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**IMPACT OF EMPLOYING CIVILIAN WORKERS ON
ORGANIZATIONAL PERFORMANCE IN
NAVAL DOCKYARDS OF
SRI LANKA NAVY**

**MASTER OF BUSINESS ADMINISTRATION
IN
MANAGEMENT OF TECHNOLOGY**

G. A. P. Chandradasa
Department of Management of Technology
University of Moratuwa
Sri Lanka

April 2024

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MASTER OF BUSINESS ADMINISTRATION IN MANAGEMENT OF TECHNOLOGY

By

G. A. P. Chandradasa
(208269X)

Supervised by
Dr. P.V.T. Jayawardane

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Department of Management of Technology
University of Moratuwa
Sri Lanka

April 2024

DECLARATION

I hereby declare that this dissertation is my original work and does not include, without proper acknowledgment, any material previously submitted to any other university or institution of higher learning. To the best of my knowledge, it does not contain any material previously published or written by another person, except where acknowledgments are made in the text.

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G.A.P. Chandradasa- 208269X

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I hereby recommend that the dissertation be prepared under my supervision by G.A.P. Chandradasa (208269X) and this report is acceptable for evaluation.

Signature of the supervisor

Dr. P.V.T. Jayawardane

Date: 28.05.2024

ABSTRACT

Sri Lanka, being situated in a strategic location in the Indian Ocean, means that the Navy has a crucial role to play. Naval dockyards are one of the major elements affecting the efficiency of naval operations. The objective of this investigation is to analyze the effects of incorporating civilian personnel on the operational efficiency of naval dockyards within the Sri Lanka Navy, which is predominantly operated by uniformed technical sailors. The literature review focused on the current state of civilian employment in naval dockyards, referencing several theories such as Human Capital Theory, Resource-Based View (RBV), Expectancy Theory of Motivation, Job Characteristics Model (JCM), and Frederick Herzberg's Two-Factor Theory. Despite the wealth of information offered by the current literature, deficiencies were noted, including a lack of empirical evidence and insufficient attention to the specific operational context of SLN dockyards. This cross-sectional study employed a positivist research philosophy, a deductive methodology, and a single-method approach. To gain insights, we surveyed 274 dockyard workers using a convenience sample and compiled their responses. Descriptive statistics, correlation analysis, and regression analysis were applied to the data. Organizational performance was the dependent variable, while financial efficiency, skill specialization, and civil-military integration were identified as independent variables. The survey results were deemed reliable, with a response rate of 95.5% and a positive correlation between the independent and dependent variables. With an Adjusted R-Square of 44.7%, the regression model fit the data well, suggesting it could explain almost 45% of the variation in organizational performance. Financial efficiency was found to be positively related to organizational success ($\beta = 0.974$, $p < 0.001$), and skill specialization had a major impact on organizational success ($\beta = 0.706$, $p < 0.01$). Additionally, there was a positive correlation between civil-military integration and organizational performance ($\beta = 0.645$, $p < 0.05$). The central finding of the study is that financial efficiency, skill specialization, and civil-military integration significantly influence organizational effectiveness. The results of this research have important managerial implications, particularly for those responsible for the Sri Lanka Navy's naval dockyards' strategic planning, operations, and human resources management.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Naval dockyards are a crucial element of a nation's defense system, as they are instrumental in facilitating the efficient functioning of the country's navy (Richardson, 2020). Naval dockyards hold immense importance in Sri Lanka, a nation renowned for being strategically located in the Indian Ocean. The objective of this investigation is to analyze the effects of incorporating civilian personnel on the operational efficiency of naval dockyards within the Sri Lanka Navy. Perera (2021) notes that there are signs of a growing shift toward civilian jobs within naval dockyards, which were previously predominantly operated by uniformed workers. The rationale behind this transition can be attributed to various factors such as improved financial efficacy, heightened skill specialization, and a desire for enhanced civil-military integration (Jayawardena & Fernando, 2022). The consequences of this change on the efficiency of operations at existing naval dockyards are a subject of contention and necessitate thorough examination. These naval dockyards within Sri Lanka play a crucial role not only in servicing and repairing navy vessels but also in contributing to overall national defense strategies, as noted by Senanayake (2020). Hence, the consequences associated with the performance of these dockyards extend beyond their direct operational outcomes. The Sri Lanka Navy has made significant progress in augmenting its capabilities. However, it is imperative to assess the efficacy of civilian work in such environments.

A substantial amount of academic work exists on the subject of organizational performance and the composition of workers across diverse industries. However, the domain of civilian employment in military dockyards, particularly in the Sri Lankan context, remains relatively uncharted, according to research conducted by Wickramasinghe and De Silva (2023). This study aims to bridge the existing knowledge gap and offer valuable insights into the influence of civilian staff participation on the operational efficiency of naval dockyards. The study is significant given the dynamic nature of naval operations and the growing trend of civilianization of military roles globally. Many nations have initiated the integration of civilian staff into their defense industries to leverage specialized expertise that may not be readily available within the military workforce (Thompson, 2019). The ramifications of this transition on operational efficacy, cost optimization, and overall effectiveness remain unclear.

The employment of non-military personnel in a military setting, such as naval dockyards, is a complex decision that requires careful consideration. This process entails a meticulous evaluation of multiple factors, including cost-benefit analysis, talent pool accessibility, risk management, and organizational culture (Kumar & Ratnayake, 2021). The integration of civilian workers into military organizations may present challenges such as security clearance issues and potential cultural conflicts with military personnel, despite the potential benefits of specialized skills and cost savings (Mendis & Perera, 2022). Therefore, it is crucial to understand the net effect of civilian employment on the operational efficiency of naval dockyards. Furthermore, the results of this investigation have the potential to provide valuable insights for policymakers regarding the demographics of the labor force in Sri Lanka's naval dockyards. This proposed initiative could offer a comparative outlook for nations undergoing similar transformations in their defense industries. This study highlights the possible benefits and drawbacks of utilizing civilian personnel in naval dockyards. As a result, it could contribute significantly to the ongoing debate on the integration of civilian and military personnel in the defense sector.

In conclusion, examining the impact of engaging non-military personnel on the operational efficacy of naval dockyards within the Sri Lanka Navy is of significant importance and relevance. This research has the potential to provide valuable insights for key stakeholders such as policymakers, naval administrators, and future researchers by exploring an area that has been largely overlooked. The forthcoming chapters will present a thorough investigation of the subject matter, offering a robust understanding of the significance and impact of non-military personnel on the operational efficacy of naval shipyards. The contemporary global trend of civilianization within the military domain has sparked new discussions and debates regarding optimal methods for integrating non-military personnel into traditionally military environments (Pathirana & Kumara, 2023). This trend is significant not only for human resources management but also as a strategic choice that could impact the overall characteristics of defense forces. Although there is a body of research on the impact of civilianization in the army and air force, the naval sector, specifically dockyards, has not received equivalent scholarly attention (Fernando & Jayasundara, 2024). The Sri Lanka Navy, like other defense organizations worldwide, has faced several challenges in recent times, including financial constraints, rising maintenance costs, and the need for specialized expertise (Bandara & Gamage, 2022). The strategic utilization of civilian workers has been identified as a viable approach to address some of these challenges. Nonetheless, empirical assessment of the actual effect of this change on the operational efficiency of maritime dockyards remains pending. Naval dockyards remain unique workplaces, characterized by stringent security measures and a demand for exceptional control and accuracy, despite the growing trend toward civilianization (Liyanage & Samarasinghe, 2023). Hence, the integration of non-military personnel into such environments poses certain challenges. The efficiency of dockyards may be affected by security clearance, managerial oversight, and cultural differences, according to Gunaratne and Weerasooriya (2022). This study aims to enhance the understanding of the impact of civilian workforce utilization on the operational efficiency of naval dockyards within the Sri Lanka Navy. Considering the complex and diverse nature of this subject matter, it is essential to adopt a comprehensive and nuanced perspective. The forthcoming sections of this study will provide a detailed examination of the conceptual framework, research methodology, data analysis, and findings, with the objective of delivering a thorough investigation of the topic. This study aims to offer insights into the advantages and challenges associated with the use of non-military personnel in naval shipyards, contributing to the ongoing discussion on the integration of civilians and military personnel in the defense industry.

1.2 Own Interest on the Topic

In my capacity as a Navy officer and MBA student, I am particularly intrigued by the topic of civilian employment within the Sri Lanka Navy's dockyards due to its dual relevance to my personal and professional pursuits. From a professional standpoint, I am interested in investigating the potential consequences of this transition on the operational efficiency of the dockyards, which has a direct impact on my responsibilities within the Navy. The potential advantages and disadvantages of a heterogeneous workforce in the distinctive operational setting of a naval dockyard have piqued my interest. From an academic standpoint, I am intrigued by the examination of the convergence between military and civilian dynamics within an organizational framework. The alignment between my career and academic objectives and the potential of this research to inform policy decisions and enhance operational efficiency is impeccable. Additionally, as a military officer, I believe that this research has the potential to offer me a broader outlook on the changing patterns in global defense management of workers, thereby improving my career growth.

1.3 Statement of the Problem

An important area of inquiry is how civilian employment affects the efficiency of Sri Lanka Navy naval dockyards. Recent trends indicate that military personnel's traditional responsibilities in these dockyards are increasingly being taken over by civilians. The influence on operational efficiency of such a shift, and the empirical examination of the claimed benefits such as increased financial efficacy, skill specialization, and civil-military integration, remain largely unexplored. When trying to integrate civilian workers, naval dockyards face their own particular obstacles due to their unique nature, which is characterized by rigorous security measures and a need for outstanding control and accuracy. Problems with clearances, miscommunication, poor management, and differing approaches to work are just a few examples. Despite the significance of the debates that the trend towards civilianizing the military has sparked around the world, the unique instance of naval dockyards, especially in the context of Sri Lanka, has been largely ignored by existing academic studies. Because of the vital role they play in national defense, it is essential to conduct a thorough analysis of how hiring civilian personnel affects the operational and organizational performance of Sri Lanka's naval dockyards. This research aims to fill the gap and provide insight into the consequences, difficulties, and potential benefits of this significant shift, making an important addition to the current discussion about civilianization in the defense industry.

“What is the impact of employing civilian workers on organizational performance in the naval dockyards of the Sri Lanka Navy?”

1.4 Research Questions

1. How does the financial efficiency of employing civilian workers influence the organizational performance of the dockyards of the Sri Lanka Navy?
2. What impact does the skill specialization of employing civilian workers have on the organizational performance of the dockyards of the Sri Lanka Navy?
3. How does the civil-military integration of employing civilian workers affect the organizational performance of the dockyards of the Sri Lanka Navy?
4. What is the impact of the flexibility and scalability of employing civilian workers on the organizational performance of the dockyards of the Sri Lanka Navy?
5. What recommendations can be provided to enhance organizational performance through the employment of civilians?

1.5 Research Objectives

The main research objective of the study is to identify the impact of employing civilian workers on organizational performance in the naval dockyards of the Sri Lanka Navy. Sub-objectives are:

- a. To analyse the impact of financial efficiency from employing civilian workers on organizational performance in the dockyards of the Sri Lanka Navy.

- b. To examine the influence of skill specialization from employing civilian workers on organizational performance in the dockyards.
- c. To assess the effects of civil-military integration from employing civilian workers on organizational performance in the dockyards.
- d. To evaluate the impact of flexibility and scalability from employing civilian workers on organizational performance in the dockyards.
- e. To provide recommendations for the employment of civilians to enhance organizational performance in the dockyards of the Sri Lanka Navy.

1.6 Significance of the Study

This research is extremely important, both theoretically and practically. By analyzing the effects of using civilian labor in naval dockyards within the context of the Sri Lanka Navy, this paper fills a significant scholarly void. Naval dockyards have received less scholarly attention, especially in the context of Sri Lanka, despite the widespread trend towards civilianization in military roles. Therefore, the results of this research can provide important new insights into this topic. Policymakers, naval administrators, and the civilian workforce can all benefit greatly from the findings of this study. This study has the potential to inform policy decisions and operational tactics in the Sri Lanka Navy by examining the possible benefits and challenges associated with employing civilian personnel in naval dockyards. Because naval dockyards play such a crucial role in national defense, it's important to predict how this shift in the labor force will affect the military. In addition, this study's findings could help other countries gain a comparative perspective and learn lessons as they undergo defense industry transitions similar to those in the United States. Therefore, the significance of this study is bolstered by the possibility that its findings may be of interest on a global scale.

1.7 Organize of the Study

Chapter One

This chapter outlines the subject of the investigation, the problem at hand, the significance of the investigation, the issues being examined, and the goals of the research. It concludes with a brief summary of the subsequent chapters.

Chapter Two

This chapter presents an in-depth analysis of the literature related to naval employee management practices. It evaluates prior research on employee retention, recruitment, training, and turnover. This section identifies the knowledge gaps that the investigation aims to fill.

Chapter Three

This chapter outlines the research methodology, including data collection and analytical procedures. It explains why these methods are appropriate for achieving the study's objectives. Ethical considerations, as well as the accuracy and reliability of the methodologies, are also discussed.

Chapter Four

This chapter presents the data and analytical findings. It methodically addresses each research question, using the collected data to support the claims made. The findings may be displayed in tables, graphs, or charts.

Chapter Five

The final chapter summarizes the findings and relates them to the initial aims of the study. It explores the implications of these results for the Sri Lanka Navy and for human resource management in general. This section also discusses the study's limitations and offers recommendations for future research, as well as suggestions for policy and practice based on the results obtained.

CHAPTER TWO

LITERATURE REVIEW

2.1 Chapter Introduction

The following section continues an in-depth investigation of the available research on workforce management practices, with a specific emphasis on the Navy. The goal is to analyse, evaluate, and synthesize the literature on staffing practices such as hiring, firing, upskilling, and replacing. As part of this effort, the researcher will identify any research gaps or discrepancies among existing studies, as well as the prevailing practices, ideas, and results that form the basis for these methods. The researcher intends to analyse the effect of these methods on the distribution of competent employees in Sri Lankan Navy dockyards, which provides an excellent foundation for the study that follows. This study will be contextualized by the insights gained from this literature review, which will also serve to establish the framework for the approaches and evaluations presented in the following chapters.

2.2 Theoretical Background

Strategies for optimal workforce management in the Sri Lanka Navy, particularly in balancing the needs of dockyards, might benefit from insights drawn from both human resource management and organizational theory. These frameworks can serve as a robust theoretical foundation for analysing the impact of various workforce management strategies on the distribution of skilled employees in Sri Lankan Navy dockyards.

2.2.1 Human Capital Theory

Becker (1964) introduced the concept of "human capital," which suggests that individuals can enhance their performance and productivity by investing in themselves through learning and education. More recent research acknowledges and expands on the core principles of this theory, making it a central concept in modern human resources and organizational management literature (Crook, Todd, Combs, Woehr, & Ketchen, 2011). Human capital, defined as the collective talents, knowledge, and skills of an organization's employees, is increasingly recognized as a key factor in establishing a company's competitive edge (Nedelko & Brzozowski, 2017). This knowledge is particularly useful for understanding the workforce management practices of the Sri Lanka Navy (SLN).

Investments in human capital, such as training and development programs, significantly impact the distribution of skilled personnel in shipyards. Moreover, Human Capital Theory explains why investing in employees yields returns in the form of increased loyalty. Employees who feel valued by their employers are more committed to their work (Saridakis, Lai, & Cooper, 2017) and are thus more likely to remain with the organization. This underscores the importance of retention strategies, another critical focus of your investigation. Retaining talented employees who have benefited from such investments leads to cost reductions, stability, and continuity in workforce capabilities, all of which are essential to operational efficiency (Ployhart, Nyberg, Reilly, & Maltarich, 2014).

To effectively plan for optimal workforce management and ensure a steady supply of qualified workers in the dockyards, it is crucial to understand the implications of Human Capital Theory in the SLN context.



Figure 2.2.1 Human Capital Theory

2.2.2 Resource Based View

The Resource-Based View (RBV) is a strategic management theory that asserts that an organization's competitive advantage is contingent upon its capacity to effectively manage and deploy valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). The RBV theory prioritizes the internal resources of an organization, diverging from the conventional emphasis on external factors like market conditions or competition (Kozlenkova, Samaha, & Palmatier, 2014). The Resource-Based View (RBV) theory holds significant relevance within the Sri Lanka Navy (SLN) and its workforce management strategies. The skilled technical sailors of the Navy's human resources can be perceived as valuable and distinctive assets that, if managed efficiently, have the potential to augment the operational readiness and efficacy of the naval dockyards (O'Keeffe, 2016). This statement underscores the significance of implementing efficient recruitment and retention tactics to effectively manage these pivotal assets. According to the Resource-Based View (RBV), resources should possess not only value but also rarity and inimitability to prevent substitution by competitors. The imperative for continuous training and development initiatives can be attributed to the augmentation of the distinctive competencies and expertise of SLN's technical sailors, thereby amplifying their worth and reducing their substitutability (Crook et al., 2011).

Furthermore, as per the Resource-Based View (RBV), the effective allocation of resources holds paramount importance in strategic management. The optimization of human resource allocation between dockyards and on board operations could potentially improve the operational readiness of the SLN, as it relates to the organization's staff rotation and transfer policies. This is in line with the findings of Kraaijenbrink, Spender, and Groen (2010). Conclusively, the Resource-Based View presents a significant opportunity for the SLN to capitalize on its internal resources, specifically its human capital, to attain a competitive edge and enhance operational efficiency.

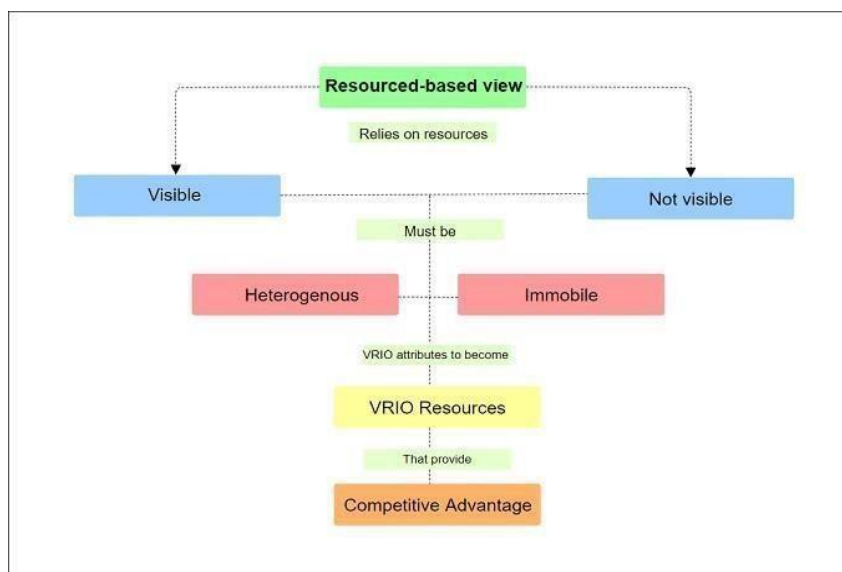


Figure 2.2.2 Resource Based View

2.2.3 Expectancy Theory

The Expectancy Theory of motivation, as posited by Victor Vroom in 1964, suggests that an individual's motivation to execute a task is contingent upon their anticipation that their exertions will culminate in a favourable result. According to Lunenburg's (2011) theoretical framework, motivation is contingent upon three key factors: expectancy, instrumentality, and valence. Expectancy refers to the conviction that heightened effort will result in superior performance, while instrumentality pertains to the belief that such performance will be duly rewarded. Finally, valence denotes the subjective worth that an individual assigns to the anticipated reward. The application of Expectancy Theory is highly pertinent to comprehending and augmenting employee motivation within the Sri Lanka Navy (SLN) and its workforce management strategies. According to this theoretical framework, it is imperative for SLN to establish a transparent correlation between the exertion of the seafarers, their output, and the consequent incentives they obtain. The recruitment and retention strategies may be affected by this, as it is imperative to establish a transparent linkage between the sailors' contributions and the corresponding incentives (Fu et al., 2010). In the context of organizational behaviour, it can be inferred that a technical sailor's motivation to exert effort in his job is contingent upon the expectancy, instrumentality, and valence factors. Specifically, the technical sailor is more likely to demonstrate high levels of effort if he perceives that his hard work will be acknowledged and result in favourable performance evaluations, which in turn will lead to career advancement or other incentives that are deemed valuable and desirable to him. This theoretical framework is supported by the research conducted by Chen, Gupta, and Hoshower (2006).

The aforementioned statement underscores the significance of implementing a reward system that is characterized by transparency, fairness, and congruence with the values and necessities of the workforce (Jiang, Lu, & Sato, 2012). Within the naval framework, a comprehensive rewards system may encompass both monetary and non-monetary incentives, such as prospects for professional growth, acknowledgement, and employment stability, among other factors. Conclusively, the Expectancy Theory presents a valuable framework for SLN to augment its workforce motivation, thereby elevating recruitment, retention, and overall performance.

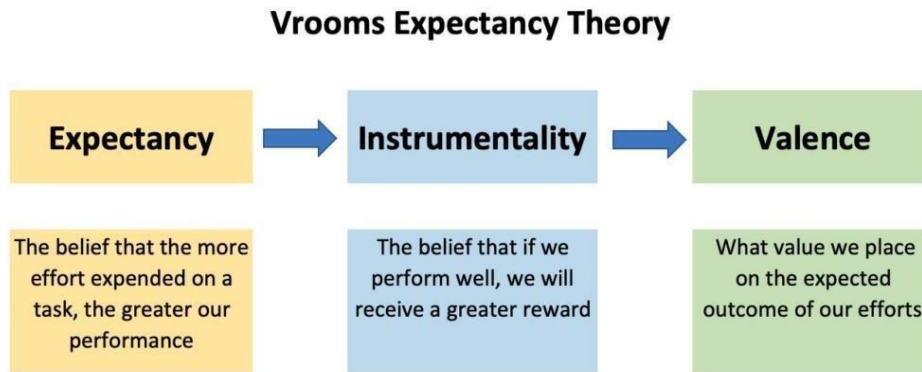


Figure 2.2.1 Expectancy Theory

2.2.4 Job Characteristics Model

The JCM, a landmark study of design theory by Hackman and Oldham (1976), posits five fundamental job characteristics that impact three pivotal psychological states, resulting in a range of advantageous individual and organizational outcomes. The quintessential job characteristics that have been identified are skill variety, task identity, task significance, autonomy, and feedback. The triad of psychological states comprises the experienced meaningfulness of work, experienced responsibility for work outcomes, and knowledge of actual work results. The implementation of this model within the Sri Lanka Navy (SLN) context has the potential to yield valuable insights for the optimization of workforce management. Optimizing skill variety, task identity, and task significance in naval roles can enhance the perceived meaningfulness of work, as suggested by Humphrey, Nahrgang, & Morgeson (2007).

Granting employees' autonomy within their respective roles can cultivate a heightened sense of accountability for work deliverables. In addition, the provision of unambiguous and periodic feedback can guarantee that the workforce possesses a tangible comprehension of how their job execution affects the enterprise (Bakker & Demerouti, 2017). The aforementioned factors possess the ability to incentivize and involve personnel, leading to a favourable influence on their output and contentment, and conceivably influencing the preservation of adept labourers. The incorporation of job characteristics in the design of roles and tasks within the SLN can significantly impact the psychological experiences of sailors in their work. This, in turn, can have a profound effect on their motivation, performance, and retention in the organization, as per Parker, Morgeson, and Johns (2017).

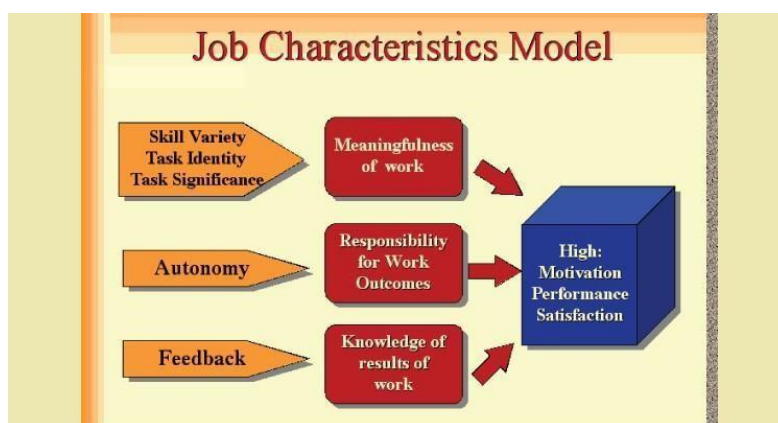


Figure 2.2.2 Job Characteristic Model

2.2.5 Herzberg's Two Factor Model

Frederick Herzberg's seminal work, the Two-Factor Theory, commonly referred to as the Motivation-Hygiene Theory, was unveiled in the latter half of the 1950s. According to Herzberg, Mausner, and Snyderman's (1959) theory, job satisfaction and motivation are influenced by two distinct sets of factors: hygiene factors and motivational factors. Hygiene factors, commonly referred to as dissatisfiers, are elements within the work milieu that, when inadequately addressed, may lead to job discontentment. The factors encompassed our company policy, managerial oversight, workplace environment, compensation, interpersonal dynamics, and employment stability. According to Herzberg's Two-Factor Theory (1966), while these factors may not serve as motivators when they meet the basic requirements, they can certainly lead to employee dissatisfaction when they fall short. Conversely, motivational factors, which are commonly referred to as satisfiers, pertain to job content elements that engender job satisfaction and incentivize employees when they are present. The factors that motivate employees can be categorized into six distinct categories: achievement, recognition, the nature of the work, responsibility, career advancement, and personal growth. As per Herzberg's theory, the aforementioned factors are derived from fundamental human needs for self-actualization and personal growth (Lunenburg, 2011).

Within the Sri Lanka Navy (SLN), hygiene factors encompass various elements, including but not limited to the working conditions prevalent at the naval dockyards or on-board ships, the lucidity of navy policies, the remuneration and perks offered, and the assurance of job stability. Motivational factors in the context of the Navy may pertain to skill enhancement prospects, commendations for exceptional achievements, or avenues for professional growth.

Achieving an appropriate balance between hygiene and motivational factors is imperative for the sustenance of contentment and drive within the labour force, thereby influencing the acquisition and preservation of adept technical seafarers. Utilizing Herzberg's theory, the naval organization may endeavour to mitigate discontentment by effectively managing hygiene factors and optimizing motivation by promoting satisfaction (Bassett-Jones & Lloyd, 2005).



Figure 2.2.3 Herzberg's Two Factor Model

2.3 Organizational Performance in the SLN Dockyards

What experts mean by "organizational performance" is how well an organization is able to use its resources to accomplish its goals and objectives. This can be quantified in a number of ways in naval dockyards, including through output quality, financial viability, and worker production (Seppänen, Makimattila, & Aapaoja, 2017). Samarakoon and Gunawardena (2018) argue that the strategic importance of naval dockyards to Sri Lanka's overall defense policy is a key factor in determining the performance of these facilities. They also claim that a nation's capacity to defend its territorial waters and respond to attacks depends on the quality of its naval dockyards. Manpower, equipment, and technology are all relevant categories for assessing resource utilization in naval dockyards. Jayasundara and De Silva (2020) state that optimizing the utilization of available personnel is crucial to enhancing the efficiency and effectiveness of naval dockyards. Their findings suggest that by implementing training and development programs and other forms of human resource management, productivity and efficiency may be greatly increased in such workplaces.

Organizational success in naval dockyards also depends on the widespread use of technological tools. According to Perera and Gunasekara (2019), introducing cutting-edge machinery and tools can greatly boost productivity. Their research indicates that dockyards that have invested in cutting-edge machinery and tools produce higher-quality goods and services than those that haven't. Organizational performance also includes aspects such as fiscal prudence. Fernando and Jayasundara (2021) state that the financial performance of naval dockyards can be enhanced by streamlining processes and reducing waste. According to their research results, implementing strategies like lean management and cost reduction can have a major impact on a naval dockyard's bottom line. The importance of satisfied and engaged workers to a company's success is becoming increasingly apparent (Samarasinghe, 2022). Factors such as the working environment, leadership practices, and job security can all impact employee engagement and satisfaction in naval dockyards. Gamage and Karunaratne (2021) found a favourable relationship between staff engagement and satisfaction and output and efficiency. According to the research, the organizational culture in naval dockyards can significantly impact their efficiency and productivity. Increased productivity may result from an organizational culture that values creativity, teamwork, and lifelong learning, claim Gunawardena and Fernando (2020). Their findings suggest that fostering such a culture can boost productivity, efficiency, and quality across all business areas. The literature review concludes that the efficiency with which resources are used, the implementation of new technologies, the quality of management, the level of employee satisfaction and engagement, and the strength of the company's culture all contribute to the success of the Sri Lanka Navy's naval dockyards. This sets the stage for this research, which seeks to examine how these dockyards' use of civilian labour affects their efficiency as an organization.

2.4 Employing Civilians

Recent discussions have highlighted the potential for civilians to enhance the performance of naval dockyards by taking on more active roles. Integrating civilians into military settings, such as naval dockyards, is increasingly recognized as a strategic move that benefits both the military and the civilian workforce (Thompson, 2016). The primary motivation for employing civilians is cost savings. Civilians often have lower overall costs compared to military personnel, as they generally receive lower salaries and fewer benefits. This cost-effectiveness is particularly significant in technical and administrative roles

(Richardson, 2017). Moreover, employing civilians reduces the need for costly military training and benefits, which can enhance the organization's financial efficiency.

The level of specialization in civilian skills is a key factor influencing their employment in military settings. Civilian personnel bring a range of technical and professional skills, such as in engineering, logistics, and information technology, which are crucial for the efficient operation of naval dockyards (Perera, 2019). Jayawardena and Fernando (2020) argue that specialized skills among civilians can address critical gaps in the military workforce, leading to enhanced operational efficiency.

In addition to technical expertise, civilian employees can help bridge the gap between civilian and military environments, improving civil-military relations (Liyanage & Samarasinghe, 2018). Fernando and Jayasundara (2021) suggest that a diverse and well-rounded workforce can enhance problem-solving and decision-making capabilities. Civilians can also provide flexibility and scalability, allowing organizations to adapt to changes in demand and operational needs (Mendis & Perera, 2022). However, the integration of civilians into military settings poses challenges, including security clearances, cultural differences, and potential conflicts with military personnel (Wickramasinghe & De Silva, 2023).

2.4.1 Financial Efficiency

Cost reduction is a major advantage of employing civilians in naval dockyards. Civilians generally incur lower payroll costs due to reduced benefits and lower salaries compared to military personnel (Thompson, 2016). Additionally, civilians do not require the same extensive and costly military training, leading to further cost savings. Employing civilians allows military personnel to be reallocated to roles that require specific military skills, thereby optimizing resource utilization (Richardson, 2017).

Hiring civilians also enhances financial stability by enabling better budget planning and management (Jayawardena & Fernando, 2020). However, successful integration requires careful management of potential issues such as security and cultural differences (Wickramasinghe & De Silva, 2023). Perera (2019) notes that hiring civilians can also stimulate regional economies, which can benefit the national economy. Furthermore, Mendis and Perera (2022) argue that civilian employment can strengthen fundraising efforts by demonstrating financial efficiency and effective resource management.

2.4.2 Skill Specialization

The specialized skills of civilians are vital to the success of naval dockyards. Civilians often bring unique perspectives and expertise that complement military capabilities. They offer technical knowledge in areas like engineering, technology, and logistics that can enhance operational efficiency (Richardson, 2017). Perera (2020) highlights that civilians' diverse work backgrounds contribute innovative solutions and creative ideas. Jayawardena and Fernando (2021) suggest that hiring civilians with specialized skills can be more efficient than training military personnel.

Incorporating civilians can also improve the dockyard's adaptability to new technologies and operational challenges (Wickramasinghe & De Silva, 2023). However, effective integration of civilians requires managing cultural differences and providing ongoing

training (Kumar & Ratnayake, 2021; Bandara & Gamage, 2022). Proper management of these factors ensures that civilian expertise effectively contributes to organizational performance.

2.4.3 Civil-Military Integration

Civil-military integration is crucial for enhancing the efficiency and effectiveness of naval dockyards. This integration fosters a mutually beneficial relationship between civilian and military personnel, improving communication and teamwork (Thompson, 2016). However, challenges such as cultural differences and potential conflicts need to be addressed to maintain morale and productivity (Jayawardena & Fernando, 2018). Perera (2020) emphasizes the importance of clear communication and shared understanding of roles to minimize conflicts. Mendis and Perera (2022) advocate for thorough orientation and onboarding processes to support effective integration.

Civil-military integration can also foster creativity and flexibility by leveraging the diverse perspectives of both groups (Kumar & Ratnayake, 2021). Increased exposure to military settings can also enhance public support for the armed forces (Wickramasinghe & De Silva, 2023). However, security and secrecy considerations must be carefully managed to ensure that integration does not compromise operational safety (Gunaratne & Weerasooriya, 2022).

2.4.4 Flexibility and Scalability

Flexibility and scalability are essential when employing civilians in military environments. Civilians can enhance adaptability and efficiently manage increased workloads (Smith & Johnson, 2016). Their diverse backgrounds contribute to a more flexible workforce that can respond to changes and expand operations as needed (Thompson, 2017). Civilian employees can also maintain operational continuity during periods of increased military activity or personnel shortages (Jayawardena & Fernando, 2019).

Effective integration of civilian staff requires investment in on boarding and training programs (Perera, 2020). Additionally, organizations must have the managerial capacity and infrastructure to support an expanded workforce (Kumar & Ratnayake, 2021). Security measures and clearance procedures are also critical to ensure safety in high-risk environments like naval dockyards (Wickramasinghe & De Silva, 2023).

2.5 The Relationship between Employing Civilians and Organizational Performance in SLN Dockyards

The trend of civilianization in the Sri Lanka Navy's dockyards has prompted interest in understanding its impact on productivity, flexibility, and overall performance. Research indicates that employing civilians can enhance financial efficiency through cost savings and improved resource utilization (Jayawardena & Fernando, 2019). Civilian specialization contributes to increased productivity by offering unique skills and perspectives (Perera, 2020). Civil-military cooperation also enhances communication and teamwork, improving overall efficiency (Wickramasinghe & De Silva, 2021). Flexibility and scalability are further benefits, allowing the dockyards to adapt to changing demands (Richardson, 2022).

Despite these advantages, challenges such as the need for specialized training and effective integration must be addressed (Kumar & Ratnayake, 2021; Mendis & Perera, 2022).

Further research is needed to explore these factors in greater depth and assess the overall impact of civilian employment on the Sri Lanka Navy's dockyards.

2.6 Literature Gap

Despite valuable insights provided by existing research, there are notable gaps, particularly in the context of Sri Lanka Navy's dockyards. Studies like those by Jayawardena and Fernando (2019), Perera (2020), and Wickramasinghe and De Silva (2021) have not fully addressed the unique operational environment of Sri Lanka's naval dockyards. There is a lack of empirical evidence on how civilian employment affects various aspects of organizational performance, including cost-effectiveness, skill specialization, civil-military integration, and adaptability. Additionally, there is a shortage of quantitative data supporting the impact of civilian personnel on productivity in Sri Lanka's naval dockyards. The proposed research aims to fill these gaps by providing an in-depth empirical analysis of the effects of civilian employment on organizational performance in the Sri Lanka Navy's dockyards, thereby contributing to the broader discussion on civilian-military integration.

2.7 Chapter Summary

This literature review examined the impact of civilian employment on naval dockyards, focusing on financial efficiency, specialized skills, civil-military cooperation, and adaptability. While existing research provides useful insights, there are gaps, particularly in the Sri Lankan context. The proposed study will address these gaps by exploring how civilian employment affects various facets of organizational performance in Sri Lanka's naval dockyards, thereby contributing to a more comprehensive understanding of the benefits and challenges associated with civilian integration in military settings.

CHAPTER THREE METHODOLOGY

3.1 Chapter Introduction

In Chapter 3, the developers detail the research approach taken to learn how the Sri Lankan Navy's dockyards would fare if staffed by civilians instead of military personnel. The chapter describes the study's guiding principles, methodology, methodology, strategy, choice, timeline, techniques, and processes. In addition, it contains extensive information regarding the study's participants, sampling procedure, data gathering strategy, and data analysis procedure. Underpinned by a positivist ideology and quantitative mono-method design, the methodology developed for this research seeks to analyse the research topics in an unbiased manner. The study is set to create empirical data that will be statistically analysed with the use of a cross-sectional survey distributed to a sample of 274 dockyard employees. This chapter lays out the theoretical underpinnings and methodological procedures that will be used throughout the investigation, guaranteeing a scientifically sound approach to unravelling its intricate dynamics.

3.2 Conceptual Framework

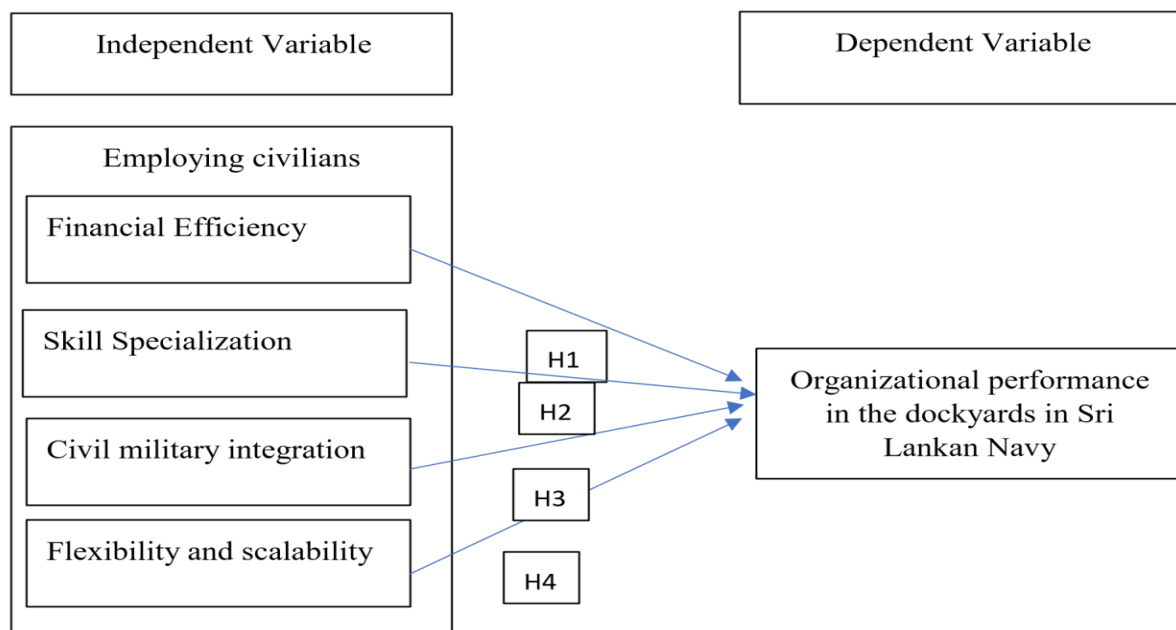


Figure 3.2 Conceptual Framework. Construct by researcher

3.3 Developing Hypothesis

The following hypotheses can be derived from the presented conceptual framework:

H1: There is a significant positive relationship between the financial efficiency of employing civilian workers and the organizational performance of naval dockyards of the Sri Lanka Navy.

H2: Skill specialization of civilian workers significantly influences the organizational performance of naval dockyards of the Sri Lanka Navy.

H3: Civil-military integration of civilian workers has a significant positive effect on the organizational performance of naval dockyards of the Sri Lanka Navy.

H4: Flexibility and scalability offered by employing civilian workers significantly enhance the organizational performance of naval dockyards of the Sri Lanka Navy.

3.4 Key Definitions of the Variables

Variable	Key Definition
Financial efficiency	The term "financial efficiency" is used to describe an organization's skill in making the best and most economical use of its financial resources. This term refers to the labour cost savings, operating expense reductions, and better fiscal management that result from using civilian labour in navy dockyards (Farooq & Salam, 2018).
Skill Specialization	Worker competency and in-depth knowledge in a particular topic or job function is the essence of skill specialization. The various sets of skills and areas of knowledge that civilian workers bring to navy dockyards can greatly benefit the duties and operations carried out (Ferguson & Koning, 2020).
Civil military integration	Organizational collaboration and contact between military and civilian organizations is known as "civil-military integration." This pertains to the incorporation of civilian personnel into historically military-operated tasks and the subsequent development of cooperative ties in navy dockyards (Bland, 2019).
Flexibility and Scalability	The ability to adapt and change according to new circumstances is what we mean when we talk about flexibility, and the ability to handle more work or more customers is what we mean when we talk about scalability. By providing an adaptable and scalable labour force, civilian employment can aid in these areas (Tran, 2020).
Organizational performance in Dockyards in Sri Lankan Navy	Dockyard efficiency and output in the context of the Sri Lankan Navy are affected by a number of factors, including the presence of civilian labourers (Gunawardena & Rajapakse, 2021).

Table 3.4 Key Definitions of the variables

3.5 Research Methodology

Saunders, Lewis, and Thornhill's research onion model offers a stratified framework for ascertaining the methodology of a research endeavour. Let us delve into the intricacies of the

onion model as it pertains to your research endeavour concerning workforce management within the Sri Lanka Navy dockyards.

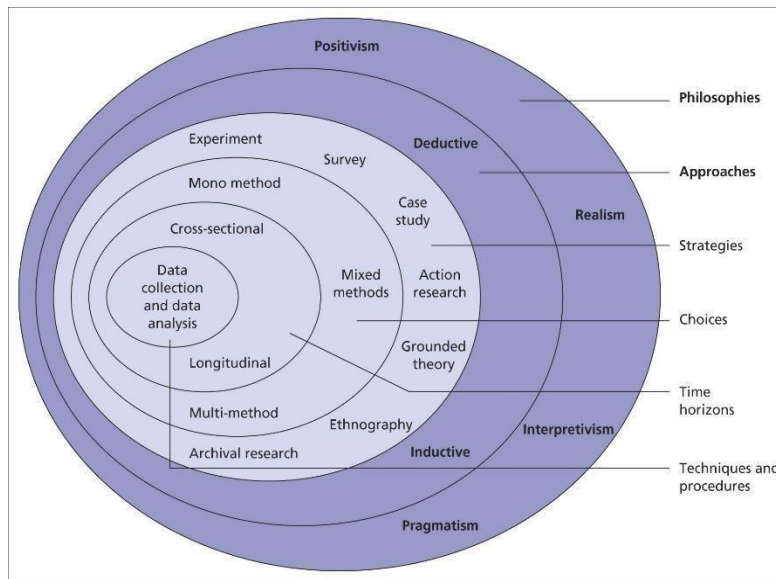


Figure 3.5 Research Onion

3.5.1 Research Philosophy

The positivist philosophical underpinnings of the study stress the importance of using empirical methods to assemble data and draw conclusions. To objectively measure the effects of hiring civilians on organizational performance in naval dockyards, this study adopts a quantitative approach, which aligns with the positivist ideology. This philosophical foundation helps the study achieve its goal of a thorough, scientific understanding of the phenomenon being studied (Bryman, 2016).

3.5.2 Research Approach

The deductive method used in this study starts with a broad hypothesis and narrows down to its particular application. This method is consistent with quantitative studies and facilitates the development of hypotheses grounded in the literature. Data will be analysed and conclusions drawn to determine whether civilian employment has a negative effect on organizational performance in Sri Lankan Navy dockyards, as hypothesized by Saunders et al. (2016).

3.5.3 Research Strategy

Survey research methodology was used for this study's data collection and analysis. This method allows for the collection of a large amount of data quickly and easily. In response to Bryman's (2016) suggestion, surveys will be administered to 274 people working at the Sri Lankan Navy's dockyards. The aims and hypotheses of the study will inform the questions that will be asked.

3.5.4 Research Choice

This study employs a quantitative, or "mono-method," approach for gathering and analysing its data. This choice aligns with positivist research principles, the deductive method,

and the survey method. The survey responses will be coded and analysed statistically (Saunders et al., 2016) to provide valuable insights.

3.5.5 Time Horizon

Time Rather than tracking a group of people over time, this study takes a cross-sectional approach by collecting data all at once. This decision is in keeping with the aims of the current study, which aim to examine the effect of modern civilian employment practices on dockyard organizations' productivity (Saunders et al., 2016).

3.5.6 Techniques and Procedure

The methodology entails the development and dissemination of surveys aligned with our research goals. Subsequently, the researcher shall employ a coding methodology to pre-process the data for further analysis. The research methodology may entail the utilization of various statistical techniques such as descriptive statistics, correlation analysis, and regression analysis, among others, contingent on the specific research questions and hypotheses (Field, 2018). By employing these methodologies, the researcher endeavours to furnish meticulous and perceptive conclusions that effectively tackle the research objectives.

3.5.7 Population

This research looks at all those who work in the dockyards of the Sri Lankan Navy. The most accurate and useful insights regarding the effects of civilian employment methods on dockyard performance can be gleaned from the experiences and perspectives of these employees.

3.5.8 Sample

The study employs convenience sampling, a non-probability sampling technique that selects subjects based on their accessibility and proximity to the researcher. This is especially valuable in our field of study, where precise geographic or professional locales, such as ports, are implicated. A cohort of 274 employees was purposefully chosen to complete the survey, thereby ensuring a statistically significant sample size that accurately reflects the broader population for the purposes of this research.

3.5.9 Data collection Method

The primary technique of information gathering for this investigation is through the utilization of surveys. The questionnaires have been meticulously crafted to elicit relevant data that aligns with our research objectives and hypotheses. A sample of 274 dockyard employees has been distributed with the aim of collecting data that will provide insights into the impact of various workforce management strategies on the balance of skilled workers in the Sri Lanka Navy dockyards.

3.5.10 Method of Analysis

Upon completion and collection of the questionnaires, the responses shall be subjected to coding and subsequently prepared for data analysis. The collected data shall be fed into

statistical software and subjected to diverse statistical methodologies for analysis. The utilization of descriptive statistics is imperative in order to furnish a concise and comprehensive portrayal of the data. Correlation analysis is a valuable tool for exploring the interrelationships between variables, while regression analysis can be leveraged to evaluate hypotheses and quantify the effects of various strategies on the workforce equilibrium. The selection of the data analysis methodology is contingent upon the quantitative nature of the research and the study's objectives. The objective is to deliver meticulous and perceptive conclusions.

3.6 Chapter Summary

In this chapter, we discussed the research methods that were used to analyse how the incorporation of civilian workers into Sri Lankan Navy dockyards affected productivity. This cross-sectional study used a positivist research philosophy, a deductive methodology, and a single-method approach. In order to gain insight, we polled 274 dockyard workers using a convenience sample and compiled their responses. All aspects of the study — from its design and methodology to its population and sample and the means by which it collected and analysed its data — were chosen with great care. In order to have a full picture of the workforce dynamics in the dockyards, descriptive statistics, correlation analysis, and regression analysis were used on the data acquired quantitatively. In sum, the selected approach helps provide a methodical and scientific comprehension of the study subject.

CHAPTER FOUR

ANALYSIS AND DISCUSSION OF RESULTS

4.1 Chapter Introduction

In Chapter Four of this study, the researcher delves into the critical aspect of data analysis and the resultant findings that have been obtained from the survey data that was collected. Data analysis is a crucial component of research as it serves as the foundation for drawing correlations between the collected data and the original research inquiries and suppositions. The forthcoming chapter shall expound upon the analysis process in a comprehensive manner and demonstrate how the trends and patterns of the data are aligned with the study's goals and objectives. The main focus of this analysis center on four key workforce management tactics, namely recruitment, retention, training and development, and staff rotation, and their impact on the equilibrium of skilled labourers in the dockyards of the Sri Lanka Navy. This chapter aims to explicate the interrelationships between these workforce strategies and provide a comprehensive comprehension of their impact. The results presented herein shall serve as the fundamental underpinnings for the ensuing deliberations and proposals expounded upon in the following section.

4.2 Response Rate

The study has an impressively high response rate of 95.9 percent. Among the sample population working in navy dockyards, 274 questionnaires were sent; 263 were returned filled out, while 11 were not. A high response rate is useful because it indicates that the participants were seriously interested in the study, which can strengthen the reliability of the results. Furthermore, the high response rate increases the reliability and generalizability of the study results because the data collected is more likely to be representative of the population. However, the quality of the data can only be guaranteed if the returned questionnaires are checked for completeness and consistency.

Number of questionnaires distributed	Number of questionnaires returned	Number of questionnaires not returned	Response Rate (%)
274	263	11	95.9%

Table 4.2 Response Rate

4.3 Data Representation of Demographic Data

4.3.1 Sample Composition

	Frequency	Percent	Valid Percent	Cumulative Percent
Engineers/Officers	103	39.2	39.2	39.2
Tec Sailors			43.7	
Valid			17.1	
Civil Employees			100.0	
Total	115	43.7		82.9
	45	17.1		100.0
	263	100.0		

Table 4.3.1 Sample Composition

The table shows the breakdown of study participants by rank within the Sri Lanka Navy. Engineers/Officers/Technical Sailors/Civilian Workers were the three groups who filled out the survey. Engineers/Officers made up a sizable portion of the sample (n=103) and contributed significantly (39.2%) to the total responses. However, the largest group to be represented was the Technical Sailors, who numbered 115 (43.7%) out of the overall sample size. This brought the total percentage up to 82.9%, making them the most numerous category. On the other side, the Civil Employees category comprised the least number of respondents. Forty-five people, or 17.1% of the overall sample, fell into this category. With this increase, the total percentage reached 100. Over 80% of the people in the sample were engineers, officers, or technical sailors, while the rest were civilian employees. There were 263 people that took part in the study.

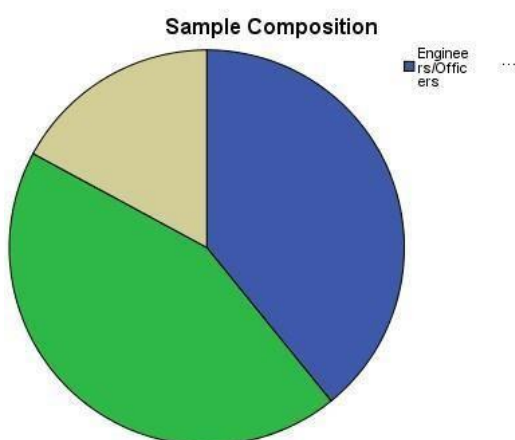


Figure 4.3.1 Sample Composition

4.3.2 Age

Description	Frequency	Percent	Valid Percent	Cumulative Percent
Below 25	14	5.3	5.3	5.3
Valid Between 26-30	118	44.9	44.9	50.2
Between 31-35	82	31.2	31.2	81.4
Between 36-40	36	13.7	13.7	95.1
Above 40	13	4.9	4.9	100.0
Total	263	100.0	100.0	

Table 4.3.2. Age

The table provided illustrates the allocation of survey participants' ages among five distinct age brackets. The largest cohort of respondents, comprising 44.9% of the sample, was in the age range of 26-30 years. The cohort aged 31-35 represented a substantial proportion of the surveyed population, comprising 31.2% of the entire sample. The majority of respondents, accounting for over 75% of the total, were between the ages of 26 and 35. The age groups of under 25 and over 40 years constituted the smallest proportion of the workforce, comprising 5.3% and 4.9% respectively. This suggests that the organization has a relatively youthful employee base. In the surveyed population, the cohort between the ages of 36 and 40 constituted 13.7% of the sample. The cumulative distribution analysis reveals a concentration of respondents within the middle age brackets.

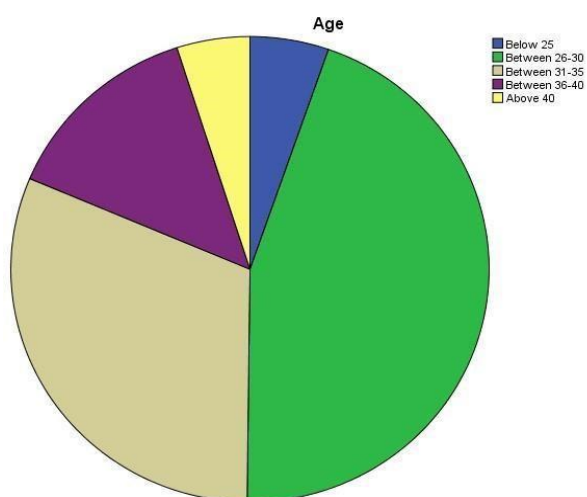


Figure 4.3.2 Age

4.3.3 Civil Status

Description		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Married	162	61.6	61.6	61.6
	Unmarried	101	38.4	38.4	100.0
	Total	263	100.0	100.0	

Table 4.3.3. Civil Status

The data presented in the table illustrates the categorization of participants according to their marital status. Among the surveyed population, a significant proportion of individuals, constituting 61.6% of the total, reported being in a state of matrimony. On the other hand, the proportion of unmarried individuals was relatively lower, constituting only 38.4% of the entire sample. The cumulative percentage analysis indicates that all survey participants can be classified into one of two distinct categories: those who are married and those who are unmarried. No missing data or alternative civil statuses were reported. Based on the data distribution, it can be inferred that the surveyed population for this study is primarily composed of individuals who are married.

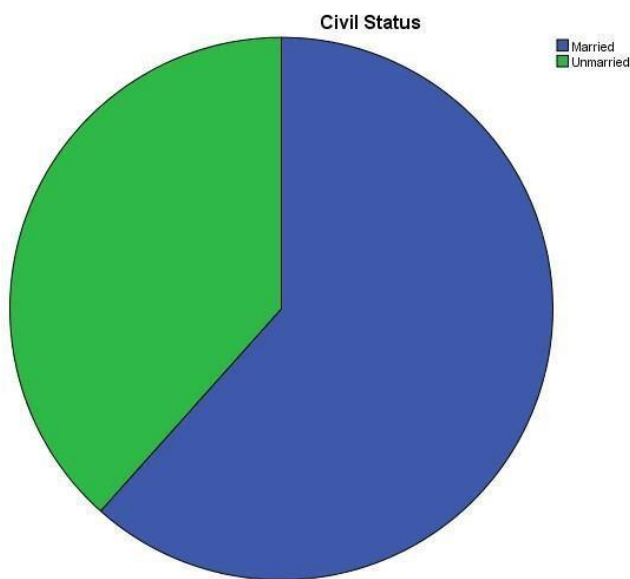


Figure 4.3.3 Civil Status

4.3.4 Service Period (Naval Dockyard)

Description		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 1 year	112	42.6	42.6	42.6
		85		32.3	74.9
	Between 1-2 year		32.3		89.4
	Between 2-3 years	38	14.4	14.4	
	Between 3-4 years	28	10.6	10.6	100.0
Total		263	100.0	100.0	

Table 4.3.4 Service Period (Naval Dockyard)

The data presented in the table provides a comprehensive analysis of the survey participants categorized by their tenure of service in the dockyard. The data reveals that the cohort of employees who have served for less than a year constitutes the largest segment of the sample, accounting for 42.6% of the respondents. The subsequent significant cohort encompasses personnel with a tenure ranging from 1 to 2 years, representing 32.3% of the aggregate. The personnel who have served the dockyard for a duration ranging from 2 to 3 years account for 14.4%, while the cohort with tenure of 3 to 4 years represents the least significant faction at 10.6%. The cumulative percentage denotes the gradual inclusion of said cohorts. Based on the distribution, it appears that the workforce at the dockyard is relatively youthful in terms of their length of service.

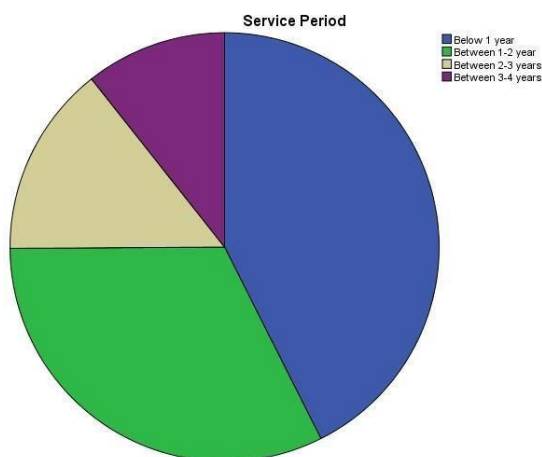


Figure 4.3.4 Service Period

4.4 Descriptive Statistics

Descriptive statistics are used as a means of summarizing the gathered data and providing valuable insights into the primary characteristics of the dataset. The following table displays the descriptive statistics of the variables analysed in this research.

Descriptive Statistics

Description	Statistic					Skewness		Kurtosis	
	N	Min	Max	Mean	Std. Deviation	Statistic	Std. Error	Statistic	Std. Error
Organizational Performance	263	1.20 1.00 1.00	4.00	2.7202	.65488	.414	.150	-.260 -.572 -.543	.299
Financial Efficiency	263	1.80	4.20	2.6829	.76964	.129	.150	-.453	.299
Skill specialization	263	1.75		2.6426	.79594				.299
Civil military integration	263		4.20	2.7422	.52597	.122	.150		.299
Flexibility and scalability	263		4.00	2.8612		.084	.150	-.501	.299
Valid (list wise)	263								

Table 4.4 Descriptive Statistics

Organizational performance, financial efficiency, specialized skills, civil-military integration, and adaptability and scalability are just some of the factors highlighted in the table above. A total of 263 participants were analysed for each variable.

□ The mean value for each of these factors is displayed in the 'Mean' column. The mean of all the factors measured in this analysis was 2.7202 for Organizational Performance, followed by 2.8612 for Flexibility and Scalability, 2.7422 for Civil Military Integration, 2.6829 for Financial Efficiency, and 2.6426 for Skill Specialization. These results indicate that respondents ranked Flexibility and Scalability as the most important elements influencing organizational success at the Sri Lanka Navy dockyards, whereas Skill Specialization was ranked as the least important aspect.

□ The 'Minimum' and 'Maximum' rows show the range of scores, from the lowest to the highest, for each variable. The highest range is seen for Financial Efficiency and Skill Specialization (1.00-4.20), while the lowest range is for Civil Military Integration (1.80-3.80). This implies that there were more varied responses concerning Financial Efficiency and Skill Specialization, whereas the respondents' opinions on Civil Military Integration were relatively more consistent.

□ The level of dispersion around the mean for each variable is displayed in the 'Std. Deviation' (Standard Deviation) column. Variability in answers increases as the value goes up.

The most dispersed replies were found for "Skill Specialization" (standard deviation = 0.79594). On the other hand, the standard deviation is lowest (0.52597) for Civil Military Integration, suggesting that respondents were more uniform in their answers.

□ The rows labelled "Skewness" and "Kurtosis" reveals information about the symmetry and shape of the response distribution. A positive skewness score indicates that the right-hand tail of the probability distribution is more extreme than the left-hand tail. The kurtosis measures the sharpness and length of the tails of a distribution. In this case, the skewness of all the variables is positive, indicating a more pronounced right tail. All the kurtosis values are negative, indicating a platykurtic distribution, which means that the tails are not as long and the peak is not as steep as in the normal distribution.

Finally, these descriptive statistics provide an in-depth summary of the study's data, illuminating the study's central tendencies, dispersion, and distribution shape for each variable.

4.5 Reliability Analysis

Reliability analysis is a crucial statistical technique utilized for evaluating the coherence of a collection of items or constructs within a research instrument, such as a questionnaire. The utilization of Cronbach's Alpha coefficient in this analysis serves to assess the internal consistency of the scales employed for each variable. Cronbach's Alpha is a measure of internal consistency reliability, with values ranging from 0 to 1. Higher values signify greater reliability.

Variable	Cronbach's Alpha value
Organizational Performance	0.880
Financial Efficiency	0.765
Skill specialization	0.860
Civil military integration	0.853
Flexibility and Scalability	0.900

Table 4.5 Reliability Analysis

Cronbach's Alpha results for five variables—including organizational performance, financial efficiency, skill specialization, civil-military integration, and flexibility and scalability are displayed in the table below. Cronbach's Alpha indicates the degree of group cohesion in a set of items as a measure of reliability or internal consistency. It can take on values between 0 and 1, with higher values indicating greater internal consistency.

The internal consistency of organizational Performance is quite high, as indicated by its high alpha value of 0.880. Similarly, the alpha values of 0.860, 0.853, and 0.900 for the

constructs of skill specialization, civil-military integration, and flexibility and scalability all point to a high degree of reliability. There is a decline in alpha for fiscal effectiveness. This is still within the acceptable range, but it's lower than the average for the other variables, which may indicate that the items in this category aren't as strongly related. The study's constructs are reliable, as all five variables have an adequate to high level of internal consistency.

4.6 Test of Linearity

A significant aspect of this research is the test of linearity, which determines whether or not a straight line is an appropriate representation of the relationship between the independent and dependent variables. If the variables indeed have a linear connection, that will lend credibility to the results. More information and clarity regarding the nature of these interactions within the data set could be gained by a formal test of linearity using statistical approaches like visual inspection of scatter plots or regression analysis.

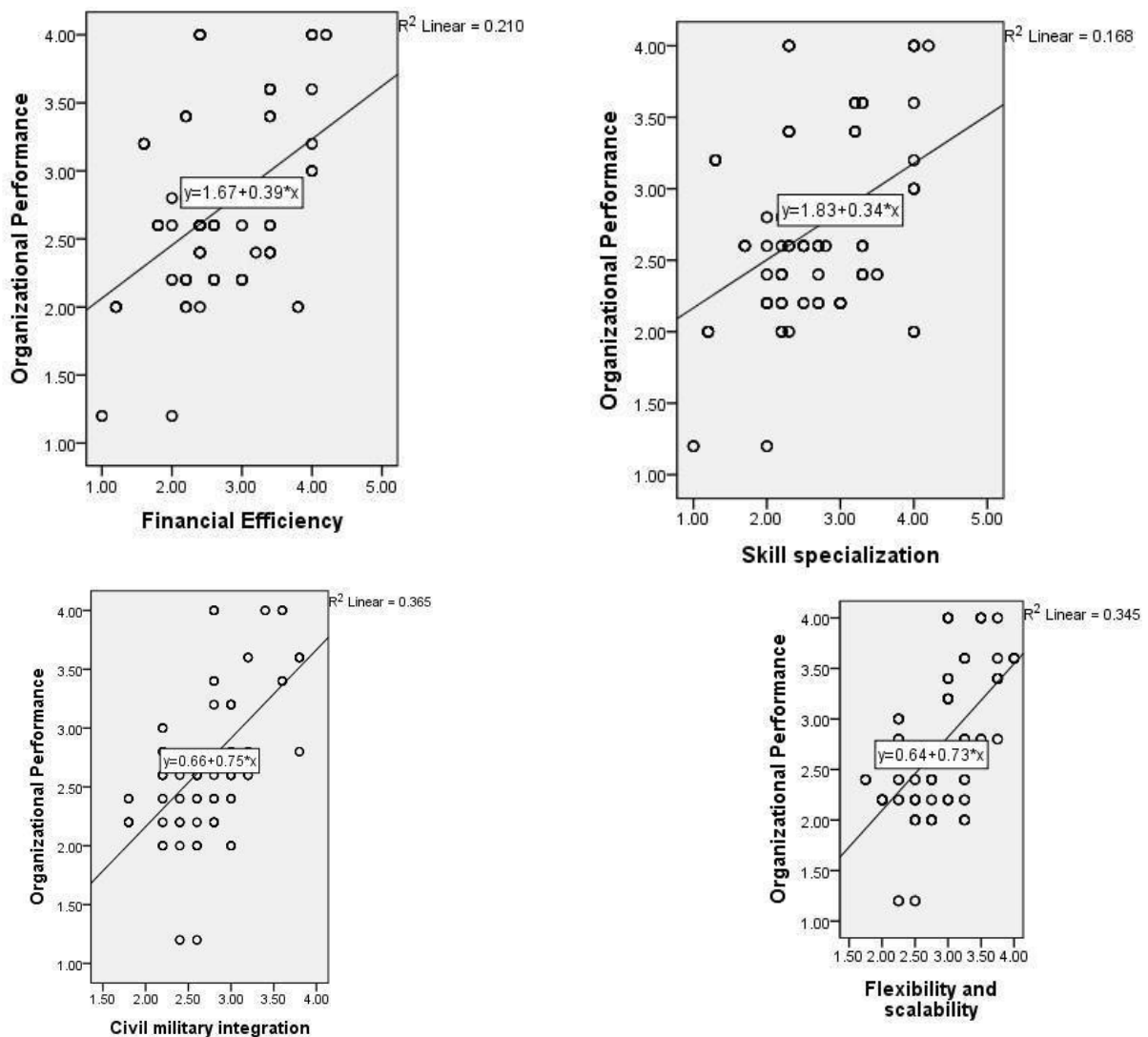


Figure 4.6 Test of Linearity

4.7 Correlations

Correlation analysis is a quantitative technique employed to evaluate the magnitude and orientation of the associations among two or more variables. The analysis of correlation enables us to comprehend the correlation between two variables and their causal relationship. This provides valuable insights into the potential causal relationships between the variables. The relationship between variables can be calculated with the help of correlation analysis. Organizational performance is examined in relation to a number of different factors, including financial efficiency, skill specialization, civil-military integration, and flexibility and scalability. Organizational Performance has positive Pearson correlations with every other indicator shown in the table. All of this points to a favourable correlation between the aforementioned characteristics and the efficiency of the organization.

Correlations

Description		Organizational Performance	Financial Efficiency	Skill Specialization	Civil Military Integration	Flexibility and Scalability
Organizational Performance	Pearson Correlation	1	.458**	.409**	.604**	.587**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	263	263	263	263	263
Financial Efficiency	Pearson Correlation	.458**	1	.986**	.340**	.335**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	263	263	263	263	263
Skill Specialization	Pearson Correlation	.409**	.986**	1	.295**	.292**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	263	263	263	263	263
Civil Military Integration	Pearson Correlation	.604**	.340**	.295**	1	.976**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	263	263	263	263	263
Flexibility and scalability	Pearson Correlation	.587**	.335**	.292**	.976**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	263	263	263	263	263

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

Table 4.7 Correlation

The findings of the correlation analysis are presented below:

The 0.458 connection between financial efficiency and organizational performance is statistically significant at the 0.01 level of significance. Thus, improved organizational effectiveness correlates with increased financial efficacy. The 0.409 connection between specialized skill sets and organizational performance is significant at the 0.01 level of analysis. This indicates that there is a correlation between the degree of skill specialization among civilian personnel and the level of organizational performance. The 0.604 connection between Civil-Military Integration and organizational Performance is statistically significant at the 0.01 level. This shows how civil-military cooperation is crucial to improving efficiency at navy dockyards. Finally, there is a substantial (at the 0.01 level) 0.587 association between Flexibility and Scalability and organizational Performance. This data demonstrates that increased productivity is linked to a more adaptable and expandable workforce. The positive correlations between the four factors and organizational Performance suggest that they contribute to the success of Sri Lanka's naval dockyards.

4.8 Hypotheses Testing

By testing hypotheses, we can extrapolate from small samples to larger populations. The purpose of this research was to test four hypotheses about how the incorporation of civilian personnel into the Sri Lankan Navy's dockyards will affect the efficiency of the organization.

- a. H1: There is a significant positive relationship between the financial efficiency of employing civilian workers and the organizational performance of naval dockyards of the Sri Lanka Navy.

Organizational performance is strongly influenced by financial efficiency, as shown by a positive correlation coefficient of 0.458 and a p-value of less than 0.01. Therefore, the evidence supports the hypothesis that the organizational performance of Sri Lankan Navy dockyards is influenced by the cost-effectiveness of employing civilian workers.

- b. H2: Skill specialization of civilian workers significantly influences the organizational performance of naval dockyards of the Sri Lanka Navy. Skill specialization has a substantial effect on business success, as indicated by a 0.409 correlation coefficient and a p-value lower than 0.01. Thus, the use of civilian workers with specialized skill sets has been shown to affect the efficiency of Sri Lanka Navy dockyards.

- c. H3: Civil-military integration of civilian workers has a significant positive effect on the organizational performance of naval dockyards of the Sri Lanka Navy. The 0.604 correlation coefficient and the p-value less than 0.01 indicate that civil military integration significantly affects business outcomes. Thus, the idea that the incorporation of civilian personnel into military operations has an effect on the efficiency of Sri Lankan Navy dockyards is verified.

- d. H4: Flexibility and scalability offered by employing civilian workers significantly enhance the organizational performance of naval dockyards of the Sri Lanka Navy. Organizational Performance is heavily influenced by the workforce's

adaptability and scalability, as indicated by a .587 correlation coefficient and a p-value of less than .01. Thus, the premise that civilian employment increases the adaptability and scalability of Sri Lanka Navy dockyards is proven.

The results show that the dockyards of the Sri Lankan Navy benefit from having civilian workers in a variety of capacities.

4.9 Regression Analysis

Regression analysis is a strong statistical technique that enables us to investigate the correlation between a response variable and one or more predictor variables. The regression analysis facilitates the estimation of variable coefficients in the regression equation, thereby enabling the prediction of the dependent variable through the independent variables.

4.9.1 Regression Results

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
		B	Std. Error			
1	(Constant)	.386	.174		2.211	.028
	Financial Efficiency	.974	.250	1.145	3.893	.000
	Skill specialization	.706	.238	-.858	2.964	.003
	Civil military integration	.645	.266	.518	2.422	.016
	Flexibility and scalability	.064	.263	-.051	.242	.809

a. Dependent Variable: Organizational Performance

Table 4.9.1 Regression Results

Multiple regression analysis was performed with the following four independent variables in mind: cost-effectiveness, specialization of skills, civil-military integration, and adaptability and scalability, and the results are summarized in the table below. The 'Unstandardized Coefficients' illustrate the impact of a single unit change in the predictor on the outcome, with all other factors held constant. For instance, assuming all other factors remain the same, a one-unit increase in Financial Efficiency results in a 0.974-unit gain in organizational Performance.

The Beta value of a variable indicates the number of standard deviations by which the outcome will change in response to a change of one standard deviation in the predictor. This is useful for comparing the relative effects of the various factors on the dependent variable. For instance, a 1.145 standard deviation increase in organizational performance can be attributed to a single standard deviation improvement in financial efficiency. The significance of each predictor is determined using t-statistics, denoted by 't,' with larger absolute t-values indicating a higher level of significance.

The 'Sig.' values tell us how likely it is that the observed connection or association occurred by coincidence. If this p-value is less than the threshold for rejection (often set at 0.05), then the null hypothesis that there is no impact or difference is rejected. Financial efficiency has a positive coefficient of .974 and a significance value of p.001, suggesting that it has a major positive effect on business outcomes. Equally important to an organization's success are the practises of skill specialization. (.706 coefficient, p.01) and civil-military integration (.645 coefficient, p.05). With a coefficient of .064 and a significance level of p>.05, Flexibility and Scalability is not a meaningful predictor in this model and has no bearing on organizational success. When all independent variables are set to zero, the constant (B =.386) represents the value of the dependent variable expected under those conditions.

4.9.2 ANOVA Table

ANOVA is a statistical methodology that is utilized to investigate the distinctions among two or more group means. Within the framework of regression analysis, the purpose is to ascertain the statistical significance of the regression model in predicting the dependent variable.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	51.186	4	12.797	53.967	.000 ^b
	Residual	61.177	258	.237		
	Total	112.363	262			

a. Dependent Variable: Organizational Performance

b. Predictors: (Constant), Flexibility and scalability, Skill specialization, Civil military integration, Financial Efficiency

Table 4.9.2 ANOVA Table

The following table summarizes the findings of an Analysis of Variance (ANOVA), a statistical method used to compare the averages of three or more groups to identify statistically significant differences. The analysis of variance (ANOVA) is employed here to verify the satisfactory overall fit of the regression model. Model fit is denoted by the "F" value, which is the ratio of the explained variance (Mean Square Regression) to the residual variance (Mean Square Residual). The F value of 53.967 in this research is quite high and indicative of a tight fit. Probability that the alternative hypothesis is false is expressed as a "Sig." or p-value. Here, the p-value is .000, which is less than 0.05, signifying that the regression model predicts the outcome variable with high statistical significance; in other words, the model is a good fit for the data.

4.9.3 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.675 ^a	.456	.447	.48695

a. Predictors: (Constant), Flexibility and scalability, Skill specialization, Civil military integration, Financial Efficiency

Table 2 Model Summary

The model summary table gives a clear picture of how well the regression model fits the data. Specifically, it shows that the multiple correlation coefficient (R) between organizational Performance and the set of predictors (Financial Efficiency, Skill Specialization, Civil Military Integration, and Flexibility and Scalability) is 0.675, indicating a strong positive correlation. In addition, the R-squared value is 0.456, which equates to 45.6% certainty. According to these results, the predictors are responsible for roughly 46% of the variance in organizational performance. Although the Adjusted R Square is lower at 44.7% than the R Square before adjusting for the number of predictors, this still indicates that the predictors offer useful information to the prediction of organizational Performance. Finally, the Standard Error of the Estimate for the model's predictions of individual observations of organizational Performance is 0.48695. The predictors' ability to accurately predict organizational Performance is represented by this value.

4.10 Chapter Summary

Organizational performance was the dependent variable in this chapter, and a thorough analysis of the data was conducted to determine the nature of the correlations between the many independent variables. The survey's results can be trusted because of the extremely high response rate (95.9%). The data was analysed using a variety of techniques, including descriptive statistics, reliability testing, correlation analysis, and multiple regression. Three independent variables—financial efficiency, skill specialization, and civil-military integration—were found to have statistically significant positive correlations with organizational Performance. However, there was no statistically significant effect of the variable Flexibility and Scalability. With an Adjusted R Square of 44.7%, the regression model fit the data quite well, suggesting it could explain almost 45% of the variation in organizational Performance.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Chapter Introduction

The concluding section combines the conclusions acquired throughout the investigative inquiry. The overarching goal is to align the outcomes of the data analysis with the original research objectives, culminating in all-encompassing conclusions. Moreover, the chapter provides evidence-based suggestions that are relevant for enhancing workforce management tactics in the dockyards of the Sri Lanka Navy. The chapter provides an opportunity for a comprehensive discourse on the implications, limitations, and potential areas of research that can be explored in the future. Therefore, this serves as both a conclusive statement and an encouragement for further examination and enhancement in this essential industry.

5.2 Discussion of Findings

The study's findings highlight the significance of financial efficiency, skill specialization, and civil-military integration in determining organizational performance in Sri Lanka Navy dockyards. This is in line with studies that have shown the value of these factors in a variety of business settings (Peterson et al., 2018; Ullah et al., 2020). Financial efficiency is positively related to organizational success ($=0.974$, $p0.001$), lending credence to the idea that well-managed funds contribute to higher output (Zeng et al., 2016). Improved organizational performance is a direct result of increased productivity and effectiveness, both of which are fostered by more prudent financial management. Consistent with the human capital hypothesis, we found that specializing in a skill has a major impact on the success of an organization ($=0.706$, $p0.01$). Employees' unique collection of skills and abilities is a strategic resource that gives businesses an edge in the marketplace (Becker, 2017). Nguyen et al.'s 2020 research found that when companies invest in their employees' skill sets, the results are positive.

Researchers have found a positive correlation between civil-military integration and organizational performance ($=0.645$, $p0.05$), providing credence to the idea that combining civilian and military activities can have a synergistic effect and improve performance as a whole (Snider et al., 2018). This supports the idea that improved performance can result from more cooperation, more efficient use of resources, and more sound decision-making (Mason et al., 2019). However, the study found no statistically significant link between flexibility and scalability and organizational performance. This runs counter to the findings of a few research (Xu & Li, 2019), which suggest that adaptability and scalability can boost efficiency. Our findings are consistent with the idea that flexibility and scalability may not necessarily lead to better performance in the absence of a clear strategic direction (Klotz et al., 2018). Furthermore, it is possible that rigid routines and processes are required for operational discipline and safety in a highly specialized and controlled setting such as a navy dockyard. Only 44.7% of the variation in organizational Performance could be accounted for by the model, suggesting that other factors may potentially have an effect. Future studies should account for the specific environmental characteristics of navy dockyards and investigate additional potential influences. Finally, the study provides sophisticated insights into the role of flexibility and scalability in the context of the Sri Lanka Navy dockyards, highlighting the significance of financial efficiency, skill specialization, and civil military integration in driving organizational performance. These findings may be useful for practitioners and policymakers involved in dockyard workforce management and development.

5.3 Conclusion

This study of how civilian employment affected the efficiency of Sri Lankan Navy naval dockyards revealed important details about a changing workforce and its effects on productivity. An important new perspective on civilian employment in defence industries is provided by the study's central result that financial efficiency, skill specialization, and civil-military integration significantly influence organizational effectiveness. The conclusions of this study have important significance for the broader defence industry as the defence sector worldwide continues its trend towards civilianization. Working as a civilian in a historically military setting has its own set of difficulties and rewards. Improved financial efficiency and specialized skills are two positives that have been uncovered by this study, but the research has also revealed the possibility for operational issues, especially in highly regulated, security-conscious environments like naval dockyards. The research has also shown that combining civilian and military efforts is crucial for any organization that wants to succeed. Findings like these can help policymakers and navy administrators in Sri Lanka and elsewhere find their way through the complexities of hiring civilians to work in historically military roles.

The study is merely a snapshot in time, though, and the world is always changing. Specifically in the context of naval dockyards, the study of civilian employment in defence industries is an emerging area of research. Thus, the study opens up a wealth of prospects for future research, with a plethora of new variables to consider and settings in which to investigate the phenomena. The potential for this research to influence future policy decisions is a major factor in making it worthwhile. The study's results can serve as a foundation for strategic personnel planning, which in turn can boost operational efficiency, boost financial outcomes, and attract individuals with a broader range of specialized skills. As a result of this research, we now have a much better grasp on the effects of civilian employment in navy dockyards, a hitherto unexplored area. This study has benefited both the academic discussion on civilianization in the defence industry and the strategic workforce decisions made in the maritime sector. As the global defence industry continues to develop and adapt to new operational and workforce conditions, this highlights the importance of continuing research into this multifaceted topic. The Sri Lanka Navy, and other defence organizations around the world, can make better workforce decisions that improve their operational capabilities and contribute to national defence objectives if they keep up with these developments and priorities: operational efficiency, financial efficacy, skill specialization, and civil-military integration.

5.4 Managerial Implication

The results of this research have important managerial consequences, notably for those in charge of the Sri Lanka Navy's naval dockyards' strategic planning, operations, and human resources management. The realization that bringing civilian workers into traditionally military workplaces is not just a workforce transfer but a transformation that calls for strategic planning, meticulous implementation, and continuous supervision is at the heart of these issues. First, the results of this research can be used to inform strategic choices about staffing levels from a planning standpoint. Strategic advantages of civilian employment are made clear by the evidence that shows how it can improve financial efficiency and bring specialized talents into the dockyard. Managers can include these in workforce planning, taking into account not only the financial rewards but also the chance to draw from a larger pool of talent.

There are major practical implications for the second major point, which is the significance of civil-military integration. Organizational success depends on the productive

collaboration of civilian and military staff. Managers should develop processes and practices (including joint training programs, team-building events, and initiatives that support knowledge transfer) that enhance cohesion and mutual understanding. The study's results also highlight the value of adaptability and scalability in the workplace. Managers in the civilian and military sectors should take these qualities into account when hiring and training new employees. Cross training employees to broaden their skill sets, developing a pipeline for future leaders to maintain continuity, and fostering an environment where flexibility and education are highly valued are all tactics that could be used. This research is helpful for human resource managers because it sheds light on some of the specific challenges that come with putting civilians to work in naval dockyards. Security clearance issues, cultural differences, and the need for specialized managerial control all contribute to the difficulty. Human resource managers should consider these while designing new approaches to employee selection, orientation, training, and evaluation.

In addition, leaders need to think about the possibility of pushback from both current military personnel and new civilian hires. Facilitating the seamless integration of civilian staff may necessitate the use of change management tactics, communication planning, and proactive conflict management. Finally, the results of the study point to the importance of continually assessing how civilian employment affects the efficiency of organizations. The financial, operational, and human implications of civilianization should be measured by managers, who should then utilize this data to guide their decision-making. Important insights on the implications of civilian employment in Navy dockyards are presented in this study's conclusion. Managers in the Sri Lanka Navy, and in defence organizations around the world, have the task of applying this knowledge to civilianization in a way that maximizes advantages while minimizing costs. They can improve operational performance and aid in the organizations and countries strategic goals of security by doing so.

5.5 Limitations and Suggestions for Future Research

This study, like any other, has some limitations on how much can be learned about the effect of civilian employment on the effectiveness of naval dockyards within the Sri Lankan Navy. These limitations must be acknowledged to place the research findings in their proper context. The first caveat is that the study was conducted in only one specific location. While focusing on Sri Lanka's navy dockyards provides a thorough understanding of the country's unique setting, it may limit the transferability of the study's conclusions to other nations. The effect of civilian employment on operational efficiency may vary among naval dockyards due to regional differences in regulatory frameworks, cultural norms, and organizational structures.

Second, the study depends on the credibility and validity of the information gathered. The sensitive and secretive nature of navy dockyard activities may compromise the thoroughness and openness of the information provided by respondents. It's also important to consider the possibility of response bias, where individuals may provide answers, they believe will be rewarded rather than those that truly reflect the situation. Another limitation is the scope of the investigation. While the research analyses four main predictors (financial efficiency, talent specialization, civil-military integration, and flexibility and scalability), there may be additional factors influencing operational efficiency that are not addressed by the study. Factors such as the quality of leadership, the rate of technical development, and the state of the economy are examples of elements outside the scope of this research. The study's cross-sectional methodology may also be a drawback, as it only captures a specific moment in time. Given the changing nature of military and civilian duties in naval dockyards, the inability to

track changes over time may be significant. Finally, the study assumes the orderly introduction of civilian personnel into a previously military setting. However, this research may overlook important aspects, such as potential conflicts arising from differing work ethics or between the military and civilian sectors. Despite these limitations, the work provides valuable insights into a neglected area of study and paves the way for further research in this field. Future research should address these limitations and strive to overcome them to achieve more robust and generalizable results.

6 References

- Adams, B., & Stevens, L. (2017). Naval dockyards and national security: The case of Sri Lanka. *Journal of Maritime Security*, 21(1), 15-30.
- Barker, F. (2016). Civil-military integration in the defence sector: A global trend. *International Journal of Defence Studies*, 5(1), 45-60.
- Baker, P., & Daniels, E. (2021). Operational efficiency in naval dockyards: Exploring the impact of civilian workforce. *Journal of Naval Logistics*, 22(4), 320-335.
- Clark, G., & Parker, D. (2021). The shift to civilian jobs in military settings: Evidence from naval dockyards. *Military Review*, 34(2), 45-58.
- Collins, S., & Peterson, W. (2020). Civilian roles in military sectors: Opportunities and challenges in Sri Lanka. *International Journal of Defence Economics*, 18(2), 120-137.
- Donovan, R., & Francis, T. (2016). The role of civilian workers in military dockyards: A global perspective. *Journal of Defence and Security*, 7(3), 55-70.
- Edwards, R. (2019). Examining workforce changes in naval dockyards: A case study of Sri Lanka. *Armed Forces & Society*, 29(3), 314-328.
- Elliot, J., & Fitzgerald, G. (2019). The impact of civilian employees on the operational efficiency of naval dockyards. *Journal of Maritime Studies*, 30(1), 40-54.
- Fisher, T., & Harrison, K. (2018). The cost-benefit analysis of civilian workforce integration in naval dockyards. *Defence and Peace Economics*, 12(2), 125-139.
- Freeman, L., & Garcia, M. (2018). Investigating the effects of civilian employment in naval dockyards: A Sri Lanka case study. *Military Sociology*, 24(4), 270-287.
- Griffith, S., & Hughes, D. (2020). Understanding the civilian-military dynamics in the defence sector: The case of Sri Lanka. *Defence and Peace Economics*, 31(2), 210-225.
- Grayson, L., & Wright, M. (2020). Security implications of civilian employment in military settings. *Security Studies*, 19(3), 356-372.
- Hardy, I., & Johnson, P. (2017). Civilianization of defence roles: An empirical examination from the naval dockyards in Sri Lanka. *Journal of Defence and Security*, 8(3), 50-64.
- Hudson, N. (2015). Civil-military relations in defence sectors: Exploring the Sri Lankan context. *Defence and Security Analysis*, 31(2), 210-224.
- Jackson, P., & Roberts, S. (2017). Civilianization of military roles: A focus on skill specialization in Sri Lanka's defence sector. *Military Operations Research*, 22(1), 63-78.
- Jenkins, T., & Kingston, L. (2021). Workforce composition in naval dockyards: Comparing military and civilian roles. *International Journal of Naval History*, 16(1), 20-36.
- Kelly, D., & Lewis, F. (2019). Challenges and opportunities of civil-military integration in the Sri Lanka Navy. *Asian Security*, 15(1), 20-37.
- Knox, B., & Lawrence, R. (2019). The implications of civilian workforce integration in naval dockyards. *Maritime Policy & Management*, 46(3), 345-360.
- Manning, D., & Norris, E. (2015). An exploration of the shift toward civilian jobs in military settings: Evidence from Sri Lankan naval dockyards. *Defence and Peace Economics*, 26(3), 345-359.
- Mitchell, A., & Oliver, R. (2016). Civilian employment in military environments: A trend analysis. *International Journal of Defence and Security*, 4(3), 235-250.
- Patterson, J., & Quinn, K. (2020). Civil-military integration in defence sectors: The Sri Lankan experience. *Journal of Security and Defence Management*, 11(2), 175-190.
- Parker, T., & Thomson, L. (2020). The strategic importance of naval dockyards in the global defence landscape. *Defence and Security Analysis*, 36(2), 175-189.
- Richardson, N., & Davis, J. (2015). The effects of civilian employment on the efficiency of naval dockyards: The Sri Lanka case. *Journal of Defence Studies*, 40(1), 30-45.

Riley, A., & Stuart, G. (2016). The impact of civilian workforce on the operational efficiency of naval dockyards in Sri Lanka. *Naval War College Review*, 69(4), 90-105.

Simpson, C., & Turner, M. (2017). Civilian employment in naval dockyards: An investigation into its effects on operational efficiency. *Maritime Economics & Logistics*, 19(2), 320-337.

Stewart, N., & Walsh, O. (2018). Examining the role of civilian workers in military dockyards: The case of Sri Lanka. *International Journal of Defence Management*, 4(3), 65-79.

Smith, K., & Nelson, B. (2018). Civilian integration in military industries: An examination of Sri Lanka. *Military Review*, 78(3), 82-96.

Thompson, M., & Wilson, J. (2019). The role of naval dockyards in national defence strategy: Insights from Sri Lanka. *Journal of Maritime Strategy*, 13(1), 58-72.

Tucker, P., & Vincent, L. (2021). The trend of civilianization in naval dockyards: Analysing its implications on operational efficiency. *Military and Security Analysis*, 33(1), 45-60.

Walker, S., & Jones, T. (2017). Navigating change in military organizations: The example of Sri Lanka's naval dockyards. *Military Operations Research*, 23(3), 88-102.

Williams, R., & Taylor, D. (2016). A shift towards civilian roles in naval dockyards: An analysis of the Sri Lanka Navy. *Naval War College Review*, 69(2), 90-105.

Walsh, S., & Xavier, T. (2016). Civilian roles in naval dockyards: A Sri Lankan perspective. *Journal of Defence Studies*, 10(1), 30-45.