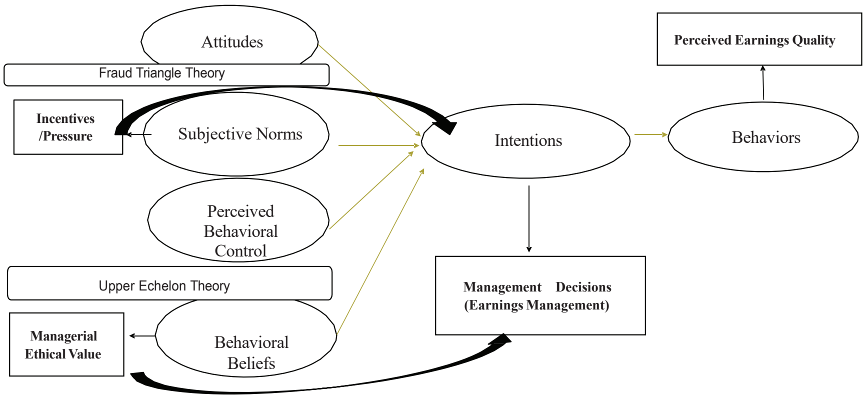

Figure 2: An Integrated Framework for Modeling

Notes: Upper echelon theory (Hambrick & Mason, 1984) and fraud triangle theory (Cressey, 1953) are integrated into the theory of planned behavior (Ajzen, 1985)

Managerial Ethical Values Based on the Upper Echelon Theory

Following the theory of planned behavior (Ajzen, 1985), attitudes and subjective norms are based on beliefs about the consequences of performing a behavior and the relevant referents' normative expectations. A person's behavior is explained in reference to his or her beliefs. Thus, in this model, the upper echelon theory is applied to explain the relationship between managers' ethical values (behavioral beliefs) and their intention for misrepresentation (intention).

Fernandhytia and Muslichah (2020) noted that ethical values had a negative effect on accounting fraud tendency. Professional ethics codes played a significant role in maintaining ethical behavior in working environments. Following the upper echelon theory, managers' cognitive base values and observable characteristics influenced strategic choices and performance (Hambrick & Mason, 1984).

The Security Exchange Committee (SEC) stated the following at the National Society of Compliance Professionals (NSCP) National Meeting: Governance. This includes the board of directors and senior management setting a tone at the top and providing compliance and ethics programs with the necessary resources, independence, standing, and authority to be effective. NEP staff have begun meeting with directors, CEOs, and senior management teams to better understand risk and assess the tone at the top, that is, shaping the culture of compliance, ethics, and risk management (di Florio, 2011).

Ethical values can be defined as the overall values embraced by individuals and organizations. Ethical values compel managers to make good decisions and restrict fraudulent activities (Ambrose et al., 2007). Zandstra (2002) indicated that the main reason for Enron's fraud was a failure by Enron's board of directors to function in a morally and ethically responsible manner.

The tone at the top (*TATT*)[3] is defined as the visible willingness of top management to prioritize corporate value over other values in decision- making and to expect all others in the organization to do the same (Nederlandse Beroepsoganisatie van Accountants (NBA), 2012). A good *TATT* set by example and action is central to the overall ethical environment of firms (Schwartz et al., 2005).

The *TATT* is an essential element of effective internal control and corporate governance, and it should not be underestimated (Ahamed & Epps, 2013)[4]. Nakashima and Ziebart (2016) found that the *TATT* was associated with the accuracy of cash flow predictions as a proxy for earnings quality. Beaudoin et al. (2015) provided evidence that a CFO's ethical predisposition toward earnings management constrained earnings management behavior.

3 Committee of Sponsoring Organizations of the Treadway Commission (COSO) (2013) asserts the following. Internal control consists of five interrelated components. As one of the components, the control environment sets the tone of an organization, influencing the control consciousness of its people. The control environment is the foundation for all other components of internal control and provides discipline and structure. The control environment factors include the integrity, ethical values, and competence of the entity's people; management's philosophy and operating style; the way management assigns authority and responsibility and organizes and develops its people; and the attention and direction provided by the board of directors.

4 There is a connection between fraud and the *TATT* (Association of Certified Fraud Examination, 2006). By establishing a culture of honesty and openness from the top down, managers can imbue their organizations with a spirit of open accountability and pull fraud out of the shadows (PricewaterhouseCoopers (PWC), 2018). A strong *TATT* in the upper level of firm management should lead to an ethical atmosphere that permeates the organization and enhances its internal control system. A poor *TATT* leads managers to commit accounting fraud. There are several studies that examine the association between the *TATT* and the occurrence of fraud (Brazel et al., 2010; Murphy & Free, 2016).

Managerial ethical values were measured based on the *TATT* as a characteristic of management. This study predicted that the stronger the *TATT* of a manager of a nonfraud firm is, the higher the earnings quality the firm will possess. Accordingly, the following hypothesis was proposed:

H1: Perceived managerial ethical values are positively associated with perceived earnings quality.

Incentives/Pressures Based on the Fraud Triangle Theory

Following the theory of planned behavior, a manager forms earnings management intentions based on perceived subjective norms, which refer to the perceived social pressure to perform or not perform a behavior (Ajzen, 1991). This is a factor that corresponds to the incentives/pressures of fraud triangle theory.

As Nakashima (2019) demonstrated, 74% of CFOs stated that a manager can choose to manage earnings for misrepresentation when he or she possesses inside pressure within a firm. This is one of the special features of the Japanese Management System. Managers misrepresented information in an attempt to preserve their positions. The relationship between incentives/pressures and managerial decisions to manage earnings is considered based on fraud triangle theory (Cressy, 1953). Hogan et al. (2008) indicated that when managers possess incentives/pressures to meet their goals, earnings management for misrepresentation can arise.

Archival studies have established incentives for management's discretion (Burns & Kedia, 2006; Efendi et al., 2007; Erickson et al., 2006; Harris & Bromiley, 2007; Johnson et al., 2009; Shuto, 2010; Subramanyam, 1996; Suda, 2000). Moreover, survey studies have shown that managers are incentivized to meet earnings benchmarks to secure credibility from markets and sustain and increase stock prices (Graham et al., 2005; Suda & Hanaeda, 2008).

Burgstahler et al. (2006) showed that incentives created by capital market pressures and institutional factors are determinants of earnings quality. Guay et al. (1996) indicated that although the performance portion of earnings management improves earnings quality, opportunism and noise in earnings management reduce earnings quality. Krishnan et al. (2008) examined the relationship between inventory policies established by managers and earnings quality and find that the influence of accounting policies and estimates established by management on earnings quality is reflected in the quality of accruals (Krishnan et al., 2008).

Earnings management activities can have both positive and negative consequences for earnings quality (Francis et al., 2008). Thus, this study predicted that incentives/pressures for misrepresenting earnings were negatively associated with earnings quality and propose the following hypothesis:

H2: Perceived incentives/pressures to misrepresent earnings are negatively associated with perceived earnings quality.

METHODOLOGY

Sample

This study used survey responses from Nakashima's (2019) study regarding CFOs.[5] The questionnaires were distributed with a cover letter that suggested the purpose of the survey research, namely, to obtain evidence that most managers in Japan possess ethical values and sincere management intentions, as follows: The reliability of the capital market in Japan has declined due to accounting fraud that occurred at a firm in Japan. The reason why a survey for CFOs of public firms in Japan was implemented is because the proof should be needed to document whether managers in Japan

5 The survey questionnaires were sent to the CFOs of public firms in Japan through the postal service on July 1, 2017. 131 responses were collected from Japanese firms in total for a response rate of 4.0%. There are six firms that indicated the exact names of their firms and CFOs, they noted that they were not able to participate in any survey because of the corporate policy. The six firms were removed. Among the one hundred sixteen firms that provided their names, one firm revealed no data and was removed. Thus, of the overall one hundred twenty-five firms, one hundred fifteen firms provided their names as well as data. The questionnaire is based on the study by Dichev et al. (2013) and composed of the following parts: managers' visions for earnings quality, higher-quality earnings, determinants of earnings quality, earnings management, accounting policies and standards that influence earnings quality, and misrepresentation of earnings. The survey respondents were asked to indicate their level of agreement with each statement on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

have ethical minds and manage their operations sincerely. To clarify these managers' ideas regarding earnings quality and earnings management in Japan can recover the reliability of the Japanese stock market (Nakashima, 2019). The respondents were managers who agreed with the objective of the survey. The measurement of each variable in the model is described in the following section.

Latent Variables

Behavioral beliefs (tone at the top as managerial ethical values)

Following the theory of planned behavior, when a manager decides to manage earnings for misrepresentation, he or she uses his or her managerial ethical values as behavioral beliefs. To assess managers' ethical values, Nakashima (2019) used questions from Nakashima and Okuda (2016). The examined CFOs were asked about their ideas regarding the following topics: Q1.1, conformity to J-SOX, Q1.2, improvements in internal control, and Q1.3, the importance of targets. Figure 2 shows the results regarding the responses to Q1.1.1, Q1.1.2, Q1.2, and Q1.3.

Nakashima and Okuda (2016) developed questions framed around the fraud triangle theory (Cressey, 1953) and indicated that Q1.1.1 and Q1.1.2 can gauge whether a manager is committed to reducing opportunities to prevent fraud by asking whether he or she is willing to improve the internal control system. In addition, they indicated that Q1.2 could capture the extent of a manager's rationalization by asking whether he or she possesses objective decision-making abilities and that Q1.3 could capture a manager's degree of pressure by asking whether he or she has positive attitudes toward earnings management. Thus, managerial ethical values was quantified as *TATT*, which was measured indirectly by Q 1.1, Q1.2, Q 1.2, and Q1.3 (Nakashima & Ziebart, 2016).

Figure 3 shows that 62.10% and 69.80% of Japanese CFOs possessed positive attitudes toward compliance with Japanese Version of Sarbanes-Oxley Act of 2022 (J-SOX) and the improvement of internal control systems, respectively. Furthermore, 70.70% of Japanese CFOs possessed objective decision-making skills, and 68.10% of the CFOs possessed positive attitudes toward meeting their goals.

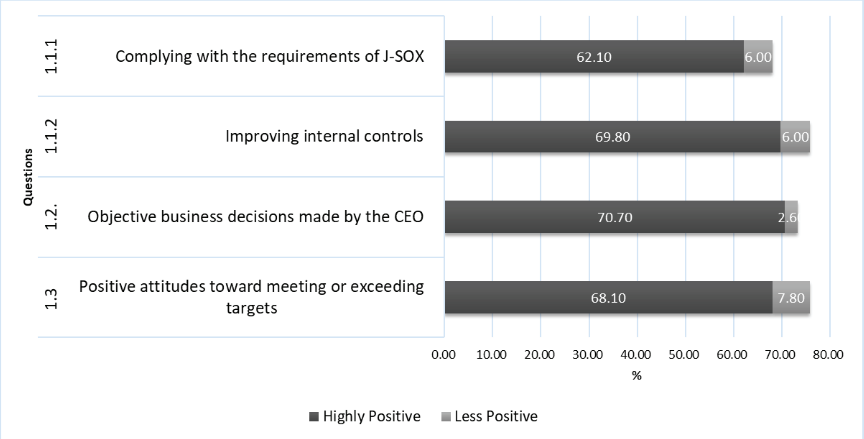

Figure 3: Tone at the Top (TATT)

Notes: CFOs were asked about how they would describe their attitudes regarding documenting and assessing the effectiveness of the internal control structure and procedures related to financial reporting, (1.1.1) complying with the requirements of J-SOX, and (1.1.2) improving the internal controls of the company. (1.2). If independent and objective third parties were to judge the ethics of business decisions made by you at your company, what do you think they would say? (1.3) How positive is the CFOs regarding meeting or exceeding targets, such as sales, net income, and/or earnings per share? Column 2 reports that "agree" encompasses the percentage of participants who answered 5 or 4, and "disagree" covers the percentage of participants who answered 2 or 1. The mean indicates the mean of the scores indicated by the participants for each item.

Perceived subjective norms (incentives/pressures)

According to the fraud triangle theory, the incentive to misstate earnings arises because of various pressures, such as the need to meet goals, compensation, and performance (Hogan et al., 2008).

Incentives/pressures were measured indirectly using Q7.4. Therefore, the participating CFOs were asked to evaluate the incentives for CFOs to use earnings to misrepresent performance.

Intentions to misrepresent (earnings quality)

Since Francis et al. (2008) indicated that earnings management activities have both positive and negative effected of earnings quality as an outcome, earnings quality was regarded as an outcome of managerial decisions. Earnings quality was measured indirectly using Q5.1 and Q5.2.

Validation Model

This study examined the relationship between earnings quality and its discretionary determinants. Data analysis was conducted using SEM to explain the relationships among multiple variables (Hair et al., 1998).

SEM was chosen in this study for the following reasons. First, SEM can capture interrelated relationships simultaneously. Second, SEM can reveal unobserved elements of relationships. Third, SEM can be used to define a model to explain an entire relationship (Hair et al., 1998).

Management's decisions were composed of the *TATT* and incentives/ pressures and both influenced earnings quality, as shown in Figure 4. Management's decisions were composed of the TATT and incentives/ pressures and that both influenced earnings quality, as shown in Figure 4.

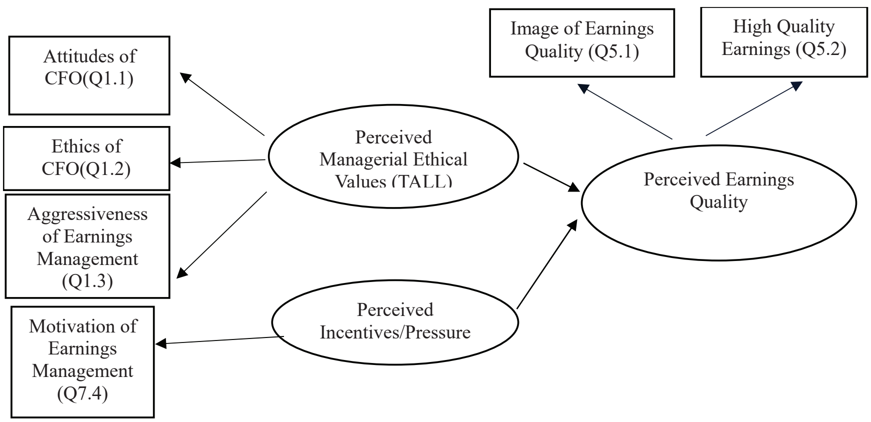

Figure 4: Validation Model

Notes: This is the validation model of earnings quality. The ellipses denote latent variables

The model 1 for this analysis is constructed as shown below:

$$Et = \beta 0 + \beta 1\ TATTt\text{-}1 + \beta 2\ INCENTIVES/PRESSURESt\text{-}1 + \varepsilon \qquad (1)$$

Descriptive Statistics

Table 1 presents the descriptive statistics of the sample firms. As shown the sales growth, sales, price-to-earnings ratio and debt of the sample firms were 5.173, 0.630 (mean, median), 1.225, 1.055 (mean, median), 13.621, 8.800 (mean, median) and 0.549, 0.553 (mean, median), respectively. This indicated that the sample firms exhibited good performance and comparatively little debt. The total asset turnover, which is computed through sales dividing by total asset is an indicator of how efficiently the assets invested in a business is utilized. When a firm is able to generate more sales with less assets, its total asset turnover ratio is higher. The asset turnover of the sample firms was greater than 1.0. This indicated that the sample firm was highly secure. The debt ratio is an indicator used to confirm a firm's ability to repay its debt over the medium to long term relative to its assets by showing the ratio of the firm's assets to its total liabilities. the ratio of liabilities to assets of the sample firms, were less than 0.5. This suggested that the sample firms' financial position was likely safe.

Table 1: Descriptive Statistics for the Sample Firms (N=115)

	Mean	S.D	Min	Max	25th Percentile	Median	75th Percentile
Sales growth	5.173	17.761	-22.190	135.080	-0.188	0.630	6.110
Sales	1.225	0.628	0.244	3.259	0.803	1.055	1.445
Price/ Earnings ratio	13.621	26.013	0.000	240.400	0.000	8.800	16.050
Debt	0.549	0.195	0.158	0.878	0.390	0.553	0.718

Variable Definition:

All variables are deflated by total assets in the end of the year

Sales Growth	Sales in the beginning of the year / Sales in the end of the year
Sales	Sales/Total assets
Price/Earnings ratio	(Stock Price/Earnings per share)*100
Debt	Total liabilities/Total assets

Correlation Matrix of Latent Variables

A correlation analysis between the discretionary determinants of earnings quality and earnings quality was conducted. Table 2 provides a Pearson/Spearman correlation matrix for the variables in the model. There was a significant positive correlation between earnings quality and *TATT* (0.193 for Pearson) (0.178 for Spearman) and a negative correlation between earnings quality and incentives/pressures (-0.157 for Pearson), (-123 for Spearman).

Table 2: Correlation Coefficients

	EarningsQuality	TATT	Incentives/Pressures
EarningsQuality	1.000	**.193***	**-.157**
		.038	.096
TATT	**.178**	1.000	.009
	.057		.924
Incentives/Pressures	-.123	.064	1.000
	.192	.498	

Correlations above (below) the diagonal are Pearson (Spearman) correlations.

The bottom number in each is a two-tail p-value. * significant at 5% level; ** significant at 1% level.

Variable definitions:

TATT	{(Q1.1+Q1.2)/2+Q1.2+Q1.3}/3
Attitude of CFO (Q 1.1)	Attitude of the CEO with regard to documenting and assessing the effectiveness of the internal control structure and procedures over financial reporting? Complying with the requirements of J-SOX (Q1.1.1), Improving internal controls in the firm (Q1.1.2)
	Ethical values of business decisions made by CFO (Q1.2)
	Aggressiveness of earning management by CFO to meet or beat targets (Q1.3)
Incentives/Pressures (Q7.4)	Q7_4: Following the Fraud Triangle, there are motivations, rationalization, and opportunities coexist, fraud occurs. Please rate the importance of the following motivations for firms that use earnings to misrepresent economic performance:
EarningsQuality (Q5.1)	Images of"earnings quality
	Sustainable earnings, Free from special or one-time item, Accurately reflects economic reality, Quality earnings come from normal operations, earnings backed by cash flows, accurate application of GAAP, higher transparent earnings, consistently reported earnings, conservative earnings, regular revenues minis regular expenses, growing earnings,and EBITDA etc.

RESULTS

Model Fit

Here, an assessment of how well the theory fit the sample data is provided. The goodness-of-fit index (GFI) was 0.936. The possible range is 0 to 1, with higher values indicating a better fit. The GFI of this model, 0.93, was greater than 0.90, which is considered a good fit (Hair et al., 1998). The root mean square error of approximation (RMSEA) has become one of the most widely used measures of misfit/fit in applications of SEM (Hair et al., 1998; Kelley & Lai, 2011). Here, RMSEA was small (0.000). These indices indicated that the model fit was good.

Hypothesis Test

Structural model estimation is used to test the hypotheses by examining the p value for significance and the standard error (S.E.) value to determine the relationship direction (positive or negative).

Test of H1: Managerial Ethical Values and Earnings Quality

Figure 5 and Table 3 present the SEM results. The results showed that the TATT had a positive effect on earnings quality (estimate = 0.295), and the p value was significant. This supported H1. This result is consistent with the results of Hiebl (2014), Qi et al. (2018) and Qu (2020), that applied the upper echelon theory. In addition, the finding is consistent with Francis et al.'s (2008) theory and Nakashima and Ziebart (2016) that *TATT* was significantly associated with earnings quality (the accuracy of cash flow predictions) (Nakashima & Ziebart, 2016).

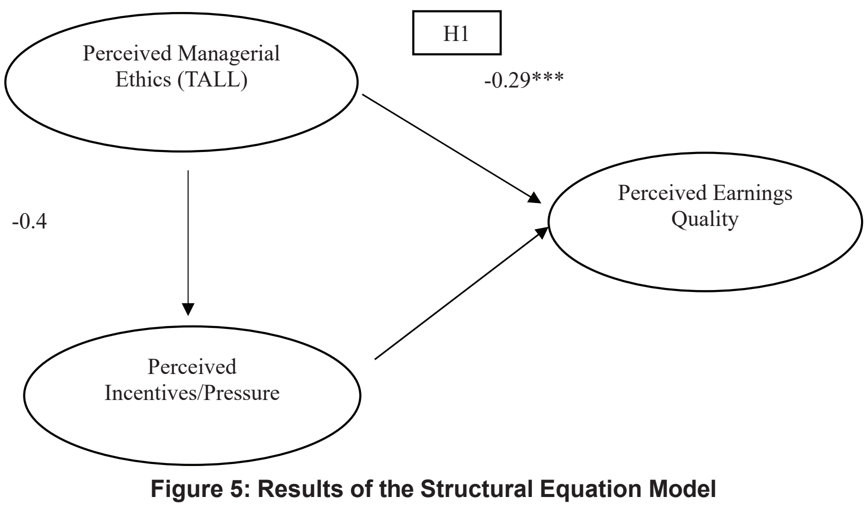

Figure 5: Results of the Structural Equation Model

Table 3: Regression Weights

			Estimate	S.E.	C.R.	P	
Incentives/Pressures	<---	*TATT*	-0.037	0.124	-0.297	0.766	
EarningsQuality	<---	*TATT*	0.077	0.029	2.641	0.008	***

*, ** and *** indicate that significant at 0.1 level, 0.05 level and 0.001 level, respectively.
See Table 2 for the definision of each variable.

This suggested that managerial ethical values can improve earnings quality. Therefore, as Drucker (1954) indicated, investors do not forgive a lack of integrity in a manager. Hence, a person with integrity should be appointed as a manager.

Test of H2: Incentives/Pressures and Earnings Quality

The results as shown in Figure 5 and Table 3, showed that incentives/pressures had a significant and negative effect on earnings quality (estimate = -0.244). This result supported H2 and is consistent with the results of Brown et al. (2016), who applied the theory of planned behavior and the fraud triangle theory by using SEM. In addition, this is consistent with Guay et al.'s (1996) finding that managers' economic incentives influence the magnitude and direction of discretionary accruals and Burgstahler et al.'s (2006) finding that incentives created by capital market pressures influence earnings quality.

CONCLUSIONS

This study investigated the presence of a significant relationship between earnings quality and its discretionary determinants through SEM by using research survey responses (Nakashima, 2019; Nakashima & Okuda, 2016). The theory of planned behavior was integrated with the fraud triangle theory, and the upper echelon theory to model a managerial decision mechanism. The SEM results provide strong support for the theoretical model and showed that managerial ethical values (*TATT*) positively impacted earnings quality and that incentives/pressures negatively influenced earnings quality. This suggested that managerial ethical values improve earnings quality and that incentives/pressures impair earnings quality.

This model implied that individuals with higher ethical values should be appointed as managers. How should one foster ethical values? Are ethical values an innate characteristic of managers, or can they be fostered? Drucker mentioned that management should avoid filling higher management roles with persons lacking integrity, as integrity is an innate characteristic and cannot be fostered (Drucker, 1954). This is a limitation of this study. Incentives/pressures are internal, individual-level factors; moreover, it is difficult to suppress greed. Therefore, based on the fraud triangle theory, opportunities should be controlled as another factor. Thus, an ethical environment can be fostered by strengthening accounting standards. Moreover, as Cohen et al. (2010) suggested, auditing standards related to misrepresentation should suppress managers' unethical behavior as a fraud risk factor.

This study has another limitation. The models of earnings quality implemented here were based on the survey results. The small sample size used in the SEM might bias the results. Therefore, generalizing the results might be difficult.

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