CHAPTER I
INTRODUCTION

1.1 General Description of The Research Object

PT Vale Indonesia has been exploring nickel mines since the 1920s. However, the company founded a new entity called PT International Nickel Indonesia (INCO) on July 25, 1968. At the time it was officialized, there was an agreement between the company and the Indonesian Government through the Working Contract *(Kontrak Kerja).* PT Vale Indonesia mines nickel laterite to produce nickel in matte. The average production volume is 75,000 metric tons (MT) per year. In producing nickel in the Sorowako Block, Luwu East, South Sulawesi, the company uses a technology for melting the nickel laterite ore called pyrometallurgy.

The company, which has its headquarters in Sequis Tower, General Street Sudirman Kav 71, Jakarta, is planning to build a nickel processing plant in Sambalagi, Morowali District, Central Sulawesi, and Pomalaa, Kolaka District, Southeast Sulawesi. Since signing the CC, PT INCO has committed to operating integrated nickel mining. Prior to the government's order for mineralization, the company had run a factory in Sorowako since 1977. The factory inauguration was attended by the second president of the Republic of Indonesia (RI), Soeharto.

Since 2011, there has been a change in the order of shareholders, resulting in the change of name to PT Vale Indonesia. In carrying out its operations, the company is firmly committed to the concepts of sustainable development, investment, and business (environmental, social, and corporate governance, or ESG).

This year, PT Vale Indonesia is celebrating its 55th anniversary with the theme “Spirit in Harmony: Everything Means, Everything Is Valuable." Several projects the company is running in 2023 include the laying of the first stone of the Indonesia Growth Project (IGP) in Morowali, the inauguration of the Sawerigading

Wallacea Biodiversity Park (Kehati), and a definitive deal with Ford. Some of the awards that PT Vale Indonesia has won in 2022 are the Very Praised Sustainable Business Award (SBA), Best Shareholder, the 13th IICD Corporate Governance Award, and the Indonesian Institute for Corporate Directorship (IICD).

Figure 1. 1 Company's Logo

Source: http://www.vale.com/indonesia, 2023

There are signs that most of PT Vale Indonesia still has a traditional understanding of supply management, including the unreliability of supplier profit as one of the performance indicators in more modern supply management techniques that place an emphasis on alliances or collaborations with suppliers that are mutually beneficial.

PT Vale Indonesia strategy consist of two components: profitable and sustainable long-term growth and maximizing production through operational quality. One of the main elements sustainable long-term growth strategy is improving margins through efficiency and cost optimization to improve the company’s financial performance and competitiveness. About 65% of PT Vale Indonesia cost of production is caused by the costs of supplying goods and services (fuel costs, auxiliary materials costs and service costs). Thus, the function and role of supply management are crucial in order to assist the companies in improving operating margins through efficiency and cost optimization to achieve a long-term sustainable growth strategy that has been determined. Supply management

performance has an important role in influencing the success of the company's strategy to achieve it (Porter, 2000).

1.1.1 Vision and Mission

a. Vision

Here's the vision of PT Vale Indonesia Tbk:

"Become the number one SDA natural resource company in the world that provides long-term benefits through excellence and a spirit of living for humans and the environment".

b. Mission

As for the mission from PT Vale Indonesia Tbk:

"Turning SDA into prosperity and sustainable development".

Besides, there are values held by PT Vale Indonesia Tbk, which are:

a. Life is precious
b. Appreciate the SDA
c. Love our earth
d. Doing the right thing
e. Improve performance together
f. Realizing a goal together

1.1.2 Organizational Structure

Figure 1. 2 Organizational Structure

Source: processed by researcher

PT. Vale Indonesia is headed by a President, Chief Executive Officer, and CEO who are responsible for directing as well as coordinating all activities in all its departments and units. The department of PT Vale Indonesia consists of four major groups, namely:

a) The group of operations is led by the Vice President of Operations, who is responsible for and coordinates all activities in each department and its units responsible for the provision, maintenance, and repair of ready-to-use equipment as well as the processing of nickel laterite to nickel matte. In addition, the group has four departments: the mining department, the maintenance department, the process plant department, and the logistics department.

b) The special project group is led by the Vice President of the Special Project, who is responsible for and coordinates all the activities carried out by each department under it, such as monitoring the progress of the ongoing project, procurement of company needs, whether goods or services, and monitoring information processing systems, logistics of production, and processing of computer systems in mines and power plants.

c) The financial group is headed by the Vice President, Chief Financial Officer, who is responsible for overseeing and coordinating the costs of production, wages, property accounting, cash management, making and supervising the financial cash flows of all parts of INCO, accounting services, property and payroll, financial accountant, Singapore accountant, cash management accountant, and internal audit.

d) The business services organizational development group is headed by the Vice President for Business Services Organizational Development, who is responsible for directing and coordinating all activities related to government and public service, as well as the administration of civil service and industrial relations. The department organizes training and development for SDA employees. The group is headed by the safety and environment control

department, the human relations and employee relations departments, the medical services departments, and the security and plant protection departments.

1.1.3 Products of PT Vale Indonesia

As for the products produced by PT. Vale Indonesia:

Nickel laterite seeds mined by PT Vale Indonesia Tbk contain a nickel element with a ratio of 1.95 Ni. PT Nickel Processing Vale Indonesia is a pyrometallurgy that uses heat and fire production to produce nickel metal in the form of a matte nickel sulfide with a ratio of at least 75 Ni. Pure nickel is a hard and glossy metal with interesting features, among them: Malleable can be shaped, ductile can be pulled into wire, Tensile Strength has a high range of strength, and rust proof has rust-resistant properties. Nickel and its compounds are used in: stainless steel, also called white steel, which is an alloy of nickel and iron and other chemical elements; alloy, a metal mixture to obtain certain properties; catalyst, as a material that helps accelerate the chemical reaction process; nickel plating, the nickel coating on the surface of iron plates; coins, metal currency; electric heating units; accumulators; and batteries.

1.2 Research Background

In the current era of globalization, business competition will be increasingly stringent and become one of the reasons for companies to develop business strategies and tactics as well as possible. Supply chain management is a product distribution concept that can produce more optimal product distribution patterns (Rahardjo, 2021). It is important for a company to know whether the supply chain system that is running in the company is good or not. The trend of demand for nickel products which continues to increase every year has forced companies to design a supply chain by focusing on and maximizing customer value which includes the process of coordination, scheduling, and control, up to the evaluation stage. The key to producing an efficient supply chain, industry players generally apply the

concept of supply chain management which is also known as Supply Chain Management (SCM).

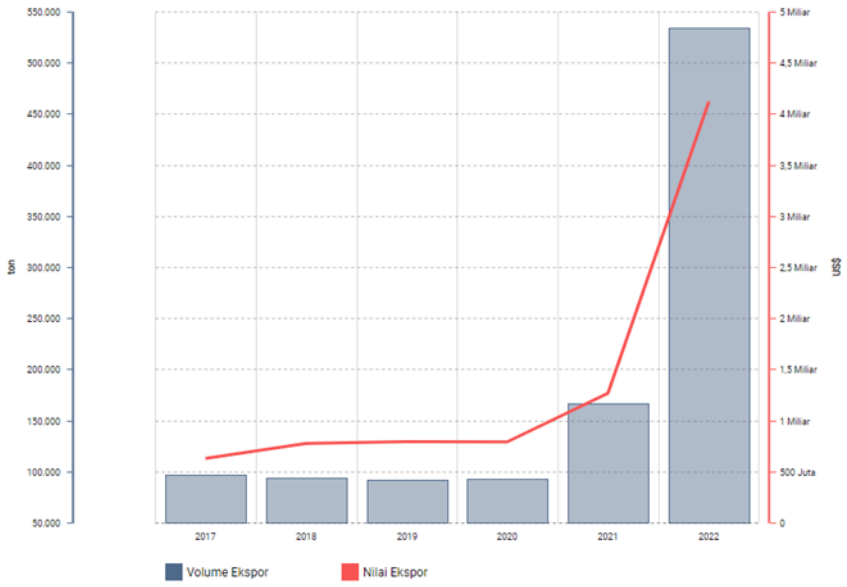

Figure 1. 3 Growth of Volume and Value of Nickel Exports 2017-2022

Source: Databoks Katadata, Indonesia's Economic and Business Data Center

According to Sustainability Report of PTVI (2021), The company use a variety of performance measurement measures to make sure that PT Vale Indonesia Tbk is reaching its sustainability objectives, managing risks, and conducting business effectively. Among these instruments are:

a. Energy efficiency and emissions reduction: PT Vale Indonesia Tbk recognizes the significance of reducing emissions in all its activities as part of its objective to achieve net-zero emissions.
b. Management efficiency ratios: These ratios are used to evaluate how well PT Vale Indonesia manages routine affairs and operates effectively.
c. Balanced Scorecard: This tool measures the performance of the knowledge management system implementation in terms of employee performance.

These tools are helpful, but they could also have some drawbacks. The management efficiency ratios may not fully account for all the risks that the

company faces, and the balanced scorecard may not offer a thorough analysis of every area of PT Vale Indonesia's performance.

Supply Chain Operations Reference (SCOR) model is suggested for use in PT Vale Indonesia's performance evaluation to solve the shortcomings of the current performance assessment methods. Numerous benefits are provided by the SCOR model.

a. Comprehensive: The SCOR model considers every element of the supply chain, from sourcing to delivery (Lukman 2018), enabling a thorough analysis of PT Vale Indonesia's performance. It captures the threats and chances the business faces in running its supply chain.
b. Standardized: The SCOR model is a widely used, standardized tool that may be used by different businesses and industries (Lukman 2018). This technique allows PT Vale Indonesia to assess its performance against that of other businesses in the same sector and identify areas for development.
c. Continuous Improvement: The SCOR concept is intended to promote ongoing development. It identifies areas that need development and sets performance goals (Lukman 2018), allowing PT Vale Indonesia to gradually increase the efficiency of its operations and performance in terms of sustainability.

The SCOR Model approach will divide the supply chain process into six core processes, namely plan, source, make, deliver, return, and enable. In addition, the SCOR Model measures supply chain performance based on five very comprehensive attributes, namely responsiveness, reliability, agility, cost, and asset management (Rakhman et al. 2018). Therefore, the SCOR Model has the main advantage of being able to measure supply chain performance in a representative and detailed manner from upstream to downstream.

Measurement of supply chain management performance using the SCOR method produces measurements that have a hierarchical structure because the performance attributes to be measured consist of various performance measurement

metrics. Therefore, overall performance measurement requires a special approach because it is based on various criteria. One method that can be combined to measure supply chain performance with the SCOR method is the Analytical Hierarchy Process (Palma, 2014). This is because AHP uses an approach that can structure problems hierarchically and can detect the logical consistency of the considerations used in decision making (Perdana 2014). AHP can decompose very complex problems into one main part. AHP also produces weights that can be used to determine the degree of importance of various aspects of performance measurement that are measured based on priority. Measuring the performance of supply chain management with the SCOR method results in measurements that have a hierarchical structure because the performance attributes to be measured consist of various performance measurement metrics. Therefore, the measurement of overall performance requires a special approach because it is based on various criteria.

Another opinion was also expressed by I Nyoman Pujawan (2005), performance measurement in the supply chain is needed to:

a. Monitoring and controlling.
b. Communicate organizational goals to functions in the supply chain.
c. Knowing where an organization stands relative to competitors and to the goals to be achieved.
d. Determine the direction of improvement to create an advantage in competing.

Researchers are interested in conducting further research on measuring the performance of SCM performance. Therefore, this study aims to design how the SCOR Model and AHP Method can be used to measure SCM performance that has so far been applied to PTVI. Therefore, this research entitled **"MEASUREMENT OF SUPPLY CHAIN MANAGEMENT PERFORMANCE USING SCOR MODEL (SUPPLY CHAIN OPERATION REFERENCE), A CASE STUDY OF MAIN WAREHOUSE SECTION PT VALE INDONESIA TBK".**

1.3 Research Question

From the background description, the following problems can be formulated:

1. How is the performance in supply chain management at Main Warehouse Section PTVI if performance measurement is carried out using the SCOR Model approach?
2. What kind of action plan can be recommended for Main Warehouse Section PTVI according to the performance level of the indicators?

1.4 Research Purpose

Based on the formulation of the problem that has been described, the objectives of this research are as follows:

1. To determine the performance of the supply chain when analyzed using the SCOR Model approach.
2. Provide recommendations to companies related to improving company performance.

1.5 Research Benefit

With the research and discussion of the existing problems, the benefits that can be obtained in this final project research are:

1. For Company

   The author hopes that the results of the study can provide useful insights for further development of the issue of performance appraisal using the SCOR Model approach.
2. For Society

   Especially among universities, the author hopes that the results of this research can directly or indirectly contribute ideas that can increase knowledge.

1.6 Scope of The Study

The scope of each research activity always has a limit for the actors. The scope limitation serves to make a scientific activity more focused and consistent with the goals that have been set previously. In addition, this limitation can also facilitate the author in achieving the initial goal. The scope for specific aspects of Supply Chain Management at PTVI with the material discussed includes:

1. PTVI Supply Chain Management Overview
2. Main Warehouse Section PTVI Activities
3. Measurement of supply chain management performance in the Main Warehouse Section with the SCOR Model approach
4. Evaluation of Supply Chain Management performance measurement results

1.7 Writing Systematics

Chapter I Introduction

It includes the background of the problem, problem formulation, limitations, objectives, and benefits of the research.

Chapter II Literature Study

It contains a description of previous research results that are relevant to the current research being conducted. Additionally, it includes the concepts and basic principles necessary to solve the research problem, as well as the theoretical foundations to support the study that will be conducted.

Chapter III Research Method

It explains the methods, techniques, and approaches that the researcher used to obtain and process the data.

Chapter IV Research Result and Discussion

It contains a discussion of the characteristics of the respondents, research findings, and an overall discussion of the research results.

Chapter V Conclusions and Recommendations

It discusses the conclusions and recommendations as the final result of this thesis writing.