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IMPACT OF CEO CHARISMA ON FINANCIAL PERFORMANCE: EVIDENCE FROM INDONESIAN FIRMS

PENGARUH KARISMA DIREKTUR UTAMA TERHADAP KINERJA KEUANGAN PERUSAHAAN DI INDONESIA

Anindya Apta Apsari[1*], Dony Abdul Chalid[2]

[1,2]*Universitas Indonesia*

[*]*Corresponding Author: anindya.apta@ui.ac.id*

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A B S T R A C T

Charisma is a personal characteristic of a person that makes others view them as a leader. Some prior studies on CEO charisma and financial performance found a positive relationship between CEO charisma and their firm's performance, especially during conditions of uncertainty. This study seeks to find the impact of CEO's charisma on Indonesian firms' financial performance, using firm risk as the uncertainty condition. This study picked some firms from IDX80 because the firms in that index are believed to have a higher market capitalization and more known by the public, thus giving the possibility of more news coverage. CEO's charisma is calculated by doing text analysis on articles discussing these CEOs. Firm performance measures used were ROA and Tobin' s Q. This study used firm risk measured from beta and epsilon of CAPM as a moderating variable to find whether firm risk act as a moderator to increase the effect of CEO's charisma on firm performance. Panel data regression was used to determine relationship between the variables. This study found a positive and significant relationship between charisma and firm performance when Tobin's Q was used as a dependent variable and firm-specific risk was included in the regression. This study found a moderating effect from firm-specific risk on the relationship between CEO charisma and firm performance.

Kata Kunci:
Analisis Teks; Karakteristik Direktur Utama; Kepemiminan Karismatik; Kinerja Keuangan

A B S T R A K

Karisma adalah ciri-ciri pribadi yang dimiliki seseorang dan membuat orang tersebut dianggap sebagai pemimpin oleh orang-orang lainnya. Sudah ada beberapa studi terdahulu yang meneliti hubungan antara karisma direktur utama dengan kinerja keuangan yang menemukan hubungan positif antara keduanya, terutama dalam keadaan ketidakpastian atau krisis. Studi ini bertujuan untuk meneliti hubungan antara karisma direktur utama dengan kinerja keuangan perusahaan mereka menggunakan risiko perusahaan sebagai variabel moderasi. Penelitian ini menggunakan perusahaan yang terdaftar dalam IDX80 sebagai sampel karena perusahaan-perusahan tersebut memiliki kapitalisasi pasar lebih besar dan lebih banyak diliput dalam berita. Karisma direktur utama diukur menggunakan analisis teks yang membahas para direktur utama tersebut. Kinerja keuangan diukur menggunakan ROA dan Tobin's Q. Risiko perusahaan didapatkan dari *beta* dan *epsilon* CAPM masing-masing perusahaan. Regresi data panel dilakukan terhadap seluruh variabel untuk menemukan hubungan antara variabel-variabel yang diteliti. Penelitian ini menemukan hubungan positif dan signifikan antara karisma direktur utama dengan kinerja keuangan perusahaan ketika menggunakan Tobin's Q sebagai pengukuran kinerja dan risiko non sistematik dimasukkan dalam regresi. Selain itu, penelitian ini menemukan pengaruh moderasi dari risiko non sistematik bagi hubungan antara karisma dengan kinerja perusahaan, namun tidak ada pengaruh moderasi dari risiko sistematik.

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1. Introduction

Studies examining the relationship between a CEO's personal characteristics and their firm's financial performance are well established. Earlier researches examined demographic characteristics, such as age, gender, and education level (Harrison et al., 2018). Further researches developed into more intangible personal qualities, such as neuroticism, extroversion, (Harrison et al., 2018; Wang & Chen, 2020), hubris (Y. Tang et al., 2014), leadership style (Jensen et al., 2020) and finally, charisma (Yeung et al., 2018). Charisma is a personal characteristic that will cause others to treat that person as a leader. Theories about charismatic leadership was popularized by Max Weber (1978) who stated that charisma is one of three types of authorities. Charisma in a leader will make others want to follow that leader.

There are a few studies about CEO's charisma and financial performance. One study which is often cited as the pioneer of studying charisma and firm performance is Waldman et al. (2001). This study examines 48 CEOs in Fortune 500 companies using a condition of

uncertainty as a moderating variable. Waldman's study found that there is a significant correlation between charisma and firm performance when moderated by conditions of uncertainty, however when there is no uncertainty condition, there is no significant correlation between those two variables (Waldman et al., 2001). Existing studies regarding CEO charisma and firm performance used samples from the United States (Harrison et al., 2018; Tosi et al., 2004; Wang & Chen, 2020), Europe (Jensen et al., 2020), and/or China (Yeung et al., 2018). These earlier studies used varying methods in measuring charisma, firm performance, and the condition of uncertainty. Some studies used questionnaires that were filled by top-level managers that work under the CEOs to gauge those CEO's charisma in the office (Tosi et al., 2004; Waldman et al., 2001). Measures of charisma consists of but not limited to whether their CEOs generate respect and confidence in their subordinates, communicates high expectations and company vision, as well as show determination in their own work (Waldman et al., 2001).

However, using questionnaire has some weaknesses, namely that it relies on the willingness of CEOs or their subordinates to answer the questionnaires and the presence of social desirability bias (Wang & Chen, 2020). Thus, other researchers used unobtrusive measures as an alternative. An example of unobtrusive measures that have been used to measure someone's personality and charisma in earlier studies used the prominence of CEO's photos in company's reports and CEO's use of first-person pronouns in interviews to measure their narcissism (Chatterjee & Hambrick, 2007). Newer studies also took advantage of the big data era by analyzing public data regarding CEOs. One study analyzed CEO's personality by utilizing machine learning algorithms on their utterances on their personal social media accounts (Wang & Chen, 2020); a different study calculated the number of times the CEOs have been described in media using words relating to "confidence" and "conservatism" to measure CEO hubris (Y. Tang et al., 2014); and another one used text analysis to find whether the CEOs were described using words relating to charisma to measure CEO charisma (Yeung et al., 2018). This study will also be using an unobtrusive measure, which is text analysis to measure how often a CEO was described using words relating to charisma in news coverage. Using an unobtrusive measure like this will mitigate the problems of using questionnaires to calculate CEO's charisma score, which are the number of willing respondents and social biases.

This study will also be using an objective measurement to calculate firm risk, which acted as a proxy for environmental uncertainty. Some earlier studies have used perceived environmental uncertainty as their moderating variable, also using questionnaires to measure the perception of existing environmental uncertainty in the employees. Measures of perceived environmental uncertainty consist of but not limited to the presence of marketing and investment opportunity where they live, threats to the survival of their company, the speed of change

around the company, and the predictability of political changes in the country (Covin, Jeffrey & Slevin, Dennis, 1989; Tosi et al., 2004; Waldman et al., 2001). The measurement that will be used in this study for environmental uncertainty is firm risk, which are acquired from the *beta* and *epsilon* of CAPM of weekly stock return (Agle et al., 2006; Miller et al., 2002). Using a more objective measurement that does not depend on the perceptions of respondents corresponded more to the unobtrusive measure used in measuring CEO charisma and mitigate the problem of respondent willingness in answering questionnaires. An earlier study used an unobtrusive measure in measure CEO charisma also used a more objective mean in defining environmental uncertainty in their research, which is the period around Initial Public Offering (Yeung et al., 2018).

To the author's knowledge, there have not been any studies in Indonesia that examined the relationship between CEO charisma and their firm's financial performance. Existing studies in Indonesia have studied CEO's demographic characteristics such as gender and age on firm's earning management (Putra, 2021; Putri & Rusmanto, 2019; Saputri, 2021), similar to some other studies regarding earnings management in other developing countries (Alqatamin et al., 2017; Enofe et al., 2017). There are also related studies in Indonesia focused on general characteristics of the company such as financial ratios and the size of the firm (S. Tang & Fiorentina, 2021) of the entire board such as board size dan the existence of independent commissioner (Setiawan et al., 2018).

This study seeks to find the correlation between CEOs and financial performances of their firms in Indonesia. Samples are picked from IDX80 index from the Indonesian Stock Exchange. Purposive sampling is used to choose firms whose CEOs have at least four years of tenure to control for their influence to the company. This study also controlled for their ages, size of company, and industry mean of financial performance. CEO charisma is analysed by using term frequency/inverse document frequency method on news articles discussing the specific CEOs. The articles were compiled and using R, a matrix of term frequency/inverse document frequency was acquired. Keywords relating to charismatic leadership were searched in the document matrix and the average value was used as the independent variable. At the point of writing, this study is the first one in Indonesia to study this topic.

2. Literature Review

2.1 The Upper Echelons Theory

The upper echelons theory was established by Hambrick and Mason in 1984 to propose that the personal characteristics of someone in the upper management team can influence their firm's performance (Hambrick & Mason, 1984; Wang & Chen, 2020). Departing from behavioral

theory which argued that complex decision makings are largely influenced by behavioral factors rather than mechanical quests for economic optimization. The more complex the decision, the more influential the decision maker's behaviors will be. Hambrick and Mason proposed that top level managers have control over many aspects of their organization and cannot possibly be an expert in all of those aspects. Thus, their decisions will reflect their personal idiosyncrasies (Hambrick & Mason, 1984).

Hambrick and Mason's original article proposed that this theory will mostly focus on observable characteristics, such as age, tenure, socioeconomic roots, education, and financial position. Later on, this theory would also encompass more psychological characteristics of upper management team, such as narcissism, in a study done by Chatterjee and Hambrick in 2007. They believe that narcissistic CEOs tend to be bolder in choosing firm strategies and more vulnerable to boredom. Their study found that narcissistic CEOs generate more extreme wins and more extreme losses than lesser narcissistic ones (Chatterjee & Hambrick, 2007). The upper echelons theory can also be applied to charismatic CEOs and how their leadership influences the company (Waldman et al., 2001)

It is also possible to explain the relations between CEO portrayal in the media and their stock prices by the efficient market hypothesis. Efficient market hypothesis proposed that an efficient market will fully reflect all information available. According to this hypothesis, an effective market will react timely and precisely. This means that investors who are late to the new information will not be able to gain any profit from changes in the financial market and the changes will reflect new existing information accurately which means neither overreacting nor underreacting (Fama, 1970; Shleifer, 2004).

2.2 Financial Performance

Financial performance is one of the ways to measure a firm's performance. Financial performance is often used to measure the achievement of economic goals and it is often the dominant model in empirical studies (Venkatraman & Ramanujam, 1986; Waldman, 1999; Wang & Chen, 2020). There are many ways to measure a firm's financial performance, but this study will use two measures, which are Return on Assets (RoA) and Tobin's Q. The formula for RoA is as follows:

$$RoA = \frac{NetIncome}{TotalAsset}$$

The formula for Tobin's Q that was used in this study is as follows:

$$Tobin'sQ = \frac{TotalMarketValueofFirm}{TotalAssetsValue}$$

Where Total Market Value of the Firm is calculated using the number of outstanding shares times share price plus book value of liabilities. Total Assets Value is the book value of assets (Christensen et al., 2010; Kyere & Ausloos, 2021).

2.3 Charismatic Leadership

Charisma was originally a religious concept. Charismatic leadership theory was popularized by Max Weber who stated that there were three types of authorities: rational which was based on a legal belief to an authority to uphold the law; traditional which was based on an established belief on a long-held tradition; and charismatic which was based on a loyalty to a person's holiness or extraordinary characteristic. This characteristic is not possessed by everyone, thus those that possess them are treated as a leader (Spoelstra, 2019; Weber, 1978).

A study that examined the relationship between a charismatic leader and financial performance defined charisma as the relationship between a leader individual and their followers based on the behaviour of the leader combined the characteristics liked by the followers. Those behaviours can include the ability to convey firm's vision and mission, also the ability to show grit while working. These characteristics that their followers like can make others admire the leader (Waldman et al., 2001). Another study defined a charismatic leader as a leader who can deliver a vision that is different from the status quo, confident to take risks and act unconventionally, shows a degree of self-sacrifice, and able to inspire their followers with an emotional appeal (Yeung et al., 2018).

2.4 Charismatic Leadership and Financial Performance

One article which was often cited as the first to study the relationship between charismatic leaders and firm financial performance is by Waldman et al. (2001), moderated by an uncertainty condition. This study found a positive but insignificant relationship between firm financial performance and charismatic leader, but the relationship became significant after adding a crisis or uncertainty condition as a moderation variable (Waldman et al., 2001).

A following article replicated Waldman's study in 2001 by studying the relationship between charismatic CEOs and firm financial performance in an uncertain condition conducted in 2004. This study used a Multi-factor Leadership Questionnaire to assess managers' charismatic behaviour and attributions. These questionnaires were filled by managers in 36 companies. This study used shareholder return and return on assets as measures for firm performance. This study found no significant relationship between CEO charisma and financial performance, however they found that more charismatic CEOs receive higher total pay. They also found that the equity market places higher value on charismatic CEOs (Tosi et al., 2004).

Existing studies used different methods to calculate for CEO charisma, including text analysis to find predetermined keywords in articles discussing the CEOs where the researchers

gave 1 (one) to indicate when there are relations from these words to CEOs' names and 0 (zero) otherwise (Yeung et al., 2018), questionnaires filled by managers to then be assessed by judges experienced in I/O psychology and organizational behaviour (Jensen et al., 2020), questionnaires filled by CFOs where they assess their CEOs qualities (Waldman et al., 2001), or using linguistic cues analysis from the CEOs personal social media posts (Wang & Chen, 2020).

This study seeks to analyse the relationship between CEO charisma and financial performance in Indonesian firms. Former studies found a positive but insignificant relationship between CEO charisma and financial performance in normal conditions (Tosi et al., 2004; Waldman et al., 2001) and some others found a positive relationship between charismatic leadership and first-day return of initial public offering (Yeung et al., 2018). This study used return on assets (RoA) and Tobin's Q as a measure on firms' financial performance, thus it was hypothesized as follows:

H_{1a}: CEO charisma has a positive relationship with firm's RoA

H_{1b}: CEO charisma has a positive relationship with firm's Tobin's Q

2.5 Environmental Uncertainty

Environmental uncertainty is often included in studies concerning charisma and financial performance. Environmental uncertainty is a condition when an individual have difficulty in understanding the changes in his/her environment, the potential impact of this changes to his/her organization, and whether the responses to those changes will be successful or not (Milliken, 1987; Waldman et al., 2001; Yeung et al., 2018). Some experts believe that the condition of environmental uncertainty is important regarding charisma because in an uncertain condition, employees will look up to a leader for guidance so the firm as a whole will become more easily influenced by the leader's personal qualities (Tosi et al., 2004; Waldman et al., 2001; Yeung et al., 2018). It is also believed that an uncertain condition will push the leaders to show their charismatic side or that condition can also force the leaders to become more charismatic (Halverson et al., 2004). An uncertain condition also may give leaders more discretion in choosing actions for their company (Waldman, 1999).

Waldman et al. (2001) included environmental uncertainty as a moderating variable in their study. They used questionnaires to measure both charisma and perceived environmental uncertainty. They found that CEO charisma can influence firm performance, but only during uncertain conditions. This study found that the interaction between charisma and environmental uncertainty were the key predictors of firm performance. Meanwhile Tosi et al. (2004) found no significant direct relationship between CEO charisma and firm performance, however charismatic CEOs gained higher pay compared to those who are less so. Yeung et al. (2018)

used a period of uncertainty to conduct their study, which is when companies undergo Initial Public Offering. Their study found that charisma does have a positive and significant relationship with first day returns of IPOs. Agle et al. (2006) found that perception of CEO charisma was related with perceived measure of firm performance, however perceptions of CEO charisma was only related to some objective measures of firm performance. These differing results could be attributed to different research methods such as sample sizes, measurements, and time frames.

Existing studies used various methods in measuring environmental uncertainty. Some studies used questionnaires in order to measure perceived environmental uncertainty that managers feel (Tosi et al., 2004; Waldman et al., 2001), another study picked a period where companies should be in an uncertain condition, such as during an initial public offering (Yeung et al., 2018), or used a quantitative measure such as firm risk (Agle et al., 2006). This study will be using a quantitative measure as well, which is firm risk, noted by *beta* and *epsilon* derived from CAPM of weekly stock return (Miller et al., 2002). Firm risk is often used in business research because it can represent a collective appraisal of uncertainty that was faced by the market. We believe that using firm risk, which is a more objective measure of environmental uncertainty, will be more compatible with the unobtrusive measure used to calculate CEO charisma, which is text analysis on CEO news coverage.

H_{2a}: The positive relationship between CEO charisma and RoA is higher under conditions of uncertainty (high firm risk)

H_{2b}: The positive relationship between CEO charisma and Tobin's Q is higher under conditions of uncertainty (high firm risk)

3. Research Methods

This study uses regression and quantitative method. First, the data was collected and pre-processed in Microsoft Excel. Data cleaning was used to remove terms scraped by the scraper application but not actually part of the articles, such as links to related news articles. Then, the data was imported to R where further data cleaning was performed. This data cleaning consisted of turning all upper-case letters into lowercases, removing numbers, removing affixes and suffixes, and turning articles into tokens to then be analysed using tf-idf to find the importance of each words in every article.

3.1 Sample Data

This study used purposive sampling technique, focusing on publicly-listed companies that are more widely known and have higher market capitalization because it is believed that these companies would have higher media coverage and it would also be easier to acquire the

required financial information (Jensen et al., 2020). The index IDX80 was chosen because it consists of 80 stocks in the Indonesian Stock Exchange with a relatively high market capitalization, high liquidity, good fundamentals, and it also has enough amount of news coverage that can be analyzed.

Purposive sampling was used to choose firms where the CEOs have been in office for at least 4 years, which started from 2018 until 2021. This is to ensure that CEOs have been in office long enough that they can have an impact on how the firm operates. From 80 firms in the IDX80 index, 43 firms were chosen where the CEOs have been in office for at least four years. Then news articles were searched for articles mentioning those CEOs. If any CEO was not mentioned at all in any news articles in any given year from 2018 to 2021, then the firm would be eliminated. Furthermore, firms who were the only member of IDX80 from their industry was also eliminated because there would be a missing value in the Industry Mean Financial Performance variable. In the end, 28 firms were selected to be final samples for this study. The observation period used is four years, which is 2018 – 2021, in accordance with four years minimum tenure of the CEOs, making sure that the CEOs used in this study were the same people from 2018 until 2021. Therefore, the number of observations in this study was 112 observations.

3.2 Variables and Measurements

The regression models of this study are as follows:

$$FP_{i,t} = \alpha + \beta_1 Charisma_{i,t} + \beta_2 Age_{i,t} + \beta_3 FirmSize_{i,t} + \beta_4 FPIndMean_{i,t} + \varepsilon \quad \text{.....(1)}$$

$$FP_{i,t} = \alpha + \beta_1 Charisma_{i,t} + \beta_2 Age_{i,t} + \beta_3 FirmSize_{i,t} + \beta_4 FPIndMean_{i,t} + \beta_5 Uncertainty_{i,t} + \varepsilon \quad \text{.....(2)}$$

$$FP_{i,t} = \alpha + \beta_1 Charisma_{i,t} + \beta_2 Age_{i,t} + \beta_3 FirmSize_{i,t} + \beta_4 FPIndMean_{i,t} + \beta_5 Uncertainty_{i,t} + \beta_6 Charisma * Uncertainty_{i,t} + \varepsilon \quad \text{.....(3)}$$

Where $FP_{i,t}$ is the financial performance of firm i at year t, measured by ROA and Tobin's Q. $\beta_1 Charisma_{i,t}$ is the value of the charisma of firm i at year t, measured by text analysis of firm i at year t (Yeung et al., 2018). $\beta_2 Age_{i,t}$ is the age of CEO of firm i at year t (Harrison et al., 2018; Wang & Chen, 2020). $\beta_3 FirmSize_{i,t}$ is the natural logarithm of the number of employees of firm i at year t (Harrison et al., 2018; Jensen et al., 2020). $\beta_4 FPIndMean_{i,t}$ is the industry mean of financial performance measure of other companies in the same IDX classification except for firm i at year t (Harrison et al., 2018; Wang & Chen, 2020). $\beta_5 Uncertainty_{i,t}$ is the firm risk, acquired from beta (systematic risk) as "Risk 1" and epsilon (firm-specific risk) as "Risk 2" from CAPM of four years of weekly stock returns of firm i at year t (Agle et al., 2006; Miller et al., 2002).

$\beta_6 Charisma * Uncertainty_{i,t}$ is the interaction variable which is the multiplication result between the independent variable charisma and the moderating variable uncertainty.

3.2.1. Financial Performance

Financial performance was measured using two types of measurement, first is Return on Asset which can be considered an accounting-based measure because it focused on the numbers from each firm's financial reports. The second measurement is Tobin's Q which can be considered a market-based measure because it also took into account the shares existing in the market and how much they are worth.

3.2.2. CEO Charisma

This study used text analysis to measure CEO's charisma to be used as the independent variable. News articles were searched manually through search engines and scraped from news websites, especially those that focus more on financial news, including but not limited to Kontan, CNBC Indonesia, and Bisnis.com. The articles were collected and cleaned in Microsoft Excel to remove terms that are not part of the article, such as links to other related articles. Then they are further cleaned in R Studio to remove stop-words, remove uppercase letters, remove numbers, and also remove punctuations. Then the data is ready for the tf-idf process. The average tf-idf value is then used for the value of charisma that was used in the regression analysis.

The score for CEO's charisma was measured using tf-idf method. Tf-idf method measures how important a word is in a collection of documents (Mee et al., 2021). News articles for each CEO will be collected and divided based on CEO and year, from 2018 to 2021. Each period will then be transformed into a tf-idf matrix using these following formulas:

$$tfidf(t,d,D) = tf(t,d) * idf(t,D)$$

Where *tf* (term frequency) stood for the number of times term *t* appeared in document *d*. *idf* (inverse document frequency) stood for the number of term *t* in collection of document D, which was calculated using the following formula:

$$idf(t,D) = log \frac{N}{|(d \in D : t \in d)|}$$

Where N stood for the number of documents exist in collection of document D. In this study, a collection of document D is the number of articles discussing the CEO for a firm in any given year from 2018 – 2021. And $|(d \in D : t \in d)|$ is the amount of document where the term *t* appeared (Mee et al., 2021). The predetermined keywords which were then searched for in the matrix were obtained from the keywords used by Yeung et al., (2018) and the Indonesian language thesaurus published by the Ministry of Education, Culture, Research, and Technology.

Those words were “lead”, “influence”, “known”, “competent”, “charisma”, “appreciation”, “expert”, “praise”, and “capable” in the Indonesian language.

3.2.3. CEO Age

CEO Age is the control variable used in the individual level (Wang & Chen, 2020; Yeung et al., 2018). Earlier studies on CEO Age and firm performance have wielded conflicting results. Some experts believe that older CEOs will have a higher understanding of their industry thus will giving higher returns, while the others believe younger CEOs will be more ambitious in looking for better opportunities (Mukherjee & Sen, 2022)

3.2.4. Firm Size

Firm size is the control variable used for the firm level. At the firm level, this study used firm size, which is measured by natural logarithm of the number of employees (Harrison et al., 2018; Jensen et al., 2020).

3.2.5. Industry Mean Financial Performance

At the industry level, this study used the mean of financial performance of other firms in the industry. For the purpose of this study, the Indonesian Stock Exchange’s classification is used. Only the financial performance of the firms in the chosen index is used, which is the IDX80. The focal firm is excluded in the measurement of the mean of the industry’s financial performance (Harrison et al., 2018; Wang & Chen, 2020).

4. Results and Discussion

4.1 Descriptive Statistics

Table 1 presented the descriptive statistics for the 28 firms that was selected as samples for this study.

Table 1

Descriptive Statistics

Variable	Mean	Median	Std. Dev.	Min	Max
ROA	0,0810	0,0583	0,0941	-0,2625	0,5175
Tobin's Q	1,7557	1,2669	1,2805	0,1575	9,5013
Charisma	0	0	1	-1,4216	4,9911
Risk 1	1,0291	1,0327	0,2291	-0,0599	1,4441
Risk 2	1,8584	1,1237	1,5579	0	6,9535
Age (2021)	56,7100	55,5000	9,7700	35	78
Firm Size	8,4116	8,4586	1,5517	3,9982	11,4250
Industry Mean ROA	0,0726	0,0604	0,0488	-0,0213	0,2182
Industry Mean Tobin's Q	1,8110	1,5643	0,8015	0,9310	4,4797
Charisma * Risk 1	-0,0203	-0,1999	1,0497	-1,5181	5,7281

Charisma * Risk 2	-0,0631	-0,1782	1,7390	-4,5491	6,5707

Source: Data Processed with Stata (2022)

The independent variable for this study is Charisma and the values on the table above have been standardized to make the mean equal to 0 and standard deviation equal to 1. For the variable Age, the table above used data from the year 2021 only. The age of the CEOs ranged from 35 years old to 78 years old by the year of 2021, with a mean of 56.71 and median of 55.5. The number of employees of sample companies ranged from 59 people to 90,339 people by the year of 2021, with the mean of 11,216.21 and median of 4,717 people. Charisma score was standardized to make the mean equal to zero and standard deviation equal to 1. This means that CEOs whose score was in the negative has a below-average charisma.

Chow Test and Hausman Test were used to find the most suitable regression model to be used. It was found that for the dataset with ROA as the dependent variable, Random Effects Model was the most suitable and for the dataset with Tobin's Q as the dependent variable, Fixed Effects Model was the most suitable. Results of the regression were shown in tables 2 through 5.

4.2 Regression Results and Discussion

Moderated Regression Analysis was done to determine the relationship of moderating variables, the type of moderating variable, and whether those variables do have a moderating effect. The analysis was done in three steps, first without the hypothesized moderating variable, second with the moderating variable, and third adding in the interaction term, which is a multiplication between the independent variable and the hypothesized moderating variable (Sharma et al., 1981).

This study has two independent variables (ROA and Tobin's Q) and two moderating variables (Risk 1 / *beta* and Risk 2 / *epsilon*), thus we conducted the regression four times for each independent and moderating variables.

Table 2

Moderated Regression Results for ROA (Independent) with Risk 1 (Moderator)

Variables	ROA - Risk 1		
	Step 1	Step 2	Step 3
Charisma	-0.0012845	-0.001178	-0.0194699
Age	-0.0021531	-0.0019137	-0.0019496
Firm Size	-0.0047636	-0.004277	-0.0047808
ROA Industry Mean	0.6445139**	0.5904604*	0.6038412*
Risk 1		-0.037621	-0.0354281
Charisma * Risk 1			0.0176367
_cons	0.1931491**	0.2185947**	0.2219687**

N	28		
R-squared	0.1137	0.1184	0.1202
Prob F-stat	0.0465*	0.0696	0.1174

Notes:

+ p< 0.1; * p<0.05; ** p<0.01; *** p<0.001

Source: Data Processed with Stata (2022)

Table 2 above showed moderated regression analysis of ROA with the moderating variable Risk 1, which is systematic risk. However, two of the equations here have a regression F-stat of less than 0.1, thus this model was not representative of the data.

Table 3

Moderated Regression Results for ROA (Independent) with Risk 2 (Moderator)

Variables	ROA - Risk 2		
	Step 1	Step 2	Step 3
Charisma	-0.0012845	0.0001055	-0.0026778
Age	-0.0021531	-0.0023812*	-0.0023919*
Firm Size	-0.0047636	-0.00397	-0.0041459
ROA Industry Mean	0.6445139**	0.5479455**	0.5494525**
Risk 2		-0.0131311+	-0.0132302+
Charisma * Risk 2			0.0022293
_cons	0.1931491**	0.2268485***	0.229017***
N	28		
R-squared	0.1137	0.1013	0.1437
Prob F-stat	0.0465*	0.0053**	0.0109*

Notes:

+ p< 0.1; * p<0.05; ** p<0.01; *** p<0.001

Source: Data Processed with Stata (2022)

Table 3 above showed moderated regression analysis of ROA with the moderating variable Risk 2, which is firm-specific risk. Table above showed that the insertion of Risk 2, the hypothesized moderating variable, reduced the R^2 of the equation. However, inserting the interaction variable increased the R^2 by 4 percent. Sharma et al. (1981) stated that to be a moderating variable, the equations in step 2 and step 3 should be significantly different, otherwise the hypothesized moderating variable would be an independent predictor variable. The table above showed Risk 2 to be a quasi-moderator because the equations in Step 1, Step 2, and Step 3 are all different from each other.

Table 4

Moderated Regression Results for Tobin's Q (Independent) with Risk 1 (Moderator)

Variables	Tobin's Q - Risk 1		
	Step 1	Step 2	Step 3
Charisma	0.1229012	0.122458	0.2764742
Age	-0.0445351*	-0.0461493*	-0.0462732*
Firm Size	0.3869566**	0.3807157**	0.3869103**
Tobin's Q Industry Mean	0.3273389+	0.3567267+	0.3510783+
Risk 1		0.3013759	0.275611
Tobin's Q * Risk 1			-0.149738
_cons	0.3669701	0.1443229	0.1325652
N	28		
R-squared	0.2734	0.2826	0.2833
Prob F-stat	0.0017**	0.0024**	0.0057**
Notes:			
+ p< 0.1; * p<0.05; ** p<0.01; *** p<0.001			

Source: Data Processed with Stata (2022)

Table 4 above showed moderated regression analysis of Tobin's Q as the dependent variable with the moderating variable Risk 1, which stood for systematic risk. In the table above, equations of Step 2 and Step 3 are not significantly different, thus Risk 1 does not have a moderating effect.

Table 5

Moderated Regression Results for Tobin's Q (Independent) with Risk 2 (Moderator)

Variables	Tobin's Q - Risk 2		
	Step 1	Step 2	Step 3
Charisma	0.1229012	0.1145121	0.3082271*
Age	-0.0445351*	-0.0457215*	-0.0469896*
Firm Size	0.3869566**	0.3863332**	0.3992781**
Tobin's Q Industry Mean	0.3273389	0.2800757	0.3054189
Risk 2		-0.1412368	-0.1173659
Tobin's Q * Risk 2			-0.1518458
_cons	0.3669701	0.7466283	0.6207651
N	28		
R-squared	0.2734	0.2903	0.2969
Prob F-stat	0.0017**	0.0019**	0.0017**
Notes:			
+ p< 0.1; * p<0.05; ** p<0.01; *** p<0.001			

Source: Data Processed with Stata (2022)

Table 5 above showed moderated regression analysis of Tobin's Q as the dependent variable with the moderating variable Risk 2, which stood for firm-specific risk. Here, equations

in Step 2 and Step 3 were different, thus Risk 2 was a moderating variable. However, equations in Step 1 and Step 2 were different thus Risk 2 was a pure moderating variable on Charisma and Tobin's Q.

Tables 2 to 5 above showed that some equations in table 2 has an F-stat of more than 0.05. A positive and significant relationship between charisma and firm financial performance was only found where the dependent variable was Tobin's Q and Risk 2 was taken into account as a control variable during regression. Other than that, this study found no significant relationship between Charisma and firm financial performance. Some of the models above showed that Risk 2 (firm-specific risk) has a moderating effect on ROA and Tobin's Q and Risk 1 (systematic risk) has no moderating effect on either ROA nor Tobin's Q.

Existing studies regarding this subject has given conflicting results. This could be caused by differing measurement methods that are used. Some findings were consistent with earlier studies which found positive but not significant relationship between CEO charisma and their firms' financial performance on conditions of certainty (Tosi et al., 2004; Waldman et al., 2001). Tosi et al., (2003) also did not find significant evidence of the impact of moderating effect of uncertainty condition on ROA, however they found significant evidence of the moderator variable uncertainty on shareholder return, which was in line with this study that also found a positive and significant relationship when the dependent variable measure used was Tobin's Q, which is a market-based measure, the same as shareholder return.

Agle et al., (2006) who also used firm risk as a moderating variable also found no significant relationship between charisma and objective measures of firm performance such as ROA but found significant relationship between charisma and perceived firm performance which were measured using questionnaire. The significant relationship between Charisma and Tobin's Q while controlled by firm-specific risk in this study could be attributed to the fact that this study used news articles for measuring the CEOs' charisma score and Tobin's Q is a market-based measure that also took into account stock prices in the market. Investors who read articles regarding CEOs may base their opinions on where to invest and thus influenced the price of the firm's stock in the market. This result correlates with the study of behavioral finance which states that investors are not always rational. They may be influenced by their own biases and sentiments regarding the investment tools (Zhu & Niu, 2016). News articles discussing CEOs can impact how investors feel about certain CEOs and their firms and then impact their investment behaviors.

Yeung et al., (2018) who also used text analysis in determining CEO's charisma score also found a significant impact of Charisma on first-day IPO return. Yeung et al., (2018) used a period where they deemed to be highly uncertain, which is when a company is undergoing an

IPO. An IPO is an event that is specific to a firm, which correlates with the findings of this study. We found that Tobin's Q was positively and significantly correlated with charisma when Risk 2, which stood for firm-specific risk was included in the regression. This means that the condition in the specific firm has an important effect on how charisma impacts firm performance.

Another interesting finding of this research was that models that use Tobin's Q as the dependent variable (shown in tables 4 and 5) all found significant and negative relationships between age and firm performance that was measured using Tobin's Q. This means that as CEO age increases, Tobin's Q will decrease. Earlier studies about CEO's age and firm performance have also resulted in conflicting findings. One school of thought believes that an older CEO will be more careful and more knowledgeable in managing their firms (Putri & Rusmanto, 2019; Sitthipongpanich & Polsiri, 2015). The other school of thought believe that a younger CEO will be more ambitious in growing their careers and more willing to choose riskier decisions, causing in higher firm performance (Amran et al., 2014; Li et al., 2017; Mukherjee & Sen, 2022; Serfling, 2014). However that finding agreed with the proposition of Hambrick and Mason (1984) regarding upper echelons theory that stated that firms with younger managers will generate higher growth and variability than those with older managers. The study by Sitthipongpanich & Polsiri (2015) on family firms in Thailand wielded similar results. They found that the highest-performing CEOs are the ones who are young, came from the owning family, and with a strong support network from a diverse board and an alumni network. Family firms and non-family firms do have different characteristics in their performance (Simões Vieira, 2014). Similar to Thai firm structures, a lot of Indonesian firms are family-owned and have a highly concentrated ownership (Duygun et al., 2018). This could explain the effect of age on financial performance.

5. Conclusion, Limitations, and Future Studies

This study found a significant and positive relationship between CEO charisma and firm's financial performance only when Tobin's Q was the dependent variable and firm-specific risk was taken into account in the regression. The other variables that were also found to have a significant relationship were Age (negative and significant relationship with Tobin's Q), Firm Size (positive and significant relationship with Tobin's Q) and Industry Mean ROA (positive and significant relationship with ROA). This study also found a moderating effect from Risk 2 which stood for firm-specific risk. Thus, we managed to accept one of four hypotheses for this study, which is that charisma has a positive and significant relationship with Tobin's Q. Environmental uncertainty also has some moderating effect on some measures of firm performance.

The authors of this study hope that the findings can be beneficial to investors, firm management teams, and also academics. Investors are urged to read news regarding CEOs of the firms they are interested in investing in to have an understanding of their charisma or leadership qualities. Firm management teams can also use news coverage or questionnaire on the subordinates of potential CEOs to understand their charisma or leadership qualities in their prior experiences. This can be used as a consideration when choosing potential CEOs. In the end, academics can use this study as a reference for further study.

This study was conducted with a limited sample due to the nature of news-based text analysis. This caused that only CEOs with a significant news coverage to be included in the study and others without news coverage to be eliminated, although there is a possibility that those CEOs also might be charismatic when working with their peers. Next studies can consider using a longer research period, combining text analysis with questionnaires to add more variance to the study, and studying firms in more than one country.

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