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IDENTIFYING THE URGENCY OF INDONESIA'S NICKEL INDUSTRY DOWNSTREAM: WTO DISPUTE AND GLOBAL MOMENTUM

Jhon Maxwell Yosua Pattinussa

Fakultas Ilmu Sosial dan Ilmu Politik, Program Studi Hubungan Internasional, Universitas Pelita Harapan

e-mail: jhon.yosua@uph.edu

ABSTRACT

In recent years, Indonesia has been striving to vertically integrate its nickel industry. The primary reasons for this are technological advancements, the global momentum towards sustainability, and abundant nickel mineral resources. With 52% of the world's nickel reserves, Indonesia has undertaken the downstream policy of its nickel industry. Various policies have been created and implemented, including laws, government regulations, and ministerial regulations, to guide the downstream process. However, the European Union's lawsuit against Indonesia at the WTO has posed a significant challenge to this process. After being found guilty, Indonesia has appealed the EU's lawsuit. This research aims to identify the current state of the downstream process and the underlying interests behind Indonesia's ongoing appeal. Using qualitative research methods and focusing on explaining the downstream of the national nickel industry, this study seeks to uncover and elucidate the main agenda behind the urgency of Indonesia's nickel industry downstream amid the WTO dispute and global momentum in electronic vehicle era.

Keywords: Nickel, Downstream Policy, European Union, Lawsuit, Indonesia

ABSTRAK

Dalam beberapa tahun terakhir, Indonesia telah berupaya keras untuk mengintegrasikan industri nikel mereka secara vertikal. Alasan utama dibalik hal ini adalah kemajuan teknologi yang semakin pesat, momentum global yang semakin mengarah ke berkelanjutan, dan sumber daya mineral nikel yang berlimpah. Dengan memiliki 52% dari cadangan nikel dunia, Indonesia telah menjalankan hilirisasi dalam industri nikel mereka. Berbagai kebijakan telah dibentuk dan diimplementasikan untuk menuntun proses hilirisasi, termasuk aturan hukum, aturan pemerintah, dan regulasi tingkat menteri. Namun, tuntutan hukum Uni Eropa melawan Indonesia di WTO telah memberikan ancaman signifikan terhadap proses ini. Setelah divonis bersalah, Indonesia telah mengajukan banding terhadap tuntutan hukum Uni Eropa tersebut. Penelitian ini bertujuan untuk mengidentifikasi situasi terkini dari proses hilirisasi dan kepentingan tersembunyi di balik banding Indonesia yang sedang berjalan. Dengan menggunakan metode penelitian kualitatif dan berfokus pada menjelaskan hilirisasi dari industri nikel nasional, penelitian ini mencoba mengungkapkan dan menjelaskan agenda utama di balik urgensi hilirisasi industri nikel Indonesia yang berkaitan dengan sengketa WTO dan momentum global di era kendaraan listrik.

Kata kunci: Nikel, Hilirisasi, Uni Eropa, Tuntutan Hukum, Indonesia

1. Introduction

Technological advancements and globalization have driven significant changes in human life, especially in international trade. The speed at which goods and services move internationally and the variety of commodities traded have undergone significant changes. This has created numerous opportunities in the concept of international trade. One such opportunity brought about by the process of modernization and globalization is the emergence of global value chains (GVCs).

GVCs originate from the inefficiency issues highlighted by Smith regarding the necessity for division of labor, targeting efficiency and effectiveness in meeting global societal needs as one of the essential aspects (Hamowy, 1968). According to data from the Organization for Economic Co-

operation and Development (OECD), around 70% of international trade activities are part of GVCs (OECD, 2024). This indicates that today's global industry is becoming increasingly interdependent.

For instance, in the case of the semiconductor industry with Qualcomm from 2013-2022. In 2017, Qualcomm had to significantly increase its prices compared to other competitors before opening itself to GVCs.

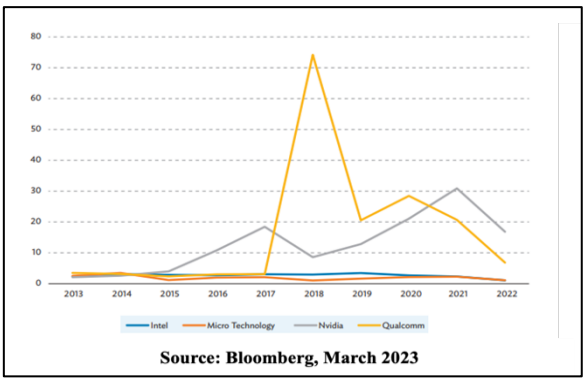


Figure 1.1. Price to Book Ratios of Leading Americans, 2013–2022

The inefficiency experienced by Qualcomm due to high production costs resulted in losses for the semiconductor company throughout 2017-2018. This is evident from the above curve, showing the market price compared to the book price, with a ratio eight times higher. However, after partnering with a Japanese company to manage the raw materials for semiconductor production, Qualcomm successfully increased its market cap from USD 8.4 million (2.2% of the global semiconductor market share) in 2015 to USD 17.5 million (3.6% of the global semiconductor market share) (World Trade Organization, 2023).

This trend of increasing efficiency is occurring in various manufacturing sectors. However, GVCs do not come without risks. During the COVID-19 pandemic, the global industries relying on GVC strategies faced turbulence. It was noted that 70% of manufacturing industries halted and could not operate due to government policies at the time (Pratikno & Pattinussa, 2022). For middle economic power countries like Indonesia, the increase in global GVCs and the experiences during the pandemic are crucial in reassessing how Indonesia should play its role in GVCs.

In implementing GVCs, each country takes on different roles based on their factor endowments. For instance, Indonesia often serves primarily as a raw material provider on a global scale in the global production chain.

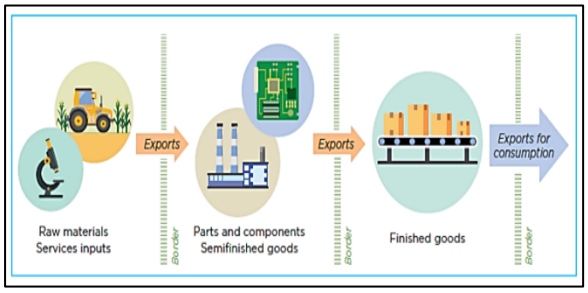


Figure 1.2. GVC Roadmap

Amid the development of the global semiconductor industry over the past decade, Indonesia has remained a supplier of raw materials. Semiconductors are not only used in phones and other electronics but have also entered the transportation sector, particularly with the growing use of batteries in modern transportation.

To increase revenue from the burgeoning international trade, the Indonesian government aims to shift its position to enhance added value. Countries that benefit the most from GVC strategies are those with higher-value-added tasks and the ability to maximize raw materials, manufacturing, and services to ensure this (World Bank, 2024). Based on the GVC production map (Figure 1.2), Indonesia needs to enhance its added value. President Joko Widodo has developed a comprehensive policy framework and a grand plan for the nickel mineral industry to maximize Indonesia's benefits.

In 2020, in accordance with Minister of Energy and Mineral Resources Regulation No. 11 of 2019, Indonesia implemented a nickel ore export ban. This caused significant turbulence in the global market, particularly in the semiconductor manufacturing industry, given Indonesia's status as one of the largest

nickel exporters in the world. The European Union's protest to the WTO in 2021 put Indonesia in a difficult position, as Indonesia was found to be in violation of free trade principles upheld by the WTO. In a ruling the following year, Indonesia was declared to have violated these principles and was required to lift the nickel ore export ban. However, Indonesia continues to fight for the export ban and the downstream of its nickel industry.

Given the dynamics between technological advancements and the government's efforts to challenge the WTO, the author seeks to understand government's considerations in pursuing the downstream of the nickel industry. Furthermore, the author aims to identify Indonesia's interests in opposing global regime rules, considering Indonesia's non-compliance with WTO decisions and regulations.

2. Literature Review

In this section, the author intends to provide an overview and understanding of the research topic based on previous journals and literature studies, divided into three sub-sections: Investment and Nickel Downstream in Indonesia; The European Union's Lawsuit against Indonesia; The Global Nickel Industry Market.

2.1. Indonesia Downstream Nickel Policy

In their paper titled "Increasing Investment and Nickel Downstream in Indonesia," Agung and Waluyo state that one of the main motivations for the need for vertical integration or downstream of the nickel industry in the country is the abundant nickel reserves. Indonesia has recorded nickel ore reserves of 11.887 million tons, with a national production capacity of 800,000 tons out of a global total production of 2.67 million tons, positioning Indonesia as a major global nickel producer. The authors found that downstream the nickel industry is positive and can significantly boost the domestic economy. However, they conclude that there are several factors to consider in this downstream process, including changes and additional production costs that could undermine the broader plans for nickel industry downstream in the country (Agung & Waluyo, 2022).

In agreement with Agung and Waluyo, Radicha and Wibisana, in their paper titled "Indonesia's Nickel Protectionism in Global Trade," further explain the background of vertical integration in the nickel industry. Besides the abundance of nickel ore resources, the global trend towards adopting electric vehicles is also a major reason. The Indonesian Minister of Energy and Mineral Resources Regulation No. 11 of 2019 on downstream policies is seen as a form of Indonesian protectionism. The primary goal is to create a global battery hub and a center for global electric vehicle production. However, to achieve this, foreign investors remain the key actors in implementing nickel industry downstream and achieving Indonesia's broader goals as a global battery and electric vehicle production center (Radicha & Wibisana, 2023).

Examining the impacts of nickel industry downstream in Indonesia, Fadillah and Wahyuni, in their paper titled "Study of Indonesia's Nickel Ore Export Ban Policy," state that the strategy and policy tools for downstream nickel in recent years have had a positive impact on global nickel prices (with a positive trend leading to higher prices). However, it has led to a depreciation of the Indonesian rupiah against the US dollar. This indicates that the government's rules or strategies for nickel industry downstream still require support from various other policy packages across different sectors if Indonesia is to truly achieve its goals (Fadillah & Wahyuni, 2023).

2.2. European Union Lawsuit against Indonesia

In Indonesia's efforts to downstream its domestic nickel industry, there have been side effects on larger industries, particularly in the global supply chain (GVC). In her

paper titled “The Dispute Over Indonesia's Nickel Exports with the European Union at the World Trade Organization,” Grace Hutabarat notes that the negative impact of Indonesia’s protectionism is most acutely felt by the European Union. As part of the global battery production chain, the European Union views Indonesia's protective measures as violations of Articles 3.1 (b) and XI:1 of GATT 1994, which pertain to export restrictions and have resulted in disruptions to the global production chain. Hutabarat concludes that Indonesia lost the case at the WTO (Hutabarat, 2023).

Still maintaining an optimistic view on Indonesia's nickel downstream, Krustiyati and Surya, in their paper titled “International Trade Dispute Over Nickel Ore Exports Between Indonesia and the European Union,” argue that the primary goal of downstream nickel is not to deliberately hinder international trade. Instead, the main objective is to enhance national prosperity. They suggest that with government policies in place, domestic smelter needs will be met. According to them, if the restrictions are implemented to fulfill domestic industrial needs, the European Union would not need to bring the matter to the WTO. Moreover, as stipulated in the General Agreement on Tariffs and Trade (GATT) 1994, the EU's lawsuit would not be applicable if Indonesia could first redefine the final products within framework of its national nickel downstream scheme (Krustiyati & Surya, 2022).

Examining the WTO decision further, Rachma Putri and her team, in their paper titled “Resolution of the Dispute Over Indonesia’s Nickel Export Ban to the European Union by the World Trade Organization,” state that the European Union’s claims of loss due to Indonesia's nickel export ban are invalid. Their main argument is that the European Union has long ceased to receive nickel exports from Indonesia. The primary motive behind the EU's actions is their concern that the EU’s stainless-steel industry has recently been overshadowed by China's dominance in the global market, leading to fears that Indonesia could become strong competitor in the stainless steel industry. Meanwhile, Indonesia's efforts are focused on battery downstream, which has no direct connection to the European Union’s fears (Putri et al., 2022).

2.3. Global Nickel Market Industry

The target of Indonesia nickel industry's downstream policy is driven by national economic interests. The goal is to strengthen domestic nickel production by adding value to Indonesian nickel products, thereby enhancing Indonesia's position in the global electric vehicle (EV) battery value chain. However, this ambition is questioned. Antonio Nieto, in his paper titled “The Strategic Importance of Nickel: Scenarios and Perspectives Aimed at Global Supply,” argues that despite Indonesia and Pacific countries like the Philippines and Australia holding the largest nickel reserves globally, control and the core of battery production remain centered in Italy and China. Nieto further suggests that the policy of adding value will only provide temporary benefits unless Indonesia and the Philippines seriously invest in improving human resources (HR) to develop skilled professionals, particularly in the nickel industry (Nieto, 2013).

The International Nickel Study Group (INSG) report for 2021 shows that since 1995, global nickel demand has been increasing. Over nearly 30 years, global nickel consumption has reached 39 million tons. With an asymmetrical growth rate, from 1995 to 2009, production increased by only about 9-10% over 14 years. However, from 2010 to 2020, there was a 210% increase, with average annual nickel usage in 2020 reaching 2.5 million tons. The INSG article indicates that Asia, and notably Indonesia, has played a significant role in global nickel supply over the past decade. From 2016 to 2020, Indonesia's production increased 4.5 times compared to China’s, which had halted due to the COVID-19 pandemic during the same period (International Nickel Study Group,

2022). According to the data, Indonesia has become a major player in the global nickel industry value chain. Unfortunately, during this period, Indonesia only produced raw nickel, resulting in missed opportunities for national economic improvement.

Specifically, the growth in Indonesian nickel production has attracted foreign investors, such as the London Metal Exchange, to focus on the nickel industry. In a report released by INSG titled "The World Nickel Market in 2021 – Indonesia Rising to the Top," authored by Ricardo Ferreira in 2021, it is stated that nickel prices experienced a 178% fluctuation increase. For example, at the end of March 2020, global nickel prices were at $11,065 per ton, and by February 2021, prices had surged to $19,689 per ton (Ferreira, 2021). The report attributes this price increase to a 145% rise in demand for electric vehicles during the first quarter of 2021 compared to the previous year. The report predicts that Indonesia will become the largest producer of High-pressure Acid Leaching (HPAL) nickel in the world and dominate global battery production.

3. Research Method

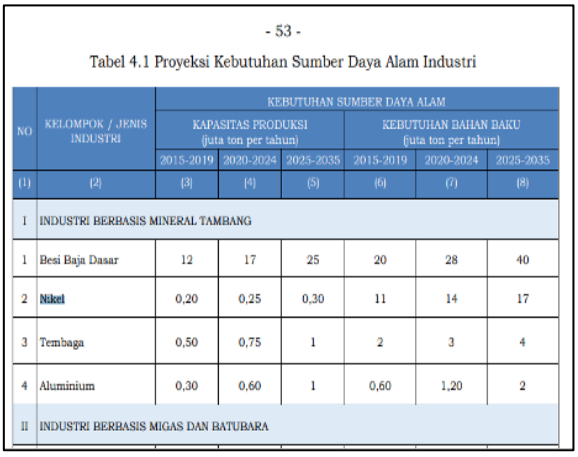
This research employs a qualitative research method because the researcher believes that this method can provide a deep interpretation of the analytical process. The data used by the author consists of secondary data obtained from official government websites and various digital journal articles from national and international journal portals. The data will be presented in an exploratory-descriptive manner to explain the considerations or disputes regarding the Indonesian government's efforts in nickel downstream policy.

4. Result and Discussion

Indonesia controls 52% of the world's nickel reserves, totaling 4.5 million metric tons, with 11.7 million metric tons of nickel resources (90% located in Central Sulawesi, South Sulawesi, Southeast Sulawesi, and North Maluku), and additional nickel reserves in other forms totaling 21 million metric tons. This gives Indonesia substantial potential due to its resource endowment. On the other hand, the demand for Battery Electric Vehicles (which use nickel as a raw material) is also growing. Recognizing the significant potential of national nickel resources, the government made a major decision affecting the global supply market in the nickel mining industry by implementing nickel downstream policy.

Downstream essentially aims to add value to the final nickel products produced domestically. In Indonesia, the downstream policy began to be implemented in 2020. However, according to Law No. 4 of 2009 on Mineral and Coal Mining, there were already provisions for the 'nationalization' of raw nickel in Chapters 3 and 4 of the law. Moreover, the timeline for implementing export bans was initially set to begin in 2014. Despite this, Indonesia has not yet fully implemented the downstream of nickel due to inadequate infrastructure and domestic production networks, with the mineral industry still dominated by coal mining.

Recognizing the lack of adequate infrastructure, Law No. 3 of 2020 was enacted to address the issues in Law No. 4 of 2009 by setting more realistic targets and strategies. For example, Article 1, Paragraph 13c addresses the ban on exports but is accompanied by provisions for developing mining facilities in Article 1, Paragraph 18. The implementation of this legislation started in 2020 but included a relaxation of the export ban until 2022, with the condition of converting Contract of Work (KK) licenses to Mining Business Licenses (IUP) or Special Mining Business Licenses (IUPK). The main objective of the licensing changes implemented by the government is to integrate raw nickel miners into the national vertical nickel industry structure. This is evident from the requirement that national nickel miners must build smelters or nickel ore processing facilities by 2025.



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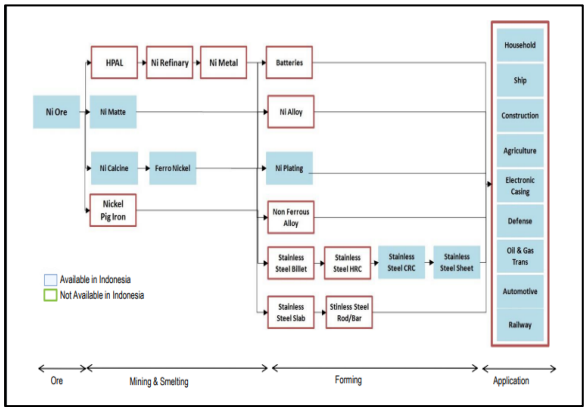
Tabel 4.1 Proyeksi Kebutuhan Sumber Daya Alam Industri

NO	KELOMPOK / JENIS INDUSTRI	KEBUTUHAN SUMBER DAYA ALAM					
		KAPASITAS PRODUKSI (juta ton per tahun)			KEBUTUHAN BAHAN BAKU (juta ton per tahun)		
		2015-2019	2020-2024	2025-2035	2015-2019	2020-2024	2025-2035
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I	INDUSTRI BERBASIS MINERAL TAMBANG						
1	Besi Baja Dasar	12	17	25	20	28	40
2	Nikel	0,20	0,25	0,30	11	14	17
3	Tembaga	0,50	0,75	1	2	3	4
4	Aluminium	0,30	0,60	1	0,60	1,20	2
II	INDUSTRI BERBASIS MIGAS DAN BATUBARA						

Table 4.1. *Proyeksi Kebutuhan Sumber Daya Alam Industri*



Figur 4.2. *Pohon Industri Nikel*

According to Government Regulation (PP) No. 14 of 2015 on the blueprint for Indonesia's mineral and mining resources, the government has gradually tested the export ban in phases. For example, in 2010, a year after Law No. 4 of 2009 was established, the export of raw nickel, which was previously sent to China, was halted. This move yielded positive results for Indonesia, with total investments amounting to 113 trillion rupiah. The decision to ban raw nickel exports was driven by the awareness that Indonesia controls 52% of the global nickel reserves but could only meet less than 0.3% (1.7%) of the global market demand.

As global demand for nickel in battery electric vehicles increased, the Indonesian government became more assertive in implementing export bans on further processed nickel products. In line with the revision of Law No. 4 of 2009, which was incorporated into Law No. 3 of 2020, the Minister of Industry issued Regulation No. 6 of 2020 on the latest nickel downstream roadmap. A significant change was the extension of the export ban from just raw nickel to include further stages in the national production chain. This now covers the export ban on nickel ore, mining and smelting processes, including smelting, forming schemes and processes, and finished products (determining the final products of nickel mining activities on a national scale).

According to Industry Minister Regulation No. 6 of 2020, the Indonesian government targets focusing nickel ore (Ni Ore) on producing High-pressure Acid Leaching (HPAL) and Nickel Pig Iron (NPI). The main differences between these processes are in mining, smelting, and production outputs, as well as the value added. Typically, in Indonesia, the mining and smelting processes produce Nickel Pig Iron (NPI), which requires no further extensive refining (purification and smelting) and directly moves to the forming stage. NPI produces Non-Ferrous Alloy, Stainless Steel Billet, and Stainless-Steel Slab.

Stainless Steel Billet is processed into Stainless Steel Hot Rolled Coil (HRC) or black plate, which is strong and used for automotive frames, construction projects, and agricultural equipment. Due to its strength, HRC is priced relatively high and used in strategic projects. Thus, in the nickel industry structure, Stainless Steel Cold Rolled Coil (CRC) (which enhances and changes the physical properties of HRC to a smoother and less oily finish, making it more expensive) is not considered an option or derivative product of Stainless Steel HRC due to its economic value. Another product from NPI is Stainless Slab, which is typically processed into softer and more malleable stainless-steel rods, contrasting with HRC and CRC, which have stronger and harder structures (Kompas.com, 2021).

Another focus of the government's downstream efforts is HPAL. In its process, HPAL is refined into Ni Refinery and then

into Ni Metal before becoming the final battery product. Applications of batteries, Ni Alloy, Non-Ferrous Alloy, Stainless Steel Billet, and Stainless-Steel Slab include global industries such as household markets, transportation, shipping, construction, agriculture, electronics, defense, automotive, railways, and oil. However, according to Government Regulation No. 14 of 2015, page 46, the government focuses downstream activities on nickel pig iron, ferronickel, or nickel matte, by establishing smelters and processing plant facilities.

Furthermore, the government is developing a large domestic battery industry with a focus on HPAL and ferronickel smelters. This is reflected in one of the government's policy packages, which includes a roadmap for Battery Electric Vehicles (BEVs) under Industry Regulation No. 6 of 2020, aiming to increase the Domestic Component Level (DCL) from 2020 to 2023 in components for two-wheeled, three-wheeled, four-wheeled, and larger vehicles. According to this regulation, the DCL target for major components is 50% for manufacturing components, with an increase to 58% by 2024. Electric vehicle frames and related stainless-steel components will be produced from domestically sourced ferronickel. Details are outlined in Articles 10, Paragraphs 1 and 2.

Paragraph 1 sets a target of 50% for main content, including 10% for the body, cabin, and/or chassis, 30% for battery DCL value, and 10% for the drive system (frame, wheels, gears, etc.). Paragraph 2 sets a target of 58% by 2024, with 11% for the body, cabin, and/or chassis, 35% for battery DCL value, and 10% for the drive system. Notably, as of 2024, major companies like Wuling claim that the Wuling Airev is an Indonesian-made product, considering that 58% compliance with Industry Regulation No. 6 of 2020 has been achieved in Indonesia. The nickel downstream policy in Indonesia since 2020 has been more focused and structured compared to previous efforts starting in 2009.

In addition to regulating DCL for battery-based electric vehicles, the government also offers tax incentives for four-wheeled electric vehicles and buses with a DCL of 40% or more. For these vehicles, the VAT Subsidy (PPN DTP) is reduced from 10% to just 1%. For battery-powered electric buses with a DCL between 20-40%, the VAT Subsidy is 5%, making the total payable VAT 6%. This is regulated under Finance Minister Regulation No. 38 of 2023 (Ministry of Finance of the Republic of Indonesia, 2023). In 2023, a total of 35,862 electric vehicles received incentives (Herman, 2023). Thus, Indonesia is clearly at a different level compared to 2010 when downstream efforts were first attempted.

Electric vehicles are the primary goal and final product, or outcome of the vertical integration or downstream process sought by the government. As additional evidence, the transformation of nickel smelters in Indonesia, under government direction in 2023, shows that at least four of the 27 smelters in Indonesia have the capacity and capability for hydrometallurgy to produce HPAL. These four smelters are strategically located where national nickel ore reserves are found: PT. Huayue Nickel Cobalt, PT. QMB New Energy Material, PT. Halmahera Persada Lygend, and PT. Kolaka Nickel Indonesia, operating in Sulawesi and Maluku. The government aims to improve the operations of existing nickel smelters in Indonesia by investing in them so they can focus on producing nickel using hydrometallurgy, enabling the batteries produced to last up to 73 years.

To boost national nickel production, the government targets having at least 53 hydrometallurgy nickel smelters in Indonesia by 2024 (Santika, 2023). Amid the government's significant efforts to increase the number of smelters and create a roadmap for national nickel downstream, the European Union (EU) lawsuit poses a serious threat to undermining these efforts. The EU's challenge to Indonesia at the World Trade Organization (WTO) concerns the nickel

export ban, arguing that it violates Article XI:1 of the General Agreement on Tariffs and Trade (GATT), which prohibits quantitative restrictions on imports and exports, including bans, quotas, and other limitations (excluding duties, taxes, or other kind of trade barriers) (Hutabarat, 2023). The government's policies outlined in Law No. 4 of 2009 and its revision in Law No. 3 of 2020 regarding the ban on Nickel Ore and raw nickel have been found to violate GATT principles.

The European Union (EU) lawsuit also raises concerns about Article III:4 of GATT, which pertains to National Treatment on Internal Taxation and Regulation. This article requires WTO members to provide equal treatment for imported products compared to domestic products concerning laws, regulations, and requirements affecting sale, offer, purchase, distribution, and use. The EU argues that Industry Regulation No. 6 of 2020 is inconsistent with this principle. The Indonesian government is accused of deliberately creating this regulation to pursue vertical integration (by setting DCL requirements), which could discriminate against other imported nickel products, including subsidies and special treatment for mining companies.

With the two lawsuits filed by the EU against Indonesia at the WTO, Indonesia was found to have violated regulations in 2022. Therefore, the government was required to reopen exports of Nickel Ore and raw Nickel. However, shortly after the decision was announced, Indonesia appealed the ruling at the end of 2022 (CNBC Indonesia, 2023). According to prevailing international legal standards, Indonesia's position in this appeal is clearly under threat. This is due to the lack of a clear definition regarding the feedback provided by the government in its appeal. Research findings indicate that Indonesia's appeal references Article XX of GATT – General Exceptions, which allows exceptions to GATT rules under certain conditions, such as the protection of non-renewable natural resources (like nickel) under Article XX(g) and the protection of human, plant, and animal health (living organisms in general for sustainable purposes) under Article XX(b), thus providing justification for the government's downstream efforts in the name of sustainability.

As of now, Indonesia has not received clarity on its appeal process at the WTO. According to research, Indonesia's counterarguments to the WTO may not be strong, especially when considering the final WTO decision in 2022. Indonesia faced a setback due to the underdeveloped state of its nickel industry. As a result, the output from nickel is predominantly iron, and HPAL or battery production for vehicles is not yet seen as a viable final product from Indonesia. Over the past decade, Indonesia has primarily used pyrometallurgical methods, producing nickel matte with a composition of 77-78% Ni, 21-22% S, and 0.5-0.6% Fe (Prathama, 2020). Typically, this nickel matte is used for producing stainless steel for household products. Therefore, legally, Indonesia is perceived as making excuses and disrupting the global production chain.

On the other hand, Indonesia's appeal serves a different interest. Based on Law No. 3 of 2020, the significant target for building and transforming smelters in Indonesia (with a total of 27 smelters in 2023 and plans to develop up to 53 smelters by 2024) indicates that the government is overhauling the industry structure within a relatively short time frame. The appeal is no longer relevant to the outcome. Whether Indonesia wins or loses the appeal is less significant for the downstream process. Indonesia's appeal appears to be a deliberate strategy to buy time for transforming smelter operations to hydrometallurgy, enabling full production of batteries and supporting materials for electric vehicles. Ultimately, once the vertical integration and industrial structure of nickel are completed, the EU lawsuit and WTO ruling will become less relevant. The government's policy will be justified and correct, focusing on nickel for battery products rather than stainless steel for household equipment.

5. Conclusion

The growing global momentum in the electric vehicle (EV) industry, coupled with a commitment to sustainability across various sectors, underscores the importance for Indonesia to focus on downstream its nickel industry with an emphasis on battery output. This involves restructuring policies, ensuring that the transformation of smelters is achieved by 2025, and engaging foreign investors (electric vehicle manufacturers) in Indonesia's nickel downstream process. Despite facing challenges from the EU lawsuit at the WTO, the government's appeal is not merely about winning or losing. Regardless of whether Indonesia's appeal is successful or not, the country will maintain a robust vertical industrial structure and a significant role in the global production chain for battery-based vehicles. According to researchers, Indonesia should apply the principles of downstream to other fields or raw commodities. Given that Indonesia is not only rich in nickel but also in other natural resources, these should be maximized in line with constitutional mandates.

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