

The Role of Research & Development as Mediating The Effect of Male CEO Masculinity Face on Earnings Management: Evidence From Indonesia

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Abstrak

Objective: This study aims to obtain empirical evidence of the role of profit management mediating the impact of the male CEO's masculinity face on research & development costs; this study also seeks to identify the part of profit management mediating the impact of the male CEO's masculinity face on research & development costs. This research is to prove the consistency of the role of profit management mediating the impact of the beginning of male CEO masculinity on research & development costs.

Design / Methodology / Approach: This research uses a quantitative approach with the population and research samples using the Indonesia Stock Exchange companies in 2014-2018. This study collected facial images identified as male CEOs from the Indonesia Stock Exchange website and company websites and utilised Google searches. The data analysis method in the study used Regression Ordinary Least Square (OLS) with Stata Software version 14.2. Stata software version 14.2 is one of the regression completion procedures that has a high level of flexibility in research that connects theory, concepts and data that can be carried out on research variables.

Findings: The findings explain that the role of profit management mediates the influence of the male CEO's masculinity face on research & development costs, meaning that the increase and decrease in the part of profit management has an impact on increasing and decreasing the masculinity face of male CEOs also has an impact on increasing and decreasing research & development costs.

Research implications: The practical impact of research results can help the Indonesian Institute of Accountants develop Financial Accounting Standard No. 19 in Indonesia. The theoretical implications of research results can explain agency theory and behavioural consistency theory. The policy implications of research results can provide evidence that the role of profit management mediates the influence of the male CEO's face of masculinity on research & development costs.

Originality/ value: Throughout the study's observations to date, it has not found any research on the topic of the role of profit management mediating the influence of the masculinity of male CEOs associated with research & development costs. The distinct role of male CEOs affects research & development policies and cost. The originality of this study can be shown by the differences from previous studies, first (Jia et al., 2014) explain that the face of masculinity of male CEOs has a positive effect on profit management practices. The second (Kamiya et al., 2018) explains that the face of masculinity of male CEOs has a positive impact on leverage. Research & development

costs in the company have an essential position to increase the company's long-term profitability

Keywords: CEO Male, fWHR, Masculinity, R&D, Earnings Management

JEL Classification: G32, G02, M1, G34, Z1

1. INTRODUCTION

Academic research has provided empirical evidence of the importance of research & development costs in economic growth (Jones & Williams, 1998; Bowns et al., 2003; Arnold & Kornprobst, 2006; Pindad⁴⁶ et al., 2010). The decline in research & development costs led to a reduction in the company's performance in the United States in the 1980s and in Japan in the 1990s (Nagaoka, 2007). As a result of the phenomena the decline in research & development costs that occurs in United States companies and Japan, this research focused on increasing research & development cost expenditures are no longer considered as costs but rather as an investment in research & development costs to generate long-term company profitability (Pindado et al., 2010). However, research on research & development investment is still small compared to the capital investment (Li, 2011).

The existence of research gaps (research gaps) (Pindado et al., 2010; Setiono & Hartomo, 2016) explain¹³ that research & development costs positively affect long-term company profitability. Companies on the Indonesian Stock Exchange capitalise on research & development costs to achieve profit targets. His research (Nelson et al., 2002; Mariadi et al., 2012) found that the capitalisation of research & development costs is one of the common ways that male CEOs do in flattening profits. The low coefficient of determination shows low expenditure on research & development costs of companies in Indonesia (Mariadi et al., 2012). Based on his findings (Mariadi et al., 2012) explained that only a small percentage of companies in Indonesia carry out research & development cost activities and have not become an obligation so that the selection of accounting methods for research & development costs is only an immaterial policy that does not significantly affect the company's profit (Suharli & Arisandi, 2009; Mariadi et al., 2012)⁴⁵.

Agency theory explains the relationship or contract between shareholders and the characteristics of a male CEO as an agent (Jensen & Meckling, 1976). Shareholders employ the characteristics of a male CEO as an agent to perform duties for the benefit of shareholders, including delegation of decision-making authorisation from shareholders³⁷ to the characteristics of a male CEO as an agent (Mahiswari & Nugroho, 2014). In companies listed on the Indonesia Stock Exchange whose capital consists of shares, shareholders act as principals while the CEO's characteristics are agents. The characteristics of a male CEO have a positive effect on research & development costs (Shefer & Frenkel, 2005). The behavioural consistency theory explains that the face of male CEO masculinity correlates with testosterone, aggressiveness, and social status affects profit management and investment costs of research & development (Epstein, 1979). Financial Accounting Standard No. 19 explains that research is an original and planned research that is carried out in the hope of obtaining new technical or scientific knowledge and understanding. At the same time, development is the application of research results into a plan or design to produce materials, tools, products, processes, systems, or services (Arifian & Yuyetta, 2011; IAI, 2015).

The use of research & development cost variables in this study, previous studies on the role of male CEO characteristics in various strategic decisions of companies have been widely researched, based on the role of male CEO characteristics in decision making and establishing research & development cost policies to obtain long-term company profitability. The originality of the study can be seen as a difference from previous research (Jia et al., 2014) explaining that the masculinity face of male CEOs has a positive effect on profit management, while (Kamiya et al., 2018) explain that the face of masculinity of male CEOs has a positive impact on leverage. However, they only conduct research to the extent that the face of masculinity of male CEOs has a positive effect on profit management and influence. There has been no study that explains the face of masculinity of male CEOs affects research & development costs, even though agency theory (Jensen & Meckling, 1976) explains that the characteristics of male CEOs affect research & development costs. Meanwhile, the use of profit management variables as mediator variables, based on his opinion (Scott, 2015), In the process of creating financial statements, profit management refers to the technique of manipulating accounting profits in accordance with the characteristics of a male CEO as an agent of change. The characteristics of a male CEO as a company manager know more about the company's data and the company's prospects than shareholders. Profit management can be seen in the opportunistic attitude of the characteristics of a male CEO as an agent in agency theory (Jensen & Meckling, 1976). So to provide empirical evidence of the role of profit management mediates the influence of the male CEO's masculinity on research & development costs. The findings are empirically expected to complement the literature to provide empirical evidence that the disclosure of the role of profit management mediates the influence of the male CEO's masculinity face on research & development costs that have not been empirically conducted in previous research, to provide evidence in the field of behavioural accounting.

The face of masculinity is a concept of masculine behaviour that exists in men with implications for aggressiveness; having a complex character tends to be emotional to perform actions (Jewitt, 1997). The face of male CEO masculinity correlates with testosterone, hostility and social status affects profit management practice and investment research & development (Jia et al., 2014). The face of masculinity has factors that can affect the performance of a male CEO in managing a company (Tanjaya & Santoso, 2020). The characteristics of a male CEO with a masculine face affect the company's financial management process (Kamiya et al., (2018). The face of masculinity is a personal aspect; the face of a person's masculinity is carried from birth. The neuroendocrinology literature explains that the face of masculinity in men predicts masculine behaviour habits and aggressive behaviours (Kamiya et al., (2018). The masculinity face of a tall male CEO can be expected to be more aggressive in managing the company (Tanjaya & Santoso, 2020).

The characteristics of a male CEO positively affect the company's decision-making process (Bertrand & Schoar, (2003). Characteristics of male CEOs have a confident nature and often practice profit management. The overconfidence nature of the characteristics of male CEOs often carries out profit management practices (Graham, Harvey, dan Puri, 2013; Kamiya et al., 2018; Malmendier & Tate, 2005), Acquisition (Doukas & Petmezas, 2007; Kim, 2013; Kamiya et al., 2018), innovation (Hirshleifer, Low, & Teoh, 2012; Kamiya et al., 2018). Research in neuroendocrinology explains that a man's face affects aggressive behaviour. The face of male masculinity affects aggressive behaviour (Carré & McCormick, 2008; Christiansen & Winkler, 1992). The

face of masculinity affects male behaviour (Campbell. et al (2011). Characteristics of male CEOs tend to negotiate for personal gain (Wong et al., (2011). Men who have a high face of masculinity are considered trustworthy (Stirrat & Perrett, 2010). The characteristics of male CEOs who have a higher masculinity face have better performance than male CEOs who have a lower masculinity face (Kamiya et al., 2018; Kamiya, & Park, 2017; Wong et al., 2011).

The characteristics of male CEOs in the application of accounting methods between capitalising and charging research & development cost expenditures affect profit management; companies tend to capitalise on research & development costs (1) companies have high debts, (2) companies have low-interest guarantee ratios, (3) companies have high dividend ratios or dividend payment limitations (3) high company leverage to shareholders in composition working capital (Daley & Vigeland, (1983). Research & development costs correlate with profit management (Lobo & Zhou, 2001). Profit management practices affect the capitalisation of research & development costs (Markarian et al., 2008; Mariadi et al., 2012). The company's decision to capitalise on research & development costs relates to profit levelling (Markarian et al., 2008; Mariadi et al., 2012). This study seeks to provide empirical evidence of the role of profit management in mediating the influence of male CEOs' masculinity on research & development costs.

Research provides clear and focused boundaries. This study is an issue on the importance of the masculinity of male CEOs as the root of the problem with research & development costs. The research was limited to companies listed on the Indonesia Stock Exchange from 2014-2018. Research limits to analysing the facial variables of male CEO masculinity, research & development costs and profit management. Male CEO masculinity face variables are measured using ImageJ software.

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2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Agency Theory

Agency theory is a consequence of the separation of control over the characteristics of male CEOs as agents who have direct access to company information data compared to shareholders. The relationship between the characteristics of a male CEO as an agent and shareholders to delegate authority to the characteristics of a male CEO as a company manager (Jensen & Meckling, (1976). The characteristic purpose of a male CEO as an agent with shareholders should be the same to improve the company through shareholder prosperity. Still, sometimes the characteristics of a male CEO as an agent have thoughts that are contrary to shareholders' beliefs (Mayangsari, 2001) so that the role of agency theory provides an important solution in decision making characteristics of male CEOs as agents to the practice of profit management and research & development costs.

Agency cost in three types: monitoring, bonding, and residual costs (Jensen & Meckling, (1976). Agency theory uses three assumptions of human nature, namely: (1) humans are generally selfish, (2) humans have limited thinking power regarding future perceptions and (3) humans always avoid risks (Eisenhardt, (1989). From the assumption of human nature, it can be seen that the role of male CEO characteristics affects policymaking and the implementation of profit management practices and research & development cost policies.

2.2 Behavioral Consistency Theory

The face of male CEO masculinity correlates with testosterone, aggressiveness and social status affects the practice of profit management and investment research

&development seen from the theory of behavioral consistency's point of view (Epstein, (1979), behavioural consistency can be shown as behavior as a prelude to predicting most people in a given time. The theory of behavioural consistency assumes the opinion of a person who can influence events that give rise to emotions, consistency of behaviorbehaviour can be shown as a specially chosen subject, consistency of behaviour is described in the study with the title: "The Stability of Behaviour: I. Predicting Most of the People Much the Time" (Epstein, (1979).

2.3 Face, Testosterone and Behavior

Previous studies have provided empirical evidence of a link between testosterone and masculine behaviour. The CEO's face can be the basis for the interconnectedness of the male face to be a topic in this study. A man's face can predict masculine behaviour (Jia et al., (2014). Based laboratory evidence (Carré & McCormick, 2008; Christiansen & Winkler, 1992) explains that men's faces predict having an aggressive nature. The practice of profit management with the face of a male CEO has a relationship with masculine behaviour (Jia et al., 2014).

Men's faces positively affect masculine behavior, while testosterone tends to practice profit management (Eisenegger, Naef, Snozzi, Heinrichs, & Fehr, 2010; Jia et al., 2014). The relationship between testosterone and the behaviour of male CEOs affects the brain both before birth and during the growth period (Jia et al., (2014). A group of nerve cells plays a role in-memory processing and emotional reactions as mediators between testosterone in brain regions to evaluate social interactions (Bos et al., 2012; Jia et al., 2014).

Testosterone regulates growth acceleration in adolescents (Johnston et al., 2001). Testosterone affects adolescent growth (Verdonck et al., 1999; Jia et al., 2014). Previous studies have provided evidence empirically that male and female development differs in the bizygomatic (between the left cheekbone to the right cheekbone), but for the height of the upper face, there is no difference in the growth period (Jia et al., (2014). The findings empirically prove that testosterone affects male facial development (Folstad & Karter, 1992). A man's face affects masculine behaviour during infancy (Jia et al., 2014; Alrajih & Ward, 2014). There is a relationship between testosterone and the ratio of the width of the male face (Lefevre et al., 2013). Several studies have proven the existence of a positive relationship between the percentage of male face width to testosterone. Previous research explained that testosterone has a positive relationship with facial development (Lefevre et al., 2013). Higher or lower testosterone in men affects the masculine face (Jia et al., 2014; Pound, Penton-Voak, & SurrIDGE, 2009).

2.4 The Face Of Male CEO Masculinity And Profit Management

Previous research explained that the face of masculinity of male CEOs has a positive effect on profit management practices (Jia et al., 2014). Development of research that links accounting practices with the characteristics of top management (Fee et al., 2013; Bolton & Bruunermeier, 2008; Jia et al., 2014). The development of research in accounting, finance, and economics extends to the characteristics of male CEOs in the company's policy-making process (Fee et al., 2013; Bolton & Bruunermeier, 2008; Jia et al., 2014).

The characteristic role of male CEOs affects the process of presenting the company's financial statements (Bertrand & Schoar, (2003). The characteristic function of male CEOs positively affects profit management practices (Bamber et al., 2010; Brochet et al., 2011; Dyreng et al., 2010; Feng et al., 2011; Ge et al., 2011; Jia et al., 2014). The characteristics of male CEOs affect the resulting incentive results (Chava et

al., 2010; Jia et al., 2014). Characteristics of a particular male CEO having excessive confidence in carrying out profit management practices (Dikolli et al., 2012; Jia et al., 2014). The face of masculinity of male CEOs positively affects profit management practices (Jia et al., (2014).

2.5 Research Conceptual Framework

The conceptual framework explains the influence between independent and dependent variables, the mediator variables used in this study. Research places the face of male CEO masculinity as an independent variable, research & development costs as a dependent variable, and profit management as a mediator variable. Based on the explanation above, the conceptual framework of the study can be described as follows:

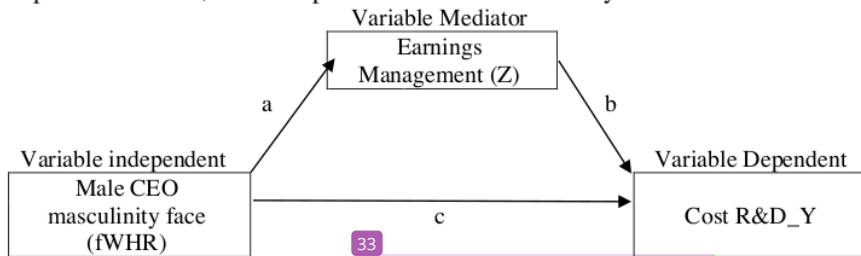


Figure 2 1: Conceptual Framework of Research

2.5 Research Hypothesis

Agency theory is the relationship that occurs between the characteristics of a male CEO as an agent who functions as a company manager and shareholders. The characteristics of a male CEO as an agent will be given the authority and decision-making of the company. The purpose of agency theory is to fulfil the company's desire to maximise and increase shareholder value (Jensen & Meckling, (1976). Motivation for the characteristics of a male CEO as an agent to carry out profit management practices to increase the company's value by increasing profits (Indriani et al., 2014).

Previous research explained that the face of male CEO masculinity has a positive effect on profit management practices (Jia et al., 2014). The beginning of masculinity of male CEOs positively affects profit management practices through masculine behaviour seen from the theory of behavioral consistency's point of view (Epstein, 1979). Profit management is a safe manipulation of company financial statement data because profit management activities are legitimate and do not violate generally accepted accounting principles (Scott, 2015). The decision of the male CEO characteristic to carry out profit management practices is data manipulation in the process of presenting financial statements (Becker, (1968). The face of masculinity of male CEOs positively affects profit management practices through masculine behaviour (Jia et al., 2014).

The company capitalises on research & development costs to achieve profit targets. Capitalisation of research & development costs is one of the common ways that male CEOs flatten their profits are (Nelson et al., 2002; Mariadi et al., 2012). His findings explained that the low coefficient of determination indicates the low cost of research & development companies in Indonesia (Mariadi et al., 2012). Based on his findings (Mariadi et al., 2012) explained that only a small percentage of companies in Indonesia carry out research & development cost activities and have not become an obligation, so the selection of accounting methods for research & development costs is only an immaterial policy that does not significantly affect the company's profit (Suharli & Arisandi, 2009; Mariadi et al., 2012)

Based on the description above, profit management is a behaviour carried out by the characteristics of a male CEO as an agent to manipulate revenue without violating the generally accepted rules of accounting principles (Chandrasegaram et al., 2013). The practice of profit management is expected to be able to mediate the positive influence of the masculinity of male CEOs on research & development costs. The hypothesis proposed is as follows:

H4: Profit Management Mediates the Positive Influence of a Male CEO's Masculinity Face On Research & Development Costs.

3. RESEARCH METHODS

3.1 Types and Approaches to Research

This research uses a quantitative approach to provide meaning about the interpretation of statistical figures (Aliyyah, Siswomihardjo, et al., 2021; Prasetyo et al., 2021). The study aims to provide empirical evidence of the role of profit management in mediating the impact of the male CEO's masculinity face on research & development costs. Research approach using explanatory research (Endarto, Taufiqurrahman, Kurniawan, et al., 2021; Indrawati et al., 2021) with population and research samples using companies on the Indonesia Stock Exchange in 2014-2018. This study collected facial images identified as male CEOs from the Indonesia Stock Exchange website and company websites from 2014-to 2018 and utilised Google searches. The data analysis method in the study used Regression Ordinary Least Square (OLS) with Stata Software version 14.2. Stata software version 14.2 is one of the regression completion procedures that has a high level of flexibility in research that connects theory, concepts and data that can be done on research variables.

3.2 Operational Definitions and Measurements

The face of masculinity of male CEOs is an independent variable, variable research & development costs as a dependent variable, and variable earnings management as a variable mediator.

3.2.1 Independent variables (fWHR)

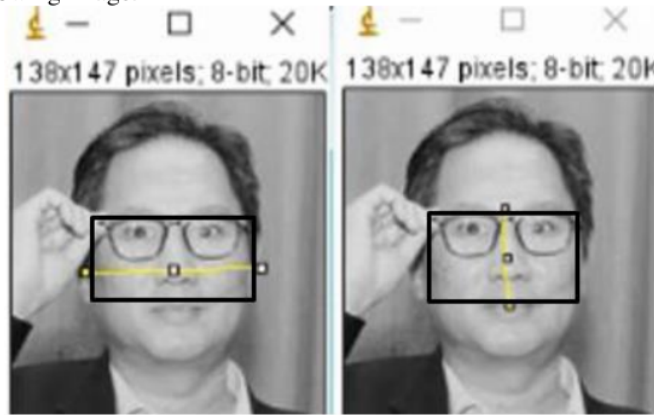
Independent variables can affect other variables. The study used the male CEO's masculinity face variable as an independent variable. The face of masculinity is a concept of masculine behaviour that exists in men with implications for aggressiveness, has a complex character tends to be emotional in carrying out actions (Jewitt, 1997). Measurement of male CEO masculinity face variables using ImageJ software, research converts images of male CEOs' faces into grayscale images with a height of 8 bits (Kamiya et al., 2018).

The ImageJ software measures the distance between two points on each of the study's male CEOs' faces by dragging the mouse across the image; the vertical line size represents the distance between the upper lip to the highest point of the eyelid. While the horizontal line represents the maximum distance between the left cheekbone to the right cheekbone (Kamiya et al., (2018). Accordingly, the study independently assigned a photo quality score between zero and three following criteria:

- 0: As a result of this poor posture, either one or both ears are obscured, or the photographer captures a picture of the face that causes difficulty in measuring the face's height.
- 1: It appears like only half of the ear is visible since the person is leaning slightly to one side.
- 2: Both ears can be seen on the face, with their roots visible.

3: Proper standing or sitting posture is characterised by a straight back and ears that can be seen all the way up to the crown of the head.

The study used quality scores number two and three based on guidelines (Kamiya et al., 2018). The measurement scale of this study using the percentage ratio scale can be seen in the following image:



Gambar 3-1: Pengukuran Wajah Maskulinitas CEO Pria (fWHR)

Information:

Horizontal line : ¹⁷ Represents the maximum distance between the left cheekbone to the right cheekbone

Vertical Line : Represents the distance between the upper lip to the highest point of the eyelid

3.2.2 Research & development costs (R&D) (Y)

Dependent variables are variables whose value cannot be influenced by other variables (Kalbuana, Prasetyo, et al., 2021; Kalbuana, Suryati, et al., 2021). Dependent variables in this study use research & development (R&D) costs. Research & development (R&D) costs are an investment made by the company on a new science basis to produce more efficient products based on existing resources (Tuna et al., 2015). Research & development (R&D) costs are measured using the research & development cost intensity ratio (R&D) (Padgett & Galan, 2010; Arifian & Yuyetta, 2012) with the following formula:

$$\text{Cost Research \& Development (R\&D)} = \frac{\text{Total Research \& Development Expenditure}}{\text{Sales}}$$

Information:

Research & Development Costs_{i,t} = Research & development Costs i in the year t
 Total Expenditure of research & development costs_{i,t} = Total Expenditure of research & development costs i in the t year
 Sales_{i,t} = Sales i in the t year

3.2.3 Variable Mediator (Z)

Variable mediator is an intermediate variable (Kalbuana, Prasetyo, et al., 2021; Kalbuana, Suryati, et al., 2021) which functions to mediate the relationship between independent variables and dependent variables (Baron & Kenny, 1986; Mehmetoglu, 2018; Zhao et al., 2010). Variable mediator in the study using profit management (Jia et

al., 2014). Profit management is a practice in the process of preparing financial statements, so that it can increase or decrease accounting profits as desired by management. The characteristics of a male CEO as a company manager know more data about the state of the company and the company's future prospects than shareholders (Scott, 2015).

Profit management on research using model measurement (Kothari et al., 2005) refinement of the model (Jones, 1991) by including return on assets, this model adds return on assets in the calculation of discretionary accruals, so as to be able to measure profit management more accurately. The measurement scale of this study uses a percentage ratio scale. Here's the model equation (Kothari et al., 2005) with the following formula:

- (1) Calculating TA (total accrual) i.e. net profit for year t less operating cash flow for year t with the following formula:

$$TAC = NI_{it} - CFO_{it}$$

The following is an estimate of total accrual (TA) using the Ordinary Least Square method:

$$\frac{TA_{it}}{A_{it-1}} = \beta_1 \left(\frac{1}{A_{it-1}} \right) + \beta_2 \left(\frac{\Delta REV_{it}}{A_{it-1}} \right) + \beta_3 \left(\frac{PPE}{A_{it-1}} \right) + \epsilon$$

- (2) The NDA (non-discretionary accruals) are calculated using the formula above, which includes the regression coefficient.:

$$NDA_{it} = \beta_1 \left(\frac{1}{A_{it-1}} \right) + \beta_2 \left(- \frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta REC_{it}}{A_{it-1}} \right) + \beta_3 \left(\frac{PPE}{A_{it-1}} \right) + \beta_4 \left(\frac{ROA_{it}}{A_{it-1}} \right) + \epsilon$$

- (3) Finally, the formula for determining DA (discretionary accruals) as a metric of profit management is as follows.:

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it}$$

Information:

DA_{it}	: Discretionary accruals of the corporation i in the period to t
NDA_{it}	: Non Discretionary Accruals of the corporation i in the period of years t
TAC_{it}	: Total accruals of the corporation i in the period t
NI_{it}	: Net profit of the corporation i in the period of years t
CFO_{it}	: cash flow from the operating activities of the corporation i in the period of the year t
A_{it-1}	: Total assets of corporation i in the period t-1
ΔREV_{it}	: The revenue of the corporation i in year t is reduced by the revenue company I in year t-1
PPE_{it}	: Fixed assets of the corporation i in the period t
ΔRec_{it}	: Accounts receivable of the corporation i in year t minus the income of the corporation i in year t-1
ROA_{it}	: Return on assets of the corporation i in the period to t
ϵ	: Error

3.3 Data Analysis Techniques

Research data analysis is part of the data testing process after the stage of selecting and collecting research data (Sudaryanto et al., 2022; Utari, Sudaryanto, et al., 2021). Data analysis in the study using Stata Software version 14.2. Use of Stata Software version 14.2 on research for several reasons:

1. The study aims to confirm existing theories and concepts using data. Stata software version 14.2 was used for this study because it can regression ordinary least square (OLS).
2. The research model is relatively complex, because there is a proxy for profit management to act as a mediator variable to see how the role of profit management mediates the influence of the male CEO's masculinity face on research & development costs.
3. The model that is built there is a tiered causality relationship, which has a distinctive feature, so it is expected that the mediator variable to see the relationship of the independent variable in the dependent variable.

Variable mediator is an intermediate variable, which functions to mediate the relationship between dependent variables and independent variables (Baron & Kenny, 1986; Zhao et al., 2010). Testing mediators to prove the role of profit management as a mediation variable serves to mediate the relationship between the facial variables of male CEO masculinity to research & development costs.

Criteria for determining the influence of mediation in a relationship (Baron & Kenny, 1986; Zhao et al., 2010) explains as follows:

- a. The first equation, the independent variable must have a significant influence on the mediator variable.
- b. The second equation, the mediator variable must have a significant influence on the dependent variable
- c. The third equation, independent variables must have a significant influence on dependent variables.

The following is a picture that is the process of determining the type of mediator variable (Baron & Kenny, 1986; Zhao et al., 2010):

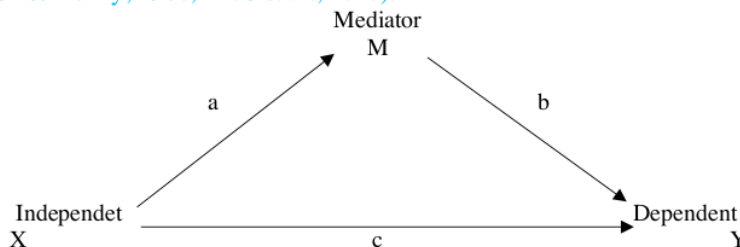


Figure 4 2: Relationship between Independent, Mediator and Dependent Variables (Baron & Kenny, 1986; Zhao et al., 2010)

Zhao et al., (2010) conduct research by developing the types of mediator research that have been carried out previously by (Baron & Kenny, 1986) by identifying three patterns consistent with the mediator and two consistent patterns without a mediator as follows:

- a. Complementary mediator: the influence of the mediator (axb) and the direct influence (c) they are both genuine and orient themselves in the same broad direction..
- b. Competitive mediator: the influence of the mediator (axb) and the direct influence (c) both exist and point in opposite directions.
- c. Indirect-only mediator: there is an influence of the mediator (axb), however there is no direct impact
- d. Direct-only nonmediation: there is a direct influence (c), but there is no indirect influence.

e. No-effect nonmediation: no influence either directly or indirectly.

3.3.1. Descriptive Statistics

Descriptive statistics are statistics that can describe the picture of the research object through analytical data, without conducting analysis (Prasetyo, Aliyyah, Rusdiyanto, Utari, et al., 2021; Utari, Iswoyo, et al., 2021) from data on the face variables of male CEO masculinity, variable costs of research & development, and variable earnings. Management.

3.3.2. Pearson Correlation Test

Pearson correlation testing is used to see the relationship between independent variables and dependent variables by assuming Pearson correlations are normally distributed data (Prasetyo, Aliyyah, Rusdiyanto, Nartasari, et al., 2021; Rusdiyanto et al., 2021). If there is any correlation between two variables, the results will be either positive (+) or negative (-). Having a positive correlation value indicates that the link is one-way. When the independent variable grows, the dependent variable also grows. This is known as unidirectional growth. Correlation values that are negative signify a lack of directionality in the relationship. In other words, if the value of the independent variable is great, then the dependent variable decreases. Between 0 and 1, there is a correlation (Endarto, Taufiqurrahman, Suhartono, et al., 2021; Prasetyo, Aliyyah, Rusdiyanto, Kalbuana, et al., 2021). With Pearson correlation formulations as follows:

$$r_{xy} = \frac{n \sum XY - (\sum X)(\sum Y)}{\sqrt{\{n \sum X^2 - (\sum X)^2\} \{n \sum Y^2 - (\sum Y)^2\}}}$$

Information:

- r = Correlation value
- X = Variable X
- Y = Variable Y

3.3.3 Research Regression Model

Regression analysis to find out how close the relationship that occurs between one variable and another. Regression analysis has the function of predicting or predicting the magnitude of the value of an independent variable (Y) if the dependent variable (X) is changed (Prasetyo, Aliyyah, Rusdiyanto, Nartasari, et al., 2021; Rusdiyanto et al., 2021). A regression analysis of panel data was used to test the role of profit management mediating the influence of the male CEO's masculinity face (fWHR) on research & development (Y) costs. Based on the independent variables and dependent variables that have been described, an equation model is obtained which will be used as follows:

The role of Profit management mediates the influence of the male CEO's masculinity face on research & development costs

$$Z_{i,t} = \beta_0 + \beta_1 \text{fWHR}_{i,t} + \epsilon \quad \dots \dots \dots (22)$$

$$\text{R\&D}_{i,t} = \beta_0 + \beta_1 Z_{i,t} + \epsilon \quad \dots \dots \dots (2)$$

$$\text{R\&D}_{i,t} = \beta_0 + \beta_1 \text{fWHR}_{i,t} + \epsilon \quad \dots \dots \dots (3)$$

To explain from the model of variable face masculinity of male CEOs, variable research & development costs, and variable mediators of profit management can be explained as follows:

Table 3-1: Variable Description

Information	Description
i	= Company cross-section data
t	= Company time series data
fWHR	= The Face of Male CEO Masculinity

Information	Description
Cost R&D	= Research and Development Costs
Z (Meditor)	= Earnings Management
α	= Constant
$\beta_1, \beta_2, \beta_3$	= Variable regression coefficient R&D, fWHR
$\beta_1, \beta_2, \beta_3$	= Variable regression coefficients R&D, fWHR, Z
ϵ	= Error

4. RESULTS OF RESEARCH AND DISCUSSION

4.1 Variable Descriptive Statistics

The results of descriptive statistics can be presented with a minimum, maximum, mean, standard deviation of the studied variable from a sample of enterprises. In addition to presenting based on a sample of companies on the Indonesia Stock Exchange in the period 2014-2018, testing this sample based on companies on the Indonesia Stock Exchange, can be seen in the figure below:

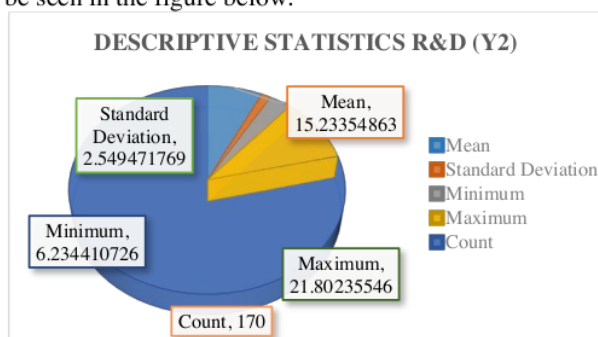


Figure 4 1: R&D_Y2 Descriptive Statistics

Based on the figure above, it shows the number of observations (N) there are 170, out of 170 observations the minimum research & development cost value is 6.234411, and the maximum research & development cost value is 21.80236 the average value of 170 observations or a mean of 15.23355 with a standard deviation of 2.549472.

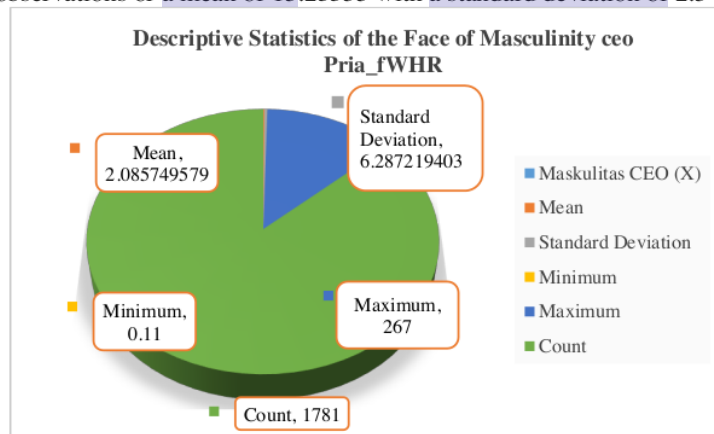


Figure 4 2: Descriptive Statistics of the Face of Masculinity of CEO Pria_fWHR

Based on the picture above, it shows the number of observations (N) there are 1781, out of 1781 observations the minimum male CEO masculinity face value is 0.11, and the

maximum male CEO masculinity face value is 267. the average value of 1781 observations or mean was 2.08575 with a standard deviation of 6.287219.

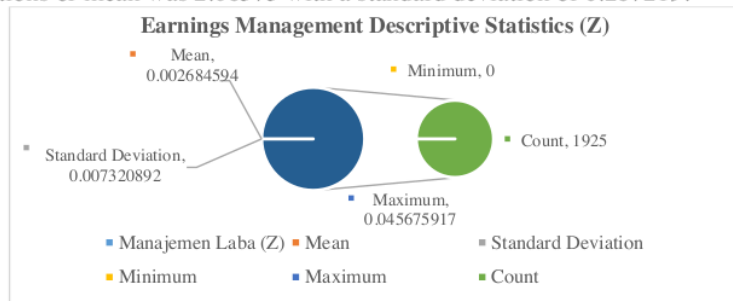


Figure 4 3: Earnings Management Descriptive Statistics _Z

Based on the figure above, it shows the number of observations (N) there was 1925, from 1925 this observation the minimum profit management value was .0, and the maximum profit management value was 0.0456759. The average value from 1925 or mean was 0.0026846 with a standard deviation of 0.0073209.

4.2 Pearson Correlation Test

In the pearson correlation test test to see how strong or how weak the relationship of profit management roles mediates the influence of the male CEO's masculinity face on research & development costs. In this test, if the pearson correlation value (r) is above 0.05 (5%), then there is a strong relationship the role of management mediating the influence of the male CEO's masculinity face on research & development costs, if the pearson correlation value is below 0.05 (5%) then the relationship of profit management role mediates the influence of the male CEO's masculinity face on research & development costs is declared weak.

Table 4-1: Pearson Correlation Test

Variables	(1)	(2)	(3)
(1) R&D	1.000		
(2) fWHR	-0.086 (0.278)	1.000	
(3) Earnings Management	0.001 (0.985)	0.059 (0.013)	1.000

Variables	(1)	(2)	(3)
(1) R&D	1.000		
(2) fWHR	-0.086	1.000	
(3) Earnings Management	0.001	0.059	1.000

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Based on the table above, it can be interpreted that the variable costs of research & development, the face of masculinity of male CEOs and profit management have a value above 0.05 (5%). Thus, it can be explained that all of these variables are declared valid to be used in model testing. The reliability test results above explain the value above 0.05 (5%). This proves that all variables used are the same reliable if tested.

4.3 Mediator Analysis of Research & Development Costs

The process for analyzing mediation on an estimation model requires two approaches. The first approach based on (Baron & Kenny, 1986) is carried out several stages in analyzing the significance between the specifications of the mediation variables

to strengthen the relationship between the independent variables to the dependent variables, so that it can be interpreted that the mediation variable affects in full as a mediator variable

The second approach is based on an approach (Zhao et al., 2010) to test mediation with multiple Tests. In the first test, an estimate of indirect impact (indirect effect) was carried out divided by the overall impact (total effect) or called the Ratio Indirect to Total Effect (RIT) which had an independent variable impact on the dependent variable mediated by the mediation variable. In the next test, an estimate of the indirect effect was carried out divided by direct impact (direct effect) or called the Ratio Indirect Effect to Direct Effect (RID) which indicates the magnitude of the impact of the independent variable on the dependent variable mediated by the mediation variable. The last is the Sobel test, which compares p-value with z-value as the basis for the hypothesis of mediation between variables.

Table 4-2: Mediation Analysis (R&D)
Output SEM Direct and Total Eff R&D

VARIABLE	1 R&D	2 R&D	3 R&D	4 R&D
Earnings Management		15.16 (31.31)		
fWHR	0.01*** (0.00)	-1.30 (1.10)		
Constant	-0.01** (0.01)	17.55*** (2.09)	0.00*** (0.00)	6.30*** (0.70)
Observed	160	160	160	160

Stand. err. in parentheses * p<0.1, ** p<0.05, *** p<0.01

4.4 Discussion of Research Results

The probability result of Prob>F has a value of $0.0003 \leq 0.05$ (5%) this shows that together the regression coefficient has a significant value, meaning that together the face of masculinity of the male CEO affects the cost of research & development. The value of R2 has a value of 0.0887, this shows that the degree of determination of the face of masculinity of male CEOs towards research & development costs is 0.0887. This means that the 0.0887 variability of research & development costs can be explained by the masculinity of male CEOs. The discussion of the results of the research analysis is an analysis of the suitability of theories, opinions or previous research that have been put forward by the results of previous studies to overcome phenomena in research. The discussion of the results of the research analysis is an analysis of the suitability of theories, opinions, or previous research that has been stated by the results of previous studies carried out to overcome phenomena in this study. Here are the main parts that can be discussed in the research findings as follows:

The Results of the Discussion of Profit Management Findings Mediate the Influence of the Face of Masculinity of Male CEOs On Research & Development Costs

To empirically evidence the role of profit management mediating the impact of the male CEO's masculinity face on research & development costs, this research approach uses two approaches (Baron & Kenny, 1986; Zhao et al., 2010) with the procedure of analysis of its processing using (Mehmetoglu, 2018):

Approach (Baron & Kenny, 1986) Research & Development Costs

In the First Stage testing the face of masculinity of male CEOs positively affects profit management practices, obtained p-value significance level values of $0.002 \leq 0.01$ (1%), 0.05 (5%) in the first test were declared passed, the results of the analysis empirically the

face of CEO masculinity had a positive effect on profit management practices with a significance level of 0.002, the findings were consistent with the findings (Jia et al., 2014) meaning that the increase and decrease in the masculinity of male CEOs has an impact on the increase and decrease in profit management practices.

In the Second Stage testing profit management positively affects research & development costs obtained a p-value significance level value of $0.628 \geq 0.05$ (5%) in the second test stage was declared not to pass the test the effect of profit management on research & development costs inconsistent with its findings (Nelson et al., 2002; Mariadi et al., 2012) the company capitalizes on research & development costs in order to achieve profit targets. Research by (Nelson et al., 2002; Mariadi et al., 2012) explaining the capitalization of research & development costs is one of the common ways that male CEOs do in flattening profits. The results of the low coefficient of determination show the low cost of research & development costs of the company on the Indonesia Stock Exchange (Mariadi et al., 2012). Based on the findings consistent with the findings (Mariadi et al., 2012) explained that only a small percentage of companies on the Indonesia Stock Exchange carry out research & development cost activities and have not yet become an obligation, so the selection of accounting methods for research & development costs is only an immaterial policy that does not significantly affect the company's profit (Suharli & Arisandi, 2009; Mariadi et al., 2012) So that it can be concluded in the first stage with the results of the singnifikansi p-value of $0.002 \leq 0.05$ (5%) and in the second stage with the results of the singnifiance of p-value $0.628 \geq 0.05$ (5%) is not singnifikan, meaning that the role of profit management mediates the influence of the masculinity face of the male CEO on research & development costs, the results of the analysis using an approach (Baron & Kenny, 1986). The findings of the hypothesis submitted are supported by the hypothesis proposed by Profit Management Mediating a Positive Influence on the Face of Male CEO Masculinity On Research & Development Costs. The findings of this empirical study are included in the category of Inderect-only Mediator mediation

Approach (Zhao et al., 2010) Research & Development Costs

In Testing the Ratio Indirect to Total Effect (RIT)

(Indirect effect / Total effect) / $(0.009 / 0.086) = 0.103$, Meaning about 10% effect of the influence of the male CEO's masculinity face on research & development costs mediated profit management role.

In Testing the Ratio Indirect Effect to Direct Effect (RID)

(Indirect effect / Direct effect) / $(0.009 / 0.095) = 0.094$, That is, the profit management mediation effect is 0.1 times the influence of the male CEO's masculinity face on research & development costs. Based on the description above, it can be concluded that the hypothesis proposed is accepted, meaning that profit management mediates the positive influence of the male CEO's masculinity face on research & development costs with a singnificiency rate of 10% using climbing (Zhao et al., 2010). These results support the hypothesis proposed profit management mediates a positive influence on the face of male CEO masculinity towards research & development costs. These empirical findings belong to the category of Inderect-only Mediator mediation

The findings empirically supported by the theory of behavioral consistency reveal that the face of masculinity of male CEOs correlates with testosterone, aggressiveness and social status affects profit management and research & development seen from the theory of behavioral consistency's point of view (Epstein, 1979). The expenditure of research & development costs results in a level of uncertainty in the output produced by

the company. This uncertainty is the cause of the large amount of funds spent by the company has an impact on agency problems between the characteristics of male CEOs as agents and shareholders (Aoun & Hwang, 2008). Jensen & Meckling, (1976) explaining agency relationships arise when shareholders hire male CEO characteristics as agents to provide services and then delegate authority in decision-making. So that agency theory provides an important solution in decision making of male CEO characteristics to profit management practice policies and research & development cost policies.

The company capitalizes on research & development costs in order to achieve profit targets. Research by (Nelson et al., 2002; Mariadi et al., 2012) found that the capitalization of research & development costs is one of the common ways that male CEOs as agents do profit flattening. The results of the low coefficient of determination show the low cost of research & development costs of the company on the Indonesia Stock Exchange (Mariadi et al., 2012). Based on his findings (Mariadi et al., 2012) explained that only a small number of companies on the Indonesia Stock Exchange carry out research & development cost activities and have not become an obligation, so the selection of accounting methods for research & development costs is only an immaterial policy that cannot significantly affect the company's profits (Suharli & Arisandi, 2009; Mariadi et al., 2012). Jia et al., (2014) provides empirical evidence that a man's face can predict masculine behavior. While (Carré & McCormick, 2008) provides evidence empirically that a man's face predicts the nature of a person's aggressiveness. The face of the male CEO is connected with the process of presenting the company's financial statements. Jia et al., (2014) provides empirical evidence of a relationship between profit management practices and the masculinity face of male CEOs who have masculine behavior.

5. CONCLUSION

The practice of profit management mediates the influence of the male CEO's face of masculinity on research & development costs. The findings provide empirical evidence that profit management practices have an impact on increasing and decreasing the masculinity of male CEOs as well as having an impact on increasing and decreasing research & development costs. The findings are supported by agency theory and behavioral consistency theory which explains that the face of CEO masculinity has an influence on profit management practices and research & development costs. Meanwhile, agency theory explains the characteristic role of male CEOs in making profit management practice policies and research & development (R&D) cost policies. The findings are empirically supported by ImageJ software that the masculinity face of male CEOs has an influence on profit management practices and research & development costs.

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