AN OVERVIEW OF ESG AND NON-TARIFF MEASURES AFFECTING INTERNATIONAL TRADE OF SEAFOOD AND AQUACULTURE PRODUCTS

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Abstract

ESG factors, encompassing environmental, social, and governance practices, have become increasingly important for businesses. Companies are now expected to balance financial performance with sustainability and ethical considerations. ESG performance can positively impact a company's financial outcomes, particularly in developed countries with stringent regulations. However, developing countries like those in ASEAN may lag in ESG compliance. Thailand's seafood industry, a significant global player, faces challenges in ESG compliance. The industry needs to improve sustainable fishing practices, address labor issues, and adopt traceability systems to meet international standards. To thrive in the global market, Thai seafood companies must prioritize ESG. This involves adhering to regulations, adopting sustainable practices, and building strong stakeholder relationships. By doing so, they can enhance competitiveness, ensure long-term sustainability, and contribute to Thailand's economic growth.

Keywords: Sustainable Performance, ESG, Exports, Non-Tariff Measures (NTM), Processed Seafood

Introduction

The importance of ESG (Environmental, Social, and Governance) factors in business has grown significantly in recent years. Companies are expected to be accountable not just for their financial performance but also for their impact on the environment, their social responsibility, and their corporate governance and business ethics. First, the environmental aspect includes efforts to minimize carbon footprint, reduce waste, conserve natural resources, and mitigate the effects of climate change (Trahan & Jantz, 2023). Companies should measure and disclose their environmental impact, whether through reducing greenhouse gas emissions, increasing energy efficiency, or adopting sustainable practices in production and supply chains. Second, the social aspect addresses how companies manage relationships with their employees, suppliers, customers and communities. It encompasses issues such as labor practices, diversity and inclusion, human rights, consumer protection and community engagement (De Giuli et al., 2024). Social responsibility includes ensuring safe working conditions, respecting human rights, promoting employee well-being, and addressing consumer needs in an ethical manner. Third, the area of governance focuses on how a company is governed, including the transparency of decision-making processes, the effectiveness of leadership, board diversity, executive compensation, and shareholder rights. Strong governance practices can prevent fraud, ensure accountability and align the interests of the company's management with those of shareholders and other stakeholders (Li et al., 2021).

The growing emphasis on ESG is driven by both investor demand and regulatory pressures, as stakeholders increasingly seek evidence that companies are acting responsibly and sustainably. ESG performance can also impact a company's financial outcomes. Previous studies have shown a positive relationship between ESG performance and profitability, particularly return on assets (ROA) (e.g. Maji & Lohia, 2022; Rahman et al., 2023). The positive impact of ESG on firm performance is found to be more pronounced in large-scale companies (Chen et al., 2023). In addition, company with higher ESG practices often outperform their peers in terms of risk management, total factor productivity and long-term growth (e.g. Du et al., 2024).

According to Chen et al. (2023), companies in more developed countries such as European countries and the U.S. have to meet high CSR reporting requirements; therefore, they must clearly show development and actions such as sales revenue, cost control and resource allocation, leading to corporate financial performance. On the other hand, developing countries such as ASEAN countries are still laggard in complying with ESG standards despite experiencing significant impacts from climate change due to a rise in ground temperatures and sea levels (Shastry, 2021). Recent studies relevant to ESG in the ASEAN region provide mixed results and insights in various areas. At the country level, Mohd Daud et al. (2024) found that the environmental (E) component of ESG positively influenced

economic growth (measured by GDP per capita) of Thailand, Malaysia and the Philippines, but not Indonesia and Singapore. The governance (G) component also positively affected Thailand's economic growth, reflecting growing interest of the investors in ESG factors. At the company level, Handoyo and Anas (2024) emphasized the notable positive effect of the governance (G) performance on firm performance but did not find any significant effect of the environmental (E) and social (S) performances. Therefore, the benefits of environmental and social initiatives on the company-level performance may depend on the context of regulatory environments in specific countries where firms operate businesses (Handoyo & Anas, 2024). In terms of strategic orientation, the research findings of Setiarini et al. (2023) indicate that firms which have prospector strategy orientation (thus continuously searching for new market opportunities through processes of innovation and development in products) tend to have greater ESG practices compared with those with defender strategy orientation. This may be due to more availability of strategic resources.

There is an urgent need for Thai companies to pay more attention and increase effort and resources to improve ESG performance, not only to enhance their own profitability and firm value but also to benefit the country's overall economic growth in the long term. According to the study of Mohd Daud et al. (2024), Singapore, Malaysia, the Philippines and Indonesia showed an upward trend of ESG from 1990 to 2020 whereas Thailand did not have any significant improvement despite the fact that the country has been negatively affected by climate change (Nemoto & Morgan, 2020).

The authors focus on the processed seafood industry of Thailand for two main reasons. First, Thailand is the world's 8th largest exporter of processed seafood by volume and ranked 14th by value, with a 3.3% and 3.0% share of the global market, respectively (Kornboontritos, 2023). Several factors have contributed to the growth of Thailand's seafood industry, including the country's advantageous geography with abundant seafood supplies and availability of skilled yet affordable labor force specializing in seafood preparation. The second reason to focus on the processed seafood industry is because this sector directly impacts the environment in terms of seafood sourcing and plays a very important role in the transition to low-carbon and zero-waste economy. In recent years the size of Thailand's marine catch has declined for more than a decade, potentially caused by overfishing and fishing during the spawning season, habitat destruction, rising costs of food and labor used in aquaculture operations and outbreaks of disease on aquaculture farms (Kornboontritos, 2023). Thai processed seafood exporters have also encountered intense competition by competitors from China, Ecuador, India and Vietnam (Food and Agriculture Organization of the United Nations (FAO), 2024). It is therefore extremely crucial for the Thai exporters to improve their ESG performance to achieve sustainable growth and profitability.

Prospects for Thailand's Seafood Industry and Sustainability Trend Thailand's Seafood Industry

As consumers seek more convenience in food preparation, the demand for processed food such as ready-to-eat and ready-to-cook forms is on the rise. Processed seafood is one of the popular types among consumers, and this leads Thai processed seafood producers to develop a wide range of products for global markets to meet consumers' modern lifestyles. Thailand's seafood industry primarily produces for export, and its key trading partners are countries such as the United States, Japan, and China. According to the Department of Fisheries, (2024a), the total value of Thailand's processed seafood exports in 2023 was approximately 211,285.55 million baht, which accounted for 16.13% of Thailand's total food exports. Among these processed seafood, "canned tuna and shrimp" made up to 59.11%, about 124,890.88 million baht of total value of Thailand's processed seafood exports in 2023 (see Figure 1). These two processed seafood products are the key indicator that could impact growth prospects of Thailand's seafood industry in the future.

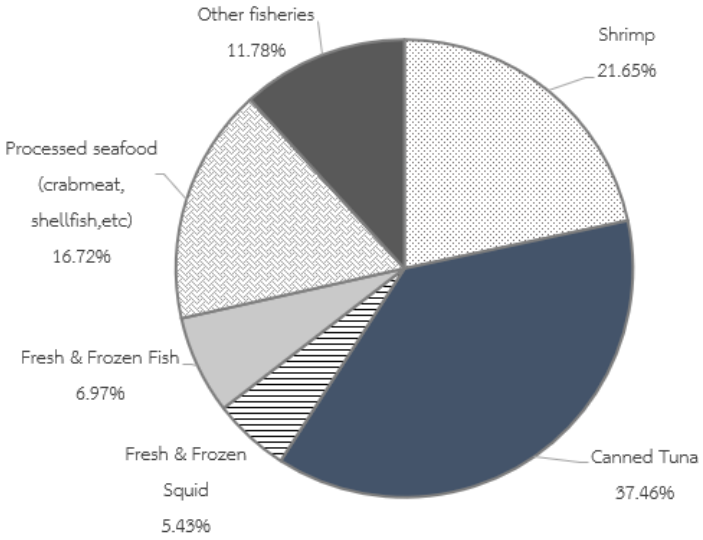

Figure 1 Proportion of Thailand's Processed Seafood for Export in Year 2023 (From total value of 211,285.55 million baht) (Department of Fisheries, 2024a).
Source: Authors' own creation

The growth of Thailand's seafood industry is aligned with the global economy, indicating a continued path of economic recovery. Recently, the value of the country's seafood exports has been sluggish since year 2019 due to several factors such as COVID-19, an uncertainty of supply of tuna, increasing costs in shrimp farms, competition of alternative products, labor shortage and illegal labor, and non-tariff trade barriers by trading partners (Trade Policy and Strategy Office, 2024). During the first nine months of the year 2024, Thailand's seafood exports show a gradual and steady improvement, and this recovery depends on the demand for seafood from certain consumer groups (SCB Economic

Intelligence Center, 2024). Since the global economy remains highly risky due to various factors that are pressuring the recovery trend, including high inflation worldwide which affects exchange rates, an ongoing war between Russia and Ukraine, the internal issues in the Middle East that are expected to persist, resulting in high transportation costs and thus higher prices, these factors have made consumers to become more cautious on their spending, cutting down unnecessary expenses, and opting to buy cheaper products.

Canned Tuna Industry

Thailand has a key strength as the world's largest producer and exporter of tuna products, particularly canned tuna, which gives it a highly competitive capability in the global market. The main export markets are the United States, Japan, and Australia, respectively, while Saudi Arabia and other Middle Eastern countries have become newly emerged markets for tuna products. Additionally, Thailand's processed seafood and tuna industry is large in scale and has sufficient production capacity to meet the demand of trading partners. The value of Thailand's canned tuna exports is expected to continue growing with the overall economic recovery and increasing demand from trading partners and new markets of canned tuna in the Middle East, Africa, Latin America, and CLMV countries. However, it will take time to build upon these emerging markets (SCB EIC Industry Insight, 2024).

Three key challenges for the tuna industry that are related to sustainability are as follows:

1. The increasing climate change and ocean warming affect global fishing industry. As the rise in temperature has led tuna to migrate across oceans worldwide, this impacts tuna reproduction and their size. Additionally, other marine life are more likely to migrate away from the equatorial regions due to rising temperatures and consequently cause an imbalance in marine ecosystems.

2. Sustainability fishing practices under international standards become increasingly important in the future. Sustainable fishing refers to fishing practices that can control and maintain fish population in the oceans at sustainable levels, ensuring that fish can be harvested continuously without causing destruction or imbalances in marine ecosystems (SCB Economic Intelligence Center, 2024). The issues of sustainable fishing may lead to an increase in restrictions on off-season fishing, more strict policies that require fishing nets and lines and other on-board waste to be collected and disposed properly, and the proper use of fishing gear that do not damage marine natural resources. Irresponsible fishing could result in a long-term decline in the supply of wide-caught tuna and directly impact costs and profit margins of companies in the industry. Therefore, operators in the tuna industry must consider and comply with regulations in sustainable fishing practices.

3. The seafood industry is known for its labor-intensive in nature and has complex supply chains. The issue of human trafficking and the use of illegal labor has become increasingly important in international trade and has become one of the major social issues in

the tuna industry. In 2015, the European Commission officially put Thailand on formal notice for not taking sufficient measures in the international fight against illegal, unreported, and unregulated (IUU) fishing and then later in 2019 it formally announced the lifting of a yellow card for Thailand in recognition of the substantive progress the country has made in tackling IUU fishing (Ministry of Foreign Affairs, 2022). In 2024, the U.S. Department of State issued a Trafficking in Persons (TIPs) Report which stated that Thailand was ranked in Tier 2 for the third consecutive year because even though the Thai government and various sectors have shown significant progress in working together to prevent and combat human trafficking over the past years, some trafficking issues are continuously persisted in fishing and seafood processing. These issues are such as irregular or infrequently paid, unpaid wages, lack of legitimate identity documents, and unsafe working conditions (U.S. Department of State, 2024).

For Thailand's tuna industry, traceability could provide a major solution for sustainability. Companies in this industry could adopt modern technologies for seafood traceability, and it could be the backbone of sustainability fishing practices. Digital traceability in seafood supply chain is a big step to ensure sustainability and set a new standard for environment and social responsibility along its supply chain. Traceability cold help company, its partners, and governments to minimize IUU fishing, which protect wild-catch fisheries and environment, and help uphold human rights, reducing risk in seafood supply chain (Thai Union Group PCL., 2017).

Shrimp Industry

Shrimp is regarded as a luxury food, and its consumption trends is aligning with global economic trends. About 90% of shrimp produced in Thailand is intended for the export market and the main export markets for shrimp are China, the United States and Japan, respectively. While navigating the way toward the end of COVID-19 era, Thailand's main shrimp export market continued to decline significantly due to the fragile economic recovery and weak consumer purchasing power in China, weak demand in the US and Japan (SCB Economic Intelligence Center, 2024). Besides the decline in global demands, Thai shrimp industry also faced with increasing export competitors that have lower production costs. One strategy for the Thai shrimp industry is to enhance the quality of shrimp and sell them at higher prices. However, increasing prices can only be done to a certain extent, as it is accompanied by rising production costs on shrimp farms. The primary source of shrimp for export is farmed and the products include fresh, chilled, frozen, processed and canned shrimp. The costs of shrimp production have been steadily increasing caused by the combat with diseases in shrimp farms, climate change, and other operational costs. Operators also need to invest in their shrimp farms with new farming technologies to improve quality of shrimp products.

Business challenges that are related to sustainability for the shrimp industry are as follows:

1. Managing shrimps farming process more efficiently would include raising the quality of shrimp breeds, feed and new farming technologies according to the international standards and practices. Operators or entrepreneurs in this industry should consider using shrimp breeds that can adapt and survive in unpredictable climate conditions, utilizing antibiotics responsibly and prudently to ensure compliance with market regulations and requirements (Thai Union Feedmill PCL., 2024). Additionally, the development of eco-friendly practices become increasingly important, such as installing solar panels to help reduce energy consumption, or some technology to monitor water quality and oxygen level could help shrimp entrepreneurs to achieve a better outcome.

2. Shrimp industry is known to a number of environmental and social issues such as water pollution, negative impact to surrounding ecosystems, and issues in safe labor and legal labor. The farm owners and the seafood export companies should drive responsibility in producing shrimps throughout its value chain, ensuring product traceability which extends from farms, feed producers, and operating the business in such a way that does not negatively impact local ecosystem. To improve the shrimp industry, shrimp producers need to address nutrition, food security and safety, produce higher quality of shrimp products that are deforestation-free, protect mangroves and marine animals, and minimize negative impacts on environmental and social systems. Along this value chain, shrimp farm operators should look after the labor rights, and no illegal labor is employed (US Department of State, 2024).

Stakeholder Theory and Institutional Theory: Compliance with Regulations Shows Consideration to Stakeholders

According to the stakeholder theory originated by Freeman (1984), businesses should create value not only in terms of profit maximization for shareholders but also in terms of responsibility to all parties that are affected by or have an interest in the company's actions. Besides the shareholders, other stakeholders include customers, suppliers, employees, communities, and the environment. By considering the needs and interests of a broader group of stakeholders, businesses can build stronger relationships, improve their reputation, and foster long-term success. This approach calls for companies to take into account the social, environmental, and ethical implications into their decisions and business strategies. The three components of ESG allow companies to assess their performance in a way that addresses the diverse interests of these stakeholders. For instance, an organization committed to strong environmental practices (Environmental ESG) is likely to reduce negative impacts on the local community (Social ESG) and demonstrate good governance by being transparent in its environmental reporting. Similarly, adopting fair labor practices (Social ESG) supports employee well-being and builds trust with consumers and regulators (Governance ESG). As ESG criteria become more integrated into corporate strategy and performance assessment,

companies increasingly recognize that their long-term success depends on how well they balance the needs and interests of their stakeholders.

Another important theory which provides a strong basis for relating the impact of ESG on firm performance is the institutional theory. This theory posits that social institutions such as regulatory frameworks, cultural norms, values and societal expectations essentially influence the behaviors and strategies of firms (Huang, 2021). Firms must conform to established institutional norms, rules and regulations in order to gain legitimacy and acceptance (Del Gesso & Lodhi, 2024; Handoyo & Anas, 2024). This theory is particularly applicable in the context of international trade of processed seafood due to the need to conform to the rules and regulations related to human rights, environmental sustainability and international fishing governance.

By integrating the two aforementioned theories to address the situation of Thai processed seafood companies, it is extremely crucial for them to comply with specific rules and regulations relevant to the seafood and aquaculture industry. By doing so they can demonstrate their responsibility towards the environment, society and people while obtaining legitimacy to achieve successful performance in international trade.

Important Regulations - Non-tariff Measures Affecting International Trade of Seafood and Aquaculture Products in Selected Export Markets

Ensuring the safety, sustainability, and traceability of the processed seafood and aquaculture products involves navigating a complex maze of rules and regulations which create non-tariff barriers to international trade. Thailand's major export markets include United States, Japan and the European Union (Kornboontritos, 2023). Some important rules and regulations of these countries are as follows:

USA – The Food and Drug Administration (FDA) plays a significant role in protecting consumers by enforcing the Food Safety Modernization Act (FSMA) (Food and Drug Administration, 2021), which mandates a preventative approach called Hazard Analysis and Critical Control Point (HACCP) for all seafood entering the U.S. market. Importers who are Thailand's business partners have to be registered with the FDA and implement HACCP plans that identify and control potential hazards throughout the entire supply chain, from harvest to processing and transport. Failure to comply with HACCP would result in significant consequences, including product detention or refusal of entry. In addition, to ensure sustainability, the National Oceanic and Atmospheric Administration (NOAA) Fisheries emphasizes sustainable fishing practices and the prevention of overfishing of commercially valuable species. The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and International Fisheries Trade Permit (IFTP) program require a permit for importing, exporting, or re-exporting tuna and swordfish, often subject to international conservation agreements (NOAA, 2022). Finally, the Trade Facilitation and Enforcement Act 2015 (TFTEA)

prohibits imports of all products made by forced labor into the United States (United States Congress, 2016). The USA has made progress towards sustainable fisheries management, countering illegal, unreported, and unregulated (IUU) fishing (United States Interagency Working Group on IUU Fishing, 2022).

Japan – There are three important laws relevant to seafood international trade including 1) the Foreign Exchange and Foreign Trade Act, 2) the Food Sanitation Act, and 3) the Customs Act (Japan External Trade Organization (JETRO), 2011). First, the Foreign Exchange and Foreign Trade Act indicates import quota, import approval and import acknowledgment. Next, the Food Sanitation Act stipulates that seafood and processed products must meet the requirements of food sanitation. The types and details of the raw ingredients and contents of pesticide residues, additives, mycotoxins, etc. must be tested and import bans may be imposed on food containing substances that are prohibited or exceed approved limits. The Positive List System specifies permitted food additives and processing aids, while the HACCP-based Sanitary Control System for Food ensures safe handling. Third, under the Customs Act, importing cargo with falsified origin of the contents is banned (JETRO), 2011). Japan has also shown some progress to the combat against IUU fishing by implementing the amended Fisheries Act since 2020 and adopting the Maximum Sustainable Yield (MSY) based evaluation of fish stocks and fishing effort (Hirokawa & Thompson, 2023). The Domestic Trade of Specific Marine Animals and Plants Act was passed in the House of Councillors in December 2020 and implemented in 2022 to eliminate domestic IUU fishing and remove imported IUU products.

European Union (EU) – The European Union has a list of approved countries authorized to export fishery products to the EU as maintained by the European Commission (Article 127 of Commission Delegated Regulation (EU) 2022/2292) (European Commission, 2021). The processing facility or fishing vessel must be approved by a competent authority of the exporting country to ensure that it meets EU hygiene and sanitation standards. In addition, all seafood products exported to the EU have to comply with strict food safety regulations. The EC Regulation 178/2002 of the European Parliament and of the Council of 28 January 2002 indicates general principles and requirements of food law. It establishes the European Food Safety Authority (EFSA) and specifies procedures related to food safety. These regulations address hygiene standards throughout the production chain, from catching or harvesting to processing and packaging, setting the basic principle of 'the farm to table' approach (European Commission, 2002). Similar to the U.S., the European Union also requires a mandatory HACCP plan for all seafood businesses exporting to the EU. According to the EU's strict regulations against IUU fishing (EU IUU Fishing Coalition, 2019), companies must demonstrate that the seafood products come from legal and sustainable sources, showing catch certificates issued by a competent authority. Finally, all seafood exports to the EU have to be accompanied by a health certificate issued by a competent authority in the manufacturing country, and the

labels must provide information on the species, catch area, fishing gear used, processing method (wild-caught or farm-raised), and allergens, according to the EU regulations.

In summary, the specific regulations show various types of non-tariff measures, including technical measures such as sanitary and phytosanitary (SPS) measures, technical barriers to trade (TBT), pre-shipment inspections and other formalities, and non-technical measures such as rules of origin. All the aforementioned markets have similarities in terms of their focus on food safety, having strict standards for seafood safety, with contaminant limits and HACCP programs in place. Secondly, traceability systems are being implemented in all of the major markets to track seafood from catch to consumer, ensuring product origin and safety. Lastly, they are committed to combating IUU fishing through international cooperation and law enforcement measures.

Conclusion

The need to achieve ESG performances is not only inevitable but also very crucial for the companies to increase its strategic performance and financial performance. Within the context of international trade of seafood and aquaculture products, there are several regulations imposed by the governments of importing countries which are deemed as non-tariff measures that can impact the volume and value of internationally traded products. These measures essentially address ESG issues to ensure that businesses operate sustainably, ethically, and responsibly. Environmental regulations focus on reducing overfishing, minimizing bycatch, and protecting marine ecosystems. These policies encourage practices such as sustainable fishing, eco-friendly aquaculture, and responsible sourcing of seafood. Social aspects of ESG include worker welfare and fair labor practices, particularly in countries where labor standards may be less stringent. Governance addresses transparency, accountability, and ethical decision-making within seafood businesses. International trade of seafood and aquaculture products is shaped by these evolving ESG standards, as countries and trading blocs implement stricter regulations. Compliance with ESG regulations can enhance Thai seafood exporters' competitive advantage, allowing them to access premium markets that demand higher sustainability standards and to increase their export performance in the long run.

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