Human resources accounting optimization: A conceptual pathway to improve financial performance

Juwita Sari, Prawita Yani*, Fastha Aulia Pradhani
Sekolah Tinggi Ilmu Ekonomi Indonesia Surabaya, Jawa Timur, Indonesia

A B S T R A C T

This research discussed HRA's impact on a company's financial performance. Human Resource Accounting (HRA) is measured by using 16 indicators, while financial performance uses 4 indicators, which consist of return on assets (ROA), return on equity (ROE), firm size, and leverage ratio. The analytical method used is binary logistic regression. The result shows that none of the HRA indicators affect ROA, while the other three are still affected by HRA indicators. Employment report indicators and other employee benefits in HRA indexes significantly affect ROE. Human resource policy, human resource development fund, and superannuation fund affect firm size the most. The last leverage ratio is significantly affected by human resource policy. This research has implications for manufacturing companies to increase information transparency for investors in the capital market through the sustainability disclosure of periodical HRA reports. Meanwhile, it is recommended that the government take action to encourage HRA disclosure for public companies in Indonesia by making the standards and regulations needed.

A B S T R A K

Penelitian ini membahas pengaruh HRA terhadap kinerja keuangan suatu perusahaan. HRA diukur menggunakan 16 indikator, sedangkan kinerja keuangan diukur menggunakan 4 indikator, yaitu Return on Assets (ROA), Return on Equity (ROE), firm size, dan leverage ratio. Metode analisis yang digunakan adalah regresi logistik biner. Hasil penelitian menunjukkan bahwa tidak ada indikator HRA yang berpengaruh terhadap ROA. Sementara itu, ketiga indikator kinerja keuangan lainnya masih dipengaruhi oleh beberapa indikator HRA. Indikator laporan ketenagakerjaan dan tunjangan karyawan lainnya berpengaruh signifikan terhadap ROE, firm size juga dipengaruhi oleh indikator human resource policy, human resource development fund, dan super annuation fund. Indikator kebijakan sumber daya manusia juga memiliki pengaruh yang signifikan terhadap leverage. Penelitian ini membawa implikasi bagi perusahaan menufaktur untuk meningkatkan transparansi informasi bagi para investor di pasar modal dengan pengungkapan HRA secara rutin dan berkelanjutan. Selain itu, pemerintah juga diharapkan untuk intervensi dalam mendorong penerapan pengungkapan HRA bagi perusahaan publik di Indonesia dengan menciptakan beberapa kebijakan dan regulasi.

Keywords:
Firm size, HRA, and Financial ratio.

1. INTRODUCTION

According to IDX Channel statistics from 2021, the pandemic crisis conditions caused a significant drop in revenue for a number of corporate sectors. These industries comprise businesses in the travel, entertainment, and transportation sectors. Due to its significantly lower revenue, the company is unable to manage its operations; consequently, it reduces the number of staff and potentially efficient variable costs. Some businesses eventually had negative growth, which denoted a decline in their financial success. Manufacturing businesses are competing to manage their operations more efficiently as a result of this phenomena. Sustaining strong financial success is going to be one of the challenges. Profitability ratios, such as the ratio of assets to equity, debt/leverage ratios, and firm size, are a few examples of financial performance indicators. Often, financial performance is often used as a measurement tool due to its ability to predict cash flows in the present and the future (Ogundajo et al., 2022).

An increase in the number of workers impacted by layoffs (terminations of employment) is another consequence of uncertain environmental conditions. As an illustration, the Matahari retail company fired personnel in 2021 after closing dozens of its stores. Consequently, in the current unstable times, human resources, or the personnel of a company, are a critical variable when facing global competition. The process by which a human being is transformed into something ultimately more valuable is known as human resources. Therefore, it is important to emphasize that individuals are not only resources in this process; rather, they still require mechanisms or procedures in order to become resources that have economic value (Dhar et al., 2017). Riding an inflatable boat on a high current is how the company's new paradigm for managing human resources (HR) is described.The leader is behind, and the main task is to set the direction and balance the condition of the rubber boat. The rapid and rocky river flow is likened to the current business competition conditions (Suhariadi, 2013).

This paradigm shift encourages more and more academic research to reveal the relationship between human resource management and company performance (Khan, 2021; Mamun, 2009; Micah et al., 2012; Asika, 2017; Sari et al., 2016). HRA is a branch of science that discusses how humans are long-term resources of companies that can be calculated through numbers. HRA is treating people as assets. HRA, a process that involves measuring and reporting costs and human value as organizational resources (Raymond Asika, 2017), is also related to recruitment, placement, training, and employee development and is also related to the evaluation of the company's financial condition (Flamholtz, 1999; Flamholtz and Bullen, 2002; Gupta, 2021). HRA is also a method for recognizing, recording, and reporting investments made in human resources in an organization, which is not currently included in bookkeeping practices (Khan, 2021). In other words, this is recorded as an additional cost to the company.

Therefore, the HRA approach is very important as an alternative to HR development so that the real contribution of HR as a resource can be measured by company performance. Previous research has proven the effect of HRA disclosure indicators on company performance (Duc et al., 2021; Eksandy and Sari, 2020; Irawati, 2016). The output of the research is

empirical evidence of the effect of HRA on company performance, but there is no implicative solution in the form of a proposed model that can be used in the company. Furthermore, previous studies proposed quantitative modeling in the form of human resource assessment for companies, but the research was conducted by non-Indonesian researchers, and the object studied was also foreign companies (Al-Hattami and Kabra, 2018; Arkan, 2016; Baron, 2011; Ghasemi et al., 2018; McCracken et al., 2018; Plotnikov et al., 2019). The implementation of HRA disclosure is also the object of research with company objects in Indonesia, but the research only focuses on one company as a case study (Achjuningrum and Suhartini, 2022; Santos et al., 2021).

From the existing research gaps, encourage researchers to explore more about HRA and identify which factors are empirically proven to have a major contribution to company performance. The study population is made up of manufacturing companies listed on the IDX. Later, several samples of companies that meet the data qualification criteria will be selected, namely those that disclose their human resource financing in their financial statements. Thus, from these findings, a narrative-shaped conceptual model will be compiled that is easy for professionals in the company to understand. The hope is that the findings in this study have a practical impact, where the solutions offered can be implemented directly in the company's latest work.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS

Examining the company's financial situation is the most obvious and often utilized way to gauge financial performance in the performance review process of the organization. A overview of financial performance indicators that can be utilized as a measurement was provided in a study. 1) According to Ali (2020), the profit/profitability ratio. This profit ratio examines the amount of profit the business can turn a profit on. 2) The Efficiency Ratio, Asset Management Ratio, and Activity Ratio are computations that assess how well a business maximizes the performance of its assets. 3) The debt ratio, also known as financial leverage, gauges how much debt is utilized in a company's financial structure. 4) The growth ratio is an index that gauges a business's expansion, both growing.

The most commonly observed aspect of financial performance is the reporting on profitability. Profitability refers to the capacity to generate profits from all business activities within a company (Raymond Asika, 2017). The understanding of profit can vary based on different needs and profit measurement methods (Eksandy and Sari, 2020). Previous research has indicated that an organization's profitability is influenced by various factors, including the efficiency of internal resources and market conditions (Khan, 2021; Santoso, 2018; J. Sari and Komalasari, 2021). Some studies suggest that financial performance indicators can impact Human Resource Accounting (HRA) disclosure. In the annual financial statements of public companies, the profitability ratio, company size, and leverage ratio have been found to positively and significantly affect HRA disclosure (Kusumastuti, 2021; Ullah et al., 2020; Pham et al., 2022). Additionally, other studies have shown that HRA disclosure positively influences one of the profitability ratios, namely return on equity (Bonsu et al., 2019).

According to the American Accounting Association, Human Resource Accounting (HRA) involves the process of identifying, measuring, and communicating data about human resources to relevant stakeholders. Research underscores the significance of quantifying human resources, noting that the specialized skills or expertise of individuals can enhance a company's value (Gupta, 2021). Additionally, Human Resource Accounting should be seen not just as a system for assessing the cost and value of personnel to an organization, but also in a broader context related to human resource management within formal organizations (Eksandy and Sari, 2020; Asika, 2017).

Table 1
Definitions of 16 HRA Index

No	HRD Index	Definition
1	Separate HRA statement	How organizations manage and invest in HR
2	Total Value of Human Resource	HR-related financing (monthly salary)
3	Number of employees	Number of people working effectively
4	Human resource policy	Conditioned and strategic action focused on employee development
5	Training and development	Resources that companies spend on developing the performance of their employees
6	Management succession plan	Salary and career planning on the organizational structure and hierarchical model that exists in the company
7	Employment report	Reports from the movement in and out of employees in the company
8	Employees' value addition	How much added value generated by the company is distributed to its employees
9	Human resource development fund	Own budget or clearly defined funds for employee policy
10	Employees/ workers fund	Special conditions for anticipating the financial demands of employees, usually defined as payment or loan policies
11	Employee categories	Possible differences in the internal classification of the company
12	Managerial remuneration	Represents compensation paid to upper management levels (such as stock options)
13	Retirement benefits	Compensation paid to retired employees
14	Performance Recognition	Relate to additional compensation plans provided for best performance.
15	Superannuation fund	Private health insurance for employees paid in whole or in part by the company
16	Other employees' benefits	This includes HR-focused investments and actions

Source: Wiyadi et al., 2021

Previous research identified two primary methods for measuring Human Resource Accounting (HRA): the cost-based approach and the economic approach (Flamholtz and Bullen, 2002; Khan, 2021). In this context, cost refers to the nominal amount a company spends on services rendered. Costs can also be viewed in terms of money and assets; from a financial perspective, the expenses can provide benefits within the current accounting period, while as an asset, the cost represents a projection of future benefits for the organization.

The implementation of HRA varies across organizations and countries. Some organizations use appropriate valuation methods to measure their human resources and include this information as supplementary data or additional statements in their annual reports. Despite the various explanations, HRA itself has both advantages and disadvantages. Previous research findings highlight the pros and cons of HRA implementation for companies, noting that internal and external factors can both support and impede the process (Irawati, 2016).

Based on the economic approach primarily developed by Flamholtz, an index consisting of 16 components is developed and reflects HRA disclosure items ideally found in regular company reports. This index was also developed based on literature studies conducted (Mamun, 2009).

Numerous studies indicate a connection between the implementation of Human Resource Accounting (HRA) and a company's financial performance. For instance, HRA implementation can enhance stakeholder trust and serve as a high-value marketing tool, as reflected by Return on Assets (ROA) and Return on Equity (ROE), as well as company share value. It also helps improve the company's external reputation, establishes legitimacy in the public eye, and avoids certain costs associated with the lack of public legitimacy (Mamun, 2009; Micah et al., 2012; Ndum and Oranefo, 2021). Specifically, it is noted that applying HRA is a critical instrument for a company's financial performance, utilizing ROA indicators (Mukolo et al., 2022). Thus, the first hypothesis posits that the most disclosed HRA categories will impact the company's ROA

One of the efforts to improve the company's financial performance in labor-intensive industries is to develop employee factors. Several reviews support the implementation of HRA will be positively and significantly correlated with company performance including financial performance reflected among others by ROA and ROE (Khan, 2021; Shukuhian and Ashraf, 2019; Mukolo et al., 2022) as well as the quality of financial reporting about employees' long-term commitment (Bansal and Sharma, 2019). Related to stakeholder interests, several studies say that the implementation of HRA will increase stakeholder trust and is a marketing tool that has high value for the company represented by ROA and ROE as well as the value of company shares, helps improve the company's external reputation, reveals the company's legitimacy in the eyes of the public and avoids some of the costs arising from the absence of public legitimacy (Mamun, 2009; Micah et al., 2012; Ndum and Oranefo, 2021). Therefore, the second hypothesis developed that the 5 most expressed HRA Categories, affect the ROE of the company.

In addition to the financial performance presented in a company's financial statements, several indicators can be derived from the impact of implementing Human Resource Accounting (HRA). The size of a

company is reflected in its financial statements, and it is assumed that a larger company scale makes it easier to implement initiatives such as HRA. Disclosing HRA indicators can create a positive public image, leading to increased public trust and, consequently, greater profits as the company grows. This notion is supported by research in the banking industry. A 2019 study found a significant positive relationship between HRA implementation and company size (Diansari and Rispin, 2019; Kurniawan, 2020). Moreover, higher levels of disclosure can reduce agency costs for managers and shareholders, ultimately lowering the cost of obtaining and publishing public information while enhancing competitive advantage (Buck et al., 2002; Huui and Siddiq, 2012). However, some contradictory findings exist, such as research showing a negative relationship between public information disclosure about HRA and company size (Fontana and Macagnan, 2013). Given these varying findings, the authors include company size indicators as one of the hypotheses in this study. Therefore, the next hypothesis is that the five most frequently disclosed HRA categories affect firm size.

Leverage is one of the items used as a benchmark in a company's capital structure to fund its operations. Agency fees are one of the constituent components in obtaining company leverage. The lower the disclosure of public information in the company, the greater the agency costs and the increase in the leverage ratio. In comparison to a company's assets, high leverage will adversely affect the company's overall financial ratio. This is reinforced by research that states that companies with
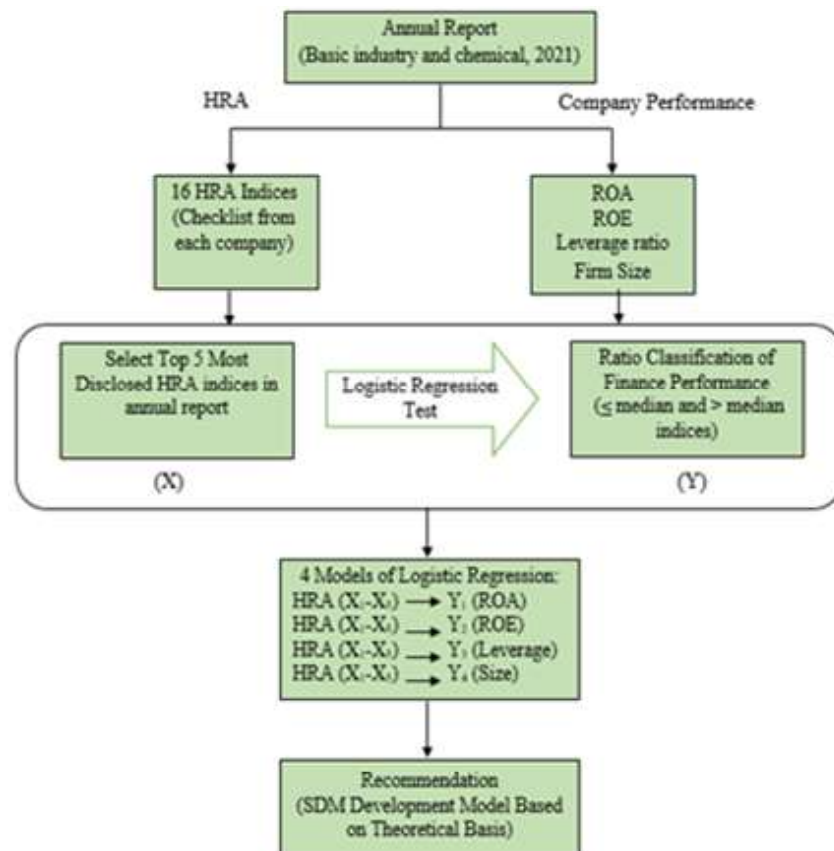

**Figure 1
Conceptual Framework**

high leverage value tend high agency costs which ultimately triggers companies to reduce information asymmetry with voluntary disclosures such as HRA (Prencipe, 2004). With reduced agency fees for information asymmetry, public trust will increase and lower the cost of obtaining leverage. Unethical practices in the company's operations will decrease, due to adequate disclosure, especially regarding human aspects. This is further clarified by the findings regarding HRA disclosure in companies that minimize unethical treatment and will subsequently have a positive and significant effect on the company's financial ratios including leverage ratios (Adekunle et. al., 2018). With varying results, the author writes down his final hypothesis that the 5 most disclosed HRA Categories affect the Company's leverage.

3. RESEARCH METHODS

This study includes one independent variable and one dependent variable. The independent variable, Human Resource Accounting (HRA), is measured using 16 HRA indices, which serve as indicators of HRA disclosure. These indicators are categorical data of a dichotomous/binary type, indicating the presence or absence of each indicator in each company, coded as 0 and 1. A code of 0 indicates no disclosure of the indicator, while a code of 1 signifies disclosure. The dependent variable, financial performance, is assessed using four indicators: Return on Assets (ROA), Return on Equity (ROE), firm size, and Leverage Ratio. In this study, the dependent variable will be classified into two categories. All indicators of the *HRA Index* are taken from previous research conducted (Mamun, 2009). All data used for this study are secondary data taken from the company's financial statements in the manufacturing sector in 2021. Data compiled from the website of the Indonesia Stock Exchange, namely www.idx.co.id. In each financial statement, 16 indicators from HRA are checked. As for the value of each dependent variable, calculations are carried out using several formulas as follows.

ROA = Net Profit / Total Asset x 100
ROE = Net Profit / Capital x 100%
Firm Size = In(total asset)
Laverage ratio = Total Liabilities/Total Asset

The population for this research consists of all manufacturing companies listed on the Indonesia Stock Exchange (IDX). The sample was selected using purposive sampling, a method that employs specific criteria. The criteria for this study included only those companies that had an annual report for 2021. Based on these criteria, a total of 61 companies were chosen as the sample. The detailed calculations are provided in Table 2.

Table 2
Sampling Criteria

Sample Criteria	Sum
Manufacturing companies listed on the Indonesia Stock Exchange (IDX)	73
Companies that do not have an *annual report* in 2021	12
Total samples used	61

Source: Personal Researcher Data, 2023

After all data has been collected completely, both for independent and dependent variables, then the data will be coded 0 or 1 for the dependent variable. The initial stage of coding for independent variables is to check the 16 HRA indicators in the company's financial statements. If the indicator is contained in the financial statements, it is marked by providing a *checklist* (√), and then given a code with the number 1, while the indicator that is not available is marked with (-), and coded with the number 0. While coding for the dependent variable is done the initial stage is to calculate the median value of each indicator, then from the median value 2 categories are formed, namely the first category is a category with a value less than equal to the median value that has been calculated with a code of 0, and for coding 1 represents a category with a value more than the median value that has been calculated. The stage is carried out for all four ratios on the four dependent variables. After the coding is complete, it is continued with the data analysis stage. The data analysis technique used is adjusted to the formulation of the problem in this study, which consists of two stages, as follows.

a. In analyzing the effect of HRA disclosure on the profitability of manufacturing companies in Indonesia, the statistical method used is binary logistic regression. This method was chosen because the dependent variable of this study is a categorical variable with 2 types of choices (binary) (Agresti, 2012)

b. determining the appropriate conceptual model to optimize the HRA function, is carried out with several stages of analysis. Recommendations are made based on the procedure in the previous step but with a simpler view of each bullet point.

4. DATA ANALYSIS AND DISCUSSION

Data analysis is split into two sections: data description and testing to assess the impact of HRA disclosure on each dependent variable (ROA, ROE, Firm Size, and leverage). The process begins with a description, which involves creating a table that outlines the proportions of each HRA disclosure for each indicator.

In Table 4, it can be seen that the values of the top 5 proportions are found in indicators **X3, X5, X11, X12,** and **X14.** This means that these five indicators are the most revealed compared to the other 16 indicators. The five indicators are *employment reports, training and development, employee categories, managerial remuneration, and performance recognition.* However, there is still an indicator that is 0, namely **X1**, so it can be indicated that none of the companies have disclosed indicators regarding *the Separate HRA statement.*

Table 3
Proportion of HRA Disclosures on Each Indicator

Indicators	X1	X2	X3	X4	X5	X6	X7	X8
Proportion	0.000	0.098	0.951	0.344	0.967	0.230	0.393	0.639
Indicators	X9	X10	X11	X12	X13	X14	X15	X16
Proportion	0.246	0.115	0.918	0.983	0.770	0.901	0.213	0.7058

Source: Data Processed, 2023

Table 4
Contingency of HRA Disclosure Indicators

Dependent Variable	HRA Indicators	Number of employees	≤ Median	> Median	Mean	Sdev
ROA	Number of Employment	Not disclosed	1	2	0.086	0.223
		Revealed	31	27		
ROE	Training and Development	Not disclosed	19	0	0.031	0.099
		Revealed	31	11		
Firm Size	Employee Categories	Not disclosed	4	1	27.379	6.556
		Revealed	28	28		
Leverage	Managerial Renumeration	Not disclosed	0	1	0.376	0.422
		Revealed	32	28		

Source: Data Processed, 2023

Table 5
Binary Logistic Regression

Dependent Variables	Independent Variables
Y1 (ROA)	X2, X4, X6, X7, X8, X9, X11, X13, X14, X15, and X16
Y2 (ROE)	X7, and X16
Y3 (Firm Size)	X7, X9, and X15
Y4 (Leverage)	X7

Source: Data Processed, 2023

The description of the data is then carried out by making a contingency table between the HRA disclosure indicator and each dependent variable, namely the financial performance ratio, as well as a summary of the mean value and standard deviation for each dependent variable. The table is presented as follows.

Based on Table 4, no company fails to disclose "managerial remuneration" and has a leverage value at or below the median. Companies with an ROE value above the median also do not disclose "training and development." Only one company with an ROE above the median has made such disclosures. Overall, across all four tables, the disclosure of the four indicators tends to correspond with financial ratio values at or below the median. The table also reveals that the firm size variable shows the greatest variation, as indicated by the highest standard deviation. The average ROA value is higher than the ROE value, with the lowest being -1.06 and the highest 1.09.

Table 6
Hosmer and Lemeshow Test

Dependent Variable	Chi-square	Sig.
ROA	10.514	0.231
ROE	0.617	0.735
Firm Size	2.891	0.576
Leverage Ratio	0.171	0.675

Source: Data Processed, 2023

Table 7
Omnibus Test

Dependent Variable	Chi-square	Sig.
ROA	4.404	0.957
ROE	3.794	0.13
Firm Size	12.646	0.0005*
Leverage Ratio	3.58	0.058**

*) Sig. Level (α=5%)
**) Sig. Level (α=10%)
Source: Data Processed, 2023

Table 8
Wald Test

Dependent Variable	Indicator	B	S.E.	Wald	Sig.	Exp(B)
Firm Size	X7	1.478	0.67	4.859	0.027*	0.228
	X9	-1.369	0.783	3.057	0.08**	3.932
	X15	1.527	0.804	3.611	0.057**	0.217
	Constant	-0.639	0.37	2.977	0.084	2.709
Leverage	X7	1.007	0.541	3.466	0.063**	2.738
	Constant	-0.496	0.339	2.145	0.143	0.609

*) Sig. Level (α=5%)
**) Sig. Level (α=10%)
Source: Data Processed, 2023

The next stage is continued with analysis to determine the effect of HRA on the four financial performance ratio indicators. The analysis was performed through modeling using binary logistic regression. Not all variables in HRA disclosures will be involved in modeling. The variables involved in modeling are selected using the *backward Wald method* so that the variables selected in modeling are variables that contribute more to the dependent variable. The results of the variables selected in *the backward wald* are presented in Table 5.

Binary logistic regression modeling has several stages, starting with testing the suitability of the model, through the *Hosmer and Lemeshow test,* and continuing to test the significance of model parameters both simultaneously and partially. The results of model conformity testing for each dependent variable are summarized in the Table below (Table 6).

Based on Table 6, it can be shown that the *p-values* for all variables are greater than *alpha* 5%. These results indicate that the model is appropriate for all variables, meaning that there is no difference between the observation results and the prediction results so that it can be continued at the next stage, namely testing the significance of parameters simultaneously using an omnibus test. Table 7 is a summary of the results of testing the significance of the parameters simultaneously.

In Table 7, the ROA variable has a p-value more than significance level, which is above significance level 5% and 10% meaning that none of the HRA disclosure indicators affect the ROA variable. Same thing applied for ROE variable which has a p-value more than significance level. While, leverage ratio and firm size variables have a p-value less than significance level at 10%. Therefore the analysis for the ROA and ROE variables no need to be continued at the stage of partial significance testing. As for the other two variables, influenced by at least one HRA disclosure indicator. To find out the indicators that affect the two dependent variables, bellow are presented at the testing stage partially which are presented as follows. Partial testing is done through a Wald test.

Based on Table 8, several indicators affect each dependent variable. This is indicated based on a p-value that is less than alpha. Furthermore, Human *Resource Policy* (X7), Human Resources Development Fund *(X9), and* Super Annuation Fund *(*X15) are some indicators of HRA reporting that affect firm size. As for the leverage variable, it is only influenced by one variable, namely *Human Resource Policy* (X7).

DISCUSSION
From a sample of 61 companies, 15 out of 16 Human Resource Accounting (HRA) indices were disclosed, with a separate HR statement index presented individually. This item, which details how the company allocates resources to HR, is often included in a distinct report separate from the standard Financial Statements and Annual Management Reports. Due to its voluntary and non-mandatory nature, such disclosures are uncommon and require additional effort from the company. This trend is consistent with conditions in Southeast Asian countries that are members of the Association of Southeast Asian Nations (ASEAN), where the disclosure of a "separate HR Statement" is predominantly found in some Malaysian and Philippine companies (Wiyadi et al., 2021). However, compared to previous research, this situation indicates rapid progress. Previously, the maximum disclosure rate was 25% in Bangladesh (Mamun, 2009), 30-40% in Nigeria (Enofe et al., 2014), and 40% in Vietnam (Pham et al., 2021). The potential for comprehensive HRA disclosure continues to be heavily promoted through various government studies and programs. Given the benefits, Human Resource Accounting Disclosure (HRAD) is mandatory in several regions, considering the increasing demand for information disclosure by shareholders and investors (Islam et al., 2013).

Previous research has proven that when companies disclose HRA reports to the public, they will improve their financial performance which is reflected in the company's ROA (Shukuhian and Ashraf, 2019; Mukolo *et al*, 2022). While, this study showed the opposite result, mentioned there is no correlation between HRA disclosure to company ROA. These results support previous research by Khan (2021) which showed no influence

between HRA disclosure on company ROA. It can be concluded that the characteristics of companies in Indonesia in increasing their company ROA are not only influenced by HRA disclosure. So that whether or not the company's HRA aspect is revealed, does not affect the ups and downs of the company's ROA.

The study indicates that the employment report indicator does not significantly influence the company's ROE. This finding aligns with previous research demonstrating that Human Resource Accounting (HRA) generally does not impact ROE (Khan, 2021; Shukuhian and Ashraf, 2019). Although ROE is not solely determined by HRA, shareholder capital investment fosters employee development, and HRA disclosure becomes imperative as employee numbers increase. Despite the overall performance not directly correlating with company performance, mandated HRA disclosure relies significantly on the company's HR resources, often under government pressure in jurisdictions requiring such disclosures (Islam et al., 2013). Such disclosures can enhance company profitability and investor value by demonstrating employee retention efforts through figures like turnover rates within employment reports. This transparency reflects the company's confidence in effective HR management with invested funds, thereby signaling efficient operations and potentially higher ROE. Additional employee benefits, such as training programs and study scholarships, further illustrate a company's commitment to HR management (Hossain et al., 2014). The study suggests that increased investments prompt companies to expand their workforce and improve HR management practices, ultimately leading to higher ROE values.

Firm size is somewhat an indicator used to make a measured impact. This research indicates a significant relationship between HRA disclosure over firm or company size. This result supported by similar research held in Vietnam (Pham et al, 2021) and Bangladesh (Sarkar et al, 2016; Ali et al, 2020). In Asia, most industry consist of highly intensive labor companies especially in manufacturing industry. There are many companies employ such human resources to do jobs to earn maximum revenue and profit after all. Therefore it is not an excessive statement, if companies in Asia have more human capital compared to them who are not part of the continent. While human capital itself has an important role of reforming existing education and technology toward future development (Almas, 2012), it is an important thing to state that the bigger amount of the employee put company in a bigger firm size since the significant role of human resources can be treated as an asset. The proper HRA disclosure will guarantee the employee rights since it is open to public and will attract more skillfull employee. They can be an important asset to the company and will make company has a better value over their human capital asset.

If human resources treated as an asset, it will increase the company value. Previous research mentioned some accounting theory has a fair valuation over human capital asset since it has non-physical characteristic (Mishra, 2021). Related with the implication given in several researches, standardized measurement should be applied in the HRA calculation. The application of International Financial Reporting Standards (IFRS) need to be implemented into company's HRA calculation and disclosure regulation (Ojokuku & Oladejo, 2015). Therefore HRA concept should be combined between management and accounting knowledge and these

two disciplines should not treated separately and must be implemented comprehensively to reach maximum value addition in the company.

HRA disclosures that have a significant and positive effect on the company's leverage are contributed by the *"managerial remuneration"* item. Management remuneration is a component that often becomes a polemic in the company considering the motive of upper management to modify financial statements with high expectations of remuneration in one period. Often large companies with their remuneration policies encourage upper management to modify reports (Pradika &; Hoesada, 2019). Therefore, extensive disclosure of management remuneration is an incentive to reduce such practices. With additional information in the form of management remuneration, the public becomes more in-depth about the company comprehensively. The point of view used is not only financial statements but also includes remuneration policies. This additional information is also an additional incentive for lowering the cost of obtaining leverage. An optimal level of leverage is essential to boost company performance. The company's ability to obtain funding in the form of debt is necessary for performance improvement (Mahmoud et al, 2023). This includes information disclosure, namely HRA disclosure.

The HRA disclosures discussed here, as highlighted by Adekunle et al. (2018), aim to reduce the cost of information acquisition for creditors by mitigating information asymmetry through management remuneration disclosure. This transparency in company operations facilitates informed decision-making by creditors, potentially lowering leverage ratios. Enhanced profitability due to improved cost efficiency further aligns incentives for creditors to extend loans to companies. Statistical analysis of 16 disclosure indices reveals varying impacts on company performance metrics such as size and leverage. Table 4.4 identifies key indices significantly contributing to financial performance indicators, though ROA and ROE did not show significant impacts despite testing with high-contributing disclosure items.

The 3 Human Resource Accounting (HRA) index components—human resource policy, human resource development fund, and superannuation fund—significantly influence company size. These elements underscore the company's commitment to transparency and openness, which are crucial for investors and shareholders. These aspects serve as benchmarks for the company's dedication to disclosing public information. The availability of transparent information provides investors and shareholders with substantial data for their decision-making processes. However, as indicated by previous studies, consistent and comprehensive disclosure is essential to effectively impact capital increase and company expansion (Shreelatha et al., 2019; Fontana & Macagnan, 2013; Rashid et al., 2022).

The conceptual model discussed next is the "managerial remuneration" *index item* that affects the company's leverage ratio. By implementing these disclosures, the cost of information asymmetry can be reduced. With cost efficiency, profitability can increase. This is a consideration for creditors to increase access to capital loans and lower interest rates so that companies can have additional resources sufficient to increase company revenues (Mahmoud et al., 2023). The attitude of these creditors will be realized by carrying out HRA disclosures consistently

and thoroughly. Public companies that are the object of this study are in dire need of disclosures that cover all aspects of HR. In addition, the disclosure that has not been maximized makes the promotion of the HRA concept contradictory. Therefore, vigorous promotion must be accompanied by consistent application.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

In this study, HRA is defined, conceptually, as enhancing company human resources through the disclosure of specific elements. This disclosure is shown to enhance corporate performance through various metrics, including value creation by expanding company scale and increasing potential revenue through higher leverage ratios. Notably, this research does not identify any significant indices affecting ROA and ROE. For companies listed on the IDX, transparency is mandatory, ensuring information availability for shareholders, potential investors, creditors, and the broader public. Consequently, HRA disclosure is now prioritized equally alongside standard financial statements. Internally, such disclosures not only enhance performance and growth prospects but also foster public trust through consistent and comprehensive reporting.

The HRA index disclosure rate in Indonesia is also the highest in ASEAN and has grown rapidly in recent years. This shows the commitment of companies in Indonesia, especially the manufacturing industry in the object of research this time. This industry basically with its labor-intensive nature requires HRA disclosure to increase the value of the company in the eyes of the public, especially for those who have listed their companies on the IDX.

Of course, in the implementation of HRA disclosure in Indonesia, the role of third parties in this case is needed by policymakers. Standardization and policies to require HRA disclosure must be accompanied by implementation guidelines and sanctions for non-implementation. Therefore, voluntary application with modest standards can be avoided. Implementation obligations, especially for public companies, help the public assess the management of the company's human resources and commitment. The resulting conceptual model can be developed later in further research by designing a mathematical model that is more implementative.

However, this study applied its data collection exclusively in the manufacturing sector and only covered results up to 2021. It did not include other financial metrics like quick ratio or inventory turnover. Consequently, the effectiveness of improvements made by these companies cannot be definitively assessed, especially given the study's one-year timeframe. Therefore, further research is needed to thoroughly investigate the implementation of HRA in the manufacturing industry.

REFERENCES

Achjuningrum, R. A., and Suhartini, D. (2022). Implementation of Disclosure of Human Capital Reporting in Creating Corporate Value at PT. Semen Indonesia. *Basic and Applied Accounting Research Journal, 1*(2), 79–94.

Adekunle, I. A. T. S. I., & Benjamin, R. (2018). Human Resource Accounting: A Panacea to Financial Reporting Problem. *Research Journal of Finance and Accounting, 9*(14), 1-10.

Al-Hattami, H. M. A., and Kabra, J. D. (2018). Designing an Information System for Human Resource Accounting in Economic Units. *Commonwealth Journal of Commerce & Management Research, 5*(3), 65-76.

Alafi, S., and Suranta, S. (2018). Disclosure of Human Resource Accounting and Corporate Financial Performance. *Journal of Accounting, 6*(1). 62-74.

Ali, S. F. (2020). The Study on the Impact of Human Resource Accounting on Performance Evaluation. *International Journal of Multicultural and Multireligious Understanding, 7*(1), 117–132.

Almas, Z.U.H. (2012), Role of effective HRD policies for economic development in South Asia. *SAARC Journal of Human Resource Development, 8*(1), 1-15.

Arkan, T. (2016). Human Resources Accounting: A Suggested Model for Measurement and Valuation. *Zeszyty naukowe uniwersytetu szczecińskiego finanse rynki finansowe ubezpieczenia, 79*(1), 173–193.

Bansal, A., and Sharma, P. (2019). An Empirical Evaluation on Performance of Organization through Human Resource Accounting (HRA): A Study on Selected Corporate Units of India. *Indian Journal of Finance and Banking, 3*(1), 1-12.

Baron, A. (2011). Measuring human capital. *Strategic HR Review, 10*(2), 30–35.

Bonsu, O. A. M., Dui, L. K., Ruiwen, L., Asare, E. K., and Prempeh, A. F. S. (2019). Exclusion of human resource accounting in statement of financial position and its effects on performance: empirical evidence of Ghana. *Business and Economics Research, 9*(2), 1-17.

Buck, J. M., and Watson, J. L. (2002). Retaining staff employees: The relationship between human resources management strategies and organizational commitment. *Innovative higher education, 26*, 175-193.

Dhar, B. K., Mutalib, M. A., and Shobani, F. (2017). Investigating the Impact of Human Resource Accounting. August. *1st International Islamic Social Economic Conference*, Malaysia.

Diansari, R. E., and Rispin, S. (2019). Factors affecting the disclosure of human resource accounting in banking. *Ride: Journal of Economics, Management and Accounting, 22*(1), 61-72.

Duc, H., Pham, T. H., Chu, T., Minh, G., Nguyen, T., Hong, L., Nhinh, N., Pham, D. H., Chu, T. H., Minh, T., Nguyen, G., Hong, T., Nguyen, L., and Nguyen, T. N. (2021). Determinants of Human Resource Accounting Disclosures: Empirical Evidence from Vietnamese Listed Companies. *Journal of Asian Finance, Economics and Business, 8*(7), 129–137.

Ekka, S., Singh, P., and Ranjan, P. (2022). The Impact of HR Analytics Adoption on Firm Return on Investment: A PSM Model Approach. *International Journal of Business and Economics*, 21, 47-56.

Eksandy, A., and Sari, R. U. (2020). Human Resource Accounting Disclosure of Manufacturing Companies in Indonesia Affected by Company Size, Profitability, Leverage, and Company Age. *Maranatha Journal of Accountancy, 12*(1), 159–177.

Enofe, A. O., Mgbame, C., Otuya, S., &; Ovie, C. (2013). Human resources accounting disclosures in Nigeria quoted firms. *Research Journal of Finance and Account, 4*(13), 7, 12.

Flamholtz, E. G. (1999). Human Resource Accounting: Advances in Concepts, Methods, and Applications. *3rd ed. Kluwer Academic Publishers.*

Flamholtz, E. G., and Bullen. (2002). Human resource accounting: a historical perspective and future implications. *Springer Science & Business Media, 40*(10), 947–954.

Fontana, F. B., and Macagnan, C. B. (2012). Factors explaining the level of voluntary human capital disclosure in the Brazilian capital market. *Intangible Capital, 9*(1), 305-321.

Ghasemi, S., Shahin, A., and Safari, A. (2018). Proposing an improved economic value model for human resource valuation. International *Journal of Productivity and Performance Management, 67*(9), 2108–2125.

Gupta, A. K. (2021). A Study of Human Resource Accounting. *International Journal of Research in Engineering, Science and Management, 4*(1), 10–12.

Hossain, A., Akhter, N., &; Sadia, N. (2014). An Empirical Analysis of the Importance of Human Resource Accounting (HRA) Practices in Organizations. *International Journal of Ethics in Social Sciences, 2*(2), 37-54.

Huui, L. M., and Siddiq, M. S. B. (2012). Human resource disclosure: The current practice and its association with corporate characteristics in Malaysia. *Interdisciplinary Journal of Contemporary Research in Business, 4*(6), 68-93.

Irawati, A. D. (2016). Development of human asset measurement methods and their disclosure in the concept of human resource accounting. *Faculty of Economics and Business, Universitas Airlangga.*

Isnaniati, S. (2019). The Effect of Human Resource Accounting Disclosure in Financial Statements on the Company's Financial Performance (Case Study in PG. Modjopanggoong Tulungagung). *Journal of Equivalence, 5*(1). 129-142

Khan, S. (2021). Impact of human resource accounting on organizations' financial performance in the context of SMEs. *Accounting, 7*(3), 621–628.

Kurniawan, A (2020). The effect of company size and profitability on accounting disclosures. *Thesis*. University of Muhammadiyah Makassar.

Kusumastuti, S. (2021). Company characteristics, performance, and disclosure of human resource accounting: an empirical study of banking companies in Indonesia. *International Journal of Economics, Business and Accounting Research (IJEBAR), 5*(1), 461-471.

Mahmood, F., Ahmed, Z., Hussain, N., &; Ben-Zaied, Y. (2023). Working capital financing and firm performance: A machine learning approach. *Review of Quantitative Finance and Accounting*, 1-36.

Mamun, S. A. Al. (2009). Human Resource Accounting (HRA) Disclosure of Bangladeshi Companies and Its Association with Corporate Characteristics. *BRAC University Journal, 1*(1), 35–43.

McCracken, M., McIvor, R., Treacy, R., and Wall, T. (2018). A study of human capital reporting in the United Kingdom. *Accounting Forum*, *42*(1), 130–141.

Micah, L. C., Ofurum, C. O., and Ihendinihu, J. U. (2012). Firms' Financial Performance and Human Resource Accounting Disclosure in Nigeria. *International Journal of Business and Management*, *7*(14), 1-15.

Cherian, J., Farouq, S. (2013). A Review of Human Resource Accounting in Organisation Performance. *International Journal of Economics and Finance, 5*(8), 74-83.

Mukolo, S. I., Jeroh, E., and Ideh, A. O. (2022). Human Resource Accounting and Financial Performance of Selected Quoted Nigerian Food and Beverages Firms. *Finance & Accounting Research Journal, 4*(3). 51-57.

Modupeola, B. B., and Solomon, E. (2021). Firm Structure and Human Resource Accounting Disclosures (HRAD) in listed Financial Firms in Nigeria. *International Journal of Innovative Finance and Economics Research, 9*(1), 171-181.

Ndum, N. B., and Oranefo, P. (2021). Human Resource Cost and Financial Performance: A Study of Quoted Brewery Firms in Nigeria. *International Journal of Innovative Finance and Economics Research, 9*(2), 72-84.

Ogundajo, G. O., Kujore, O. A., and Kassim, S. K. (2022). Human Resource Accounting Information Disclosure and Firm Value. *South Asian Res J Bus Manag, 4*(5), 182-187.

Ojokuku, R. M., & Oladejo, K. S. (2015). Human resource accounting and human capital valuation in Nigeria: Prospects and challenges. *International Journal of Economics, Commerce and Management*, *3*(7), 600-609.

Pham, D. H., Chu, T. H., Hoang, T. B. N., and Lai, T. T. T. (2022). Human resource accounting disclosure among listed companies in Vietnam: An empirical study. *Cogent Business & Management, 9*(1), 2067025.

Plotnikov, V., Pirogova, O., and Vertakova, Y. (2019). Model for Assessing the Human Capital of an Enterprise. *IOP Conference Series: Earth and Environmental Science, 272*(3), 1–7.

Pradika, E., &; Hoesada, J. (2019). The integrity of financial statements: big and independent are not guaranteed. *Journal of Accounting Finance and Auditing Studies, 5*(1), 59-79.

Prencipe, A. (2004). Proprietary costs and determinants of voluntary segment disclosure: Evidence from Italian companies. *European Accounting Review, 13*(2), 319-340.

Rashid, A., Nasimi, A. N., &; Nasimi, R. N. (2022). The uncertainty–investment relationship: scrutinizing the role of firm size. *International Journal of Emerging Markets*, *17*(10), 2605-2635.

Raymond Asika, E. (2017). Appraisal of Human Resource Accounting on Profitability of Corporate Organization. *Economics* 6(1), 1-10.

Santoso, A. (2018). The Effect of Profitability, Company Size, and Growth Rate on the Value of Manufacturing Companies in Indonesia with Capital Structure as a Moderating Variable. *Petra Business & Management Review, 4*(1), 130–141.

Sari, J., and Komalasari, P. T. (2021). Leverage and Market Share as Determining Factors for Market Competition Position of Manufacturing Companies in Indonesia. *Journal of Business and Management, 8*(2), 380–391.

Sari, T. P., Sunandar, and Alfian, M. (2016). Analysis of HRA (Human Resources Accounting) Disclosure in Banking in Asia. *Monex, 5*(2), 191–196.

Sarkar, S. H., Alam, A., & Ali, I. (2016). Human resource accounting disclosure practices in Bangladesh. *Australian Journal of Accounting, Economics and Finance, 2*(2), 100-113.

Shukuhian, H., &; Ashraf, S. H. (2019). Comparative Analysis of Human Resource Accounting Practices and The Effect of Financial Performance on Human Resource Value in Public Sector Companies in India. *Business and Management*, *11*(3), 1-13.

Suhariadi, F. (2013). *Human Resource Management (mold pe)*. Airlangga University Press.

Ullah, A., Khan, N., and Alam, Y. (2020). Effect of Human Resource Accounting Disclosure on Financial Performance of the Firms: An Empirical Evidence of KSE 100. *Journal of Innovative Research in Management Sciences*, 27-33.

Bruystegem, K. V. (2010). Human Resource Challenges for Small Growing Companies in Flanders. *Global Business and Organizational Excellence, 29*(4), 40-52.

Wiyadi, S., Pertiwi, I., Trisnawati, R., and Abdullah, N. (2021), Practices of Human Resource Accounting Disclosure: A Comparative Study across ASEAN Countries. *Universal Journal of Accounting and Finance*, *9*(3), 306 – 315.

*Corresponding authors
Author can be contacted on e-mail: prawitayani@stiesia.ac.id