

The Significance of the Nickel Ore Export Prohibition for Indonesia in Consolidating Its Middle-Income Status in the World System



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Abstract

This thesis aims to analyze the significance of the nickel ore export ban for Indonesia in the context of the global political economy, considering Indonesia's status as a Middle-Income (MI) country seeking to advance its economy. Drawing upon dependency theory and World System Theory (WST), Indonesia is assumed to transition from an MI country to a core economy by halting the export of raw materials to developed countries and instead increasing the production of manufactured goods. This study also examines Indonesia's reliance on foreign capital to support nickel downstreaming and industrialization. Both theories offer alternative insights into how the proliferation of global capitalism, coupled with the Indonesian authorities' lack of sufficient control over excessive foreign capital, can result in hidden costs affecting sustainability issues within the country. This further leads to biased economic growth and perpetuates Indonesia's challenges as an MI country in its consolidation toward becoming a developed nation.

Keywords: *Nickel, Global Political Economy, Dependency Theory, World Systems Theory, Indonesia, Middle-Income Country*

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“So verily, with the hardship, there is relief. Verily, with the hardship, there is relief” - Quran 94:5-6 (Surat ash-Sharh)

“Live a life you will remember!” - Avicii

“We didn’t come this far to only come this far” – A well-known proverb

In the name of Allah, The Most Gracious and The Most Merciful,

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Table of Contents

| | |
|---|-----|
| Abstract..... | i |
| Acknowledgments | ii |
| Table of Contents..... | iii |
| 1 Introduction | 1 |
| 1.1 Research Problem..... | 1 |
| 1.2 Research Aims and Research Questions | 3 |
| 1.3 Outline of Study | 4 |
| 2 Literature Review | 5 |
| 2.1 The Trade Dispute and Domestic Implications of Indonesia's Nickel Ore Export Ban | 5 |
| 2.2 Dependency and World-System Theory (WST): Revisiting Indonesia's Path to Industrialization | 7 |
| 3 Theoretical Frameworks | 11 |
| 3.1 World System Theory (WST) | 11 |
| 3.2 Dependency Theory | 13 |
| 3.2.1 Transnational Cooperations (TNCs)..... | 15 |
| 3.2.2 Foreign Direct Investment (FDI)..... | 16 |
| 3.2.3 Global Value Chains (GVCs)..... | 17 |
| 3.3 The Middle-Income (MI) Trap from the Perspective of the World-Systems Theory (WST) | 18 |
| 3.4 Biased Economic Growth: The Potential Costs of Labor Division in the World System..... | 21 |
| 3.5 Summary | 22 |
| 4 Methodology..... | 24 |
| 4.1 Document Analysis | 24 |
| 4.1.1 Source Materials | 26 |
| 4.1.2 Time Scope | 26 |
| 4.2 Data Analysis | 27 |
| 4.3 Ethical Considerations | 28 |
| 4.4 Limitations and Recommendations for Future Research | 29 |
| 5 Analysis | 31 |

| | | |
|-------|--|----|
| 5.1 | From Nickel Ore Export Bans to Nickel Industrialization..... | 31 |
| 5.1.1 | The Significance of Natural Resources for Indonesia: The Rationale behind Nickel Ore Export Prohibition..... | 31 |
| 5.2.2 | Nickel Industrialization as the Pathway for Indonesian Development.. | 39 |
| 5.2 | Dependency and World System Theory in Viewing Indonesia as a Middle-Income (MI) Country | 42 |
| 5.2.1 | Indonesia as a Middle-Income (MI) Country | 42 |
| 5.2.2 | Navigating Indonesia's Challenges as a Middle-Income (MI) Country within Global Value Chains (GVCs)..... | 45 |
| 5.3 | The Dilemma of Nickel Downstreaming | 48 |
| 5.3.1 | Dynamics of Nickel Industrialization: Unveiling Multifaceted Hidden Costs | 48 |
| 5.3.2 | Biased Economic Growth..... | 54 |
| 6 | Discussion..... | 57 |
| 6.1 | Conclusion..... | 60 |
| 7 | References | 62 |

1 Introduction

1.1 Research Problem

Downstreaming in the industry has become a prominent subject of discussion in Indonesia. The government of Indonesia believes that prioritizing the development of the downstream industry will have a significant positive impact on the country's economy. The President of Indonesia has even reaffirmed that the so-called 'commodity downstreaming' policy is foundational for Indonesia to become one of the world's largest economies by 2045, with an expected per capita income of USD 25,000 (Sulaiman et al., 2023). This policy aims to ensure Indonesia's strategic progress towards achieving its vision of becoming a high-income (HI) nation. This sentiment is also echoed by the Minister of Investment, who mentioned that the downstreaming policy would increase exports, state income, and boost economic growth to above five percent (Antara, 2023).

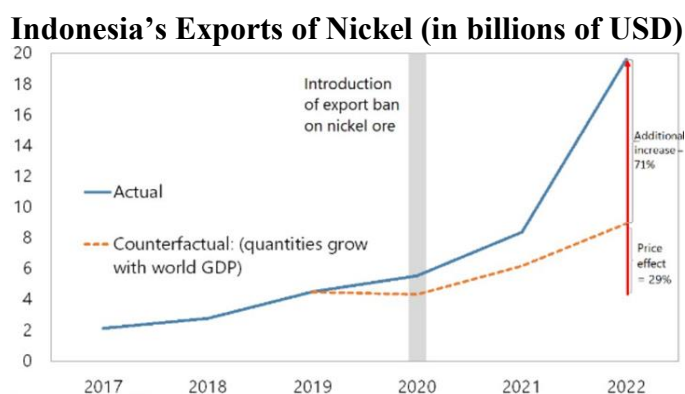
One of the pivotal sectors in Indonesia's downstream policy that has begun implementation focuses on minerals, specifically nickel. Nickel plays a crucial role in the production of stainless steel and electric vehicles (EVs) batteries, which are gaining global popularity for their carbon reduction benefits. Given the anticipated growth in nickel demand, Indonesia holds a strategically significant position, boasting the world's largest nickel reserves. It is estimated that Indonesia owns 21 million tons or 22% of global nickel reserves (Medina, 2023). Recognizing such a significant opportunity and as an upper middle-income (MI) economy¹, Indonesia is determined not to overlook its chance to play a crucial role in global value chains (GVCs), ensuring it does not remain in the status of an MI country. This commitment has prompted the government of Indonesia to cease the export of raw materials, including nickel, to add greater value.

Historically, Indonesia had a limited profit margin as an exporter of nickel ore to developed countries. To address this challenge, the government of Indonesia imposed an export tariff on nickel ore in 2012 and a complete export ban on all raw

¹ Based on the World Bank (2024), Indonesia is included in the upper MI economy (with GNI per capita between USD 4,466 and USD 13,845).

nickel in 2014 (IMF, 2023, p. 27). Yet, these policies did not yield significant results, as most of the nickel was still processed outside the country, resulting in limited refined nickel production and export revenue. In 2017, the government of Indonesia lifted the export ban and opted to reimpose the export tariff. Three years later, Indonesia re-imposed a ban on exporting raw materials and introduced a domestic processing requirement on nickel ore (JakartaPost, 2022; IMF, 2023, p. 27).

The government of Indonesia also encourages more transnational corporations (TNCs) to invest in the domestic nickel industry, establishing nickel smelting facilities within the country. With foreign direct investment (FDI) and the establishment of nickel smelters, it is expected that Indonesia will be able to process the raw material downstream, leading to an increase in export revenue and enhanced economic growth. Following the enforcement of the nickel ore export ban and domestic processing requirement, Indonesia’s export value of nickel surged from USD 4.5 billion in 2019 to USD 19.6 billion in 2022 (IMF, 2023, p. 27).² Meanwhile, the Ministry of Investment in Indonesia claimed that the export value of processed nickel products skyrocketed to USD 30 billion by 2022 (JakartaPost, 2023). Data provided by the Central Statistics Agency of Indonesia also indicated that two provinces³ in Indonesia had the highest economic growth in 2023 due to the nickel processing, mining, and extractive industries (Voi, 2024).



Source: IMF (2023, p. 27)

² According to bilateral data from UN Comtrade, over 80% of Indonesia's refined nickel was exported to China in 2021.

³ North Maluku at 20.49% and Central Sulawesi at 11.91%.

Nevertheless, Indonesia's downstream policy has received various criticisms. First, the International Monetary Fund (IMF) criticized Indonesia's nickel downstream policy for its lack of consideration regarding cost-benefit analysis and the impacts of mineral export bans on multilateral (JakartaPost, 2023). The IMF further advised considering the ripple effects, particularly on commodity prices in the global market, which could also provoke retaliatory actions from trading partners. Another criticism was mentioned during the debate preparing for the presidential election held in February 2024 (BusinessTimes, 2024). It is argued that nickel processing causes significant impacts on the environment and labor and provides little benefit to local people. Given the spillover issues arising from the prohibition of nickel ore exports, this case exemplifies biased economic growth through the lens of the dependency perspective.

Despite ongoing debates, Indonesia continues to implement the policy and advance nickel industrialization. It is hypothesized that Indonesia can transition from an upper MI country to a core economy by halting the export of raw materials to developed countries and instead increasing the production of manufactured goods. This notion is reaffirmed by the President of Indonesia, who accentuates the significance of the downstream industry in propelling Indonesia towards developed nation status, considering the reliance of other nations on goods from developed countries (PresidenRI, 2023). In this instance, the downstream industry, particularly in the mineral sector, highlights Indonesia's commitment to not remain a minor player in today's global market, but instead to play a significant role by industrializing the country. However, given the complexities associated with the foreign capital supporting nickel industrialization, the potential contribution of the nickel ore export ban to Indonesia's economic growth comes into question. Additionally, the policy may inadvertently have adverse effects at the grassroots level due to its biased impact and the presence of other externalized costs.

1.2 Research Aims and Research Questions

This research aims to analyze the significance of the nickel ore export ban for Indonesia in the global political economy context, considering Indonesia's status as

an MI country that seeks to advance its economy. Furthermore, this thesis investigates the extent to which the policy implemented by the government of Indonesia, aimed at facilitating the spread of FDI and TNCs to integrate into significant GVCs, can contribute to biased economic growth within the country. In this case, the research questions arising from the aforementioned research problem and aims are:

1. How does Indonesia seek to consolidate its MI status in the world system perspective in relation to the prohibition of nickel ore export?
2. How does the prohibition of nickel ore exports contribute to biased economic growth in Indonesia?

1.3 Outline of Study

The general structure of this thesis is as follows. The first chapter presents the introduction, which includes the background of the research, the focus on the case of Indonesia's ore export bans, as well as the research aim and questions. The following chapter is the literature review, which explores previous research related to the nickel ore export ban and presents relevant theoretical debates to anchor this study. The third chapter discusses the theoretical framework guiding this research, comprising two main theories, namely the World System Theory (WST) and Dependency Theory. Fourth, the chapter explains the document analysis methodology employed in this thesis, including ethical considerations, the study's limitations, and recommendations for future research. The fifth chapter contains the analysis of the thesis, divided into three sections: the rationale behind enacting legislation and policies concerning the nickel ore export ban, Indonesia's position as an MI country within the world system, and the grassroots issues stemming from nickel industrialization. Finally, the sixth chapter discusses the common thread among all three analysis sections, summarizes the findings, and concludes this study.

2 Literature Review

2.1 The Trade Dispute and Domestic Implications of Indonesia's Nickel Ore Export Ban

There have been several studies conducted on the nickel ore export ban, primarily focusing on international trade dispute issues. Due to the policy of the nickel ore export ban and domestic processing requirement imposed by Indonesia, the European Union (EU) brought the case to the World Trade Organization (WTO). Instead of disputing the trade case based on extractive issues impacting sustainability, the EU argues that these measures unfairly harm its steel and stainless steel industry. The EU Commission further explained that Indonesia's measures could have a direct effect of nullification and impairment, estimated at around EUR 350 million, while the indirect impact could be up to four times higher (EU, 2023). On the other hand, Indonesia defended that such policies were necessary because low-grade ore is considered waste and not economically viable, as well as to adhere to good mining practices (WTO, 2023).

In November 2022, the WTO ruled against Indonesia, stating that Indonesia's policy was inconsistent with its obligations under the General Agreement on Tariffs and Trade (GATT) 1994 (EU, 2023). The WTO mentioned that Indonesia is prohibited from imposing restrictions other than duties, taxes, or other charges (Adisuryo, 2023). In this case, Indonesia disagreed with the result of the WTO panel. To challenge this decision, Indonesia took the matter further by filing an appeal in 2022. Since the government of Indonesia views that the panel's decision did not yet have permanent legal force, Indonesia continues the policy before the Dispute Settlement Body (DSB) in the WTO adopts the final measurement (Adisuryo, 2023). Nevertheless, Indonesia's appeal was stalled due to an issue with the WTO Appellate Body, which is supposed to be a standing body in the organization hearing appeals from reports issued by panels in disputes brought by WTO Members. This occurred because the election of the Appeal Board by a WTO member, the United States, faced a blockage (Hasjanah, 2023).

Some research further suggests that Indonesia's reasons for imposing the nickel ore export ban, such as classification as essential materials for Indonesia and protecting humans and the environment, are unlikely to be justified under GATT 1994 (Widiatedja, 2021, p. 696; Adam and Ahamat, 2022, pp. 251–2). It is argued that Indonesia's primary objective with the measure is merely to protect downstream industries. Another study also suggests that the prohibition on the export of nickel ore cannot be implemented continuously (Krustiyati et al., 2022, pp. 132–3). Although Indonesia may have adequate evidence to legitimize its actions in line with the principle of sovereignty, it is still advised to consider the implications for the multilateral trading system in order to maintain a stable and predictable business environment.

Apart from the trade dispute concerning the nickel ore export ban issue, other research discusses the domestic implications of nickel downstream resulting from such a policy. Some studies mention that domestic nickel processing requirements indeed provide potential for economic growth in the country, aligning with the government of Indonesia's aim to boost industrial development and achieve higher added value to support the country's competitiveness in GVCs (Putra and Samputra, 2023, p. 183; Radhica and Wibisana, 2023, p. 81). This sentiment is asserted by the President of Indonesia that Indonesia's measures in industrialization to transform the export of raw materials into semi-finished or finished goods cannot be impeded by any country or international organization (Setkab, 2023). It was emphasized that the aim is to enhance added value creation within the country. However, opposing viewpoints are also researched. The nickel ore export ban that induces nickel downstreaming is argued to involve significant intervention from foreign capital, especially from Chinese corporations, which may not fully address the social, environmental, and national resilience impacts (Yoesgiantoro et al., 2022, p. 3; Putra and Samputra, 2023, p. 185).

Considering the previous research that predominantly focuses on global trade issues arising from Indonesia's prohibition on nickel ore exports, particularly the dispute settlement with the EU in the WTO, this thesis does not extensively delve into the

realm of international trade law. Nor does it center on the dispute resolution process currently under scrutiny within the WTO due to the on-going issue within the appellate body. Furthermore, recognizing the lack of research on this issue from the perspective of the global political economy, this thesis seeks to explore the case of the nickel ore export ban by emphasizing the significance of the policy and the role of global capitalism in affecting Indonesia's consolidation of its MI status. While some research has addressed the impact of the policy on domestic issues, there is currently no research that bridges the significant prohibition of nickel exports with Indonesia's status as an MI country and its role in the world system. This is particularly notable in light of the Indonesian government's aim to become a developed country through domestic commodity processing, including nickel.

2.2 Dependency and World-System Theory (WST): Revisiting Indonesia's Path to Industrialization

From the government of Indonesia's standpoint, the nickel downstreaming case is often perceived as essential for modernization to stimulate economic growth and national development. This perspective aligns with the beliefs of modernists, who argue that industrialization, urbanization, and democratization are pivotal concepts in accelerating modernity (Hawkins, 2022, p. 19). Capitalism, as a productive system, holds significance in modernization. Classical economists like Smith argue that capitalism has the potential to elevate human well-being and foster economic development (Cypher, 2021, p. 153). Modernists also encourage societies in 'third world' countries to adopt these key concepts. They advocate for support through free enterprise and capital, following Western countries like Europe and North America, to advance their nations (Hawkins, 2022, p. 20).

In line with the modernist mindset, Indonesia believes that to achieve development, it must become an industrialized nation. According to modernists, there is a need to reform the system of values to align with the principles of science, technology, and the functional requirements of a capitalist economy for progress (Heath, 2004, p. 667). This prompts the government of Indonesia to assert that the nation cannot solely enhance its economy through the exportation of raw materials and low-value

goods to developed countries. However, modernization does not always align well with sustainable development and economic growth, as evidenced by grassroots-level issues arising from nickel industrialization. The lack of research from a global political economy perspective, combined with the recognition that industrialization does not always have a positive impact, led to the selection of dependency and WST as the theoretical frameworks for this study. This research contends that both theories remain relevant to explain global political economy issues in the era of globalization, particularly concerning the impacts of global inequalities within the world system.

It is understandable that there are critiques of dependency and WST, suggesting that not all developing and least developed countries follow similar paths of development due to their unique characteristics (Sekhri, 2009, p. 8). WST has been criticized for its failure to recognize and theorize the autonomy of subsystems, neglecting the cultural aspects of the social system (Pieterse, 1988, p. 261). This criticism implies that downplaying interactions within a state can influence macro-level processes, as the culture and ideology of a state play a significant role in its development. However, the WST and dependency approaches can transcend domestic-level analysis and cultural debates by focusing on global economic relations and their connections to modern colonialism and capitalism. It is crucial not to overlook WST's primary argument that there exists a singular world economy, in which all countries participate in a global capitalist system due to their involvement in the world capitalist market (Wallerstein, 1976, p. 35; Friedmann and Wayne, 1977, p. 404).

It is evident that globalization today can amplify the neoliberal agenda by endorsing the principles of open market access. Many countries aim to leverage globalization by participating in integration processes, such as participating in free trade agreements. On the other hand, another viewpoint suggests that globalization, which emphasizes consumption patterns, has failed to transform developing and least developed countries into competitive producers in the world market (Sekhri, 2009, pp. 8–9). Free trade and FDI that could drive development in these countries

do not occur because North-South economic relations still primarily involve the South trading raw materials and fuels for manufactured goods from the North. This argument is further supported by Farny (2016, p. 3) in her paper 'Dependency Theory: A Useful Tool for Analyzing Global Inequalities Today?'. She contends that the benefits of globalization have been unevenly distributed, exacerbating global inequalities along the North-South divide.

Dependency theory has also been criticized for focusing solely on studying relationships between nations and for attributing the problems of third-world countries solely to developed countries (Friedmann and Wayne, 1977, p. 414; Sekhri, 2009, p. 8). Critics suggest that the theory should analyze the broader interactions between capitalist entities and the state. In this context, these entities compete for resources such as labor, materials, and markets, with the state assisting in securing these elements for them. However, the new dependency theory (Kutuk, 2022, p. 152) expands on this by examining recent phenomena, or what Luke Amadi (2012, in Farny, 2016, p. 4) calls 'new dependency'. This phenomenon arises from the economic asymmetry created by the economic and technological advancements of the Global North through neoliberal globalization. Leveraging this more nuanced understanding of dependency theory, this research continues to use this theory to explore the complexities of non-state global capitalist entities and to examine Indonesia's case in this context.

Dependency and WST further enable a comprehensive exploration of the issues faced by MI countries. Rather than solely analyzing these challenges within a broader systemic context, certain literature underscores the significance of domestic factors. These include technological investment, export orientation, fostering entrepreneurship and innovation, and associated policy measures. However, interdisciplinary groups of scholars in the political economy of development also recognize the heightened impact of international competition (Naseemullah, 2022, p. 2156). When MI countries from semi-peripheral and peripheral regions endeavor to upgrade domestically through foreign capital, they must navigate the coordination among all stakeholders involved, including public authorities, civil

society, and private actors. The need for coordination arises from the necessity for states to regulate and monitor FDI as well as TNCs during their activities in host countries. This ensures that development is sustainable and prevents the exploitation of labor and the environment.

Raj-Reichert (2020, in Naseemullah, 2022: 2166) provides the example of Malaysia as an MI country deeply integrated into the electronics GVCs. Despite the country's efforts, it has not succeeded in capturing more valuable production niches. This is because its reliance on FDI and TNCs has resulted in foreign contract manufacturers maintaining low value-added production processes, thus entrapping the country in labor-intensive manufacturing. This illustrates that the broader perspective, exemplified by dependency and WST, which acknowledges the presence of foreign actors in MI countries, continues to significantly influence domestic development. Building on previous research, this study seeks to examine the application of the dependency and WST approach in analyzing the context of nickel industrialization in Indonesia as a developmental pathway.

3 Theoretical Frameworks

This chapter explains the theories utilized for this thesis, mainly world-system theory (WST) and dependency theory. In the first section, WST explains its critique of capitalism and the concept of the division of the world based on countries' capacity in the global political economy, comprising core, semi-periphery, and periphery countries. The second section discusses dependency theory, the predecessor of WST, explaining that not relying on core countries may improve the welfare of the state, but it does not necessarily help countries in peripheral and semi-peripheral status be free from the grip of global capitalism. Dependency theory further examines the roles of Multinational Corporations (MNCs)/Transnational Corporations (TNCs), Foreign Direct Investment (FDI), as well as the involvement of countries in Global Value Chains (GVCs). The following section explains the middle-income (MI) trap issue from the perspective of dependency and WST. This chapter also further presents the potential costs of countries hosting foreign capital apart from economic aspects. Finally, the chapter closes with a summary of the chosen theories and their implications for further application in this thesis.

3.1 World System Theory (WST)

According to Wallerstein (2011, p. 347) regarding world system theory (WST), "*a world system is a social system, one that has boundaries, structures, member groups, rules of legitimation, and coherence*". This statement could be explained as societies being interconnected within a larger system where their interactions are influenced by global dynamics and power structures (Hopkins and Wallerstein, 1982, p. 42). This theory recognizes the concept of sovereign states in the modern world system that are linked to each other. Historically, sovereignty was introduced after the Westphalia Treaty in 1648, marking the existence of the modern state with autonomous state power, fixed boundaries, and the principle of non-interference in domestic affairs (Wallerstein, 2004, pp. 42–3).

Today, the relations between societies in the world system can be observed through the interconnectedness and interdependence of nation-states. Wallerstein (1976, p. 35; Cairó-i-Céspedes and Cívico, 2022, p. 1953) suggests that in this global system,

characterized by such interaction, the dynamics of capitalism are induced, resulting in a unified world system operating on capitalist principles. This implies that capitalism becomes the dominant economic framework governing the global political economy. This can be seen in the division of labor and the law of capital accumulation in driving economic progress for the nation's wealth. Capital accumulation refers to the expansion of the stock of capital, while the division of labor entails task specialization. Classical economics posits that the division of labor leads to lower costs and increased output, thereby offering producers high-profit opportunities (Cypher, 2021, p. 154).

With greater division of labor, more people worldwide will likely enjoy economic prosperity (Cypher, 2021, p. 155). Globalization then spread this idea, making extensive division of labor globally. Yet, WST is against this concept since the division of labor in the world system involves a hierarchy of occupational tasks where the range of economic activity is not evenly distributed globally (Wallerstein, 2011, p. 350). This leads to some groups exploiting the labor of others and receiving a larger surplus value than others. The world system reflects the reality of the expansionist logic of global capitalism, driven by the pursuit of profit and economic dominance. The least developed countries (LDCs) and developing countries are exploited by the developed countries for their resources, labor, and markets. As a result, this continuous interaction leads to the dependence of LDCs and developing countries on meeting the needs and demands of developed countries to sustain the global capitalist economy (Cairó-i-Céspedes and Cívico, 2022, p. 1953).

WST identifies three basic hierarchical types of countries in the world system as follows (Hopkins and Wallerstein, 1982, pp. 45–7; Wallerstein, 2004, pp. 28–9; Jacob, 2023, pp. 54–5). First, there are the core countries that focus on exporting manufactured products in international commerce. Core regions also have characteristics such as having a greater proportion of their workforce in higher-waged labor and being composed of stable nation-states, which include industrialized countries of the North Atlantic plus Japan, commonly referred to as developed countries. Second, there are peripheral countries that tend to be exporters

of agricultural and extractive products. These regions, which include the rest of the non-Communist world, are part of peripheral regions and typically have weak state functions, lower-wage workforces, and lack free choice in the global market due to their dependency on their former colonizing powers. Peripheral regions are often also referred to as LDCs. Third, there are semi-peripheral countries that are classified as 'in-between' in the core-periphery structure. Semi-peripheries refer to countries that seek entry into core status while at the same time fearing their decline to the level of the peripheries. These countries are also characterized by combined and uneven development, where labor is more prevalent. Developing countries often belong to this category.

Contrary to this, the division of labor, as perceived by WST, is considered irrelevant by globalists. Globalization has induced the transnationalization of production processes around the world, blurring the distinctions between the core-peripheral and semi-peripheral regions based on geographical location and nation-states (Robinson, 2011, pp. 17–9). Globalists further argue that there are emerging new relationships beyond the territorial boundaries of states, such as classes, institutions, and accumulation, including the rise of supranational agencies like the World Economic Forum and G20. However, another perspective suggests that multilateral economic cooperation is still dominated by the hegemony of core countries (Chase-Dunn and Grimes, 1995, p. 411). Instead of eliminating the division in the global economy, globalization might intensify the benefits reaped by core nations as production activities expand across national boundaries.

3.2 Dependency Theory

In a broader perspective, WST is derived from the dependency theory. The dependency theory was inspired by the Singer-Prebisch hypothesis (Kutuk, 2022, p. 151). The hypothesis suggests that prices of primary commodities tend to decrease compared to manufactured goods. Dependency theory views the global 'division of labor' by categorizing LDCs as producers of primary commodities such as agricultural products, minerals, and raw materials. Developing countries export intermediate goods, while developed economies transform these goods into

industrial products and commercialize them with the help of the international trade regime, which tends to favor core countries (Kvangraven, 2023, p. 150).

According to Dos Santos (1970, p. 231), dependence occurs when the economy of certain countries is influenced by the development and expansion of another economy. The interdependence between two or more countries with an asymmetry of power leads to dependence, wherein dominant nations remain self-sustaining while dependent nations can only sustain themselves as a reflection of the dominant nations' expansion. The dependency theory further explains its premise that is against the concept of international trade. David Ricardo (in Deardorff, 2011, p. 28) argues that countries can produce and sell things that they are good at making and purchase things that they are not good at. He underlines his concept of comparative advantage that favors free trade and economic expansion, where countries can engage in export-import activities and mutually benefit from international trade.

Dependency scholars, however, refute Ricardo's argument, suggesting that the trade relationships among countries in the world system tend to be imbalanced and can lead to dependency (Galtung, 1971, p. 90). LDCs and developing countries that rely on exporting raw or intermediate goods will face challenges in international trade with developed countries. This is because the prices of their exports are falling relative to the prices of manufactured imports, resulting in long-term deterioration of the terms of trade for peripheral and semi-peripheral countries (Cypher, 2021, p. 233). This also forces the LDCs and developing countries to produce increasingly more agricultural or raw material products to obtain the same quantity of imported manufactured goods. As a result, from the perspective of dependency theory, the world system can be explained further as follows:

“The center nations are able to buy the periphery's cheaper imported primary products with their own higher-profit manufacturing exports and with higher wages for workers, while the periphery nations find that new technology only forces the prices of their exports down on the world market, thus requiring more to be exported just to be able to purchase the same

quantity of manufactured imports from the centre. All the benefits of new technology, which is constantly advancing, thus accrue to the already developed nations, as their incomes rise and prices of what is imported from the periphery fall” (Cypher, 2021, p. 239).

Another debate mentions that notions such as dependence and modernization are not appropriate to address the issues of development and exploitation (Petras, 1981, p. 154). The theory is suggested to focus more on the complex class relationships, both at the internal and international levels, which are engendered in the process of accumulation in order to view political economy problems. However, foreign capital often controls the domestic market, leaving periphery and semi-periphery countries lacking the finance to enter the monopolistic phase of capitalist development (Kvangraven, 2023, p. 152). This suggests that the surplus extracted by monopoly capital may not necessarily flow to the host countries but rather be repatriated elsewhere by foreign capital originating from developed countries.

To further understand dependency theory's perspective on global capitalism relations in the contemporary world system, three key concepts associated with this theory need to be reviewed.

3.2.1 Transnational Cooperations (TNCs)

Transnational Corporations (TNCs) or Multinational Corporations (MNCs) refer to companies operating in two or more nations with significant equity investment in a foreign branch plant, subsidiary, or affiliate (Cypher, 2021, p. 567). The existence of TNCs can actually be observed since the colonial era. The Dutch East Indies Company, for instance, played a major role in the economic life of Indonesia before its independence by providing capital and spurring international trade. In the post-colonial era, many countries with weaker economies often seek assistance from TNCs because they lack the capacity and experience in production technology and capital (Kutuk, 2022, p. 152). This is in line with the modernist view on TNCs, arguing that these corporations may generate potential resources through their transnational activities in the form of new capital, products, advancement of

technologies, management/labor training, and other organizational innovations (Cypher, 2021, p. 584).

TNCs can be observed through four main avenues: 1) trading companies controlling the marketing process; 2) resource-intensive vertically integrated transnationals; 3) stand-alone branch manufacturing plants; 4) global factory production sites (Cypher, 2021, p. 568). Additionally, TNCs are often found in specific locations, mainly in LDCs and developing countries, driven by their own interests which aim to lower the cost of production. This includes seeking out places with cheap labor, as well as locations where there is a lack of environmental and social awareness. In another way, dependency scholars view that the presence of TNCs may contribute to the emergence of a new form of dependency. They argue that industrialization under the control of TNCs ultimately leads to the dominance of these corporations over LDCs and developing countries, characterizing a ‘transnational capitalism’ (Cardoso, 1977, p. 18). This further affects weaker economic states and has implications for the core capitalist economies.

3.2.2 Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) refers to the ownership of productive assets by a parent corporation from another nation (Cypher, 2021, p. 581). It is assumed that international investment tends to flow to countries with stable and positive economic growth. From the perspective of liberalism, dependency theory oversimplifies and misleads the evidence of private foreign investment, considering it only exploitative (Namkoong, 1999, p. 142). According to neoclassical economists, developing nations are viewed as deficient in physical capital investment (Cypher, 2021, p. 582). FDI is considered to enhance economic growth by catalyzing the improvement of various kinds of capital, industrialization, and research and development (R&D). Thus, it would appear that inflows of FDI could only have a positive effect on the economic development and growth of poorer nations.

Another viewpoint sees the impacts of much penetration of FDI, especially for non-developed countries. First, it is assumed that if many developing countries employ the strategy of FDI promotion at the same time, there is a tendency for failure (Cypher, 2021, p. 598). These developing countries may flood the global market with new manufacturing exports, inducing a fall in prices. It is also presumed that price falls may not be helped by the increasing volume of sales. Second, FDI, with the creation of fully foreign-owned businesses, tends not to improve industrial upgrading (Javorcik, 2004 in Anastasi, 2023, p. 186). TNCs established in a country do not automatically engage in technological transfers unless they are accompanied by the sharing of technology through collaboration with local companies. Finally, a recent paper from the World Bank mentions that the relationship between FDI and gross domestic product (GDP) growth is far from stable due to the global value chains (GVCs) revolution (Benetrix et al., 2023).

3.2.3 Global Value Chains (GVCs)

Global Value Chains (GVCs), also known as global integrated production systems, refer to borderless production systems that dominate TNC manufacturing and assembly operations (Cypher, 2021, p. 578). TNCs help coordinate and control a system of global and regional production that is functionally and geographically fragmented, resulting in trade no longer being related to the international exchange of 'finished' goods (Phillips, 2017, p. 430). This is relevant to the idea of the division of labor, which highlights the role of countries' specialization in the world system in order to produce goods. For instance, the process in GVCs can be observed when LDCs and developing countries with abundant natural resources extract and export those goods to core countries that possess advanced technology to further process and add value.

According to the neoclassical perspective, LDCs and developing countries that engage in GVCs would experience higher economic growth and a significant reduction in poverty levels (Cypher, 2021, p. 621). GVCs have also transformed the impact of FDI on economic growth (Benetrix et al., 2023). Since GVCs allow different parts of the production process to be distributed across multiple countries,

the idea of GVCs can help countries with less advanced capabilities participate in the global economy and attract more FDI. With the aid of the direct activities of TNCs, host economies can experience positive spillover effects on the domestic economy.

On the other hand, TNCs can take advantage of low-wage workers in poorer countries. The involvement of periphery and semi-periphery countries in GVCs may encourage TNCs to exploit their power to reduce wages and profits for local corporations. This leads to weakened consumer demand within the country, as laborers receive low salaries and cannot afford high-priced goods produced by TNCs (Cypher, 2021, p. 620). GVCs can further exacerbate inequality in the labor market, with a growing demand for skilled labor and stagnant wages for unskilled workers. Overall, GVCs are viewed as creating a new form of dependence by perpetuating structures that leave some behind (Kvangraven, 2023, p. 158). The more unrestricted FDI and international trade flow, the further intensification of fragmented and arbitrage labor manufacturing processes within global production in the world system.

3.3 The Middle-Income (MI) Trap from the Perspective of the World-Systems Theory (WST)

The World Bank (2023) categorizes countries based on Gross National Income (GNI) per capita into four classifications, as depicted in the table below, aiming to provide a broad indicator of countries' economic capacity. However, GNI per capita does not directly measure a state's welfare or level of development, nor does it reflect inequalities in income distribution within countries (World Bank, nd). Instead, it has been demonstrated to be a significant indicator closely correlated with other measures of quality of life in a country, including life expectancy at birth, child mortality rate, and school enrollment rates. The World Bank (2023) also mentions that MI countries are home to 75% of the world's population, 62% of the world's poor, and one-third of global GDP. This suggests that MI countries play a pivotal role in the world system, influencing global political economy dynamics and the distribution of welfare.

World Bank Group Country Classifications by Income Level

| | Low Income | Lower-middle Income | Upper-middle Income | High Income |
|----------------|------------|---------------------|---------------------|-------------|
| GNI per capita | ≤ 1,135 | 1,136 - 4,465 | 4,466 - 13,845 | > 13,845 |

Source: World Bank (2024)

Since the mid-2000s, scholars have paid attention to the issue of the MI trap, including in Southeast Asia countries (Doner and Schneider, 2016, p. 608). Scholars, like Felipe et al. (2021 in Anastasi, 2023, p. 175), define the MI as a term describing a country that remains stuck in the MI range for a certain period without progressing to higher income (HI) levels. Specifically, if a country stays in the lower MI for 28 years, in the higher MI for 14 years, or remains in the MI range for 42 years. Meanwhile, another perspective coming from a political economy perspective, articulated by Zhou (2018, p. 483) as well as Doner and Schneider (2016, p. 609), offers a different approach to explaining the MI trap. They state that MI countries can no longer compete with LI countries due to higher wages than those offered by LI countries, while MI countries struggle to compete with HI countries due to the gap in technological advancement. Hence, high wages and a lack of R&D capacities for technological advancement pose challenges for countries susceptible to being trapped in the MI status.

In this regard, WST helps explain the reasons why some countries suffer from the phenomena in which they are trapped at an MI level. The argument of WST offers the perspective that suggests, due to the global division of labor facilitated by global capitalism, countries in periphery and semi-periphery regions struggle to advance their economies (Anastasi, 2023, pp. 175-7). When MI countries lose their comparative advantage due to the rising wage of labor, they need capacities like core countries, especially the need for investments in areas such as R&D, human capital, infrastructure, and education, to advance towards HI status. Without similar capacities to HI countries, MI countries risk revolving around low-value-added economic activities, trapping them in a stagnant position (Anastasi, 2023, p. 188).

Consequently, these circumstances compel MI countries actively involved in the global economy to struggle to retain their significant role in the world system.

However, countries holding MI status still encounter difficulties despite their efforts to modernize their economic activities and compete in the global market. Doner and Schneider (2016, p. 612) mention that to upgrade industries and make improvements in human capital, states need to tackle social cleavages, including economic inequality, informal workers versus formal workers, and home-grown businesses versus TNCs. Meanwhile, excessive FDI can deter TNCs from investing in upgrading local institutions and industries, trapping the host countries in their place in the global supply chain (Anastasi, 2023, pp. 176-7). This situation can exacerbate broader social and environmental issues as TNCs prioritize profit extraction from LDCs and developing countries, exploiting their cheap labor and natural resources instead of actively promoting technological progress within the host country.

Indeed, despite the influx of FDI into the country resulting in the absorption of a significant labor force, advancements in local industries, technology, and R&D within the host nation are still often neglected. Technological advancement is paramount in international trade and pivotal for avoiding the MI trap, as demonstrated by the higher income levels enjoyed by developed countries today, attributable to increased labor productivity facilitated by better technology (Zhou, 2018: 485). These factors enable core economies in manufacturing advanced products for international trade. The dearth of R&D expenditure by TNCs in the host country, coupled with the flow of surplus value from LDCs and developing countries to core economies through exploitative practices, explains why FDI and TNCs may create barriers to development (Doner and Schneider, 2016, p. 616). This insight further informs the subsequent discussion on theories such as dependency and WST, which highlight how new actors in global capitalism can perpetuate hidden costs for semi-peripheral and peripheral countries, thereby prolonging sustainability issues and perpetuating their MI status.

3.4 Biased Economic Growth: The Potential Costs of Labor Division in the World System

As a result of globalization, the spread of global capitalism through the roles of FDI, TNCs, and GVCs became pivotal in the new process of accumulation and central to the growth process, especially in the periphery and semi-periphery countries. This aligns with the principles of classical and neoclassical economics, which advocate for capital accumulation, economic growth, and poverty reduction. Globalization has led many nations to undergo dramatic industrialization and increase manufacturing exports, but most have not increased their value-added (Cypher, 2021, p. 597). This is because they still have to struggle to import machinery/equipment and technology, develop adequate infrastructure, as well as bear other hidden costs that need to be sacrificed alongside the rising exports. Considering the controversy surrounding these phenomena in the world system, other impacts of the foreign capital in the host country need to be highlighted.

Firstly, Cypher (2021, pp. 592-5) discusses three potential costs associated with TNCs and FDI, which contribute to a process of biased economic growth. i) Profit shifting conduits involve significant outflows of capital through practices such as transfer pricing, debt shifting, and service fees on ‘intangibles’.⁴ While FDI inflows to LDCs and developing countries may increase their production capacity, profits are often shifted to tax havens, resulting in revenue loss for the governments of these countries. ii) Diversion effects suggest that TNCs may not prioritize indigenous knowledge and technological advancement through R&D. Another diversion effect is that top managers and skilled labor are often recruited from the best university graduates or from outside the local area, leaving local talent behind due to a lack of trained skills. iii) Increasing industrial concentration, characterized by TNC dominance in the market, may lead to suboptimal resource utilization and heightened corporate power. Corporations become more powerful as they can

⁴ A **transfer price** is used by TNCs to avoid taxes in one country or another and avoid any profit repatriation taxes or other restrictions placed by any country within the company’s global operations. **Debt shifting** refers to unnecessary loans at high-interest rates from one TNC affiliate located in a low-jurisdiction to another profitable unit located elsewhere. The third form of profit shifting is to attribute to a tax-haven-based subsidiary intellectual property rights, R&D, and **other intangibles**.

control prices and limit competition. This results in income distribution becoming more unequal, with the majority of wealth flowing only to those at the top of the economic hierarchy rather than to the labor force.

Furthermore, Wallerstein (2004, pp. 48–9) mentions three other potential costs that should be considered since corporations usually ignore or externalize them significantly. i) Costs of toxicity arise due to production processes that dispose of material or chemical waste. Environmental costs associated with GVCs, such as carbon dioxide (CO₂) emissions from logistic transportation and excess waste due to packaging, are also significant (Cypher, 2021, p. 622). ii) Costs of exhaustion of materials imply the issue of exploiting natural resources without adequately considering their replacement. It is also echoed by Cypher (2021, p. 598) that one of the long-term costs of TNCs is environmental degradation. For example, rainforests that have been cut down for wood material, leading to consequences such as the loss of biodiversity. iii) Costs of transport suggest that companies do not pay for transportation infrastructure, as the government, through revenue from the public, covers these costs. This is evidence of the state's role in the accumulation of capital to support corporate operations. In the end, TNCs often do not fully account for the negative environmental and social impacts in the pursuit of profit.

3.5 Summary

To provide critical analytical tools for understanding the dynamics of global capitalism in relation to dissecting the complexities surrounding the Indonesian context, the choice of the theoretical framework for this thesis is motivated by WST and dependency theory. Specifically, WST offers insights into the imbalance of nation-states' economic capacities, highlighting this disparity due to the division of labor. Indeed, there is criticism suggesting that dependency and WST may not be entirely relevant due to the increasingly blurred lines of actors and division of labor in the world system. However, this study adopts new dependency theories that offer deeper insights into the complex relationships between states and other global capitalist entities, such as FDI and TNCs.

In today's global landscape, periphery and semi-periphery countries may not rely directly on core economies, potentially severing the dominant-exploited relations among the states. However, the involvement of LDCs and developing countries in GVCs may introduce a new form of dependence, wherein these countries become further dependent on global corporations. While it is recognized that other viewpoints prioritize the autonomy of subsystems in shaping development issues in MI countries, the selected theories offer alternative insights into how the proliferation of global capitalism impacts domestic concerns, particularly in the periphery and semi-periphery regions. These issues are emphasized for their potential to skew economic growth effects, ultimately hindering MI countries from attaining significant positions within the world system.

Dependency theory and WST are employed in this study to examine Indonesia's nickel ore export ban, aimed at reducing the country's reliance on core nations for downstream commodities. This ban has prompted policies to meet domestic nickel processing needs, driving the necessity for nickel industrialization. Indonesia, currently classified as an MI country, aspires to achieve economic advancement through self-reliance in processing such commodities. However, this industrialization has led to a dependence on foreign capital, particularly FDI and TNCs, representing a new form of dependency. Rather than attaining a significant position in GVCs through the production of advanced goods, both theories suggest that nickel industrialization may conceal hidden costs of economic growth. These challenges could perpetuate Indonesia's MI status.

4 Methodology

This thesis utilizes a qualitative perspective, grounded in philosophical and theoretical assumptions about the nature of reality and knowledge (Weiss, 1997, p. 270). Given that the qualitative perspective incorporates subjectivity and enriching research explanations (Weiss, 1997, p. 252), this approach is chosen to provide a framework for understanding global issues comprehensively, while specifically considering the context of Indonesia. This approach influences data collection, which heavily relies on qualitative data, such as words, that are not quantified (O’Leary, 2014, p. 262). Quantitative data are also gathered in this study. Yet, they serve as supplementary and supporting information, elaborated upon further through qualitative analysis. This approach is advantageous as the research seeks to explain the significance of Indonesia’s policy on the nickel ore export ban, which cannot be adequately assessed solely through numeric data. Instead, qualitative research methods enable the capture of perspectives and motivations of various stakeholders involved in this case.

In this chapter, several sections are presented to discuss the methodology employed in this thesis. Firstly, document analysis, along with the rationale for its use in data collection for this research, is explained. In this section, the source material and time scope of this research are also elaborated upon. The subsequent section introduces the data analysis employed in this thesis. Thirdly, various ethical issues related to this research are discussed. Finally, this chapter includes a discussion of the limitations of this thesis and the potential for future research.

4.1 Document Analysis

According to Bowen (2009, p. 27), document analysis is one of the analytical methods in qualitative research that involves a systematic procedure for reviewing or evaluating documents. Although documents encompass more than just written text, this thesis primarily focuses on text form. As O’Leary (2014, p. 474) mentions, document analysis is a research tool used for collecting, reviewing, interrogating, and analyzing various forms of written text as primary sources of research data. Document analysis differs from content, narrative, and discourse analysis, which

focus on the meaning in speech and interpret the stories of individuals or language within a power-knowledge context (O’Leary, 2014, p. 599). This method is chosen to examine and interpret data from various sources of documents to elicit meaning, gain understanding, and develop empirical knowledge, particularly in the context of the global political economy, as explored in this thesis.

A document can serve as a significant carrier of messages (Prior, 2003, p. 21). In this thesis, documents offer insights into various viewpoints and experiences from different stakeholders, including government entities and non-state actors, such as businesses, TNCs, and the public. By examining textual evidence from these documents, researchers can gain a better understanding of the context within which these stakeholders are involved (Bowen, 2009, p. 29). Another specific function of documentary material in this thesis is as a means of tracking change and development material (Bowen, 2009, p. 30), as documents can provide chronological events within the time span of the research, specifically before and after the implementation of Indonesia’s policy on nickel ore export prohibition.

Furthermore, document analysis can prove to be more efficient and cost-effective compared to other methods, especially with the assistance of online resources (Bowen, 2009, p. 31; O’Leary, 2014, p. 464). Through document analysis, data collection can be both time and location-efficient, which is essential given the limited duration of the research and geographical constraints. Document analysis facilitates the mapping of perspectives from various stakeholders simultaneously, without the need for field trips (Weiss, 1997, pp. 260–1). This method is particularly useful for addressing the second research question concerning the policy's broader societal, business/capitalist, and environmental impacts. Additionally, this thesis necessitates data collection from governmental sources to capture the state’s perspective, assisting in answering the first research question regarding the significance of Indonesia’s policy in consolidating its MI status. Unlike other qualitative methods such as interviews or observations, which may be influenced by normative biases and subject to changes based on sensitivity to the issue or

national interests, documents remain consistent and stable upon repeated review or study (Bowen, 2009, p. 31).

4.1.1 Source Materials

Secondary data collection is essential for the document analysis method. Secondary data refers to existing data gathered and analyzed from available documents, rather than newly created or collected as part of the research process (O’Leary, 2014, p. 462). As mentioned above, the secondary data in the documents used in this thesis mainly focus on fixed and static texts from internet sources. Nevertheless, documents are unidimensional forms without a researcher’s intervention, and they may contain pictures and diagrams, which are also considered for inclusion in this research (Prior, 2003, p. 5; Bowen, 2009, p. 27).

In more tangible materials, sources of secondary data can include laws, regulations, proposals, contracts, minutes of meetings, reports, and brochures for the public (Weiss, 1997, p. 260). Referring to O’Leary (2014, pp. 470-1), the types of existing data employed in this research comprise: 1) official data and records, including policy summaries, report documents, academic journals/papers, statistical data, and market research, sourced from international organizations (IOs), national and local governments/departments, universities, non-governmental organizations (NGOs), and various public and private sectors; 2) official organizational communication, documents, and records, including but not limited to institution websites, press releases, catalogues, pamphlets, and memos; 3) the media, such as newspapers, magazines, and articles. The media becomes a significant data source as it often presents contemporary news and covers various stakeholders’ messages, including updated information on the activities of both state and non-state actors related to the thesis topic.

4.1.2 Time Scope

This research scrutinizes pertinent documents dating back to the emergence of 'mineral nationalism' in 2009, marked by the issuing of relevant legislation, including those related to mineral downstreaming, domestic processing

requirement, raw material export bans, and the comprehensive export prohibition on raw nickel. This study also extends until the topic attracted significant focus in Indonesia's presidential debate during the present year of 2024.

4.2 Data Analysis

By the guidance of O'Leary (2014, pp. 474-8), this thesis conducts the process of document analysis as follows. Firstly, it involves planning the range of documents considered as potential sources and determining how to obtain these documents. This thesis primarily collects data from online documents published by governments to extract information about the policy and legislation, as well as its rationale for implementing the nickel ore export ban. Additionally, documents from NGOs, such as organizations related to the global political economy, businesses operating in the nickel refining industry in Indonesia, and media sources that voice grassroots perspectives are gathered.

Secondly, the process involves gathering, reviewing, and interrogating the texts. This step emphasizes the need to verify the credibility of the text, including factors such as the author/creator, audience, circumstances of production, tone, and document style. The research not only focuses on finding information for data collection but also on identifying accurate and credible sources, which can be achieved by utilizing official institution/organization websites to ensure reliability. Lastly, the process includes reflecting, refining, and analyzing the gathered data. Similar to other methods, this step requires critically reflecting on the collected data with the guidance of the theoretical framework in this thesis to uncover and address the research questions.

Furthermore, this research follows a deductive logic approach. This logic entails drawing conclusions about specific facts to answer the research question by having certain ideas or theories in mind as the framework of the research and searching for data to potentially confirm these (O'Leary, 2014, p. 579). In this research, WST and dependency theory serve as the main guidance to analyze and provide an empirical explanation for the case of Indonesia. The analysis chapter of this study is structured

according to the theoretical framework, facilitating the examination of the collected data from documents. The first section analyzes the trajectory of Indonesia's nickel ore export prohibition, which led to nickel downstreaming and industrialization. It employs WST and dependency theory to understand Indonesia's significance in the division of labor in the world system. In the subsequent section, the study examines Indonesia's position as an MI country with the assistance of Dependency and WST in examining the challenges towards achieving HI status akin to other core economies. The third section delves into the dilemma of nickel industrialization, considering the hidden costs posed by global capitalism actors in Indonesia as a host country, thereby creating new dependency problems. Finally, the conclusion discusses all the interconnected threads from the three analysis sections to address the research questions.

4.3 Ethical Considerations

Ethics are integral to research, influenced by various factors such as competing interests, sets of values, and regulations (Mason, 2018, p. 84). According to O'Leary (2014, pp. 115-8), researchers must uphold professional integrity in their quest for knowledge production, ensuring that research is conducted impartially and conclusions are reached without unrecognized bias. In this regard, this thesis endeavors to maintain professional integrity by addressing ethical considerations as follows. Firstly, this research utilizes publicly available documents as research materials and obtains permission and informed consent for data collection. Relying on publicly available sources on the internet helps mitigate the risk of accessing visual documents and sensitive materials that may be private or confidential (Mason, 2018, p. 99).

Secondly, this thesis acknowledges two potential sources of bias. While document analysis with existing data minimizes researcher involvement, reducing the risk of bias (O'Leary, 2014, p. 464), bias in document selection may still occur. To address the potential bias in document selection, this research endeavors to gather documents from balanced sources. This entails not relying heavily on governmental documents alone but also seeking balance from news/media sources, both national

and international. Bowen (2009, pp. 31-2) emphasizes the importance of evaluating the quality of documents by assessing their content and background. Since each document varies in terms of authorship, publication, and content, providing insights into people's thoughts, ideas, and beliefs, it is crucial to consider the dynamics involved in the relationships between the content, document producers, and intended audience.

Another source of bias that may arise in this thesis is bias in interpreting the documents. As social science researchers, it is imperative to recognize that their own worldview can influence how they perceive and interpret issues (O'Leary, 2014, p. 120). Researchers' backgrounds, including their institutional affiliation, discipline, nationality, and religion, may shape their responses and conclusions (Mason, 2018, pp. 84-9). Additionally, institutional pressures can influence research outcomes by promoting certain viewpoints. To mitigate these biases, researchers must acknowledge their subjectivities and appreciate their own worldview and alternative realities (O'Leary, 2014, p. 123). This thesis endeavors to explore broader personal and societal assumptions that may be distinct from the researcher's own understanding and aims to incorporate diverse perspectives from all stakeholders involved in the research, often those whose voices are marginalized. It is anticipated that the richness and pluralism of viewpoints will enhance the thesis.

4.4 Limitations and Recommendations for Future Research

This thesis is aware of its limitations due to its research topic and methodology. Firstly, it is challenging to establish a direct linear correlation between the prohibition of nickel ore export policy and a country's progression towards HI status. There may be other variables that contribute to a country's advancement towards the core economy. In this case, the research aims to specifically focus on correlation rather than causality when examining variable relationships. Therefore, future research may consider exploring Indonesia's strategy of transitioning away from the MI status through broader downstreaming on raw material policies, not limited solely to the nickel ore or mineral sector.

Furthermore, this thesis acknowledges that utilizing document analysis poses challenges, particularly in collecting data from the government of Indonesia and the grassroots. Data in Indonesia, whether from the government or public sources, is often confidential and difficult to obtain, and it can be fragmented and disorganized. Since documents may not always provide sufficient detail, this could potentially limit the scope and depth of analysis (Bowen, 2009, p. 31). In future research, employing a triangulation method is encouraged to support document analysis as a data collection method.

It is suggested that a robust methodology requires information from one source to be cross-validated against information from other sources (Weiss, 1997, p. 84), thus not relying solely on a single data collection method to answer research questions. This research, in the future, can utilize focus group discussions (FGDs) with governmental departments working on trade and mineral issues in Indonesia, interviews with experts on the global political economy, and engagement with NGOs representing businesses and local communities. Quantitative methods can also be employed to further enhance the research, providing insights into the impact of Indonesia's policy in terms of economic development and inequality issues.

5 Analysis

5.1 From Nickel Ore Export Bans to Nickel Industrialization

This section first outlines the trajectory leading up to the prohibition of nickel ore exports by the government of Indonesia, including the pertinent legislation related to this case. Such measures, coupled with Indonesia's policies designed to attract FDI, have resulted in the proliferation of TNCs within the country. This section further examines the background that prompted the government of Indonesia to implement such measures by comparing figures with developed countries that hold significant value in the global nickel trade. It is anticipated that this analysis section offers a comprehensive understanding of Indonesia's rationale as a raw material exporter striving to become an industrialized nation. This transformation aims to enhance Indonesia's participation in GVCs and increase its value as a leading producer in the nickel industry.

5.1.1 The Significance of Natural Resources for Indonesia: The Rationale behind Nickel Ore Export Prohibition

The year 2009 marked a turning point for Indonesia, prompting a reconsideration of the country's approach to its abundant natural resources. The President of Indonesia at that time, along with key industry stakeholders, believed that Indonesia's resources were being depleted rapidly without commensurate benefits to the nation (Tritto, 2023). This led to increased state intervention and a rise in nationalism within the mineral sector. In 2009, the government of Indonesia introduced a new licensing system instructing mining companies to prioritize domestic mining services over foreign ones. This policy was intended to create more opportunities for Indonesian businesses to own mining concessions. Subsequently, the government of Indonesia decided to halt the export of raw materials progressively.

One of the significant minerals that has recently become controversial in the global and domestic markets is nickel. Nickel was the initial natural resource to be banned. According to a press release on the Ministry of Energy and Mineral Resources (MEMR) website, since January 1, 2020, nickel ore with less than 1.7% nickel

content can no longer be exported (ESDM, 2019). The MEMR, as the focal point ministry responsible for energy and mineral resources management in Indonesia, stated that the policy was implemented due to the limited resilience of nickel reserves. Indeed, Indonesia has estimated reserves of 2.8 billion tons of nickel (ESDM, 2019). Yet, further exploration is required, including obtaining environmental permits and undergoing other technical processes. The nickel reserves in Indonesia, specifically lateritic nickel, play a crucial role in the global nickel industry. Lateritic nickel contributes to 40% of the total global nickel production of 1 million tons (Radhica and Wibisana, 2023, p. 78). This type of nickel is primarily used as the main material for manufacturing high-quality lithium batteries for EVs. As many global industries transition from fossil fuel transportation to electric transportation to reduce emissions and improve efficiency, the demand for lateritic nickel is expected to increase.

Although Indonesia plays an important role in the nickel industry, its contribution to the export of processed nickel products⁵ remains relatively small. According to ITC Trademap⁶ in 2021, during the period from 2011 to 2020, Indonesia was not among the top five exporters of nickel and nickel articles (Revindo et al., 2021, p. 6). These five countries are predominantly developed countries, including Russia, Canada, the US, Germany, and Norway. For comparison, this study also utilizes data from the World Integrated Trade Solution (WITS) of the World Bank. To facilitate comprehension, a table has been created containing information on the top three exporters of nickel and nickel articles, their trade value, and quantity units, alongside data for Indonesia as an exporter.

⁵ Nickel mattes, nickel oxide sinters and other intermediate products of nickel metallurgy (HS 7501); Unwrought nickel (HS 7502); Nickel waste and scrap (HS 7503); Nickel powders and flakes (HS 7504); Nickel bars, rods, profiles and wire (HS 7505); Nickel plates, sheets, strip and foil (HS 7506); Nickel tubes, pipes and tube or pipe fittings (couplings, elbows sleeves) (HS 7507); and other articles of nickel (HS 7508).

⁶ Trade Map was developed by the International Trade Centre (ITC) United Nations Conference on Trade and Development (UNCTAD)/World Trade Organization (WTO) to provide data regarding national and product-specific trade performance.

Nickel and Other Articles Thereof Exports (HS Code 750800) by Country during 2017-2021

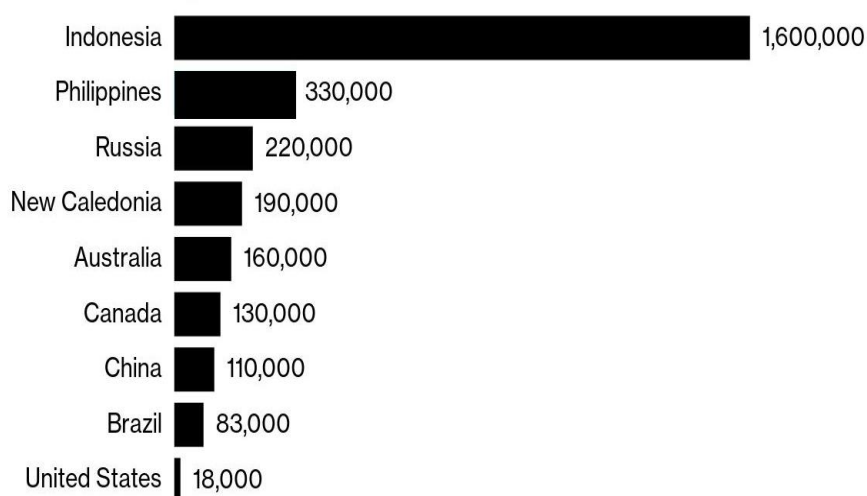
| Year | Reporter | Trade Value 1000USD | Quantity unit (Kg) |
|-------------|-----------------|--------------------------------|-------------------------------|
| 2017 | United States | 381,989.92 | 2,576,760 |
| | European Union | 276,952.13 | 1,815,480 |
| | United Kingdom | 157,954.03 | 1,780,010 |
| | Indonesia | 15,121.48 | 134,408 |
| 2018 | United States | 652,074.40 | 3,004,270 |
| | European Union | 341,418.80 | 2,087,110 |
| | United Kingdom | 196,220.88 | 2,279,080 |
| | Indonesia | 10,785.71 | 175,430 |
| 2019 | United States | 894,952.47 | 4,149,170 |
| | European Union | 412,217.30 | 2,314,660 |
| | United Kingdom | 259,529.17 | NA |
| | Indonesia | 16,911.68 | 122,113 |
| 2020 | United States | 620,371.77 | 3,793,390 |
| | European Union | 238,119.80 | 2,063,620 |
| | United Kingdom | 217,061.67 | 1,753,340 |
| | Indonesia | 13,922.85 | NA |
| 2021 | United States | 686,327.09 | 5,276,420 |
| | United Kingdom | 314,384.77 | 1,640,720 |
| | European Union | 255,573.21 | 1,547,980 |
| | Indonesia | 12,805.62 | 108,804 |

Source: WITS (2022)

WITS data from 2017 to 2021 shows that the US, EU, and UK consistently rank as the top three exporters of nickel and nickel articles, with trade values exceeding

100,000 USD. Interestingly, these developed nations are not among the top global nickel producers. This contrasts with other developing countries like Indonesia, which has never reached a trade value of more than 100,000 USD, despite being the largest producer of nickel in the world, as reported by the United States Geological Survey (Serapio and Lopez, 2023). Meanwhile, when compared to developed economies like the EU, which has contested Indonesia at the WTO over the nickel ore export ban, these countries hold an essential position in the global nickel processing market. According to the official website of the EU in 2020 (in Radhica and Wibisana, 2023, p. 80), the EU produced more than 177 million tons, or approximately 11% of the total global stainless steel production. This reveals that EU countries rely heavily on nickel ore, consuming 700,000 tons of nickel annually as the primary material for stainless steel and EV production.

Top Global Nickel Producers in 2022 (tons)



Source: Serapio and Lopez (2023)

Realizing this significant gap, Indonesia began to recognize the need to preserve its raw materials. To provide a comprehensive understanding of the progression towards the prohibition of nickel ore exports, the table below presents a chronological overview of the policy decisions, highlighting Indonesia's approach in this case.

Indonesia's Legislation regarding the Nickel Ore Export Prohibition

| No | Year | Legislation | Subject | Significance |
|----|------|---|---|---|
| 1 | 2009 | Law Number 4 Year 2009 | Coal and Mineral Mining | This law establishes national policies for the management and regulation of mineral and coal mining, delineating the responsibilities of relevant authorities. |
| 2 | 2010 | Government Regulation Number 23 Year 2010 | Implementation of Mineral and Coal Mining Business Activities | This regulation mandates that mining companies process and refine minerals to add value to their products before exporting them. However, the government grants a relaxation period of up to five years for mining businesses with special mining licenses to equip their smelters with necessary facilities for operation and production. |
| 3 | 2012 | MEMR Regulation Number 7 Year 2012 | The Increment Added Value of Mineral through the Activities of Processing and Refining/Smelting Mineral | This regulation stipulates that holders of mining business permits for production operations and community mining permits are forbidden from exporting raw mineral ore. During the current year, the government of Indonesia also implemented an export tariff. However, the Indonesian Nickel Association has raised objections, arguing that the policies impose burdens on them regarding the exportation of mining goods to |

| | | | | |
|---|------|--|--|--|
| | | | | designated countries, potentially leading to adverse effects on businesses, particularly for small-scale enterprises. |
| 4 | 2014 | Government Regulation Number 1 Year 2014 | Implementation of Mineral and Coal Mining Business Activities | This regulation was enacted to alleviate restrictions, allowing mining companies with permits and processing and purification facilities to export raw materials up to a specified limited quantity. |
| 5 | 2014 | MEMR Regulation Number 1 Year 2014 | The Increment Added Value of Mineral through Domestic Mineral Processing and Refining Activities | This regulation provides guidelines on what constitutes adding value to minerals through purification activities, which include processing the minerals domestically. The regulation also stipulates the minimum standards for processing and refining that must be met before minerals are eligible for export. |
| 6 | 2017 | Government Regulation Number 1 Year 2017 | Implementation of Mineral and Coal Mining Business Activities | This regulation permits mining companies to export raw minerals under several conditions: 1) companies must convert their contract of work permits into special mining business permits, and 2) mining companies are required to build a smelter or refinery within five years. |

| | | | | |
|---|------|-------------------------------------|------------------------------|--|
| 7 | 2018 | MEMR Regulation Number 25 Year 2018 | Mineral and Coals Businesses | This regulation permits the mining company to export raw minerals as long as the minimum requirements for processing and refining are met. With this regulation, the nickel ore export ban policy was planned to be fully enforced starting from January 11, 2022. |
| 8 | 2019 | MEMR Regulation Number 11 Year 2019 | Mineral and Coals Businesses | The government of Indonesia explicitly decided to ban the export of nickel ore, citing considerations such as downstreaming, job creation, increased investment, and national development. |
| 9 | 2020 | Law Number 3 Year 2020 | Coal and Mineral Mining | The national law enforcing the nickel ore export ban came into effect two years prior. |

Sources: Yozami (2012); Pandyaswargo et al. (2021, pp. 5-6); IMF (2023); Firdaus in (Radhica and Wibisana, 2023, pp. 79-80)

From the table above, it is evident that Indonesia began to address downstreaming issues in 2009. In the subsequent years, the government adopted a more lenient policy, allowing mining companies to continue exporting raw materials up to a specified amount and granting them time to adjust to the new regulations. This adjustment was partly due to the concerns raised by local businesses in Indonesia, who argued that the ban on raw material exports posed challenges for them, as many lacked the capacity to process the raw materials domestically. However, in the following years, the regulations became more stringent, with earlier enforcement. This was further complemented by the introduction of the Omnibus Law on Job Creation in 2020, aimed at attracting FDI in general. While the Omnibus Law is not solely intended to facilitate easier domestic processing of raw materials, it plays a

significant role in fostering the growth of the local nickel industry with foreign assistance.

The Omnibus Law on Job Creation has become a pivotal legislation for investment, representing one of the key factors driving economic growth. According to the Cabinet Secretariat of Indonesia, there was a pressing need to enhance competitiveness and innovation due to Indonesia's low ranking in ease of doing business, an unfavorable investment climate, and overlapping regulations (Setkab, 2020). The Omnibus Law on Job Creation aims to support economic transformation towards Indonesia's 2045 vision, which includes stimulating economic development, reducing poverty, supporting Small and Medium Enterprises (SMEs), and bolstering research and innovation (Dikti, 2020). This law underscores the government of Indonesia's commitment to fostering a conducive investment climate, providing legal certainty, and empowering Indonesia's skilled workforce by improving and simplifying regulations in key sectors, namely ease of doing business, investment, taxation, labor, and land issues.

With supportive legislation aimed at encouraging FDI and domestic processing requirements before exporting, Indonesia aims to maximize the benefits of the mining trade industry. To follow the path of nickel downstreaming, the government of Indonesia has also outlined a roadmap spanning from 2023 to 2035, allocating a potential of USD 545.3 billion for eight other priority commodities (Antara, 2023).⁷ On the official website of the Ministry of Communications and Informatics of Indonesia, the Indonesian president reaffirmed his commitment to maintaining the downstreaming and nickel ore export ban policy (Kominfo, 2023). Despite being challenged at the WTO, the president emphasized that Indonesia should persevere, as the measures taken by the government are believed to be pivotal in transitioning the country from a developing to a developed nation. Such strong statements suggest that through downstreaming and the raw material export ban, Indonesia aims to reduce its dependence on developed countries for adding value to goods.

⁷ Minerals, coal, oil, natural gas, plantations, fisheries, maritime, and forestry.

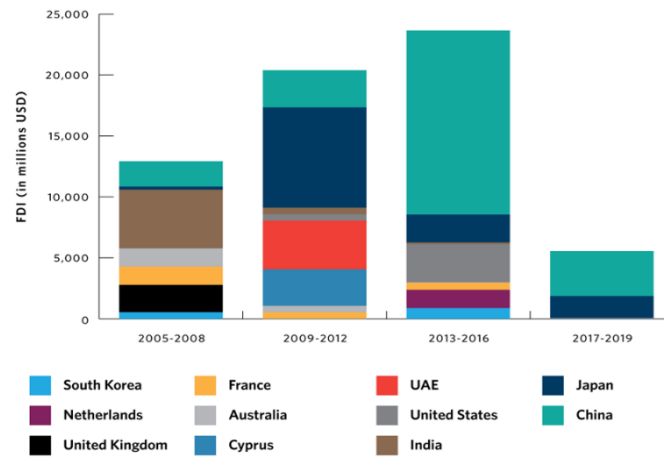
Consequently, the government believes that Indonesia needs to develop robust domestic industries to process and add value to its natural resources.

5.2.2 Nickel Industrialization as the Pathway for Indonesian Development

In 2022, Indonesia recorded USD 43 billion in FDI, marking the highest FDI in the country's history and representing a 44% increase from 2021 (Medina, 2023). The metal mining and mining sectors dominated FDI in 2022, totaling more than USD 16 billion combined, or approximately 24% of the total FDI received by the country. FDI in the metal mining sector is anticipated to persist as Indonesia aims to restrict the export of more raw minerals. In 2023, FDI increased by 13.7% on an annual basis, reaching a total of USD 47.37 billion (Munthe and Suroyo, 2024). The base metal industry continued to attract the largest FDI, amounting to USD 11.8 billion. According to the Indonesian Investment Coordinating Board, the enactment of the Omnibus Law on Job Creation in 2020, which streamlined business permit procedures and revised labor rules, stimulated investor interest in Indonesia (Sulaiman and Suroyo, 2023). Additionally, the cessation of outbound shipments of nickel ore in 2020, ensuring sufficient supply for domestic processing, also contributed to the growth of investment in metal mining.

FDI in Indonesia's mineral sector has attracted attention from numerous countries. The figure below illustrates the evolution of FDI sources in Indonesia's mineral sector from 2005 to 2019 (Tritto, 2023). In 2005, FDI in the mineral sector in Indonesia predominantly originated from Australia, India, the UK, and other European countries. Most developed countries investing in Indonesia focused on gold and silver extraction, steel manufacturing, and the extraction industry, with a focus on nickel, copper, and gold. Between 2009 and 2012, Japan and the United Arab Emirates emerged as the largest investors in Indonesia's mineral sector, primarily in steel and alumina production. After 2012, Chinese companies became the most prominent source of investment in this sector. Another source, specifically from the IMF (2023), also mentions that China and Hong Kong emerged as the leading foreign investors in nickel downstream sectors, contributing to a 47% increase in 2022.

FDI in Indonesia's Mineral Sector between 2005 and 2019



Source: Tritto (2023)

With the increase in FDI in Indonesia following several mining restriction policies issued by the government of Indonesia since 2009, the development to support nickel industrialization has also grown. As of October 2023, the MEMR recorded that there are 47 smelters spread across Indonesia (ESDM, 2023). This represents a significant increase compared to 2014, when the number of nickel smelters in Indonesia was only three. During 2021-22, following the endorsement of related policies, investment realization in nickel smelters reached approximately USD 5.5 billion (IMF, 2023, p. 27). The government of Indonesia perceives that the existing number of smelters is sufficient to adequately process and refine nickel ore within the country. In order to maintain a balance between the supply and demand for nickel ore domestically, the government of Indonesia even restricts the establishment of nickel smelters. If the proliferation of nickel smelters is not accompanied by a balance in extraction, the government of Indonesia is concerned that it will need to import nickel ore instead.

The Coordinating Minister for Maritime Affairs and Investment believes that industrialization activities have succeeded in boosting per capita gross regional domestic product in the last two years (Arkyasa, 2023). Two regions with abundant metal mining resources and impacted by the establishment of nickel facilities by

foreign investors are Central Sulawesi and North Maluku. The income per capita in both regions has increased from 2020 to 2022.⁸ The government of Indonesia mentioned that the downstreaming strategy can create new jobs in remote areas in the formal sector and generate positive spillovers across sectors, as FDI bring in technology and skills that can be utilized to enhance productivity in local industries (IMF, 2023, p. 25).

One of the largest industrialization projects for nickel is the Indonesia Morowali Industrial Park (IMIP), located in Central Sulawesi. This project commenced in 2013 with the involvement of Chinese and Indonesian companies, supported by Chinese banks for financialization (Ginting and Moore, 2021). Initially intended for stainless steel production, IMIP now focuses on expanding nickel production, given its critical role in the renewable energy transition, and has become the largest nickel-based industrial area in Indonesia. As of 2020, IMIP employed approximately 43,000 workers and indirectly supported at least another 30,000 small service providers and local businesses (Tritto, 2023). Economic spillovers are perceived by the government to occur as industrialization not only benefits the nickel facilities themselves but also leads to the development of new housing, hotels, restaurants, telecommunications infrastructure, and transportation services in the surrounding areas.

This aligns with the perspective of modernists, who argue that industrialization in a country can have a positive impact on economic growth and development (Hawkins, 2022, pp. 19-20). The effects of nickel industrialization in certain regions of Indonesia are believed to have spillover effects not only for the mining industry but also for other informal sectors. With the aid of modern technology, modernists believe that nickel industrialization can stimulate massive economies of scale in production and enhance wealth for a larger population (Heath, 2004, p. 675). The notion of industrialization enabling a country to process raw materials such as

⁸ North Maluku's per capita income increased from IDR 33.1 million per year in 2020 to IDR 53.7 million per year in 2022; Central Sulawesi's per capita income increased from IDR 66.31 million per year in 2020 to IDR 105.55 million in 2022 (Arkyasa, 2023).

nickel is considered by the government of Indonesia as a means to reduce dependency on developed nations, which typically benefit more from global nickel trade. Ultimately, such strategies undertaken by the government of Indonesia are expected to combat poverty and propel the nation toward becoming a core economy. This aims to prevent the country from remaining trapped as an MI nation, as further elaborated in the subsequent section of this study's analysis.

5.2 Dependency and World System Theory in Viewing Indonesia as a Middle-Income (MI) Country

The second section delineates Indonesia as a semi-peripheral region that primarily exports commodities or raw materials in the global market. This section also highlights Indonesia's status as an MI country, boasting a substantial GDP. The government of Indonesia is keen to capitalize on opportunities to align itself with developed nations. Guided by the selected theories above, this section examines the challenges faced by Indonesia in its pursuit to transition its economy towards the core economy in the world system. Given the significant influence of global capitalism within the country, Indonesia may risk continuing to rely on emergent capitalist actors and may struggle to progress towards becoming a developed country.

5.2.1 Indonesia as a Middle-Income (MI) Country

The economic status of Indonesia has been fluctuating. Indonesia attained MI status in 1993 (ADB, 2012). However, Indonesia regressed due to the Asian financial crisis of 1997-98. Following six years, specifically in 2003, Indonesia reclaimed its MI status. In 2019, Indonesia achieved the title of an upper MI country. However, due to the impact of the Covid-19 pandemic, the subsequent year in 2020, Indonesia's economic status, which is quite susceptible, was downgraded to the lower MI group (Rivani, 2023, pp. 16–7). According to the latest data from the World Bank (2023), Indonesia has been reclassified as an upper MI country. In this regard, the government of Indonesia has mentioned that Indonesia is now included in the 'alert' MI trap since it has held the MI status for a considerable period.

Referring to Felipe et al. (2021 in Anastasi, 2023, p. 175), a country can become stuck in the MI trap if it remains in the MI range for 42 years.

To address concerns about being trapped in the MI category, Indonesia prioritizes industrialization. In line with the modernist perspective, industry fosters productivity and increases the quality of job opportunities. The government of Indonesia believes that industry adds value to the economy and generates dual effects, including backward and forward linkages, not only within the industrial sector itself (Bappenas, 2022). The industrial sector has also become one of the most prominent economic sectors contributing to Indonesia's GDP, averaging 40% during the period from 2012 to 2022 (Statista, 2022). This stands in contrast to the agriculture sector, which consistently contributes below 14% despite Indonesia's tropical climate and vast fertile soils. The significance of the industry sector prompts the government of Indonesia to optimize industry through conducive regulations, business opportunities, and resource availability, including industrial human resources (Bappenas, 2022).

As a country included in semi-peripheral regions⁹, Indonesia tends to be more conscious of its domestic economy during uncertain times caused by globalization. Wallerstein (1976, p. 472) refers to this phenomenon as 'economic nationalism' among semi-peripheral countries during periods of world economic downturn. This trend can be observed in several policies implemented by the government of Indonesia to enhance domestic independence and promote domestic industry. These policies include the 35% import substitution program in 2022, programs to increase domestic production, downstreaming of the natural resources industry, and the omnibus law on job creation aimed at creating a favorable climate for FDI. All these programs are interconnected, aiming to reduce Indonesia's reliance on other countries for resource processing, minimize imports of industrialized goods, and meet domestic needs (Kemenkoekon, 2022). This aligns with Wallerstein's

⁹ Referring to Wallerstein (1976, p. 465), Indonesia is included in the semi-periphery regions. This region actually includes a wide range of countries in terms of economic strength and political background. In the case of Indonesia, the country also continues to produce various intermediate goods.

assertion (in 2004, pp. 29-30) that semi-peripheral states, which have a relatively mixed production base due to pressure from core states and exert pressure on peripheral states, tend to be more competitive. This reflects Indonesia's ongoing efforts to compete with other semi-peripheral states, as evidenced by its active participation in the G20 and its aspirations to join the Organisation for Economic Co-operation and Development (OECD). Indonesia's involvement in GVCs and several advanced economic organizations demonstrates its desire to be perceived as an emerging economy, moving away from its semi-peripheral status.

From the perspective of GPE, particularly through the lens of dependency theory and WST, Indonesia may find itself trapped in the MI status category when it struggles to compete with both LI and HI countries due to disparities in wages and technological advancement (Doner and Schneider, 2016, p. 609). Compared to low-wage income countries, Indonesia, as a member of the G20, which comprises the top 20 economies in the world, appears somewhat more advanced in this regard. According to the latest global wage report issued by the International Labour Organization (ILO), Indonesia has shown rapid growth indices in line with other emerging G20 economies such as India, Russia, and South Africa (Vazquez-Alvarez et al., 2022, p. 51). However, this may impact the country's competitiveness in the global market. This is because some TNCs often opt to outsource their business from core to semi-peripheral and peripheral countries to leverage cheaper labor costs and suppress production costs (Cypher, 2021, p. 622). It is a concern that LDCs and developing countries engage in a 'race to the bottom', lowering wages and labor rights to attract more FDI and TNCs.

In comparison with HI countries, Indonesia also lags in technological advancement. This is evident from Indonesia's efforts to bolster domestic industrialization, as well as its export profile. Indonesia primarily exports unprocessed primary commodities, as supported by data from the WITS (2021), indicating fluctuations in export product groups, with raw materials and consumer goods consistently comprising a

huge portion of Indonesia's total exports.¹⁰ It is noteworthy that exports of goods and services significantly contribute to Indonesia's GDP. Specifically, in 2022, exports of goods and services accounted for almost a quarter of Indonesia's GDP (Trading Economics, 2022). Natural resources have emerged as one of the primary sources of exports, alongside non-oil and gas exports, according to the official website of the Ministry of Trade of Indonesia (Satudata, 2024). Coal, vegetable oils (palm oil), and ferro-alloys or nickel have been prominent commodities exported by Indonesia from 2019 to 2023.

5.2.2 Navigating Indonesia's Challenges as a Middle-Income (MI) Country within Global Value Chains (GVCs)

With the tendency to export raw materials, international trade is argued to contribute to unequal exchange within the world system (Wallerstein, 2004, p. 12). The perspectives of dependency and WST explain that international trade, mainly for countries primarily exporting raw materials, perpetuates trade dynamics that facilitate the flow of surplus value from weaker countries to the core. Core countries, such as the US and countries in the EU, continue to demand that states in the rest of the world open their borders to flows of manufactured goods and services from them (Wallerstein, 2004, p. 55). Meanwhile, they restrict the import of competitive products from peripheral or semi-peripheral regions, such as agricultural products, by exerting pressure on weaker states to conform to the policy needs of the stronger states. This can be observed in the case of palm oil and other agricultural products in Indonesia, which face challenges in being exported to the EU due to sustainability concerns. However, the situation differs when it comes to nickel, despite its unsustainable extraction practices.

In the current global context marked by such trade competition, war, climate change, and the post-pandemic era, Indonesia is concerned about the potential negative impact on its domestic economic development. Wallerstein (1976, p. 480) suggests that during world economic downturns, semi-peripheral states can

¹⁰ Indonesia's share of exports in raw materials and consumer goods products reached 59.92% in 2021.

improve their bargaining position on the world market, enabling them to profit from shifts in world terms of trade. This prompts Indonesia to seek foreign capital and advance its trade by exporting more advanced processed goods. In support of the downstreaming industry policy, Indonesia has invited foreign companies, primarily from China. The government of Indonesia anticipates that the proliferation of FDI and TNCs in the country will facilitate the transfer of knowledge and technology. This support is expected to aid Indonesia in its industrialization efforts and ultimately assist in transitioning from its MI status.

As stated in the theoretical framework, countries that lose their comparative advantage to LI countries require capacities akin to those of core countries (Anastasi, 2023, p. 175). These capacities include the need for investment in industrial upgrading and human capital within the country. Without these capacities, MI countries are prone to engaging in low-value-added economic activities. In the case of nickel industrialization in Indonesia, doubts arise regarding the extent to which TNCs present in Indonesia would support homegrown businesses and industries. Some research conducted in Indonesia highlights challenges related to the transfer of technology and R&D in developing countries, attributed to issues such as patent rights and a lack of skilled knowledge. The TNCs tend not to deploy advanced technology in developing countries until more sophisticated technology emerges (Soekirno, 1995, p. 14). This impedes the growth of local industries in Indonesia, as they lack the capacity to develop their own technology for their respective sectors. The development of the automotive industry in Indonesia serves as an illustrative example (Sabini, 2013). Despite being a prominent producer in Southeast Asia, Indonesia has never established a local car or local EV company comparable to those in Vietnam or Malaysia. Instead, Indonesia consistently relies on the production of foreign companies in the country, such as Toyota (Japan) or Hyundai (South Korea), even for the domestic market.

Another research also mentions that one obstacle to the transfer of technology is the lack of skills or knowledge (Sulastri, 2014, pp. 276–7). When the human resources of developing countries and LDCs are not sufficient to accept and absorb

advancements brought by foreign capital, foreign companies may find it challenging to rely on local human capital. This scenario appears to be challenging in Indonesia, where, according to the Ministry of Home Affairs (in GoodStats, 2023), only 6.41% of the population attends university out of 275.36 million people. Additionally, based on the UN's Human Development Index (HDI)¹¹ in 2022, Indonesia ranks 112th globally and 6th in Southeast Asia (UNDP, 2024). This indicates that Indonesia still struggles to balance its capacity to resemble core economies in terms of human capital, infrastructure, and education. As highlighted by scholars previously, MI countries still need to address such challenges, as they can contribute to broader issues such as economic inequality and disparities across states, society, and markets (Doner and Schneider, 2016, p. 612; Anastasi, 2023, pp. 175–7). While countries like Indonesia are keen on progressing, periphery or semi-peripheral nations must also be prepared to confront challenges associated with industrialization, including social cleavages.

In summary, it can be explained that Indonesia, as a semi-peripheral region, aspires to ascend to the status of core economies and aims to avoid being trapped in the MI status with stagnant standards of living. Through its involvement in GVCs, Indonesia expects to establish an independent industrial state to meet domestic needs and enhance the export of processed advanced goods. However, despite the government's efforts to enact policies encouraging foreign capital influx into the country, Indonesia still faces challenges due to its comparative lack of capacities compared to HI states. Naseemullah (2022, p. 2163) further contends that even if developing countries upgrade their institutions and achieve the potential to produce higher value-added goods, entry into GVCs at higher levels is not guaranteed due to the complex dynamics of power asymmetry within GVCs, influenced by global capitalism's control. Although productivity and output growth in nickel production are increasing with the assistance of TNCs and FDI, it remains uncertain whether this will propel Indonesia to become a core country through mineral

¹¹ HDI is a crucial indicator to measure human development performance in a country, covering health, education, and a decent standard of living.

industrialization. Instead, the economic development pursued by the government may exacerbate disparities and environmental impacts. These ensuing issues are discussed in the next section.

5.3 The Dilemma of Nickel Downstreaming

The final section explores the dilemma of nickel downstreaming resulting from the prohibition of nickel ore export policies that necessitate domestic nickel processing requirements. This section delves into the hidden impacts of such measures, particularly on grassroots levels, including the local communities residing around the nickel extraction and smelting industries. The section also analyzes the potential additional costs due to Indonesia's ambitious involvement in GVCs with the assistance of excess FDI and TNCs, despite the government's belief that Indonesia has reduced its dependency on core nations by not exporting nickel ore to developed nations.

5.3.1 Dynamics of Nickel Industrialization: Unveiling Multifaceted Hidden Costs

Following the modernist view on capitalism and industrialization, the government of Indonesia posits that policies regarding the nickel ore ban and downstreaming in the country can generate jobs in remote areas, reduce income inequality, unemployment, and improve economic welfare in the medium to long-term (IMF, 2023, p. 26). Conversely, this research aims to explore alternative perspectives on such developments. Drawing from the dependency theory and WST, there are potential costs arising from power asymmetry in the involvement of GVCs, particularly between global corporations and grassroots actors. Cypher (2021, pp. 592-5) outlines three aspects that developing countries and LDCs may neglect when assessing the impacts of excessive FDI and TNCs.

First, after reviewing the relevant documents, this research reveals that TNCs, predominantly originating from China, continue to reap the most significant benefits from nickel extraction in Indonesia. Data from China's customs office indicates that the country imported nickel ore from Indonesia despite the ban, with a recorded quantity of 5.56 million metric tons between 2020 and 2023. On the

other hand, Jakarta refuted these claims, asserting that less than 2 metric tons of nickel ore were exported from Indonesia from 2020 to 2022 (Nangoy and Nguyen, 2023). It is argued that China and Indonesia have different concepts regarding the iron and nickel ore content in trading. Apart from that, Indonesia traditionally supplied nickel pig iron to China for processing into stainless steel. Presently, Indonesia still engages in this practice, but refined nickel exports now include battery chemicals such as nickel matte and mixed hydroxide precipitate (Mills, 2024). These materials are essential components for battery production in EVs. Although it appears that Indonesia has processed the nickel, the intermediate goods are still transferred to other companies in China for further processing into advanced goods.

According to a member of the Indonesian House of Representatives, Chinese companies have dominated Indonesia's nickel industry (Costa, 2022). One of the biggest mining companies in Indonesia, which also owns several branches worldwide, is Tsingshan Holding Group (Huang, 2023). Such a company gains an absolute advantage from its complete industry chain, encompassing upstream and downstream operations of nickel globally. This strategic move by the company ensures China's power battery industry has secured raw materials from various parts of the world. This illustration reflects profit shifting, where Indonesia still receives low profits while other large companies avoid losses by consolidating all processes in one country. Another clear example of profit shifting occurs when the Indonesian government provides incentives such as tax holidays and import tax exemptions for investors (Costa, 2022). This policy has drawn criticism due to its perceived peculiarity, particularly considering that minerals are non-renewable resources, while foreign companies stand to gain higher profits. Yet, the government still implements these measures to attract more FDI.

Secondly, diversion effects are evident in the lack of involvement of local communities residing near nickel extraction sites in Indonesia in decision-making processes (CRI, 2024). However, nickel industrialization directly impacts their rights, such as their land and resources. Given that local communities possess

valuable knowledge about their surroundings, prioritizing their input would be beneficial for those foreign companies. Indeed, those TNCs also implement Corporate Social Responsibility (CSR) programs, such as community development and training for locals, to involve them in the industrialization process (Rosada et al., 2023, pp. 106–7; Tritto, 2023). However, CSR initiatives involving local communities and their surroundings are deemed insufficient for long-term social development.¹² Additionally, the government's industrial policy over the last decade has primarily focused on promoting tax incentives for FDI and implementing non-tariff measures, such as imposing domestic processing requirements, rather than on enhancing local involvement and local R&D (Tundang and Mercurio, 2023). Nevertheless, R&D, the involvement of communities, and domestic firms have played significant roles in local development. This is illustrated by Zhou's study (2018, p. 497), which compares South Korea's emphasis on developing local R&D facilities to Brazil's heavy reliance on FDI from multinational firms. In this comparison, South Korea's approach is considered more successful, leading to the domestic production of many advanced goods.

Another diversion effect, as mentioned by Cypher (2021, p. 593), is the prevalence of non-local personnel in top-level positions within companies. At IMIP, for instance, Chinese employees often occupy supervisory, technical, or managerial roles, whereas Indonesian employees, especially the local communities, are primarily placed in the main workforce (Tritto, 2023). This situation is exacerbated by indications of differential treatment between foreign and local workers. Chinese workers receive higher salaries and utilize travel visas for work, while Indonesian workers receive slightly higher than average local salaries but face greater risks in their roles (Kumparan, 2023). This resonates with the concept of the 'race to the bottom', wherein TNCs seek to reduce costs by relocating production to semi-peripheral and peripheral countries, offering lower wages to employees (Wallerstein, 2004, p. 30). The issue of labor in the nickel industry is further

¹² CSR programs, such as electrifying surrounding villages and providing education and training opportunities for young individuals, aim to prepare them for future roles in nickel companies. Skilled workers from outside the region are expected to transfer technology to the local workforce.

exacerbated by the negligence of many local labor safety standards, leading to incidents such as explosions at nickel smelters resulting in fatalities among local workers (Handayani, 2024). This also serves as a critique of the government, as despite providing numerous incentives, both fiscal and non-fiscal, for FDI and TNCs to operate in Indonesia, the government of Indonesia appears negligent in ensuring labor rights and safety.

Thirdly, Cypher (2021, p. 595) highlights the risk of increased industrial concentration, a phenomenon also observed in the Indonesian context. The Indonesian Resources Study (IRESS)¹³ contends that Chinese investors and companies control 90% of Indonesia's nickel industry (Costa, 2022).¹⁴ While smelter companies operate under Indonesian legal entities, local firms play a negligible role. As foreign corporations gain more power, they can control prices and stifle competition, leaving many local miners unable to sustain their exports. After numerous TNCs entered Indonesia and as a result of a series of Indonesian policies, local miners have been compelled to sell their nickel ores to these large corporations. However, the TNCs, which control the nickel industry and domestic smelters, offer them low prices in return (Costa, 2022). This trend ultimately underscores how the accumulation of foreign capital can empower foreign actors at the expense of local miners. The local miners, who should have been able to benefit from their resources, find themselves disadvantaged by global capitalism and reliant on new entrants, primarily FDI and TNCs.

Another perspective from WST considers other potential costs often overlooked in the context of GVCs (Wallerstein, 2004, p. 48–9). Some of these relate to sustainability aspects, particularly environmental concerns, as exemplified in the case of nickel industrialization in Indonesia. First, the cost of toxicity resulting from the production process. Besides labor conditions, the potential damage to local communities and ecosystems due to mineral extraction in Indonesia is another

¹³ An Indonesian NGO focusing on minerals and energy.

¹⁴ Among them are Tsingshan Holding Group, Zhejiang Huayou Cobalt, Shandong Xinhai, China National Machinery Import, China Wanxiang, Fujian Pan-Chinese Mining Co.Ltd, Jiangsu Delong Nickel Ind.Co.Ltd, and China Huadi Nickel Alloy.

serious issue. To extract nickel, companies employ coal-fired smelters utilizing High-pressure acid leaching (HPAL) technology (Mills, 2024). This method generates considerably high carbon emissions that can be harmful to human health and the ecosystem in general. Moreover, the waste from this process is often disposed of as tailings dumped into the sea, known as Deep-Sea Tailings (DST). Although the government of Indonesia purportedly banned this waste dumping into the ocean via submerged pipelines in 2021, it continues to occur unabated (Mills, 2024).

Wallerstein (2004, p. 48) also discusses cost exhaustion, suggesting that natural resources, especially mining materials, can be depleted if exploited unsustainably. Furthermore, exploiting natural resources without considering restoration measures may lead to long-term damage to the environment. This phenomenon is becoming evident in Indonesia, particularly in Central Sulawesi. According to Global Forest Watch (in Ginting and Moore, 2021), Morowali, where IMIP is located, lost 8.2% of its forest cover between 2002 and 2020, representing 58% of its total forest cover loss. Deforestation rates in the area increased following Indonesia's nickel ore export ban and the commencement of nickel industrialization in 2013. In another area, particularly in Halmahera, North Maluku, Climate Rights International (CRI)¹⁵ and AI Climate Initiative University of California found that 5,331 hectares of tropical forest were cleared for nickel mining concessions (CRI, 2024). This exacerbates the issue as the region lost around 2.04 metric tons of CO₂ that would have been sequestered by the forest.

The ecological damage resulting from nickel industrialization further impacts the local community in Indonesia. Firstly, the government removed the national geopark site label from Goa Boki, an area surrounding the nickel industry in North Maluku (Pardede, 2023). This is concerning because, according to MEMR Regulation Number 31 Year 2021 regarding the establishment of a national geopark, the national geopark label aims to preserve and monitor geo-heritage,

¹⁵ An NGO that partners with local and international groups to conduct research and documentation, as well as advocacy on the issues of climate change and protecting human rights.

biodiversity, and cultural diversity for conservation, education, and sustainable development. With the revocation of the geopark status, the Goa Boki area becomes more vulnerable to and threatened by mining activities. Consequently, the TNCs in these areas tend to disregard the impact of local and environmental issues.

It is also interesting that the government of Indonesia is now prioritizing the protection of TNCs over environmental restoration and the well-being of local communities. Some national strategic areas built to facilitate industrialization in local regions are guarded by Indonesian authorities. In IMIP, for instance, a military base was constructed close to the park to safeguard the growing investment in the area. In 2014, armed personnel had to be deployed during labor strikes sparked by low wages and complaints about exploitative conditions, including occupational health hazards (Ginting and Moore, 2021). It is paradoxical that the government tends to favor FDI and TNCs operating in local regions over addressing the welfare and ecological concerns that could impact the spillover effect.

Other hidden effects stemming from the toxicity and exhaustion costs include the loss of livelihood for local communities due to nickel industrialization. In North Maluku, locals have voiced concerns about rapid population growth resulting from an influx of foreigners to their land (Pardede, 2023). This population increase, coupled with environmental degradation from industrialization, has forced locals to transition from farming to other occupations, such as driving or setting up stores, or to become laborers in mining companies. Additionally, in Central Sulawesi, waste dumped from IMIP has been found to harm ocean ecosystems and fisheries (Ginting and Moore, 2021). Such outcomes are particularly unfortunate given Indonesia's position as part of the global coral triangle, renowned for its marine biodiversity. This has profound implications for traditional fisheries, upon which local communities have historically depended for their livelihoods. As a result of mining industrialization, fish populations have declined, as well as the seawater and land that local communities rely on for their daily needs have become polluted.

Lastly, Wallerstein (2004, p. 49) argues about the cost of transport, suggesting that TNCs do not substantially contribute to infrastructure development. This assertion is exemplified by the case of Indonesia. Between 2014 and 2022, the Indonesian president announced the construction of a 1,900 km highway and several other major infrastructure projects aimed at promoting industrialization and attracting FDI, including special zones for the nickel industry, as well as seaports and airports throughout Indonesia (BBC, 2022). However, these developments have been criticized for lacking feasibility studies, thereby failing to attract many investors, and TNCs have not significantly contributed to them. While TNCs may implement some CSR programs aimed at infrastructure development, these initiatives typically operate on a smaller scale and yield short-term impacts on local communities. Additionally, many of these infrastructure projects remain underutilized, particularly outside of Java Island, where there are still sparse populations, primarily serving industrial purposes. Some international airports have even been forced to close due to operational costs outweighing revenues. Critics argue that these infrastructure developments have left the country with considerable debt and have consumed a huge portion of the national budget (BBC, 2022).

5.3.2 Biased Economic Growth

Issues persist in regions where nickel industrialization is growing due to external costs, contrary to the modernist notion of always positive economic development facilitated by GVCs. This is evidenced by the arguments of dependency and WST scholars, indicating that FDI and TNCs, coupled with governmental capacity limitations in managing global capitalism, give rise to sustainability issues and biased economic growth. This research seeks to gather extensive data on economic development in regions with nickel industries to conduct the further examination. It has been found that despite the general increase in wages in Indonesia, along with nickel production and the export value of processed nickel, as well as the country's macroeconomic stability as an MI nation, poverty continues to grow within the country, contributing to inequality.

North Maluku and Central Sulawesi, where prominent nickel industries are located, have indeed experienced accelerated economic growth. However, despite this growth, poverty rates in both regions have increased. According to the Indonesian Central Bureau of Statistics (in Arkyasa, 2023), poverty in Central Sulawesi increased from 12.33% to 12.41% (yoy) in March 2023. Ironically, the poverty rate in Central Sulawesi exceeds the national poverty line of Indonesia, which stood at 9.4% in 2023 (Statista, 2024). Similarly, in North Maluku, although below the national poverty line, the poverty rate increased from 6.23% to 6.46% (yoy) in March 2023. This data is further supported by documents from the MEMR (in Santika, 2023), which collected poverty percentages in regions with nickel mining presence in 2020. According to this data, five out of seven provinces with nickel industry permits, including North Maluku and Central Sulawesi, experienced an increase in poverty between September 2022 and March 2023.

Another source, the Center of Economic and Law Studies (Celios)¹⁶, also examined the disparity among regions where nickel smelters are built. Using the Williamson index to measure regional income inequalities, Celios found that nickel downstreaming only had a small impact on increasing the economic gap among the regions (Nurdifa, 2024). In nickel industry regions, the level of disparity ranged from 0.74 to 0.73, which tends to be close to 1, indicating a relatively large gap. It is assumed that the change in livelihoods and the loss of jobs due to nickel industrialization in some regions may contribute to the rising disparity. In Central Sulawesi in 2023, it was also observed that the farming sector contributed to 38.85% of employment, contrasting with the mining sector at 2.39% and the processing industry at merely 9.36% (Nurdifa, 2024). Nevertheless, the focus of development remains on the mining sector. This highlights how Indonesia is entrapped by GVCs and the idea of global capitalism, where the increasing trend in nickel and the necessity of nickel industrialization are perceived as the only means to reap benefits and develop the country's economy.

¹⁶ Celios is an Indonesian research institute that specializes in economics and public policy. Its goals are to promote economic equality, foster a sustainable economy, and enhance the quality of digital innovation.

Based on the numerous data presented above, it becomes evident that nickel industrialization, while stimulating development, does not always yield positive impacts for local regions. The government of Indonesia may perceive foreign capital accumulation as a means to industrialize the country and boost its economy. However, the presence of FDI and TNCs in the country brings forth additional challenges. The explanations provided reveal that regions hosting mining extraction and downstream activities still experience poverty growth and disparity, likely stemming from ecological, social, and health impacts of nickel industrialization in those areas. Ultimately, these conditions impose significant burdens on regional development and grassroots levels.

6 Discussion

Indonesia's abundant natural resources suggest that the country should have garnered greater benefits from international trade. In the case of nickel, Indonesia has the potential to become a global leader in the nickel industry. However, as explained above, many developed countries from core regions, despite not having abundant natural resources, hold significant positions in the global nickel market. This disparity is evident as many developed countries export more processed nickel and advanced goods, such as stainless steel-related products and EVs, which are often exported back to the countries that supply their raw materials. Recognizing this gap, Indonesia has implemented domestic nickel processing requirements and a nickel ore export ban, with the expectation of reducing dependency on processing raw materials in other developed nations.

The prohibition of nickel ore exports ultimately catalyzes nickel industrialization in Indonesia. According to the Ricardian model thinking, a country with superior technologies will likely possess a higher labor rate and enjoy absolute advantages in international trade (Zhou, 2018: 485). With Indonesia's nickel industrialization initiative, governmental authorities envision a multiplier effect, expecting economic growth through the creation of more job opportunities, increased nickel processing production, and higher export values. Such developments are hoped to elevate Indonesia from its MI status, advancing the country towards core economies. To bolster the nickel industrialization endeavor, Indonesia has also enacted legislation and policies aimed at attracting foreign capital to the country. Capital accumulation from abroad is necessary to establish additional smelters and enhance the domestic nickel processing industry.

In this study, dependency theory and WST are employed to elucidate that Indonesia will remain in the semi-peripheral regions if it continues to solely export raw materials or intermediate goods to core economies. As a country within the semi-peripheral region, Indonesia is at a disadvantage because the export of intermediate goods yields less value compared to the production of advanced goods with higher value-added in core economies. Conversely, it is more convenient and cost-

effective for core countries to acquire primary goods from periphery and semi-peripheral regions, which serve as the basic materials for manufactured goods (Cypher, 2021, p. 239). To alleviate Indonesia's dependency on core countries for processing raw materials, the development of domestic industries is imperative. Hence, Indonesia can meet domestic demands and enhance its bargaining power with value-added goods in the global market.

WST and dependency theory offer further insights into the challenges encountered by Indonesia as it endeavors to transition from an MI to an HI country. In the case of the prohibition of nickel ore export, nickel industrialization in Indonesia is expected to propel the country out of its MI status. To facilitate this transition, this thesis emphasizes two key points derived from the aforementioned discussion. Firstly, Indonesia's inclusion in the G20, comprising the world's top 20 economies that are actively involved in the GVCs, underscores its significant economic stature. Concurrently, Indonesia experiences growth in wage labor, a trend that may deter global corporations from investing in the country due to rising labor costs. This shift signifies Indonesia's turning point from being a LI country, yet it risks losing its comparative advantage to LI countries. However, concerns arise regarding the emergence of a 'race to the bottom', where countries compete to ease business regulations at the expense of labor rights to attract FDI and TNCs. Moreover, various incentives provided to foreign capital enable TNCs to maximize profits from exploiting Indonesia's natural resources.

Secondly, Indonesia cannot be equated with HI countries, which possess more advanced technology, cutting-edge R&D capabilities, and robust industries. It is anticipated that with the influx of TNCs and FDI, Indonesia can secure a significant position in GVCs by producing more sophisticated goods akin to core countries. To align itself with HI countries, Indonesia endeavors to enhance its manufacturing capacity and domestic industries by inviting more FDI and TNCs into the country. However, this study reveals that foreign capitalist actors often fail to uplift the local industry and instead engender new forms of dependency. These emerging dependencies are evident in the following aspects.

The flow of foreign capital into the country is expected to lead to improvements in technological and industrial advancements domestically in Indonesia. However, TNCs often refrain from technology transfer due to patent issues, competition with local industries, and the limited capacity of the host country. This is demonstrated by the scarce representation of local industries that have effectively established recognizable brands in the global nickel sector. It is also interesting that TNCs and FDI, predominantly originating from China¹⁷, are flooding the nickel industry development in Indonesia. Indonesia relies on these Chinese companies with the hope that local R&D and industries could improve. However, local firms and communities often have minimal involvement in this massive nickel industry, primarily providing raw materials for sale to TNCs and workforce services at a low cost. Despite the apparent absorption of many job opportunities by foreign capital and the potential for Indonesia to export more value-added nickel, refined nickel (intermediate goods) still primarily flows to parent companies in China, where the global nickel industry is headquartered.

Moreover, reliance on foreign capital, coupled with the lack of capacity in Indonesia's institutions to monitor and regulate these FDI and TNCs, can lead to broader sustainability issues. The nickel mining and processing industry can cause long-term environmental damage, with its waste polluting the land, air, and sea. This, in turn, affects various aspects, such as the health and livelihoods of local populations. Sacrificing environmental and social concerns due to nickel industrialization can exacerbate poverty in the region, widen disparities, and even contribute to increased foreign debt and higher expenditure from the national budget. Additionally, the hidden costs required to remediate environmental and social problems further compound these challenges. Such development inevitably fosters biased economic growth, rendering Indonesia more vulnerable within the GVCs and perpetuating its status as an MI country.

¹⁷ Similarly to Indonesia, China is also considered part of the semi-peripheral regions and an upper MI country (Wallerstein, 1976, p. 465; World Bank, 2024).

With various policies implemented in Indonesia and the assistance of Chinese corporations, Indonesia should ideally be able to move towards achieving HI status. However, this endeavor faces challenges as Indonesia must consolidate its intermediate position amidst its reliance on Chinese corporations, ironically leading to biased economic growth in the country. From the context of this research, it can be argued that exploitation does not solely emanate from HI countries within core regions. Instead, it also arises from global corporations originating in emerging countries within the world system, which can exert pressure on a country to maintain a stagnant position within GVCs. It contrasts with Wallerstein's assumption (2004, pp. 55-7) that modern colonies typically arise when strong states from core regions, such as Western Europe and the US, expand economically into weaker states in semi-peripheral and peripheral regions. This circumstance is noteworthy for demonstrating a form of dependency that encompasses not just LDCs and developing countries' reliance on developed nations but also their dependence on global corporations from non-core regions.

6.1 Conclusion

The prohibition of nickel ore export significantly impacts Indonesia's mineral sector and industry development. This is expected to alter the dominant-exploited relationship between developed nations and Indonesia as a developing country, as nickel ore no longer needs to be processed in core countries with sophisticated processing industries and technology. Consequently, the prohibition of nickel ore export, leading to downstreaming of other commodities, is anticipated to propel growth and economic development in Indonesia, facilitating its transition towards core economies.

However, Indonesia faces challenges as an MI country if it overly relies on global capitalism. The proliferation of FDI and TNCs from China introduces new forms of dependency for Indonesia. Despite the potential rise in exports and production of processed nickel, the lack of improvement in local industries due to challenges posed by big corporations in technology transfer, local R&D, and involvement continues to hinder value-added growth. This is exemplified by the fact that

exported nickel, primarily classified as intermediate goods, is predominantly channeled to parent companies in China. This trend is facilitated by Chinese TNCs, which maintain branches in multiple locations in other LDCs and developing countries like Indonesia to bolster the production of goods assembled in China.

Moreover, engaging in GVCs through excessive FDI and TNCs in Indonesia exacerbates existing disparities. While Indonesia may no longer export nickel ore to core regions, this presents an opportunity for global corporations from non-core countries to exploit resources further, particularly when Indonesian authorities lack sufficient control over excessive foreign capital. This exploitation results in hidden costs affecting sustainability issues, leading to biased economic growth and perpetuating Indonesia's challenges as an MI country in its consolidation towards developed or core nations.

7 References

Adam, B. and Ahamat, H. (2022) 'Indonesia's Mineral Export Prohibition and Legality of Export Duties Under the GATT Rules', *Sriwijaya Law Review*, 6(2), pp. 239–253. Available at: <https://doi.org/10.28946/slrev.Vol6.Iss2.1661.pp239-253>.

ADB (2012) *Indonesia risks falling into the middle-income trap - Changyong Rhee*. Available at: <https://www.adb.org/news/op-ed/indonesia-risks-falling-middle-income-trap-changyong-rhee> (Accessed: 20 April 2024).

Adisuryo, D. (2023) 'Lost in Nickel Lawsuit at the WTO, Indonesia Forced to Export Raw Nickel?', *ADCO Law*, 7 March. Available at: <https://adcolaw.com/blog/lost-in-nickel-lawsuit-at-the-wto-indonesia-forced-to-export-raw-nickel/> (Accessed: 25 January 2024).

Anastasi, A. (2023) 'Trapped In The Semi-Periphery: Understanding The Middle-Income Trap From a World-Systems Theory Perspective', *Journal of World-Systems Research*, 29, pp. 174–192. Available at: <https://doi.org/10.5195/jwsr.2023.1119>.

Antara (2023) *Downstreaming key to Indonesia's \$105 bln investment target: Minister, Antara News*. Available at: <https://en.antaranews.com/news/300732/downstreaming-key-to-indonesias-105-bln-investment-target-minister> (Accessed: 21 March 2024).

Arkyasa, M. (2023) 'Nickel driven economic growth in North Maluku and Central Sulawesi boosts regional prosperity, but poverty challenges remain | INSIDER', *Indonesia Business Post*, 8 August. Available at: <https://indonesiabusinesspost.com/insider/nickel-driven-economic-growth-in-north-maluku-and-central-sulawesi-boosts-regional-prosperity-but-poverty-challenges-remain/> (Accessed: 14 April 2024).

Bappenas (2022) *Bappenas: Indonesia Andalkan Industri untuk Capai Pertumbuhan Ekonomi / Kementerian PPN/Bappenas*. Available at: <https://www.bappenas.go.id/id/berita/bappenas-indonesia-andalkan-industri-untuk-capai-pertumbuhan-ekonomi-bmPfm> (Accessed: 20 April 2024).

BBC (2022) 'Jokowi bangun 1.900 kilometer jalan tol, dibiayai utang dan dituduh "kebijakan ugal-ugalan"', *BBC News Indonesia*. Available at: <https://www.bbc.com/indonesia/indonesia-60384149> (Accessed: 5 May 2024).

Benetrix, A., Palan, H. and Panizza, U. (2023) *The elusive link between FDI and economic growth*. Available at: <https://blogs.worldbank.org/developmenttalk/elusive-link-between-fdi-and-economic-growth> (Accessed: 19 February 2024).

Bowen, G.A. (2009) 'Document Analysis as a Qualitative Research Method', *Qualitative Research Journal*, 9(2), pp. 27–40. Available at: <https://doi.org/10.3316/QRJ0902027>.

BusinessTimes (2024) *Indonesia's controversial downstreaming policy comes in for criticism at election debate, ASEAN Business - THE BUSINESS TIMES*. Available at: <https://www.businesstimes.com.sg/international/asean/indonesias-controversial-downstreaming-policy-comes-criticism-election-debate> (Accessed: 21 March 2024).

- Cairó-i-Céspedes, G. and Cívico, J.C.P. (2022) 'Beyond core and periphery: the role of the semi-periphery in global capitalism', *Third World Quarterly*, 43(8), pp. 1950–1969. Available at: <https://doi.org/10.1080/01436597.2022.2079488>.
- Cardoso, F.H. (1977) 'The Consumption of Dependency Theory in the United States', *Latin American Research Review*, 12(3), pp. 7–24.
- Chase-Dunn, C. and Grimes, P. (1995) 'World-Systems Analysis', *Annual Review of Sociology*, 21, pp. 387–417.
- Costa, G. da (2022) 'China controls Indonesia's nickel industry | INSIDER', *Indonesia Business Post*, 30 November. Available at: <https://indonesiabusinesspost.com/insider/china-controls-indonesias-nickel-industry/> (Accessed: 3 May 2024).
- CRI (2024) 'Nickel Unearthed: The Human and Climate Costs of Indonesia's Nickel Industry', *Climate Rights International*. Available at: <https://cri.org/reports/nickel-unearthed/> (Accessed: 3 May 2024).
- Cypher, J.M. (2021) *The process of economic development*. Fifth edition. Routledge/Taylor & Francis Group.
- Deardorff, A.V. (2011) 'Comparative advantage: The theory behind measurement', *OECD* [Preprint]. Available at: <https://doi-org.ludwig.lub.lu.se/10.1787/9789264113084-en>.
- Dikti (2020) 'Booklet Omnibus Law Cipta Lapangan Kerja'. Available at: <https://dikti.kemdikbud.go.id/wp-content/uploads/2020/10/Booklet-UU-Cipta-Kerja.pdf>.
- Doner, R.F. and Schneider, B.R. (2016) 'The Middle-Income Trap More Politics than Economics', *World Politics*, 68(4), pp. 608–644.
- Dos Santos, T. (1970) 'The Structure of Dependence', *The American Economic Review*, 60(2), pp. 231–236.
- ESDM (2019) *Bijih Nikel Tidak Boleh Diekspor Lagi per Januari 2020*, ESDM. Available at: <https://www.esdm.go.id/id/media-center/arsip-berita/bijih-nikel-tidak-boleh-diekspor-lagi-per-januari-2020> (Accessed: 5 April 2024).
- EU (2023) *EU launches consultation on use of Enforcement Regulation on Indonesian nickel export restrictions*. Available at: https://policy.trade.ec.europa.eu/news/eu-launches-consultation-use-enforcement-regulation-indonesian-nickel-export-restrictions-2023-07-07_en (Accessed: 24 September 2023).
- Farny, E. (2016) *Dependency Theory: A Useful Tool for Analyzing Global Inequalities Today?* Available at: <https://www.e-ir.info/2016/11/23/dependency-theory-a-useful-tool-for-analyzing-global-inequalities-today/> (Accessed: 26 March 2024).
- Friedmann, H. and Wayne, J. (1977) 'Dependency Theory: A Critique', *The Canadian Journal of Sociology / Cahiers canadiens de sociologie*, 2(4), pp. 399–416. Available at: <https://doi.org/10.2307/3340297>.

Galtung, J. (1971) 'A Structural Theory of Imperialism', *Journal of Peace Research*, 8(2), pp. 81–117.

Ginting, P. and Moore, E. (2021) 'Indonesia Morowali Industrial Park (IMIP)', *The People's Map of Global China*. Available at: <https://thepeoplesmap.net/project/indonesia-morowali-industrial-park-imip/> (Accessed: 14 April 2024).

GoodStats (2023) *Tingkat Pendidikan Masyarakat Indonesia*, *GoodStats*. Available at: <https://goodstats.id/infographic/tingkat-pendidikan-masyarakat-indonesia-pSqsI> (Accessed: 22 April 2024).

Handayani, L. (2024) 'Lagi-lagi Tungku Smelter Meledak, Ini Kata Komisi VII', *Media Nikel Indonesia*, 22 January. Available at: <https://nikel.co.id/2024/01/22/lagi-lagi-tungku-smelter-meledak-ini-kata-komisi-vii/> (Accessed: 3 May 2024).

Hasjanah, K. (2023) 'Awaiting the Decision of WTO Appeal Against The Trade Lawsuit between Indonesia and the European Union', *IESR*, 3 April. Available at: <https://iesr.or.id/en/awaiting-the-decision-of-wto-appeal-against-the-trade-lawsuit-between-indonesia-and-the-european-union> (Accessed: 26 November 2023).

Hawkins, A. (2022) *Modernisation Theory | Modernity and the Victorians | Oxford Academic*. Available at: <https://academic.oup.com/book/44011/chapter/371861629?login=true> (Accessed: 14 February 2024).

Heath, J. (2004) *Liberalization, modernization, westernization - Joseph Heath, 2004*. Available at: <https://journals.sagepub.com/doi/abs/10.1177/0191453704045760> (Accessed: 20 April 2024).

Hopkins, T.K. and Wallerstein, I.M. (1982) *World systems analysis: theory and methodology*. Sage (Explorations in the world economy: 1).

Huang, Y. (2023) *King of Nickel, Tsingshan Holdings' Journey to the World, EqualOcean*. Available at: <https://equalocean.com/analysis/2023070519850> (Accessed: 3 May 2024).

IMF (2023) *Indonesia: 2023 Article IV Consultation-Press Release; Staff Report; and Statement by the Executive Director for Indonesia, IMF*. Available at: <https://www.imf.org/en/Publications/CR/Issues/2023/06/22/Indonesia-2023-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-535060> (Accessed: 25 January 2024).

Jacob, F. (2023) 'Wallerstein 2.0: Thinking and Applying World-Systems Theory in the 21st Century', in *Wallerstein 2.0*. transcript Verlag. Available at: <https://doi.org/10.1515/9783839460443>.

JakartaPost (2022) *Indonesia appeals WTO ruling in nickel dispute against EU, The Jakarta Post*. Available at: <https://www.thejakartapost.com/business/2022/12/13/indonesia-appeals-wto-ruling-in-nickel-dispute-against-eu.html> (Accessed: 19 December 2022).

JakartaPost (2023) *Analysis: RI adamant on upholding downstream policy despite IMF criticism* - *Academia, The Jakarta Post*. Available at: <https://www.thejakartapost.com/opinion/2023/07/12/analysis-ri-adamant-on-upholding-downstream-policy-despite-imf-criticism.html> (Accessed: 21 March 2024).

Kemendag (2022) *Membangun Sektor Industri yang Mandiri dan Berdaulat untuk Menjadi Kekuatan Ekonomi Dalam Negeri - Kementerian Koordinator Bidang Perekonomian Republik Indonesia*. Available at: <https://www.ekon.go.id/publikasi/detail/4139/membangun-sektor-industri-yang-mandiri-dan-berdaulat-untuk-menjadi-kekuatan-ekonomi-dalam-negeri> (Accessed: 20 April 2024).

Kominfo (2023) *Presiden Tegaskan Konsistensi Hilirisasi Adalah Kunci Menuju Indonesia Maju, Website Resmi Kementerian Komunikasi dan Informatika RI*. Available at: <http://content/detail/47177/presiden-tegaskan-konsistensi-hilirisasi-adalah-kunci-menuju-indonesia-maju/0/berita> (Accessed: 5 April 2024).

Krustiyati, A. *et al.* (2022) 'Analyzing the Lawsuit of the European Union Over Nickel Ore Export Regulation in Indonesia', *Croatian International Relations Review*, 28(89), pp. 120–135. Available at: <https://doi.org/10.2478/CIRR-2022-0007>.

Kumparan (2023) *Kemenko Marves Jawab Faisal Basri soal Pekerja China di Smelter: 90% Warga Lokal, kumparan*. Available at: <https://kumparan.com/kumparanbisnis/kemenko-marves-jawab-faisal-basri-soal-pekerja-china-di-smelter-90-warga-lokal-20zjrNqWvPk> (Accessed: 3 May 2024).

Kutuk, Y. (2022) 'Inequality convergence: A world-systems theory approach', *Structural Change and Economic Dynamics*, 63, pp. 150–165. Available at: <https://doi.org/10.1016/j.strueco.2022.09.009>.

Kvangraven, I.H. (2023) 'Dependency theory: strengths, weaknesses, and its relevance today', in *A Modern Guide to Uneven Economic Development*. Edward Elgar Publishing, pp. 147–170. Available at: <https://www.elgaronline.com/edcollchap/book/9781788976541/book-part-9781788976541-13.xml> (Accessed: 30 March 2024).

Mason, J. (2018) *Qualitative researching*. Third edition. Sage Publications.

Medina, A.F. (2023) *Unleashing Nickel's Potential: Indonesia's Journey to Global Prominence*. Available at: <https://www.aseanbriefing.com/news/unleashing-nickels-potential-indonesias-journey-to-global-prominence/> (Accessed: 24 September 2023).

Mills, R. (2024) 'Indonesia and China killed the nickel market', *MINING.COM*, 4 March. Available at: <https://www.mining.com/web/indonesia-and-china-killed-the-nickel-market/> (Accessed: 3 May 2024).

Munthe, B.C. and Suroyo, G. (2024) 'Indonesia sees FDI worth \$47 bln in 2023 - investment ministry', *Reuters*, 24 January. Available at: <https://www.reuters.com/markets/asia/indonesia-sees-fdi-worth-47-bln-2023-investment-ministry-2024-01-24/> (Accessed: 14 April 2024).

- Namkoong, Y. (1999) 'Dependency Theory: Concepts, Classifications, and Criticisms', *International Area Studies Review*, 2(1), pp. 121–150.
- Nangoy, F. and Nguyen, M. (2023) 'Indonesia probes possible illegal nickel ore exports to China', *Reuters*, 7 July. Available at: <https://www.reuters.com/article/idUSKBN2YN0J4/> (Accessed: 3 May 2024).
- Naseemullah, A. (2022) 'The International Political Economy of the Middle-income Trap: Journal of Development Studies', *Journal of Development Studies*, 58(10), pp. 2154–2171. Available at: <https://doi.org/10.1080/00220388.2022.2096440>.
- Nurdifa, A.R. (2024) *Ini Bukti Ketimpangan Masih Merekat di Jantung Tambang Nikel*, *Bisnis.com*. Available at: <https://ekonomi.bisnis.com/read/20240221/257/1742861/ini-bukti-ketimpangan-masih-merekat-di-jantung-tambang-nikel> (Accessed: 5 May 2024).
- O'Leary, Z. (2014) *The essential guide to doing your research project / Zina O'Leary*. London: SAGE (Second Edition). Available at: <https://lms.su.edu.pk/download?filename=1606849718-the-essential-guide-to-doing-your-research-project.pdf&lesson=46206>.
- Pandyaswargo, A.H. *et al.* (2021) 'The Emerging Electric Vehicle and Battery Industry in Indonesia: Actions around the Nickel Ore Export Ban and a SWOT Analysis', *Batteries*, 7(4), p. 80. Available at: <https://doi.org/10.3390/batteries7040080>.
- Pardede, R.K.B. (2023) *Nikel, Pedang Bermata Dua di Maluku Utara*, *kompas.id*. Available at: <https://www.kompas.id/baca/nusantara/2023/10/11/ironi-pertumbuhan-dua-digit-di-provinsi-paling-bahagia> (Accessed: 5 May 2024).
- Petras, J. (1981) 'Dependency and World System Theory: A Critique and New Directions', *Latin American Perspectives*, 8(3/4), pp. 148–155.
- Phillips, N. (2017) 'Power and inequality in the global political economy', *International Affairs*, 93(2), pp. 429–444. Available at: <https://doi.org/10.1093/ia/iix019>.
- Pieterse, J.N. (1988) 'A CRITIQUE OF WORLD SYSTEM THEORY', *International Sociology*, 3(3), pp. 251–266. Available at: <https://doi.org/10.1177/026858088003003004>.
- PresidenRI (2023) *[FOTO] Presiden Tegaskan Pentingnya Hilirisasi Industri untuk Indonesia Maju*, *Presiden RI*. Available at: <https://www.presidentri.go.id/foto/president-tegaskan-pentingnya-hilirisasi-industri-untuk-indonesia-maju/> (Accessed: 14 May 2024).
- Prior, L. (2003) *Using Documents in Social Research*. 6 Bonhill Street, London England EC2A 4PU United Kingdom: SAGE Publications Ltd. Available at: <https://doi.org/10.4135/9780857020222>.
- Putra, A. and Samputra, P. (2023) 'Analysis of nickel export restriction and downstream policy in Indonesia', *Indonesian Journal of Multidisciplinary Science*, 3, pp. 180–187. Available at: <https://doi.org/10.55324/ijoms.v3i3.749>.

Radhica, D.D. and Wibisana, R.A.A. (2023) 'Proteksionisme Nikel Indonesia dalam Perdagangan Dunia', *Jurnal Kemendag* [Preprint]. Available at: <https://jurnal.kemendag.go.id/JCN/article/download/821/392/>.

Revindo, M.D., Irawan, D. and Sinaga, C.A. (2021) 'SERI ANALISIS EKONOMI: TRADE AND INDUSTRY BRIEF, Oktober 2021'. Available at: <https://lpem.org/seri-analisis-ekonomi-trade-and-industry-brief-oktober-2021/> (Accessed: 5 April 2024).

Rivani, E. (2023) 'IMPLICATIONS AND CHALLENGES IN INDONESIA AS AN UPPER MIDDLE-INCOME COUNTRY'.

Robinson, W.I. (2011) *Globalization and the sociology of Immanuel Wallerstein: A critical appraisal*. Available at: <https://doi.org/10.1177/0268580910393372>.

Rosada, F., Wibisana, R. and Paksi, A. (2023) 'The Impact of Indonesia-China Nickel Cooperations on Indonesia's Economy and Environment', *Nation State: Journal of International Studies*, 6, pp. 96–116. Available at: <https://doi.org/10.24076/nsjis.v6i2.1270>.

Sabini, F.W. (2013) *Hilirisasi Tidak Akan Berguna jika Tidak Ada Transfer Teknologi ke Lokal*, *Koran-Jakarta.com*. Available at: <https://koran-jakarta.com/hilirisasi-tidak-akan-berguna-jika-tidak-ada-transfer-teknologi-ke-lokal> (Accessed: 22 April 2024).

Santika, E.F. (2023) *Nikel: Hilirisasi, Potensi, dan Kemiskinan Daerah Tambang yang Meningkat 2023 | Databoks*. Available at: <https://databoks.katadata.co.id/datapublish/2023/08/03/nikel-hilirisasi-potensi-dan-kemiskinan-daerah-tambang-yang-meningkat-2023> (Accessed: 5 May 2024).

Satudata (2024) *Perkembangan Ekspor Non Migas (Komoditi) | Satu Data Perdagangan*. Available at: <https://satudata.kemendag.go.id/data-informasi/perdagangan-luar-negeri/ekspor-non-migas-komoditi> (Accessed: 20 April 2024).

Sehri, S. (2009) 'Dependency approach: Chances of survival in the 21st century', *African Journal of Political Science and International Relations* [Preprint]. Available at: <https://www.semanticscholar.org/paper/Dependency-approach%3A-Chances-of-survival-in-the-Sehri/6aca81f01db8fe4f28eb20b504a35899d247fd97> (Accessed: 9 February 2024).

Serapio, M. and Lopez, D.B. (2023) 'Philippine Miners Not Keen on Indonesia Nickel Alliance Plan', *Bloomberg.com*, 14 March. Available at: <https://www.bloomberg.com/news/articles/2023-03-14/philippine-miners-aren-t-keen-on-indonesian-nickel-alliance-plan> (Accessed: 14 April 2024).

Setkab (2020) *Cabinet Secretary: Omnibus Law as Way to Deal with Economic Pressure, Sekretariat Kabinet Republik Indonesia*. Available at: <https://setkab.go.id/en/cabinet-secretary-omnibus-law-as-way-to-deal-with-economic-pressure/> (Accessed: 5 April 2024).

Setkab (2023) *Gov't Reaffirms Commitment to Downstream Industry, Sekretariat Kabinet Republik Indonesia*. Available at: <https://setkab.go.id/en/govt-reaffirms-commitment-to-downstream-industry/> (Accessed: 21 March 2024).

Soekirno (1995) 'KENDALA ALIH TEKNOLOGI DAN ALTERNATIF SOLUSINYA', *BACA: JURNAL DOKUMENTASI DAN INFORMASI*, 20(5), pp. 13–16.

Statista (2022) *Indonesia - share of economic sectors in the gross domestic product 2022*, Statista. Available at: <https://www.statista.com/statistics/319236/share-of-economic-sectors-in-the-gdp-in-indonesia/> (Accessed: 20 April 2024).

Statista (2024) *Indonesia - poverty headcount ratio 2013-2023*, Statista. Available at: <https://www.statista.com/statistics/818362/poverty-headcount-ratio-in-indonesia/> (Accessed: 9 May 2024).

Sulaiman, S. and Suroyo, G. (2023) 'Indonesia's FDI jumps in 2022, led by mineral processing', *Reuters*, 24 January. Available at: <https://www.reuters.com/markets/asia/indonesias-fdi-jumps-2022-led-by-mineral-processing-2023-01-24/> (Accessed: 14 April 2024).

Sulaiman, S., Suroyo, G. and Nangoy, F. (2023) 'Indonesia's Jokowi calls on successor to continue commodity downstreaming', *Reuters*, 16 August. Available at: <https://www.reuters.com/markets/commodities/indonesias-jokowi-calls-successor-continue-commodity-downstreaming-2023-08-16/> (Accessed: 21 March 2024).

Sulastrri, E. (2014) 'ANALISIS KEWAJIBAN ALIH TEKNOLOGI DALAM INVESTASI ASING DI INDONESIA'. Available at: https://www.academia.edu/9998032/ANALISIS_KEWAJIBAN_ALIH_TEKNOLOGI_DALAM_INVESTASI_ASING_DI_INDONESIA_Endah_Sulastrri (Accessed: 22 April 2024).

Trading Economics (2022) *Indonesia - Exports Of Goods And Services (% Of GDP) - 2024 Data 2025 Forecast 1960-2022 Historical*. Available at: <https://tradingeconomics.com/indonesia/exports-of-goods-and-services-percent-of-gdp-wb-data.html> (Accessed: 20 April 2024).

Tritto, A. (2023) *How Indonesia Used Chinese Industrial Investments to Turn Nickel into the New Gold - Carnegie Endowment for International Peace*. Available at: <https://carnegieendowment.org/2023/04/11/how-indonesia-used-chinese-industrial-investments-to-turn-nickel-into-new-gold-pub-89500> (Accessed: 26 January 2024).

Tundang, R. and Mercurio, B. (2023) *Why Indonesia is so behind the innovation curve - Asia Times*. Available at: <https://asiatimes.com/2023/02/why-indonesia-is-so-behind-the-innovation-curve/> (Accessed: 3 May 2024).

UNDP (2024) *Human Development Report 2023-24, Human Development Reports*. United Nations. Available at: <https://hdr.undp.org/content/human-development-report-2023-24> (Accessed: 23 April 2024).

Vazquez-Alvarez, R. *et al.* (2022) *Global wage report 2022-23: the impact of inflation and COVID-19 on wages and purchasing power*. 1st ed. Geneva: ILO. Available at: <https://doi.org/10.54394/ZLFG5119>.

Voi (2024) *North Maluku And Central Sulawesi Are The Highest Provinces To Encourage Economic Growth*, *VOI - Waktunya Merevolusi Pemberitaan*. Available at: <https://voi.id/en/economy/354462> (Accessed: 25 March 2024).

Wallerstein, I. (1976) 'Semi-Peripheral Countries and the Contemporary World Crisis', *Theory and Society*, 3(4), pp. 461–483.

Wallerstein, I.M. (2004) *World-systems analysis : an introduction*. Duke University Press.

Wallerstein, I.M. (2011) *The modern world-system. 1: Capitalist agriculture and the origins of the European world-economy in the sixteenth century*. Berkeley, Calif. London: University of California Press.

Weiss, C.H. (1997) *Evaluation - Carol H. Weiss - 9780133097252 (43)*. Available at: <https://www.pearson.ch/HigherEducation/Pearson/EAN/9780133097252/Evaluation> (Accessed: 6 May 2023).

Widiatedja, I.G.N.P. (2021) 'Indonesia's Export Ban on Nickel Ore: Does It Violate the World Trade Organization (WTO) Rules?', *Journal of World Trade*, 55(Issue 4), pp. 667–696. Available at: <https://doi.org/10.54648/TRAD2021028>.

WITS (2021) *Indonesia Trade Summary 2021 | WITS Data*. Available at: <https://wits.worldbank.org/CountryProfile/en/Country/IDN/Year/2021/Summary> (Accessed: 20 April 2024).

WITS (2022) *Nickel; other articles thereof n.e.s. exports by country /2022*. Available at: <https://wits.worldbank.org/trade/comtrade/en/country/ALL/year/2022/tradeflow/Exports/partner/WLD/product/750800> (Accessed: 13 April 2024).

World Bank (2023) *Overview, World Bank*. Available at: <https://www.worldbank.org/en/country/mic/overview> (Accessed: 21 February 2024).

World Bank (2024) *World Bank Country and Lending Groups – World Bank Data Help Desk*. Available at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups> (Accessed: 26 January 2024).

World Bank (nd) *Why use GNI per capita to classify economies into income groupings? – World Bank Data Help Desk*. Available at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/378831-why-use-gni-per-capita-to-classify-economies-into> (Accessed: 11 March 2024).

WTO (2023) *WTO | dispute settlement - DS592: Indonesia - Measures Relating to Raw Materials*. Available at: https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds592_e.htm (Accessed: 25 January 2024).

Yoesgiantoro, D. *et al.* (2022) 'Defense study on Indonesian nickel processing', *IOP Conference Series: Earth and Environmental Science*, 1108(1), p. 012037. Available at: <https://doi.org/10.1088/1755-1315/1108/1/012037>.

Yozami, M.A. (2012) *Pengusaha Ancam Gugat Aturan Hilirisasi Mineral*, *hukumonline.com*. Available at: <https://www.hukumonline.com/berita/a/pengusaha-ancam-gugat-aturan-hilirisasi-mineral-lt4f5c730758e1c/> (Accessed: 5 April 2024).

Zhou, H. (2018) 'Will China Avoid the Middle-Income Trap?: Chinese Economy', *Chinese Economy*, 51(6), pp. 483–502. Available at: <https://doi.org/10.1080/10971475.2018.1481004>.