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The Impact of Human Resource Accounting on Firm Performance: Evidence from Banks Listed on the Colombo Stock Exchange in Sri Lanka

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A B S T R A C T

The impact of Human Resources Accounting on Firm Performance was the study's main concern. This analysis is based on secondary data obtained from the annual reports of 12 listed banks over a ten-year period, from 2014 to 2023, on the Colombo Stock Exchange in Sri Lanka. The study's independent variable was human resource accounting procedures, which were assessed using training costs (TC), welfare costs (WC), personnel benefits (PB), and personnel costs (PC). The dependent variable was the firm's performance as determined by earnings per share (EPS), return on equity (ROE), and return on assets (ROA). In contrast, the control variables are Firm Size (FS) and Firm Age (FA). The data was analyzed using the statistical software SPSS. As analytical methods, regression analysis, correlation analysis, and descriptive analysis were applied. Finding of this research revealed that there is a significant positive relationship between training cost (TC) and Firm Performance (EPS, P=0.003/ ROA, P=0.025/ ROE, P=0.000) and personnel benefit (PB) and ROE have significant impact (ROE, P=0.020). But there is no significant impact between PB and EPS, ROA (P>0.05). However, there is a no relationship between personnel cost (PC) and welfare cost (WC) on firm performance (P>0.05). The finding of this study makes a significant contribution while providing empirical evidence to the limited Human Resource Accounting literature which is limited in the Sri Lankan context.

Keywords: Human Resource Accounting, Firm Performance. Firm Age, Firm Size

1. Introduction

The worth of an organization's workforce is assessed and reported using the Human Resource Accounting (HRA) method. It considers employees as priceless assets and evaluates how their efforts impact output and bottom-line outcomes. A variety of techniques, including value- and cost-based approaches, are used by HRA to account for human capital. The cost-based approach considers recruiting, training, and development costs as investments and keeps track of them. The value-based method, on the other hand, bases an employee's value estimation on their ability to increase future earnings and sales. Organizations may gain a better understanding of how their human resources affect overall performance and make more educated workforce management decisions by including HRA into financial reporting (Gupta, 2021). The degree to which a business meets its operational and financial objectives is referred to as firm performance. It is frequently assessed using a range of metrics, including efficiency, profitability, revenue growth, and return on investment. Metrics including Return on Equity (ROE), Return on Assets (ROA), Earning per Share (EPS), and asset quality are commonly used to assess a bank's performance. Effective firm performance is essential to a firm's capacity to weather economic ups and downs and maintain financial stability. Adherence to regulatory norms, such as capital adequacy and liquidity requirements, ensures strong performance for banks and other businesses, which are critical to safeguarding operational integrity. Furthermore, high performance gives a business a competitive advantage by enabling investment in innovation and better customer service, two things that are critical to attracting new customers and keeping existing ones. It improves investor confidence, which in turn drives up share prices and provides additional capital. It goes beyond individual achievements to support overall economic growth by generating strong business performance (Priyadarshanie, 2022). The banking industry is greatly impacted by Human Resource Accounting (HRA) because it offers a more thorough understanding of the value and contribution of human capital. HRA helps banks manage their human resources more effectively and link them with business goals by putting a number on the expense and potential value of their workforce. By using this method, banks may increase operational productivity and efficiency by making well-informed decisions on training, development, and hiring expenditures. Consequently, banks can enhance financial performance indicators like Return on Equity (ROE) and Return on Assets (ROA), resulting in a more robust competitive stance and heightened investor assurance. All things considered, HRA promotes superior human resource management, which immediately enhances business performance and long-term success in the banking industry. Additionally,

Siriwardhane and Wijekumara (2024), Priyadarshanie (2022) and Chathurika and Silva (2019) have examined the impact of human resource accounting on firm performance in Sri Lanka; however, it has not been demonstrated that this has an impact on the country's banking industry. Researchers in Sri Lanka have examined the costs of training, welfare, and personnel, and since these costs have not been examined as personnel benefits, the researcher hopes to close the research gap in the banking industry by incorporating the aforementioned dimensions of the independent variable into the study.

1.1 Research Gap

Though the idea of human resource accounting (HRA) dates back to the 1960s, its practical implementation has recently gained prominence due to developments in HR analytics and an increased emphasis on human capital. Many research gaps still exist in spite of this resurgence of interest. In order to increase accuracy and consistency in monitoring human resources, recent research show that more standardized HRA processes and stronger integration with financial reporting are required (Smith, 2023). Additionally, study is needed to determine how data analytics and future technologies might improve HRA's efficacy in delivering strategic insights and improving organizational performance (Johnson, 2024). For the field to advance and to show the usefulness of HRA in modern corporate situations, these gaps must be filled. Many businesses are hesitant to invest in the development of human capital since it is fast diminishing. For effective human capital management, the basic problem of human capital appraisal is therefore essential. Human capital management depends on accurate accounting for this asset's evaluation in financial reports. Businesses usually view human capital as a cost rather than an asset since it is a long-lasting, squandering asset whose value cannot be effectively expressed in the financial accounts. However, there isn't a commonly accepted method for assessing human capital in terms of money. Abraham, Odobi, and Enwuchola (2022) discovered that while staff training expenses have a major beneficial impact on market value, staff compensation with regard to health care and safety costs had no discernible impact. Furthermore, it has been proven that further research should be conducted to determine whether the educational attainment of employees before to employment can improve the results of human resource accounting variables. Because training for improved results is linked to the staff's basic educational qualifications. Because it can reveal the staff's level of receptivity. Furthermore, According to Dunna (2023), it is somewhat disheartening that there is no standard procedure or pattern for HRA, human resource assessment, or documenting them in the books using different statements of accounts or information disclosure.

The effect of spending on human resource accounting on business success has been extensively studied in Sri Lanka. According to Chathurika and De Silva (2019), there may be a negative correlation between overall business performance and human resource accounting disclosure because of the lower level of human resource accounting practice. Even though Sri Lanka has a lot of accounting research studies, Chathurika (2019) claims that there is a substantial research gap in the field of human resource accounting when compared to the rest of the world. Determining the impact of human resource accounting on the business and market performance of Sri Lankan listed businesses was the aim of this study. The study discovered a negative link between financial success and HRA disclosures, suggesting possible areas for future research. The HRADI was used to measure the human resource accounting disclosures. According to Priyadarshani's (2022) analysis of the relationship between human resource accounting and business performance, HRA regulations should result in a notable improvement in a company's financial performance as measured by the Human Resource Accounting Disclosure Index (HRADI).

The impact of human resource accounting on firm performance: Evidence from listed materials sector companies in Sri Lanka (Siriwardhane, 2024). Nonetheless, a significant deficit remains in the field of human resource accounting (HRA). The useful empirical information from this study adds to the scant literature on HRA in Sri Lanka. This study examined the Human Resource Accounting (HRA) performance of Sri Lankan companies in the listed materials sector. Important variables like market capitalization (Tobin's Q), stock price, return on equity (ROE), and return on assets (ROA) were found to benefit with high HRA adoption. Research demonstrates the significance of improving decision-making, boosting investor confidence, and enhancing overall business performance. This implies that further HRA integration could have even greater advantages for the sector. Furthermore, since the study found that this gap is prevalent in Sri Lanka's banking industry, it is critical to comprehend how HRA may affect company performance in this crucial industry. This discrepancy emphasizes the necessity for more research on Sri Lanka's banking sector, given the industry's significant contribution to the country's economy.

1.2 Objectives of the Study

The main objective of the study is to examine the impact of human resource accounting on the firm performance of listed banking in Sri Lanka. The specific objectives of the study are:

1) To examine the impact of Personnel Cost on the Firm Performance of the listed Banking sector in Sri Lanka.

i. To examine the impact of Personnel Cost on the EPS of the listed Banking sector in Sri Lanka.

ii. To examine the impact of Personnel Cost on the ROA of the listed Banking sector in Sri Lanka.

iii. To examine the impact of Personnel Cost on the ROE of the listed Banking sector in Sri Lanka.

2) To examine the impact of Personnel Benefit on the Firm Performance of the listed Banking sector in Sri Lanka.

i. To examine the impact of Personnel Benefit on the EPS of the listed Banking sector in Sri Lanka

ii. To examine the impact of Personnel Benefit on the ROA of the listed Banking sector in Sri Lanka

iii. To examine the impact of Personnel Benefit on the ROE of the listed Banking sector in Sri Lanka

3) To examine the impact of Training Cost on the Firm Performance of the listed Banking sector in Sri Lanka.

i. To examine the impact of Training Cost on the EPS of the listed Banking sector in Sri Lanka.

ii. To examine the impact of Training Cost on the ROA of the listed Banking sector in Sri Lanka.

iii. To examine the impact of Training Cost on the ROE of the listed Banking sector in Sri Lanka

4) To examine the impact of Welfare Cost on the Firm Performance of the listed Banking sector in Sri Lanka.

i. To examine the impact of Welfare Cost on the EPS of the listed Banking sector in Sri Lanka.

ii. To examine the impact of Welfare Cost on the ROA of the listed Banking sector in Sri Lanka.

iii. To examine the impact of Welfare Cost on the ROE of the listed Banking sector in Sri Lanka.

2. Literature Review

The impact of Human Resource Accounting (HRA) on firm performance in the banking industry is examined in this review of the literature. The theoretical foundations of HRA are examined, along with the concepts and procedures used to measure and evaluate human capital resources that are seen as essential to the success of an organization. The study examines empirical research that quantifies HRA's impact on profitability, productivity, and employee happiness in order to determine whether or not it significantly affects firm performance. It also discusses the unique potential and difficulties associated with adopting HRA in the banking sector, taking into consideration the nature of human capital, competitive pressures, and regulatory frameworks. The review offers a thorough grasp of HRA's role in improving banking sector performance by discussing practical aspects as well, such as methods for utilizing human capital to boost performance and achieve a competitive edge.

2.1 Theoretical Framework

Ben-Guang (2004) claims that the theoretical underpinnings of human resource accounting in our country are found in the political economy of Marxism and its evolution, marketing theory of socialism, productivity economics, organizational behavior science, accounting and human resource management science. The impact of human resource accounting on firm performance is supported by the following theories. Among the theories are the Resource Based Theory and the Human Capital Theory.

Human Resource Theory

This review of human resource theory begins in 1776 and ends in the 1960s, when the theoretical and empirical foundations of the field were articulated and established. Human capital (resource) theory contends that education or training raises the productivity of workers by imparting useful knowledge and skills, thus raising workers “future income through increase in their lifetime earnings”. However, the theory is criticized for using overly simplistic models, assuming a linear path from education to earnings, and failing to explain how education enhances productivity, the rise in income inequality, and the influence of social status on job outcomes (Marginson, 2017). It shows that the theory has been significantly shaped by eminent economists, including Nobel laureates Sweetland (1996). According to Ogwuche et al. (2022) investing in human capital involves enhancing a person's skills and abilities through education, training, and healthcare. The productivity of a person partly depends on the returns from these investments. Unlike physical assets like land or machinery, human capital can be improved through investment, but it cannot be transferred from one person to another. Since human resource theory provides a framework for evaluating and managing human capital, it is essential for comprehending how HRA impacts firm performance. According to this notion, the knowledge and skills of employees are vital resources that support a business's success. This paradigm is used by HRA to assess the return on investments made in employee training, development, and well-being, demonstrating how these investments might eventually boost productivity and profitability overtime. Businesses need this knowledge in order to make strategic decisions about how best to invest in their workforce, which will eventually improve their overall performance. Among research on the relationship between human capital and firm performance, Crook, Todd, Combs, Woehr, and Ketchen (2011) showed that human capital significantly improved performance, supporting the prediction that investing in human capital will increase firm performance.

Resource-Based Theory

The Resource-Based Theory defines resources as "the tangible and intangible assets firms use to conceive of and implement their strategies". This theory suggests that individual firms can achieve sustained competitive advantage through the superiority of their internal resources (Barney et al., 2001). It emphasizes that the contributions of employees at various organizational levels are critical for achieving organizational goals, necessitating the effective development of their intellectual skills and overall performance. Asamu (2020) reinforces that each employee's contribution is vital for a company's success and advises companies to invest in developing these unique employee qualities for competitiveness. The theory connects to HRA by explaining how human resources contribute to a firm's overall achievements and performance. For HR managers, the primary objective is to ensure human resources directly contribute to the organization's vision and corporate goals

2.2 Human Resource Accounting

Human Resource Accounting (HRA) is a relatively new field that has evolved through several phases of development, with initial interest and basic concept creation occurring between 1960 and 1966 (Flamholtz, 1999). The American Accounting Association defines HRA as "the process of measuring and reporting human resource information quantitatively using the accounting principles". Hosseini (2012) describes HRA as an attempt to identify, quantify, and report investments in human resources not typically accounted for under traditional accounting practices. Flamholtz (2002) considers employees as valuable organizational assets, emphasizing HRA's purpose to quantify and report investments in them as key contributors to future profitability. By including human resources as assets in financial statements, companies can better understand their role in improving products and services, encouraging management to optimize human capital and make better decisions (Flamholtz, 2002). HRA involves measuring the cost and value of people, including recruiting, selecting, training, and developing the workforce, and ascertaining the value added to the organization. It provides insight into the economic value of human capital and encourages investment in employee training, welfare, and safety (Bullen & Eyler, 2010). However, challenges such as a lack of standardized assessment methods and stakeholder resistance have been cited regarding HRA implementation (Johanson et al., 1999).

Personnel Cost

Personnel costs, including wages, benefits, and training, are human capital investments that can enhance employee productivity and efficiency, thereby improving firm performance (Akam & Ikegwuru, 2023). Higher personnel costs are often associated with better qualified employees and extensive training, leading to increased productivity and operational efficiency, as well as improved employee satisfaction and retention (Akam et al., 2024). Ngozi and Rufus et al. (2022) found that salaries, wages, and allowances significantly affect corporate performance. Conversely, some studies indicate a negative impact, especially during crises like the COVID-19 pandemic, where high personnel costs burdened pharmaceutical companies, reducing profitability (Mahssouni, Touijer & Makhroute, 2022). Sanchez, Jimenez and San (2021) noted that high personnel costs could lead to layoffs, negatively impacting metrics like ROE and EPS. Other research has found no conclusive evidence directly linking personnel costs to financial performance, suggesting that the impact depends on management, industry context, and economic conditions (Chali & Lakatos, 2024).

Personnel Benefit

Personnel benefits are additional compensations beyond regular salary, such as health insurance, retirement plans, and bonuses, crucial for attracting and retaining talent. Ngozi and Rufus (2022) found that benefits, pensions, and gratuities positively and significantly affect corporate performance, improving company value and shareholder returns. Employee benefits are essential for increasing retention and satisfaction, thereby enhancing business success (Akam & Ikegwuru, 2024). However, some researchers suggest that overly generous benefits without clear performance-based criteria can lead to complacency and reduced firm performance (Birtch, 2008). When well-designed and aligned with organizational goals, benefits like performance bonuses and healthcare plans boost employee satisfaction, motivation, and retention, leading to increased productivity.

Training Cost

Training expenditures significantly impact firm performance by improving workers' skills and competencies, leading to increased productivity and operational efficiency. Balogun, Omotoye, Oluwoye and Mojibola (2020) found a favorable correlation between improved financial performance and staff training investment in manufacturing enterprises, indicating that comprehensive training programs lead to improved financial results due to a more capable workforce. Abraham and Odobi et al. (2022) identified a significant positive relationship between staff training costs and firm performance, attributing it to increased awareness and efficiency among trained staff. Onyekwelu and Ironkwe (2022) also found a significant positive effect of training costs on the return on assets (ROA) of Nigerian insurance companies. Conversely, poorly designed or overly extensive training programs can become financial burdens, especially if skills acquired do not align with organizational goals or if employees leave soon after training (Bartel, 2000; Huselid, 1995).

Welfare Cost

Investing in health, welfare, and safety expenses is essential for improving business performance (Okpako, Atube & Olufawoye, 2014). These investments lower workplace accident risks, boost operational effectiveness, and reduce compensation costs. Welfare costs also increase employee retention and satisfaction, thereby boosting overall output (Davies, Alao, Aremu & Olalere, 2023; Mukola, 2022). Research by Abraham, Odobi and Enwuchola (2022) shows that allocating resources to health and safety can lead to improved employee welfare, reduced absenteeism, and fewer workplace injuries, supporting a healthier workforce and reducing long-term costs. However, some studies found no significant relationship between healthcare and safety costs and firm performance (Abraham & Odobi et al., 2022; Sylvia, Ajike & Olaitan, 2019). The impact of welfare costs depends on strategic alignment with corporate goals, where well-designed wellness programs can improve satisfaction, productivity, and retention, leading to financial improvements.

2.3 Firm Performance

Firm performance is a multifaceted concept evaluated using various criteria or dimensions, including profitability, growth, market value, customer satisfaction, employee satisfaction, environmental audit performance, corporate governance, and social performance (Selvam, Gayathri, Vasanth, Lingaraja & Marxiaoli, 2016). These dimensions are not interchangeable and represent different aspects of organizational performance. Measures of firm performance can include employee turnover (human resources), productivity, quality, customer satisfaction, and product flexibility (organizational

category), and financial metrics such as Return on Assets (ROA), Return on Equity (ROE), profits, sales, and Earnings Per Share (EPS). Ikegwuru and Eke (2020) emphasize that "performance" cannot be fully explained by an isolated measure. Studies show that good HRA techniques, monitoring human capital value, and evaluating investments in staff training positively affect business performance (Siriwardhane & Wijekumara, 2024). HRA procedures have been found to significantly affect the financial stability and profitability of consumer goods businesses (Ogodor & Olaniyi, 2020).

Measures of firm performance

Return on Assets

Return on Assets is a financial ratio measuring a company's profitability by showing the net profit generated from its total assets. It indicates a company's performance, and HRA has been shown to impact ROA through efficient allocation of human capital costs and increased transparency in financial reporting (Moin & Qureshi, 2023). Companies that invest in employee training and development often improve ROA (Mukola, 2022). Remuneration and training costs significantly contribute to financial performance, including ROA, highlighting human capital as a strategic resource for long-term profitability (Balogun et al., 2020). However, not all HRA elements positively affect ROA; hiring costs can negatively impact ROA if not managed efficiency (Amahalu, Agbionu & Chinyere, 2017).

Return on Equity

Return on Equity is a key metric measuring profitability by dividing a bank's net income by its shareholders' equity. A high ROE can signal various issues, including erratic profitability or high debt levels (Fernando, 2020). By recognizing and reporting human capital value, companies can attract better investment and foster greater shareholder confidence, thereby improving ROE (Omodero & Ihendinihu, 2017). Effective human resource management, through training and health/safety investments, increases employee productivity, leading to improved ROE as the workforce becomes more engaged (Kashanipour et al., 2023). HRA practices lead to more informed, strategic decisions regarding human capital investment, which can directly result in higher profitability and better ROE (Priyadarshani, 2021).

Earnings Per Share

Earnings Per Share is a measure of a company's profitability, calculated by dividing net income by the number of common stock shares outstanding, indicating how much money a company earns per share. Higher EPS values typically suggest higher profits and are often associated with increasing stock prices. Profit after tax and EPS have a significant positive effect on stock price (Hunjra Shahzad & Chani, 2014). HRA practices, such as investment in employee training, welfare, and development, increase employee productivity and efficiency, leading to better financial outcomes and a positive impact on EPS (Olatunji & Buyide, 2020). Strategic investments in human resources, including expenditure on training, welfare, and benefits, show a positive correlation with EPS (Adegbayibi, Akinyemi & Adepiti, 2024).

2.4 Impact of Human Resource Accounting on Firm Performance

Human resource accounting is recognized as a key factor in enhancing firm performance, bridging the gap between human capital management and its tangible impact on organizational outcomes.

Positive Impact of HRA on Firm Performance

Numerous international research studies demonstrate a positive effect of HRA on firm performance. Abraham et al. (2022) found that strong HRA procedures significantly improve the performance of Nigerian listed depository money banks by systematically assessing human capital investments, leading to deeper understanding of employee contributions, better strategic decision-making, increased staff engagement, retention, and higher productivity. Akam and Ikegwuru et al. (2023) showed that HRA, measured by personnel costs, training, and development costs, and personnel benefits, positively affects the performance of listed pharmaceutical companies in Nigeria, especially in terms of ROA. Investing in and reporting on human resource costs, such as training and welfare, leads to observable improvements in financial outcomes (Ifurueze et al., 2014). Flamholtz (1999) highlights that companies using HRA models are better positioned to assess economic contributions of employees and make informed investment decisions. Disclosures on human assets strengthen corporate governance and accountability, increasing investor confidence and firm valuation (Cherian & Farouq, 2013).

Onyekwelu and Ironkwe (2022) detailed several factors contributing to HRA's positive effects on Nigerian insurance companies' financial performance: improved decision-making through systematic cost estimation, increased employee productivity via valuing and rewarding workers, enhanced financial transparency attracting investors, and strategic management of human resources leading to attracting and retaining top talent. Omispe, David, Odewusi, Adesina and Oyegoke (2023) stated that HRA helps assess financial implications by tracking investments in personnel (training, benefits, welfare) and linking them to financial metrics like ROE and EPS. Dhar, Mutalib and Sobhani (2022) affirmed that HRA enables businesses to measure employee investment and relate it to financial standards such as profitability and overall organizational aesthetics. Asamu, Bakare, and Ajibare (2023) found that profitability and financial leverage significantly influence firm performance, and reporting human resource costs enhances financial statement relevance, boosts productivity, and positively impacts stock prices. Mukolo (2022) found that investments in staff training and welfare costs significantly enhance firm performance by improving employee skills, productivity, and overall organizational outcomes. Studies in Sri Lanka, including Chathurika (2019) and Priyadarshanie (2022), revealed a significant and positive impact of human capital and HRA costs on the financial performance of listed companies, with HRA practices improving firm financial performance and ROA. Siriwardena (2024) also found a significant impact of moderate HRA implementation on company performance in Sri Lankan materials sector businesses.

Negative Impact of HRA on Firm Performance

Despite the benefits, HRA can also have negative impacts, particularly if its application excessively emphasizes financial metrics, potentially underestimating intangibles like employee morale, creativity, and innovation. This narrow focus can lead to a short-term, cost-cutting mentality that undermines employee performance and overall productivity. Furthermore, the administrative burdens and implementation costs of HRA systems, especially for small businesses with limited resources, may outweigh the advantages (Smith & Adams, 2021). Onyekwelu and Ironkwe (2021) found that while HRA disclosure and training expenditures positively impacted ROA and ROE, staff number and salary increments had a statistically significant negative impact on ROA. Kashanipour and Farooji (2023) found a positive relationship between corporate profitability and HRA, but a small, negative impact on asset returns and equity returns, suggesting these variables do not significantly influence how businesses account for human resources. Mukolo (2022) highlighted that certain HRA aspects, particularly hiring costs, can negatively affect organizational performance, showing inefficiencies in recruitment processes. Moin and Qureshi (2023) found that a large workforce negatively impacts both ROA and ROCE, suggesting that maintaining a high number of employees can reduce overall financial performance. Priyadarshanie (2022) found no significant link between human resource accounting and market performance, the study reported that staff training and welfare expenses positively affect ROA, hiring costs negatively impact ROA, and Mukolo (2022) found that staff protection costs have no significant effect.

In conclusion, research indicates that Human Resource Accounting (HRA) has both beneficial and detrimental consequences on business performance. Effective HRA policies, particularly those funding training, welfare, and development, can boost employee engagement, productivity, and financial performance. By incorporating human capital investments into financial reporting, businesses can enhance decision-making, resource allocation, and competitive advantage (Abraham et al., 2022; Akam & Ikegwuru, 2023; Ifurueze et al., 2014). However, an overemphasis on financial metrics may obscure qualitative elements like creativity and staff morale, potentially leading to short-term gains at the expense of long-term productivity (Smith & Adams, 2021). Additionally, administrative expenses for implementing HRA may outweigh its advantages for small businesses (Mukolo, 2022). The relationship between HRA and firm performance is complex, necessitating a well-rounded strategy that considers both qualitative and financial factors. Future studies can focus on improving HRA procedures to address issues across various sectors and enhance business performance (Omispe et al., 2023; Onyekwelu & Ironkwe, 2022).

3. Methodology

Here outlines the conceptual framework, hypotheses development, research design, data collection methods, and analytical techniques employed to investigate the impact of Human Resource Accounting (HRA) on firm performance in Sri Lanka's listed banking sector.

3.1 Hypotheses Development

Hypotheses are provisional responses to research questions, phrased as tentative solutions based on relevant theories. Hypotheses testing is a crucial step in evidence-based research, requiring a working grasp of fundamental statistical principles and topic knowledge derived from a thorough literature review (Mourougan & Sethuraman, 2017). The integration of HRA practices is expected to positively influence firm performance by enhancing decision-making regarding employee investment, leading to improved productivity and competitiveness (Flamholtz & Kannan, 2001). This study formulates the following hypotheses:

- **Hypothesis 1 (Personnel Cost - PC):**
    - H_{0a}: There is no significant impact of personnel cost on firm performance (EPS) in Sri Lanka's listed banking sector.
    - H_{1a}: There is a significant impact of personnel cost on firm performance (EPS) in Sri Lanka's listed banking sector.
    - H_{0b}: There is no significant impact of personnel cost on firm performance (ROA) in Sri Lanka's listed banking sector.
    - H_{1b}: There is a significant impact of personnel cost on firm performance (ROA) in Sri Lanka's listed banking sector.
    - H_{0c}: There is no significant impact of personnel cost on firm performance (ROE) in Sri Lanka's listed banking sector.
    - H_{1c}: There is a significant impact of personnel cost on firm performance (ROE) in Sri Lanka's listed banking sector.
    - *Rationale:* Previous research has shown a consistent relationship between personnel cost and return on assets in pharmaceutical companies (Akam & Ikegwuru, 2023).
- **Hypothesis 2 (Personnel Benefit - PB):**
    - H_{0a}: There is no significant impact of personnel benefit on firm performance (EPS) in Sri Lanka's listed banking sector.
    - H_{1a}: There is a significant impact of personnel benefit on firm performance (EPS) in Sri Lanka's listed banking sector.
    - H_{0b}: There is no significant impact of personnel benefit on firm performance (ROA) in Sri Lanka's listed banking sector.
    - H_{1b}: There is a significant impact of personnel benefit on firm performance (ROA) in Sri Lanka's listed banking sector.
    - H_{0c}: There is no significant impact of personnel benefit on firm performance (ROE) in Sri Lanka's listed banking sector.

- H_{1c}: There is a significant impact of personnel benefit on firm performance (ROE) in Sri Lanka's listed banking sector.
- *Rationale:* Studies indicate a positive correlation between individual benefits and firm performance, contributing to employee satisfaction and productivity (Omodero & Ihedinihu, 2017).

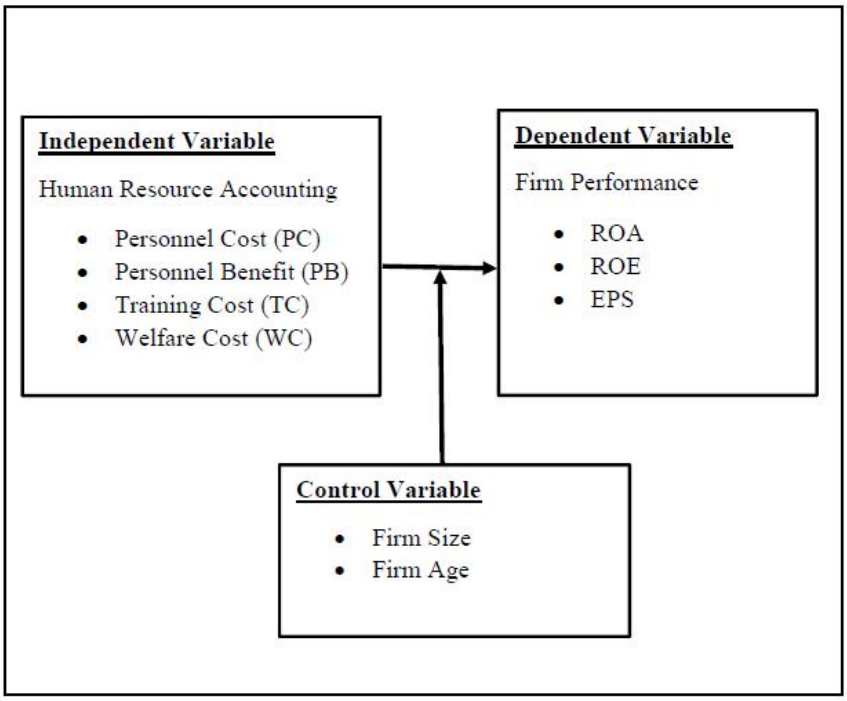
- **Hypothesis 3 (Training Cost - TC):**
  - H_{0a}: There is no significant impact of training cost on firm performance (EPS) in Sri Lanka's listed banking sector.
  - H_{1a}: There is a significant impact of training cost on firm performance (EPS) in Sri Lanka's listed banking sector.
  - H_{0b}: There is no significant impact of training cost on firm performance (ROA) in Sri Lanka's listed banking sector.
  - H_{1b}: There is a significant impact of training cost on firm performance (ROA) in Sri Lanka's listed banking sector.
  - H_{0c}: There is no significant impact of training cost on firm performance (ROE) in Sri Lanka's listed banking sector.
  - H_{1c}: There is a significant impact of training cost on firm performance (ROE) in Sri Lanka's listed banking sector.
  - *Rationale:* Training cost has been shown to lead to statistically significant improvements in employee performance metrics and overall organizational performance in the banking sector (Shanta, 2019).
- **Hypothesis 4 (Welfare Cost - WC):**
  - H_{0a}: There is no significant impact of welfare cost on firm performance (EPS) in Sri Lanka's listed banking sector.
  - H_{1a}: There is a significant impact of welfare cost on firm performance (EPS) in Sri Lanka's listed banking sector.
  - H_{0b}: There is no significant impact of welfare cost on firm performance (ROA) in Sri Lanka's listed banking sector.
  - H_{1b}: There is a significant impact of welfare cost on firm performance (ROA) in Sri Lanka's listed banking sector.
  - H_{0c}: There is no significant impact of welfare cost on firm performance (ROE) in Sri Lanka's listed banking sector.
  - H_{1c}: There is a significant impact of welfare cost on firm performance (ROE) in Sri Lanka's listed banking sector.
  - *Rationale:* Research suggests a positive relationship between employee welfare practices and firm financial performance, including productivity and innovation investment (Liang et al., 2023).

3.2 Research Design

A quantitative research design was adopted for this study, emphasizing the systematic collection and analysis of numerical data to examine the impact of HRA on firm performance in Sri Lanka's banking sector. This design serves as the overall outline, guiding the investigation from its inception to its conclusion (Creswell, 1999).

3.3 Unit of Analysis

The unit of analysis for this research is the individual listed bank in Sri Lanka. By focusing on each bank, the study aims to thoroughly investigate how HRA practices, including human capital assessment, reporting, and management, influence the financial and operational performance of each institution. This approach facilitates a detailed understanding of the relationship between HRA and firm performance within the unique context of the Sri Lankan banking sector.



3.4 Time Horizon

This research employs a longitudinal time horizon, examining the impact of HRA on firm performance over a ten-year period from 2014 to 2023. This approach enables the analysis of trends, changes, and long-term effects, providing insights into how HR investments contribute to performance outcomes over time. Longitudinal studies are crucial for capturing data across multiple fiscal periods, which is essential for understanding the sustainable effects of HRA on a bank's performance (Flores, 2023). The chosen period (2014–2023) is justified as it encompasses the transformative effects of the COVID-19 pandemic (2020–2022), the post-pandemic recovery phase (2022–2023), significant technological advancements, and changes in the regulatory framework, all of which influenced HR management and workforce strategies.

3.5 Method of Data Collection

The data collection process for this research relies on secondary data obtained from publicly available sources, primarily the annual reports of selected Sri Lankan banking companies. These reports serve as authoritative documents providing detailed information on banks' financial performance, human resource-related costs, and overall business operations. Data were extracted from official bank websites, financial databases, and the Colombo Stock Exchange (CSE) over the specified ten-year period. Key financial metrics, including Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS), were collected, along with detailed data on personnel cost, welfare and health cost, training cost, and personnel benefits. These secondary data were then carefully coded and organized into a structured dataset for analysis. A rigorous review process, involving cross-referencing financial data and ensuring consistency of disclosure practices, was conducted to ensure accuracy and reliability. This method provides a robust and detailed analysis while leveraging existing financial documents and reducing the need for primary data collection.

3.6 Population and Sampling Framework

The population of this study comprises all banking companies listed on the Colombo Stock Exchange (CSE) in Sri Lanka. This inclusive approach provides a broad representation of the banking sector, offering insights into HR accounting practices and operations within the structured finance market. A purposive sampling technique was used to select a sample of 12 banks, guided by criteria such as the companies' priority, financial stability, and the availability of comprehensive annual reports. This non-random sampling method ensures the selected banks are representative of the diversity and financial landscape of the banking sector, providing a focused yet broad view of the research objectives. Focusing on all listed banks ensures financial transparency and allows for a comprehensive analysis of HRA's impact on key performance indicators across various institutions.

3.7 Methods of Data Analysis

The collected data will be analyzed using a combination of descriptive statistics, correlation analysis, and regression analysis.

3.7.1 Descriptive Statistics

Descriptive statistics will be the initial analysis technique, providing a comprehensive summary of the collected data. This includes measures such as mean, median, and standard deviation, offering a clear and concise overview of central trends and variability within the dataset. This methodology helps in understanding the prevalence and fundamental characteristics of key variables, including financial statement accuracy and business performance indicators.

3.7.2 Correlation Analysis

Correlation analysis will be conducted to ascertain the strength and direction of relationships between the independent variable (HRA components) and dependent variable (firm performance metrics). A Pearson correlation matrix will be used to measure the linear relationship between variables (Field et al., 2009). The correlation coefficient (r) ranges from -1 to +1, where +1 indicates a perfect positive relationship, -1 indicates a perfect negative relationship, and 0 indicates no relationship (Ratner, 2009). A p-value less than 0.05 ($p < 0.05$) will indicate a statistically significant relationship, while a p-value greater than 0.05 ($p > 0.05$) will indicate no statistically significant relationship (Pearlson et al., 2019).

3.7.3 Regression Analysis

Regression analysis, a powerful statistical method, will be employed to understand how independent variable affects dependent variable, establishing a mathematical equation to predict the value of the dependent variable based on the independent variable (Uyanık & Güler, 2013). In this multiple regression analysis, the equation extends as follows:

$$Y_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \epsilon$$

Where:

- Y_i = ith observation of the dependent Variable Y (EPS, ROA, ROE)
- X_j = independent variables (PC, PB, TC, WC)
- X_{ji} = ith observation of the jth independent variable
- β_0 = intercept term
- β_j = slope coefficient for each independent variable
- ϵ = error term for the ith observation
- N = number of observations
- K = number of independent variables

Specifically, the models for this study are:

- $EPS = \beta_0 + \beta_1 PC + \beta_2 PB + \beta_3 TC + \beta_4 WC + \beta_5 FA + \beta_6 FS + \epsilon$
- $ROA = \beta_0 + \beta_1 PC + \beta_2 PB + \beta_3 TC + \beta_4 WC + \beta_5 FA + \beta_6 FS + \epsilon$
- $ROE = \beta_0 + \beta_1 PC + \beta_2 PB + \beta_3 TC + \beta_4 WC + \beta_5 FA + \beta_6 FS + \epsilon$

The β coefficient can be positive or negative to validate the hypotheses, and the p-value must be equal to or less than 0.05 at a 95% confidence interval for the hypotheses to be accepted.

4. Results

4.1 Descriptive Analysis

Table 4.1: Descriptive Analysis 000,

	N	Minimum	Maximum	Mean	Std.Deviation
PC	120	1,360,652	3,304,438,822	465,049,784.40	757,788,988.723
PB	120	13,064	170,664,374	10,601,949.17	32,976,850.701
TC	120	3,571	134,761	34,075.91	27,448.150
WC	120	41,200	145,172,220	5,967,338.16	16,418,713.602

EPS	120	0.03	56.06	11.0650	11.78660
ROA	120	0.06	3.25	1.1506	0.57730
ROE	120	0.44	23.47	11.0958	5.52316
FA	120	5	135	41.58	30.345
FS	120	34,417,730	2,580,327,879	486,756,616.29	521,800,600.978
Valid N (listwise)	120				

The descriptive statistics reveal considerable variability in human resource accounting and firm performance indicators among the sampled banks. Personnel Cost (PC) ranges from 1.36 million to over 3.3 billion, with a high mean of approximately 465 million and substantial variability (SD= 758 million), while Personnel Benefit (PB) ranges from 13,064 to 170.6 million, averaging around 10.6 million with significant dispersion (SD= 33 million), suggesting that some banks invest heavily in benefits. Training Cost (TC) shows a narrower range (3,571 to 134,761) and moderate variability, with a mean of 34,075. Welfare Cost (WC) varies widely (41,200 to 145 million) with a mean of about 6 million and high variability (SD= 16.4 million). In terms of firm performance, Return on Assets (ROA) has a small spread (0.06 to 3.25) with a mean of 1.15 and low variability of 0.58 Standard deviation, while Return on Equity (ROE) shows greater dispersion (0.44 to 23.47) with an average of 11.10. Earnings per Share (EPS) varies significantly (0.03 to 56.06) with a high SD (11.79). Firm Age (FA) spans 5 to 135 years, averaging 41.6 years, and Firm Size (FS) varies greatly (34 million to 2.58 billion), with a mean of 486.76 million and very high variability, reflecting the heterogeneity among banks in the sample.

4.2 Correlation Analysis

Table 4.2: Correlation Analysis

		Personnel Cost	Personnel benefit	Training cost	Welfare cost	EPS	ROA	ROE	Firm age	Firm size
Personnel Cost	Pearson Correlation	1								
	Sig. (2tailed)									
Personnel benefit	Pearson Correlation	.326**	1							
	Sig. (2tailed)	.000								
Training cost	Pearson Correlation	-.356**		1						
	Sig. (2tailed)	.000	-.180* .049							
Welfare cost	Pearson Correlation	-.165	-.097	.369**	1					
	Sig. (2tailed)	.072	.292	.000						
EPS	Pearson Correlation	-.310**		.266**	.090	1				
	Sig. (2tailed)	.001	-.257** .005	.003	.327					

ROA	Pearson Correlation	-.242**	-.169	.287**	.129	.468**	1			
	Sig. (2tailed)	.008	.064	.001	.161	.000				
ROE	Pearson Correlation	-.295**	-.321**	.499**	.190*	.531**	.719**	1		
	Sig. (2tailed)	.001	.000	.000	.038	.000	.000			
Firm age	Pearson Correlation	-.245**	-.284**	.032	.315**	.456**	.144	.142	1	
	Sig. (2tailed)	.007	.002	.728	.000	.000	.116	.122		
Firm size	Pearson Correlation	-.445**	-.195*	.424**	.471**	.291**	.193*	.242**	.532**	1
	Sig. (2tailed)	.000	.033	.000	.000	.001	.035	.008	.000	

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The correlation analysis reveals that personnel cost has a weak to strong negative relationship with firm performance indicators—most notably with EPS (-0.310), followed by ROE (-0.295) and ROA (-0.242), all statistically significant. Personnel benefit also shows a moderate negative correlation with ROE (-0.321), and weak to moderate negative relationships with ROA (-0.169) and EPS (-0.257). In contrast, training cost demonstrates a consistently positive and significant correlation with ROE (0.499), ROA (0.287), and EPS (0.266), indicating its strong contribution to firm performance. Welfare cost has a weak positive correlation with ROE (0.190), and no significant relationship with ROA or EPS. Regarding control variables, firm age shows a moderate positive correlation with EPS (0.456) possibly due to more established market positions, greater economies of scale, or a stronger financial foundation, but weak and non-significant correlations with ROE and ROA. Firm size is moderately and positively correlated with ROE (0.242), ROA (0.193), and EPS (0.291), suggesting that larger firms tend to perform better. Overall, training cost and firm size emerge as key drivers of performance, while higher personnel costs and benefits may hinder it, and firm age has a limited impact except on EPS.

4.3 Regression Analysis

4.3.1 Earnings Per Share (EPS)

Table 4.3: Model of Summary (EPS)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.564[a]	.318	.282	9.98860
a. Predictors: (Constant), Firm size, Personnel benefit, Training cost, Welfare cost, Personnel Cost, Firm age				

The R^2 value of 0.318 and adjusted R^2 of 0.282 indicate that the model moderately explains EPS variability, with around 28.2% of the variance attributed to the predictors after adjusting for model complexity.

Table 4.4: ANOVA (EPS)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5257.681	6	876.280	8.783	.000[b]
	Residual	11274.261	113	99.772		
	Total	16531.941	119			

a. Dependent Variable: EPS
b. Predictors: (Constant), Firm size, Personnel benefit, Training cost, Welfare cost, Personnel Cost, Firm age

Table 4.4 shows that the ANOVA test yielded an F-value of 8.783 with a significance level of 0.000, indicating that Human Resource Accounting (HRA) has a statistically significant impact on EPS ($P < 0.05$).

Table 4.5: Coefficient (EPS)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.653	2.502		.661	.510
	Personnel Cost	-2.086E-9	.000	-.134	-1.453	.149
	Personnel benefit	-1.906E-8	.000	-.053	-.627	.532
	Training cost	.000	.000	.290	3.055	.003
	Welfare cost	-1.128E-7	.000	-.157	-1.712	.090
	Firm age	.193	.039	.497	5.009	.000
	Firm size	-2.077E-9	.000	-.092	-.816	.416
a. Dependent Variable: EPS						

EPS = 1.653 – 2.086E-9PC – 1.9059E-8PB + 0.000TC – 1.128E-7WC + 0.193 FA -2.077E-9FS + $\boldsymbol{\varepsilon}$

The regression analysis indicates that among the Human Resource Accounting (HRA) variables, only training cost has a statistically significant positive impact on Earnings Per Share (EPS), with a beta of 0.290 and a p-value of 0.003, despite its B value being very small, suggesting minimal change in EPS per unit increase. Personnel cost (B = -2.086E-9), personnel benefit (B = -1.9059E-8), and welfare cost (B = -1.128E-7) all show negative but statistically insignificant relationships with EPS, as their p-values exceed 0.05 and t-statistics are below 2, indicating no meaningful impact. Among control variables, firm age has a significant positive effect on EPS (B = 0.193, beta = 0.497, p = 0.000, t = 5.009), while firm size shows a weak and insignificant negative relationship (B = -2.077E-9, beta = -0.092, p = 0.416). Overall, the analysis concludes that training cost and firm age positively influence EPS, while other HRA components and firm size do not significantly affect it.

4.3.2 Return on Assets (ROA)

Table 4.6: Model summery (ROA)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.345[a]	.119	.072	.55604
a. Predictors: (Constant), Firm size, Personnel benefit, Training cost, Welfare cost, Personnel Cost, Firm age				

The model shows a weak to moderate positive correlation ($R = 0.345$) with ROA, explaining only 11.9% of its variation ($R^2 = 0.119$). The adjusted R^2 drops to 7.2%, highlighting the model's low explanatory power after accounting for the number of predictors.

Table 4.7: ANOVA (ROA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.723	6	.787	2.546	.024[b]
	Residual	34.937	113	.309		
	Total	39.660	119			
a. Dependent Variable: ROA						
b. Predictors: (Constant), Firm size, Personnel benefit, Training cost, Welfare cost, Personnel Cost, Firm age						

Table 4.7 presents the ANOVA results, indicating that the independent variable has a significant impact on ROA. The F-test yielded a value of 2.546 with a p-value of 0.024 ($p < 0.05$), confirming the model's overall significance. Human Resource Accounting (HRA) specifically shows a significant effect on ROA.

Table 4.8: Coefficient (ROA)

Model		Unstandardized Coefficients		Standardized oefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.964	.139		6.922	.000
	Personnel Cost	-9.442E-11	.000	-.124	-1.182	.240
	Personnel benefit	-1.073E-9	.000	-.061	-.633	.528
	Training cost	5.142E-6	.000	.244	2.270	.025
	Welfare cost	-2.299E-10	.000	-.007	-.063	.950
	Firm age	.002	.002	.108	.956	.341
	Firm size	-3.552E-11	.000	-.032	-.251	.803
a. Dependent Variable: ROA						

ROA = 0.964 – 9.442E-11 PC – 1.073E-9PB + 5.142E-6 TC – 2.299E-10WC + 0.002 FA – 3.552E-11FS + $\boldsymbol{\varepsilon}$

Table 4.8 reveals that among the human resource accounting variables analyzed, only training cost shows a significant positive relationship with return on assets (ROA), with a B value of 0.000005142, a beta of 0.244, a t-statistic of 2.270, and a significance level of 0.025 (< 0.05). Other variables, including personnel cost, personnel benefit, welfare cost, firm age, and firm size, display no statistically significant relationship with ROA, as indicated by their high p-values (all > 0.05), weak beta values, and low t-statistics. Specifically, personnel cost and personnel benefit have weak negative effects on ROA, welfare cost has a negligible negative effect, firm age shows a small positive effect, and firm size a weak negative effect. Overall, the findings suggest that training cost is the only human resource accounting factor with a meaningful impact on firm performance as measured by ROA.

4.3.3 Return on Equity (ROE)

Table 4.9 Model summery (ROE)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.560[a]	.314	.277	4.69537
a. Predictors: (Constant), Firm size, Personnel benefit, Training cost, Welfare cost, Personnel Cost, Firm age				

The R^2 value of 0.314 indicates that 31.4% of the variation in ROE is explained by the model's independent variables, reflecting moderate explanatory power. However, 68.6% of the variation remains unexplained. The adjusted R^2 of 0.277, which accounts for the number of predictors, shows a slight decrease in explanatory power, suggesting that the inclusion of multiple variables may not significantly enhance the model's overall effectiveness.

Table 4.10 ANOVA (ROE)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1138.875	6	189.813	8.610	.000[b]
	Residual	2491.259	113	22.047		
	Total	3630.134	119			
a. Dependent Variable: ROE						
b. Predictors: (Constant), Firm size, Personnel benefit, Training cost, Welfare cost, Personnel Cost, Firm age						

The ANOVA results indicate that Human Resource Accounting (HRA) has a statistically significant impact on Return on Equity (ROE), as evidenced by an F-value of 8.610 and a p-value of 0.000 ($p < 0.05$).

Table 4.11 Coefficient (ROE)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	8.186	1.176		6.961	.000
	Personnel Cost	-5.415E-10	.000	-.074	-.802	.424
	Personnel benefit	-3.373E-8	.000	-.201	-2.359	.020
	Training cost	9.421E-5	.000	.468	4.924	.000
	Welfare cost	-3.085E-9	.000	-.009	-.100	.921
	Firm age	.017	.018	.094	.944	.347
	Firm size	-7.894E-10	.000	-.075	-.660	.511
a. Dependent Variable: ROE						

ROE = 8.186 – 5.415E-10PC -3.373E-8PB + 9.421E-5TC – 3.085E-9WC + 0.017 FA – 7.894E-10 FS + $\boldsymbol{\varepsilon}$

Table 4.11 reveals that among the components of Human Resource Accounting (HRA), only training costs and personnel benefits have a significant impact on Return on Equity (ROE). Training cost shows a strong positive relationship with ROE (B = 9.421E-5, β = 0.468, p = 0.000), while personnel benefits show a moderate negative but significant effect (B = -3.373E-8, β = -0.201, p = 0.020). In contrast, personnel cost (B = -5.415E-10, β = -0.074, p = 0.424) and welfare cost (B = -3.085E-9, β = -0.009, p = 0.921) exhibit weak, statistically insignificant relationships with ROE. Similarly, control variables such as firm age (B = 0.017, β = 0.094, p = 0.347) and firm size (B = -7.894E-10, β = -0.075, p = 0.511) show no significant influence. Therefore, the findings suggest that only training costs and personnel benefits meaningfully affect firm performance as measured by ROE, while other HRA components and firm characteristics do not.

4.4 Hypotheses Testing

Table 4.12: Hypotheses Testing

Hypotheses	P-Value	Decision
$1H_{1a}$ - There is a significant impact with personnel cost on EPS in Sri Lanka's listed banking sector.	0.149	Rejected
$1H_{1b}$ - There is a significant impact with personnel cost on ROA in Sri Lanka's listed banking sector	0.240	Rejected
$1H_{1c}$- There is a significant impact with personnel cost on ROE in Sri Lanka's listed banking sector.	0.424	Rejected
$2H_{1a}$ - There is a significant impact with Personnel Benefit on EPS in Sri Lanka's listed banking sector.	0.532	Rejected
2 H_{1b} - There is a significant impact with Personnel Benefit on ROA in Sri Lanka's listed banking sector.	0.528	Rejected
$2H_{1c}$- There is a significant impact with Personnel Benefit on ROE in Sri Lanka's listed banking sector.	0.020	Accepted
$3H_{1a}$- There is a significant impact with Training Cost on EPS in Sri Lanka's listed banking sector.	0.003	Accepted
$3H_{1b}$ - There is a significant impact with Training Cost on ROA in Sri Lanka's listed banking sector.	0.025	Accepted
$3H_{1c}$ - There is a significant impact with Training Cost on ROE in Sri Lanka's listed banking sector.	0.000	Accepted
$4H_{1a}$ - There is a significant impact with welfare cost on EPS in Sri Lanka's listed banking sector.	0.090	Rejected

$4H_{1b}$ - There is a significant impact with welfare cost on ROA in Sri Lanka's listed banking sector.	0.950	Rejected
$4H_{1c}$ - There is a significant impact with welfare cost on ROE in Sri Lanka's listed banking sector.	0.921	Rejected

5. Discussion

This study investigates the impact of Human Resource Accounting (HRA) components—Personnel Cost (PC), Personnel Benefit (PB), Training Cost (TC), and Welfare Cost (WC)—on firm performance indicators: Earnings per Share (EPS), Return on Assets (ROA), and Return on Equity (ROE). The R-squared values for EPS, ROA, and ROE are 32%, 12%, and 31%, respectively, indicating moderate explanatory power of HRA components on firm performance. Comparisons with prior studies (e.g., Okpako et al., 2014; Moin et al., 2023; Ovedje et al., 2021) show varying degrees of HRA impact across sectors. Moin et al. (2023) identified that, according to the R^2 value, the predictor variables account for 46% of the total variance in Return on Capital Employed (ROCE), while the remaining 54% is attributed to the error term. The R-squared value of 0.23 indicates that approximately 23% of the systematic variation in financial performance, as measured by return on assets of manufacturing firms over the period of interest, is jointly explained by the independent variables and the control variable, as indicated by Ovedje et al. (2021). Priyadarshanie (2022) reported R-squared values of 6%, 10%, and 5% for ROA, EPS, and ROE, respectively

5.1 Personnel Cost (PC):

PC showed weak negative correlations with ROE (-0.295), ROA (-0.242), and EPS (-0.310). Studies have shown that increases in personnel costs particularly in labor-intensive industries can reduce profitability and return on equity, as they contribute to higher overhead expenses (Lichtenberg, 2013). Earnings per Share (EPS) is often negatively impacted by higher labor costs, resulting in reduced returns for shareholders (Robinson & Sussman, 2014). Regression analysis revealed an insignificant impact on firm performance (EPS p=0.149; ROA p=0.240; ROE p=0.424). This aligns with findings from Ovedje and Iserien (2021) and Abraham and Odobi (2022), suggesting that banks, due to increasing automation, may be less sensitive to personnel cost changes. Non-financial motivators like skills and psychological well-being are emphasized for performance improvement.

5.2 Personnel Benefit (PB):

PB negatively correlates with ROE (-0.321), and shows weak to moderate correlations with ROA (-0.169) and EPS (-0.257). Personnel benefits including healthcare, pensions, and other welfare programs contribute significantly to a firm's operating costs. If these increased costs are not matched by a corresponding rise in employee productivity or firm revenue, they can lead to reduced profitability. This, in turn, directly affects Return on Equity (ROE), a key indicator of how effectively a firm generates profits from shareholder investments. Elevated personnel benefits may reduce the revenue available for profit generation, thereby diminishing ROE. Kaufman (2015) contends that firms offering substantial employee benefits often face decreased profitability due to the resulting increase in overhead expenses. Despite high costs, regression shows mixed impact: EPS (p=0.532), ROA (p=0.528), and ROE (p=0.020). In this study, Return on Equity (ROE) was found to have a significant impact on firm performance, whereas Return on Assets (ROA) and Earnings Per Share (EPS) did not show such an effect. However, prior research provides contrasting insights. For instance, Ngozi and Rufus et al. (2022) found that personnel benefits significantly influence both ROA and EPS. Similarly, Akam et al. (2024) highlighted the positive role of personnel benefits in enhancing overall firm performance. Furthermore, Ranta and Ylinen (2024) emphasized that improvements in customer treatment, driven by better employee performance, can subsequently lead to enhanced company performance.

5.3 Training Cost (TC):

Training costs exhibit a moderate positive correlation with Return on Equity (ROE) (r = 0.499), Return on Assets (ROA) (r = 0.287), and Earnings Per Share (EPS) (r = 0.266). Training programs can enhance employee efficiency, which in turn contributes to higher returns on equity. Higher returns on equity often reflect better asset utilization and can lead to improved earnings per share. A well-trained workforce tends to be more efficient and innovative, thereby exerting a positive impact on a company's financial performance (Huselid, 1995). The training cost has a positive impact on the bank's firm performance. The p-values are as follows: EPS = 0.003, ROS = 0.025, and ROE = 0.000. Additionally, the t-test values are all greater than 2. This study identified that training costs have a positive association with firm performance. Additionally, there is a positive correlation between training costs and firm performance. According to Abraham and Odobi et al. (2022), the cost of staff training has a significant relationship with firm performance. Additionally, studies conducted by Lukman et al. (2023), Akam and Ikegwuru et al. (2023), and Okpako and Atube et al. (2014) found that training costs have a significant impact on firm performance. The positive impact of training costs on firm performance can be attributed to the substantial benefits that training provides. Training equips employees with job-specific skills and knowledge, leading to increased efficiency, improved effectiveness, and reduced waste. For banks, well-trained staff improve customer satisfaction by consistently meeting customer demands, which enhances the bank’s performance and competitive position (Abraham & Odobi et al., 2022)

5.4 Welfare Cost (WC):

Welfare cost has a weak positive correlation with ROE (0.190), while ROA (0.129) and EPS (0.090) show no significant relationship. The welfare cost has no significant impact on the firm performance of the bank under investigation. The p-values are EPS= 0.090, ROA= 0.950, and ROE= 0.921. Some researchers, including Davies, Alao, Aremu, and Olalere (2023), found that employee safety had only a small impact on the ROAs of the targeted firms. Additionally, Liang and Nguyen et al. (2023) and Makanjuola and Shaibu et al. (2013) found that welfare costs did not directly translate into firm performance improvements. Makanjuola and Shaibu et al. (2013) found that welfare programs in public service organizations often fail to directly improve performance metrics due to inefficiencies or a lack of clear linkages to productivity. Liang and Nguyen et al. (2023) demonstrated that welfare costs did not consistently enhance financial outcomes across different firms.

6. Conclusion

This study explored the impact of Human Resource Accounting (HRA) on firm performance within Sri Lanka's listed banking sector, focusing on the independent variables of personnel cost, personnel benefit, training cost, and welfare cost, and the dependent variables of Return on Assets (ROA), Return on Equity (ROE), and Earnings Per Share (EPS), while controlling for firm age and size. The study aims to offer valuable insights into the complex impact of Human Resource Accounting (HRA) in Sri Lanka's banking sector, addressing a notable gap in existing literature. Using a quantitative approach based on secondary data from the annual reports of twelve banks listed on the Colombo Stock Exchange, the research employed descriptive statistics, correlation and regression analyses, and hypothesis testing to evaluate the influence of HRA practices. Findings revealed that training costs significantly and positively affect all firm performance indicators, while personnel and welfare costs showed no significant impact. Personnel benefits had a mixed effect, with a significant negative relationship only with ROE. These results underscore the strategic value of investing in employee training to enhance financial performance in the banking sector.

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