



The Mediating Effect of Labor Investment Efficiency on the Relationship between ESOP and Cost of Equity



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Abstract

We investigate the mediating effect of labor investment efficiency on ESOP and Cost of equity. Our findings showed the significant impact of ESOP and labor investment efficiency on the cost of equity individually. We also found labor investment partially mediated the relationship between ESOP and cost of equity. In contrast with theoretical predictions, ESOP tends to lead to inefficient labor investment. Hence, inefficiency would decrease the firm cost of equity. We used non-financial firms that were listed on Indonesian Stock Exchange (IDX) from 2017 to 2021. Path analysis was employed to analyze the hypotheses. These findings provide new insights into the relationship of ESOP with the cost of equity. Companies should pay attention to labor investment efficiency to achieve the optimum impact of ESOP and bring betterment for the company and shareholders. The policymaker also needs to regulate the implementation of ESOP and its guidance to ensure the firm would benefit all parties without any rights violation.

1. Introduction

Firms need funds from diverse sources to effectively manage their operations and facilitate business expansion. Typically, they opt for external financing when undertaking new initiatives such as building or factory expansion. To secure these funds, companies should offer investors a return on their invested capital. Investors anticipate a return that is indicated by the Cost of Capital. According to (Weston & Copeland, 1996) capital structure theory, financing can be obtained through equity and debt financing.

The cost of equity reflects a company's ability to secure funds from the capital market and plays an essential role in determining the effective distribution of resources in the capital market. It is not only essential for companies to select funding sources, create financing plans, and decide on

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financing approaches, but it also serves as a primary reference point for evaluating the viability of investments and making investment decisions. The cost of equity plays a crucial role in making decisions on financial matters and the assessment of value.

The high cost of equity reflects investors' high expectations for their capital returns. Consequently, companies must strive to enhance their performance to fulfill investors' expectations and maintain capital. If the cost of equity is high and the company fails to meet these expectations, investors could withdraw their investments and the company might have insufficient funds for its operations. On the other hand, low cost of capital can enhance a company's profitability (Babu et al., 2021) because investors' return expectations are relatively low. Companies with high profitability and liquidity tend to have low cost of capital. These characteristics indicate low business risk, which is generally favored by investors (Sharma, 2012).

To retain investors with optimal cost of equity, companies need to enhance their performance by effectively managing their resources. Human resources play a critical role as valuable assets within a company. When managing human resources, uncontrolled agency problems may arise, which can be detrimental to the company and its shareholders. The diversity of interest between employees (agents) and shareholders (principals), could potentially affect the company's productivity and performance. Therefore, interests' alignment should be pursued to minimize the impact or prevent losses. One effective approach to reducing conflicts of interest between shareholders and managers is by implementing an Employee Stock Ownership Program (ESOP).

Further research is needed to explore the development and influence of ESOP on the cost of equity in emerging companies in Indonesia (Ivanov & Zaima, 2011) found a decrease in the cost of equity after implementing ESOP programs. This was further examined by (Waseem, Abbas, & Farooq, 2022) (Cheng & Ji, 2021) who also discovered a negative relationship between ESOP and the cost of equity. Through ESOP implementation, agency conflicts can be prevented, leading to improved corporate governance and increased stock prices. The rising stock prices reflect low risk and attract investors to invest their capital. However, in a study conducted by (Aubert, Kern, & Hollandts, 2017) there was no notable correlation discovered between ESOP and the cost of equity. The varying outcomes in previous research about the relationship between ESOP and the presence of intervening variables could be considered as a potential explanation for the connection, or lack thereof, between the cost of equity and other factors, such as Labor Investment Efficiency (LIE), as human capital plays a vital role in determining company productivity, and labor investment efficiency is a crucial factor in determining a company's competitive advantage (Erosa, Koreshkova, & Restuccia, 2010).

ESOP acts as a protective measure against harmful actions or decisions by management that could negatively impact the company and its shareholders, such as under-investment or over-investment (Sualihu, Rankin, & Haman, 2021). Companies that can effectively control labor investment efficiency will also have a positive impact on reducing the cost of equity. According to (M. Jung, 2008) labor investment efficiency can reduce the financing costs of a company. Overinvestment in a company can lead to a decrease in labor investment efficiency, which can hinder the company's further development. Managers make investment decisions to gain personal profit, which can result in inefficiencies at the investment level (Gao & Yu, 2020).

The implementation of an ESOP program in companies is expected to enhance employee motivation, leading to excellent company performance (Cheng & Ji, 2021). It states that the adoption of ESOP can reduce a company's cost of equity. However, this can be hindered if there are inefficiencies in labor investment, which can disrupt the ESOP program. The expectation of ESOP adoption is to reduce the cost of equity and can be counteracted if there are inefficient investments in the workforce. This indicates the potential mediating role of Labor Investment Efficiency (LIE) in the relationship between ESOP and the Cost of Equity. Therefore, this study aims to examine the influence of ESOP on the company's cost of equity through Labor Investment Efficiency (LIE) as a mediating variable.

2. Materials and Methods

2.1 *Agency Theory*

Agency theory is a concept that describes the relationship between an agent and a principal, where the relationship is governed by a contract to carry out business activities (Jensen & Meckling, 1976). However, agents and principals may have different goals and perspectives, which could lead to agency problems. Conflicts of interest between agents and principals arise because principals seek long-term profits and business sustainability, while agents tend to pursue short-term gains. In addition, information asymmetry can be one of the causes. Due to their direct involvement in business operations, agents may possess more and better information than their principals. Principals need to ensure the validity of information, even though it may take more time, and the outcomes will never be perfect. Interests' alignment is necessary to prevent losses and agency costs, which can diminish the value of the company.

2.2 *ESOP*

ESOP is a human resources management program that enables employees to become shareholders in their company (Bapepam, 2002). Initially introduced in the United States during the 1950s, ESOP has gradually been implemented by various private companies in Indonesia since 1998. This program has the potential to foster a sense of ownership and motivation among employees, leading to improved performance. The notion of "working for their own benefit" tends to emerge as the company's success becomes intertwined with the employees' success. Each company may adopt different ESOP models based on their specific goals, strategies, and relevant regulations. (Sari, 2020) outline five types of ESOPs, including Stock grants, Direct Employee Stock Purchase Plans, Stock Option Plans, Employee Stock Ownership Plans (ESOPs), as well as provisions for Phantom Stock & Stock Appreciation Rights (SARs) that need to be fulfilled.

2.3 *Cost of Equity*

The cost of equity refers to the expenditure borne by a company when securing funding through the issuance of stocks (equity). It denotes the anticipated rate of return demanded by shareholders for their investments. The three methods that existed for determining the cost of equity are (1) the Dividend Discount Model, (2) the Capital Asset Pricing Model (CAPM), and (3) the Debt Cost plus Risk Premium approach. The Dividend Discount Model calculates the company's cost of equity by considering the present value of future dividend payments discounted back. By directly incorporating the expected rate of return into the calculation, the CAPM offers more accurate assessment of the cost of equity. CAPM calculates the rate by adding the risk-free rate to the difference between the expected return for the market portfolio, multiplied by the stock's Beta coefficient. The last approach is relatively simple, known as the "quick and dirty" approach. Since higher debt leads to higher risk, the expected rate of return on common stock should be higher than that of debt. In summary, the cost of equity in this approach is the sum of the pre-tax cost of debt and the risk premium in the expected return for equity over debt.

2.4 *Labor Investment Efficiency*

Investment efficiency depends on the relationship between risk, returns, and investment management costs, but it is constrained by various limitations faced by investors (Hodgson et al., 2000). However, this efficiency is restricted by various constraints encountered by investors. These limitations encompass both financial and non-financial factors, such as time availability for managing investments, fiduciary obligations, and regulatory requirements. Consequently, investment efficiency encompasses both financial and non-financial aspects. According to theoretical principles, the utilization of capital is considered efficient when it maximizes output value (Kothari, Ramanna, & Skinner, 2010).

Labor Investment Efficiency is developed based on agency theory using Jensen's free cash flow, formulated to measure employee investment that is not in line with expectations (overinvest or underinvest). When issues arise within a company, egoistic managers may take in excessive hiring as a component of their personal agenda. The expansion of the workforce beyond the optimal level due to political reasons or the retention of unproductive employees are two approaches to over-hiring. Overinvesting in labor will decrease a company's net profit as salaries and other relevant costs increase. On the other hand, underinvestment in labor is typically implemented when managers are driven by short-term profit-seeking investors and under-hire to meet revenue targets (Sualihu et al., 2021) (Ghaly, Dang, & Stathopoulos, 2020). The efficiency of labor investment can be determined by the percentage change in the number of employees over a specific period. As stated by (Sualihu et al., 2021)), the measurement of investment efficiency in labor can be accomplished through the utilization of the Abnormal net hiring calculation, which was popularized by (Pinnuck & Lillis, 2007). Abnormal net hiring, serving as an indicator of ineffective labor investment, can be assessed by calculating. The absolute deviation between the observed net hiring value and the expected value. This calculation considers the projected economic factors associated with recruitment decisions and has been employed in prior studies.

2.5 ESOP, Cost of Equity, and Labor Investment Efficiency

ESOP is a strategy to minimize agency costs by allowing employees to become shareholders. With the alignment of interests, every decision made by the company will affect shareholder value. The adoption of ESOP will reduce the cost of equity capital, accompanied by an increase in stock price (Ivanov & Zaima, 2011). ESOP, as a reward for employees, can enhance work motivation, thereby increasing productivity, leading to improved company performance and stock price. The increased stock price can reduce the stock's risk level (Beta), thereby lowering the cost of equity. Waseem et al. (2022) also suggested in their research that there is a substantial impact between ESOP and the cost of equity. This result is consistent with the research conducted by (Ivanov & Zaima, 2011) which suggests that the adoption of ESOP can lead to a decrease in the cost of equity. The enhanced value of ESOP is also regarded as a favorable indication for shareholders (Meng, Li, & Zhang, 2019).

H1: ESOP has significant impact on Cost of Equity

The efficiency of a company's labor investment is achieved when recruitment decisions approach the optimal level, determined by the economic fundamentals of the company. Overinvestment in labor means hiring more workers than the optimal level, while underinvestment in labor means hiring fewer workers than the optimal level. This results in the inefficiency of the company's labor investment. Overinvestment in labor increases operating leverage and can decrease the company's value (Lee & Yu, 2017). Several studies have examined the effect of labor investment efficiency. With the implementation of ESOP, employees also become owners of the company, which helps prevent inefficiencies in labor investment (Chen, Li, Luo, & Zhang, 2017). ESOP can align the

interests of employees and shareholders. (Sualihu et al., 2021) stated that executives who receive ESOP through restricted stock methods are less likely to make decisions that do not maximize benefits, such as overinvestment and underinvestment.

H2: ESOP has significant impact on Labor Investment Efficiency

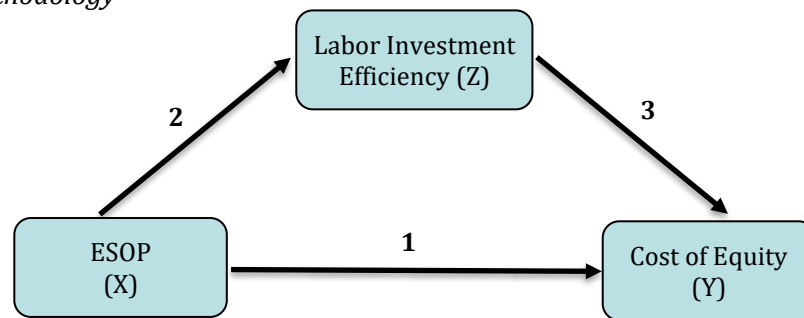
B. Jung, Lee, & Weber (2014) present findings that support the link between inefficient labor investment, such as inadequate hiring practices, and diminished future profitability. Labor expenses encompass a higher proportion of variable costs compared to capital expenses, although recent studies suggest that a considerable portion of labor costs is fixed. As a result, decisions related to labor investment hold equal significance in augmenting firm value as investments in physical capital (Merz & Yashiv, 2007). Additionally, investment efficiency is shown to have an adverse effect on the cost of equity, as demonstrated by (Majeed, Zhang, & Umar, 2018). Efficient investments indicate the presence of good business management mechanisms and mitigate agency problems through alignment of management and shareholder interests. As a result, the cost of equity for the company can be reduced. This is consistent with prior research by (Guedhami & Mishra, 2009) that discuss various corporate governance mechanisms that can reduce agency problems and, consequently, lower the cost of equity.

H3: Labor Investment Efficiency has significant impact on Cost of Equity

By adopting ESOP, a company can restrain managers from engaging in detrimental actions and encourage more cautious investment decision-making (Sualihu et al., 2021). In investment efficiency, managers need to allocate capital appropriately to create maximum output value (Gao & Yu, 2020). Efficiency levels in investment can also lower a company's cost of equity. Efficient investments demonstrate good governance by management because of resolving agency problems through aligning management and shareholder interests, thus resulting in a reduced cost of equity (Majeed et al., 2018). Therefore, the existence of inefficient labor investments can alter the influence of ESOP on the cost of equity. Labor investment efficiency can either enhance or worsen the company's situation depending on the level of overinvestment or underinvestment in labor. Optimum labor investment efficiency can lower a company's cost of capital and prevent investment problems and unprofitable projects (overinvestment) (Rochmah & Ardianto, 2020) (B. Jung et al., 2014). present empirical evidence indicating that ineffective labor investments, such as inadequate hiring practices including under-hiring, are linked to reduce profitability in the future. The implementation of ESOP programs in companies is expected to enhance employee motivation toward company ownership, thereby potentially reducing the cost of equity. However, this effect may be hindered if labor investment efficiency is inefficient and disrupts the ESOP program. Therefore, the author predicts the moderating effect of labor investment efficiency on the adoption of ESOP and the cost of equity for the company.

H4: Labor investment efficiency has significant mediating effect on the relationship between ESOP and Cost of Equity

2.6 Data and Methodology



Source: Researcher (2023)

Figure 1. Research Conceptual Framework

Based on the preceding explanation, this research uses three variables, comprising a dependent variable, an independent variable, and a mediating variable that is illustrated in *Figure 1*. This research is a quantitative study using explanatory research. From 270 non-financial firms that listed in Indonesian Stock Exchange (IDX), we used 16 firms that fulfill the following criteria: (1) The firm implemented ESOP during 2017-2021; (2) The firm regularly published its annual financial reports during 2017-2021. Therefore, the sample size obtained in this study consists of 16 firms with a total of 80 years-observations.

Firstly, we calculated ESOP and Cost of Equity. The cost of equity represents the lowest expected rate of return demanded by shareholders. Hence, we used Capital Asset Pricing Model (CAPM) to calculate the value (Aubert et al., 2017; Campa & Kern, 2020; Cheng & Ji, 2021; Waseem et al., 2022). For ESOP, we determined the value by the percentage of shares owned by employees through the ESOP program, relative to the total number of outstanding shares (Aubert et al., 2017; Waseem et al., 2022). Secondly, we measured abnormal net hiring of the firm for the value of Labor Investment Efficiency. According to (Sualihu et al., 2021) abnormal net hiring is determined by calculating the absolute difference between the actual net hiring and the desired net hiring. The desired net hiring is predicted based on economic factors associated with recruitment decisions. The value of inefficient labor investment is the error value (absolute residual) in the Net Hiring regression model that cannot be explained by the variables in the equation as follows:

$$\begin{aligned}
 Net\ hire_{it} = & \beta_i + \beta_1 Salesgrowth_{it-1} + \beta_2 Salesgrowth_{it} + \beta_3 \Delta ROA_{it} + \beta_4 \Delta ROA_{it-1} + \beta_5 ROA_{it} \\
 & + \beta_6 Return_{it} + \beta_7 Size\ R_{it} + \beta_8 LIQ_{it} + \beta_9 \Delta LIQ_{it-1} + \beta_{10} \Delta LIQ_{it} + \beta_{11} LEV_{it} \\
 & + \beta_{12} LOSSBIN1_{it-1} + \beta_{13} LOSSBIN2_{it-1} + \beta_{14} LOSSBIN3_{it-1} + \beta_{15} LOSSBIN4_{it-1} \\
 & + \beta_{16} LOSSBIN5_{it-1} + \varepsilon_{it}
 \end{aligned}$$

Note:

$Net\ hire_{it}$ is the change of employees number from year t-1 to year t for company i. $Sales\ growth$ is the change in sales. ΔROA is measured by the change in Net Income divided by Total Assets at the beginning of the year. $Return_{it}$ is the total annual stock returns for year t of company i. $Size\ R_{it}$ is the logarithm of the market equity value at the beginning of the year, and then ranked based on percentiles. LIQ_{it} is measured by the Quick Ratio at the beginning of the year. LEV_{it} is measured by the ratio of total debt to total assets at the beginning of the year. $LOSSBIN1 - 5$ are 5 dummy variables that indicate each 0.005 interval of firm ROA from 0 to -0.025. $LOSSBIN1$ is equal to 1 if the range of ROA in the period is between -0.005 to 0. $LOSSBIN2$ is equal to 1 if the range of ROA in the period is between -0.005 to -0.01. Similar principle is applicable for $LOSSBIN3$ to $LOSSBIN5$.

To analyze the data, descriptive statistics and path analysis were employed. Path analysis focuses on analyzing causal relationships and quantifying the direct and indirect effects between variables. We also employed the Sobel Test to examine the indirect effects of Labor Investment Efficiency. According to (Sualihu et al., 2021). Partial mediation occurs when the inclusion of a mediating variable does not fully diminish the significance of the relationship between the independent and dependent variables. In contrast, if the relationship becomes insignificant after including the mediating variable, it is considered as Full Mediation. The empirical model of this study is as follows:

$$Z = \alpha + \beta_2 X + \varepsilon \dots\dots\dots(1)$$

$$Y = \alpha + \beta_1 X + \beta_3 Z + \varepsilon \dots\dots\dots(2)$$

Note:

Y: Cost of Equity

X: ESOP

Z: Labor Investment Efficiency

α : constant coefficient

β : regression coefficient

ε : residual value

3. Results and Discussions

3.1 Results

Descriptive Statistics

Based on the table below, the independent variable ESOP has a minimum value of 0%, measured from 80 samples. The maximum value from these 80 samples is 2%. The mean value of the ESOP variable from the 80 company samples is 0.58%. The Cost of Equity (CoE) from the 80 company samples shows a minimum value of -14%. The maximum value is 19%. The mean value of the CoE variable is 10.11%. The Labor Investment Efficiency (LIE) samples show a minimum value of 0% and the maximum value samples is 66%. The mean value of the LIE variable from the 80 company samples is 11.77%.

Table 1
Descriptive Statistics

Variable	N	Min	Max	Mean	Std. Dev
ESOP	80	0,00	0,02	0,0058	0,00759
CoE	80	-0,14	0,19	0,1011	0,04173
LIE	80	0,00	0,66	0,1177	0,13670

Source: Processed Data (2023)

Direct Effect

Model 1 testing aimed to assess the direct effect of Employee Stock Ownership Plans (ESOP) on Labor Investment Efficiency (LIE). Table 2 showed that the analysis outcomes demonstrate a significant relationship between ESOP and LIE, as evidenced by the Standardized beta value of 0.568 and a significance level of < 0.05 ($p = 0.000$). This showed that ESOP has a significant impact on LIE. The standardized beta coefficient of ESOP, which is 0.568, corresponds to the path coefficient P2.

Table 2
Direct Effect result Model 1

Variable	Coefficient	t	Sig.	Note
ESOP → LIE	0,568	6,091	0,000	Significant (+)

R Square= 0,322

ESOP = *Employee Stock Ownership Plans*, LIE = *Labor Investment Efficiency*.

Source: Processed Data (2023)

The second model testing was conducted to investigate the direct impact of Employee Stock Ownership Plans (ESOP) and Labor Investment Efficiency (LIE) on Cost of Equity (CoE). The analysis results reveal that the Standardized beta value of ESOP is -0.419 with a significance level of < 0.05 (p = 0.000). This indicates that ESOP has a significant effect on CoE. The standardized beta coefficient of ESOP, which is -0.419, represents the path coefficient P1. Furthermore, the variable LIE has a Standardized beta value of -0.494 with a significance level of < 0.05 (p = 0.000), showing that LIE also significantly affects CoE. The standardized beta coefficient of LIE, -0.494, corresponds to the path coefficient P3.

Table 3
Direct Effect result Model 2

Variable	Coefficient	t	Sig.	Note
ESOP → CoE	-0,419	-5,152	0,000	Significant (-)
LIE → CoE	-0,494	-6,070	0,000	Significant (-)

R Square= 0,655

ESOP = *Employee Stock Ownership Plans*, CoE = *Cost of Equity*, LIE = *Labor Investment Efficiency*.

Source: Processed Data (2023)

Indirect Effect

Table 4
Total Effect result

Relationship	Direct Effect	Indirect Effect	Total Effect
ESOP → LIE	0,568	-0,2805	0,6995
ESOP → CoE	-0,419		
LIE → CoE	-0,494		

The Sobel Test showed that the p-value (significance level) in the table is lower than 5% (0.000 < 0.05). Therefore, it can be concluded that the variable Labor Investment Efficiency mediates the relationship between ESOP and Cost of Equity. The involvement of Labor Investment Efficiency as a mediator between ESOP and Cost of Equity is regarded as partial mediation, as the connection between ESOP and CoE remains noteworthy even when the LIE variable is incorporated.

3.2 Discussions

The impact of ESOP and Cost of Equity

Based on the hypothesis testing results, it is concluded that ESOP has a significant effect on COE. In this study, ESOP has a negative effect on COE, showing that higher employee ownership in the

company's stock will decrease the cost of equity for the company. ESOP is implemented to enhance employee performance. By offering equity compensation, the company aims to unite the interests of management and shareholders for the benefit of the organization. As employees and owners of the company, those who receive ESOP will increase individual productivity and overall company performance, leading to improved outcomes. This improved performance can positively impact on the company's stock price, leading to benefits for shareholders, including ESOP participants, who can realize significant capital gains. Shareholders assume that the adoption of ESOP can mitigate agency problems because management can work in line with the owners' interests, which is to generate profits. The capital gains obtained through stock price appreciation can lower shareholders' minimum return expectations. Lower return expectations can be advantageous for the company as it becomes easier to meet investor demands and maintain the length of stay. This is because some investors perceive assets with higher prices and lower return rates as having lower risk (Sharma, 2012).

These findings are consistent with previous research conducted by (Campa & Kern, 2020; Cheng & Ji, 2021; Ivanov & Zaima, 2011; Waseem et al., 2022). ESOP, as a form of employee reward, fosters a sense of ownership and boosts work motivation. Managers who hold company shares tend to be more cautious in developing long-term business strategies, thereby improving company performance and stock prices. The increasing value of ESOP is also perceived as a positive signal to shareholders. The increase in employee share ownership is seen as a reflection of resolved agency conflicts. However, it is important to note that ESOP's efficiency is contingent on the percentage of total shares owned by ESOP remaining below 5%. Excessive ownership by ESOP can lead to managerial entrenchment and dilution issues (Ginglinger, Megginson, & Waxin, 2011).

The impact of ESOP and Labor Investment Efficiency

The results of the study demonstrate a positive and significant relationship between ESOP and Labor Investment Efficiency (LIE). This suggests that higher employee ownership in the company's stock can lead to suboptimal labor investment, characterized by either excessive or inadequate investment. The introduction of ESOP in Indonesia was initially carried out by Bapepam (2002), who provided an explanation of the program along with its associated advantages. In 2007, the government issued Law No. 40 of 2007 about Limited Liability Companies, which regulated and explained the rights of ESOP shareholders. However, at the time of conducting this research, Indonesia does not have a specific law or regulation governing the implementation procedures of ESOP. The challenging implementation of the ESOP program can lead to misalignment. The higher the shares owned by employees, the higher the inefficiency in labor investment. Managers who have ESOP also have voting rights as shareholders. This can increase employees' political motivations in corporate governance or policy determination. Managers may recruit as many employees as possible and retain unproductive employees to gain power and influence (Stein, 2003). To gain support in decision-making both as managers and shareholders, managers may prioritize their own interests by engaging in over-investment, even at the expense of reducing the company's net profit. This action is commonly referred to as management entrenchment, where managers make decisions that prioritize personal gains over the interests of the company or shareholders.

Most companies prefer to adopt stock options as part of their ESOP because the process is considered easier to implement. With stock options, employees could purchase company stock within a specified period at a price lower than the market price. Managers possessing stock options can generate capital by leveraging the disparity between the market price of the company's stock and the exercise price of the options. Managers with stock options choose to enhance their personal wealth

by realizing capital gains, often disregarding the potential risks that may harm themselves and lead to suboptimal investment decisions. These managers tend to focus on short-term gains and may overlook the interests of the company and shareholders. As a result, increasing employee ownership, especially through stock options, can lead to over-investment or under-investment in labor investments.

Stock options can also incentivize managers to engage in under-firing practices during periods of business decline (Sualihu et al., 2021). During the research period, the world was affected by the Covid-19 pandemic, which significantly disrupted business activities for many companies. Quarantine measures at both the domestic and international levels hampered operational activities and potentially impacted company performance. This pandemic spanned from 2019 to mid-2021, with a recovery beginning in late 2021. The possibility of managers failing to reduce the workforce during this pandemic could be indicative of inefficiencies in labor investments within the company.

The impact of Labor Investment Efficiency and Cost of Equity

Based on the hypothesis testing results, it can be inferred that Labor Investment Efficiency (LIE) has a substantial impact on the cost of equity. However, contrary to the assumptions of investment efficiency theory, LIE in this study has a negative effect on the cost of equity, indicating that increased inefficiencies in labor investment (over-investment) lead to a decrease in the expected return rate for shareholders. The existence of inefficient investments reveals inadequate management governance within the company. Managers are seen as incapable of effectively managing human resources, resulting in a failure to enhance key performance indicators such as sales growth, profitability, liquidity, stock price, and return on equity. Inefficient investments diminish shareholder expectations for returns, as the assets are perceived as unappealing to hold. Over-hiring and under-firing practices lead to excessive costs associated with employees. A rise in employee expenses without a commensurate improvement in company performance can erode the company's net profit. Consequently, stock prices decline, rendering them unattractive assets for shareholders. With relatively low equity costs due to indications of poor governance, the company faces difficulties in retaining shareholders and attracting new capital, as it is considered unattractive to investors.

This research has new insights that inefficiency in labor investment can be detrimental to the company, leading to a decrease in shareholder expectations as the company's stock is perceived as an unattractive investment asset. Over-hiring and under-firing practices result in excessive cost, which can reduce the company's profitability. Companies with low profitability are considered unattractive for investment, thus lowering shareholder expectations. With these inefficiencies, the company will struggle to meet shareholder expectations and may face a capital shortfall. Additionally, to secure additional equity capital, the company is deemed unappealing as its assets are seen as high-risk with low return rates.

The mediating effect of Labor Investment Efficiency on the relationship between ESOP and Cost of Equity

The findings from the hypothesis testing demonstrate a noteworthy impact of ESOP on the cost of equity, which is mediated by the variable LIE. An increase in ESOP value can lead to an increase in Labor Investment Efficiency. This reflects the company's managers engaging in over-hiring or under-firing practices in suboptimal economic conditions. Increasing employee share ownership leads managers to make investment decisions that benefit their personal interests. Managers may engage in over-hiring during unfavorable economic conditions and under-firing when productivity declines in order to gain power and influence over employees. This managerial entrenchment can result in inefficient labor investments that harm the company. The expenses accrued by the company

because of over-investment, including employee salaries and associated costs, have the potential to diminish the company's net profit and subsequently lower its stock price. The presence of inefficiencies signifies poor governance and reduces the company's net profit. Consequently, the company fails to meet shareholder expectations. The company's stock is perceived as unattractive, resulting in a decline in the expected level of returns.

4. Conclusion

In this study, we found that failing in ESOP program implementation might also bring loss to the company. The higher the percentage of employee share ownership, the greater the likelihood of over-investment in labor investments by managers. Their priority is to advance their own interests and increase their power and influence within the company. This can lead to an excessive and unproductive workforce, resulting in increased employee costs such as salaries and other related expenses, ultimately reducing the company's net profit. The decline in company profitability, often accompanied by a decrease in stock prices, causes shareholders to view the company's assets as unappealing, leading to a decrease in expected returns. Consequently, the company experiences a decrease in equity costs, making it challenging to obtain additional capital and potentially causing shareholders to face losses when their expectations are not fulfilled.

This research offers both theoretical and empirical substantiation that enhances understanding and serves as a reference for researchers and stakeholders interested in the field of financial management, particularly regarding the implementation of ESOP, labor investment efficiency, and equity costs. The theoretical implications of this research involve expanding on previous studies. In this study, ESOP was found to have a significant influence on the equity costs of non-financial sector companies in Indonesia through labor investment efficiency as a mediating variable. Companies are encouraged to adopt ESOP while also considering labor investment and assessing the existing workforce within the company. Both underinvestment and overinvestment in a company can lead to inefficient performance and a decline in stock prices.

As our study solely utilized data from Indonesia, it is crucial to emphasize that the findings may not be universally applicable to other countries with differing compensation structures, investment practices, governance systems, policies, regulations, and labor employment conditions. Incorporating macroeconomic and other internal company variables might provide better analysis for the study. Future research in this field is expected to the details of ESOP implementation with each individual company. Once comprehensive data on ESOP implementation is obtained, further research should differentiate between the types of ESOP adopted to understand the characteristics of the relationships associated with each type.

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References

- Aubert, N., Kern, A., & Hollandts, X. (2017). Employee stock ownership and the cost of capital 1 We are grateful to the Editor in Chief, Thomas Lagoarde-Segot and to participants at 2016 French accounting association conference, 2015 French finance association conference, the 2014 International corp. *Research in International Business and Finance*, 41. Retrieved from <https://doi.org/10.1016/j.ribaf.2017.04.007>
- Campa, D., & Kern, A. (2020). Employee stock ownership and cost of capital: Evidence from the S&. *Journal of Corporate Accounting & Finance*, 31(3), 150–162. <https://doi.org/https://doi.org/10.1002/jcaf.22449>
- Chen, C. R., Li, Y., Luo, D., & Zhang, T. (2017). Helping hands or grabbing hands? An analysis of political connections and firm value. *Journal of Banking & Finance*, 80, 71–89.
- Cheng, F., & Ji, S. (2021). The Impact of Employee Stock Ownership Plan on the Cost of Equity Capital. *Evidence from China. Discrete Dynamics in Nature and Society*, 1–17.
- Erosa, A., Koreshkova, T., & Restuccia, D. (2010). How Important Is Human Capital? A Quantitative Theory Assessment of World Income Inequality. *Review of Economic Studies. Review of Economic Studies*, 77(4), 1421–1449. Retrieved from <https://doi.org/10.1111/j.1467-937X.2010.00610.x>
- Gao, R., & Yu, X. (2020). How to measure capital investment efficiency: a literature synthesis. *Accounting & Finance*, 60(1), 299–334. <https://doi.org/https://doi.org/10.1111/acfi.12343>
- Ghaly, M., Dang, V. A., & Stathopoulos, K. (2020). Institutional investors' horizons and corporate employment decisions. *Journal of Corporate Finance*, 64.
- Ginglinger, E., Megginson, W., & Waxin, T. (2011). Employee ownership, board representation, and corporate financial policies. *Journal of Corporate Finance*, 17(4), 868–887.
- Guedhami, O., & Mishra, D. (2009). Excess control, corporate governance and implied cost of equity. *International Evidence. Financial Review*, 44(4), 489–524.
- Ivanov, S. I., & Zaima, J. K. (2011). Analysis of the effects of ESOP adoption on the company cost of capital. *Managerial Finance*, 37(2), 173–188. <https://doi.org/https://doi.org/10.1108/03074351111103695>
- Jung, B., Lee, W.-J., & Weber, D. P. (2014). Financial Reporting Quality and Labor Investment Efficiency. *Contemporary Accounting*, 31(4), 1047–1076.
- Jung, M. (2008). The effect of stock option holdings on the wealth change in share repurchases. *Asia-Pacific Journal of Financial Studies*.
- Kothari, S. P., Ramanna, K., & Skinner, D. J. (2010). Implications for GAAP from an analysis of positive research in accounting. *Journal of Accounting and Economics*, 50(2), 246–286.
- Lee, W.-J., & Yu, K. (2017). Personnel is Policy: Labor Investment Efficiency and Firm Value. *Korean Accounting Review*, 42(2), 125–168. <https://doi.org/https://doi.org/10.24056/KAR.2017.04.001>
- Majeed, M. A., Zhang, X., & Umar, M. (2018). Impact of investment efficiency on cost of equity: evidence from China. *Journal of Asia Business Studies*, 12(1), 44–59.
- Meng, Q., Li, X., & Zhang, P. (2019). Can the ESOP Program Promote Corporate Innovation?—Empirical Evidence Based on the Perspective of Enterprise Employees. *Management World*, 35, 209–228.
- Pinnuck, M., & Lillis, A. M. (2007). Profits versus losses: Does reporting an accounting loss act as a heuristic trigger to exercise the abandonment option and divest employees. *The Accounting Review*, 82(4), 1031–1053.
- Rochmah, H. N., & Ardianto, A. (2020). Catering dividend: Dividend premium and free cash flow on dividend policy. *Cogent Business & Management*, 7(1).
- Sharma, A. (2012). Cost of capital and profitability analysis (A case study of telecommunication

-
- industry). *Journal of Commerce and Accounting Research*, 1(4), 42.
- Stein, M. (2003). Unbounded irrationality: Risk and organizational narcissism at long term capital management. *Human Relations*, 56(5), 523–540.
- Sualihu, M. A., Rankin, M., & Haman, J. (2021). The role of equity compensation in reducing inefficient investment in labor. *Journal of Corporate Finance*, 66. <https://doi.org/10.101788>.
<https://doi.org/10.1016/j.jcorpfin.2020.101788>
- Waseem, F. W., Abbas, S. F., & Farooq, A. (2022). Nexus of Employee Stock Ownership with Cost of Capital: Evidence from KSE. *IRASD Journal of Management*, 4(1), 38–50.
<https://doi.org/https://doi.org/10.52131/jom.2022.0401.0060>
- Weston, J. F., & Copeland, T. E. (1996). *Manajemen Keuangan Jilid 2*.