



Policy Paper No. 36 The Cost of Non-Tariff Measures on Food and Agriculture in Indonesia

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CONTENT

Glossary	6
Executive Sumary	7
Indonesia's Food Trade Policy Reform	8
The Significance of Food Trade in Indonesia	8
Trade is a Necessary Component for Food Security and	
Economic Development	9
Major Policy Shift Must be Followed Through to Reform	
Complex Food Trade Policy	10
Indonesia's Use of NTMs	14
Indonesian NTMs on Food and Agriculture	17
Technical NTMs	18
Quantitative Restriction and Non-Automatic Import	
Licensing System	19
Quantifying the Impact of NTMs	24
The Effects of Non-Tariff Measures in Food and Agriculture	
on Food Security	28
The Effects of Non-Tariff Measures in Food and Agriculture	
on Economic Development	31
Policy Recommendations	34
References	36

List of Tables

Table 1. Changes in the Omnibus Law on Job Creation relating	
to food import	11
Table 2. International NTM classification by chapter	13
Table 3. Indonesian NTMs on agro-food products (HS 01-24)	18
Table 4. Nominal and effective rates of protection, 2015 (%)	27
List of Figures	
Figure 1. NTM frequency and coverage ratio by sector, 2018	17
Figure 2. Import process for private sector	21
Figure 3. Indonesia's food and agriculture products affected by NTMs	
have been rising over recent years	25
Figure 4. Border prices for meat and fruit products in Indonesia and in	
neighbouring Malaysia and Philippines (USD, averaged over 2015-2019)	26
Figure 5. Domestic rice price versus international	
rice price (per kilogram)	29
Figure 6. NTMs affect businesses	31

GLOSSARY

F	R	P	÷
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Effective rates of protection

F&B:

Food and beverage industry

GVC:

Global value chain

MoA:

Ministry of Agriculture

Mol:

Ministry of Industry

MoT:

Ministry of Trade

NRP:

Nominal rates of protection

NTM:

Non-tariff measures

PSI:

Pre-shipment inspection

RIA:

Regulatory impact assessment

SPI:

Surat Persetujuan Impor (Import license)

SPS:

Sanitary and phytosanitary measures

TBT:

Technical barriers to trade

QR:

Quantitative restrictions

EXECUTIVE SUMMARY

International trade in food and agriculture has more than doubled in real terms since 1995 to a value of USD 1.5 trillion in 2018. Indonesia benefits from this trade, with food and agricultural imports valued at USD 20 billion and exports at USD 37 billion in 2018. Indonesia imports food commodities such as wheat, garlic, soybeans, sugar, and beef, and exports commodities that have a comparative advantage such as palm oil, coffee, nuts, spices, and processed food products. The increased competitiveness of Indonesia's food, beverages, and tobacco manufacturing industries indicates there is a huge potential for Indonesia to compete globally and grow its economy.

Despite the importance of food trade, Indonesia uses non-tariff barriers to trade (Non-tariff Measures or NTMs) more extensively in the food and agriculture sector than its peer countries of Singapore, Malaysia, and Vietnam. NTMs are policies other than tariffs imposed on international trade. As of January 2021, there were 466 coded NTMs administered by eight different Indonesian ministries and agencies that cover almost all of food and agriculture products. NTMs impose additional costs for enforcement, sourcing, and process-adaptation to food and beverage (F&B) manufacturing businesses, limit corporate access to the global market, and may reduce productivity and competitiveness. NTMs can, therefore, act as costly barriers to trade, even having a bigger influence than tariffs. With this, NTMs also undermine food security. Indonesia currently ranks only on position 65 out of 113 countries in the Global Food Security Index.

The Omnibus Law on Job Creation from 2020 revises the 2012 Food Law towards more liberalised food trade policy. However, existing Ministry of Agriculture and the Ministry of Trade regulations that contain NTMs on food import remain in force. Technical measures such as sanitary or phytosanitary (SPS) measures, technical barriers to trade (TBT), and pre-shipment inspection (PSI) increase compliance and storage cost due to inefficiencies in the enforcement of the NTM. Quantitative restrictions (QR) or quota imposed through non-automatic import licensing system are associated with import delays due to the complicated process, resulting in food shortages in the market and skyrocketing domestic retail prices.

Three reforms can minimize the cost of NTMs. First, the Ministry of Trade should lead a comprehensive review of existing NTMs. Regulatory Impact Assessments (RIA) should clarify the cost and benefits of specific NTMs, and allow for the removal of those with large net costs. Second, the Ministry of Agriculture and the Ministry of Trade need to consider improving enforcement infrastructure and systems to minimize compliance cost. Last but not least, the Ministry of Trade should introduce an automatic import licensing system that replaces the quota system to facilitate transparency, predictability, and ease of trade.

INDONESIA'S FOOD TRADE POLICY REFORM

The passage of Indonesia's Omnibus Law in late 2020 revised Indonesia's Food Law towards a more liberalised food trade policy. It recognised that food imports and domestic food production have equally important roles in achieving food security. The effectiveness of this policy change will depend on the implementation of the food trade aspects of the Omnibus Law and how far Indonesia can reform its complex food trade policy. To maximise both food security and economic gains that Indonesia can achieve, existing barriers to trade must be critically examined and reformed.

Non-tariff measures (NTMs)— policy measures other than tariffs that can potentially have an economic effect on international trade in goods, changing quantities traded, prices or both—are an increasingly prominent part of global trade regimes. NTMs are given the focus in this article for two reasons. First, NTMs are increasingly replacing tariffs as tariffs have been progressively liberalised through the General Agreement on Tariffs and Trade/World Trade Organization (GATT/WTO) and various trade agreements. Second, some NTMs can act as costly barriers to trade for both importers and exporters. These NTMs can have a bigger influence than tariffs on inhibiting trade, increasing the difficulty in achieving a food secure Indonesia.

The Significance of Food Trade in Indonesia

Globally, international trade in food and agriculture has more than doubled in real terms since 1995 to be worth USD 1.5 trillion in 2018 (FAO, 2020). Indonesia has also participated in the global food trade system as both an importer and exporter. In 2018, imports supplied 100% of Indonesia's wheat stock, 93.7% of garlic, 72.5% of soybeans, 69.9% of sugar, and 28.4% of beef (World Food Programme, 2020). Even for rice, a staple food for much of the population, Indonesia has been a net importer for the past decades (Patunru, forthcoming). Imported food both supplements and complements Indonesia's own food production to fulfil the food demand of its 270 million population, as well as to provide variety and choice. Imported agricultural products, such as wheat, sugar and dairy ingredients, also provide important inputs to Indonesia's important food processing sector. In total, food imports in 2018 were worth USD 20 billion (World Integrated Trade Solutions, 2020).

Meanwhile, Indonesian exports of food and agriculture products in 2018 were even greater than imports, at a total of USD 37 billion or 21% of Indonesia's total exports (World Integrated Trade Solutions, 2020). Indonesia exports agricultural products in which it has comparative advantage—not only palm oil, but also coffee, nuts, spices, and processed food products like cocoa butter and cocoa powder, and processed fruits and nuts. These exports contribute valuable revenue to the Indonesian economy.

Trade is a Necessary Component for Food Security and Economic Development

Greater food trade has the potential to improve Indonesia's poor food security and economic development. Food security is not about the rate of self-sufficiency, but about factors such as food affordability, nutritional value and dietary diversity. The World Food Summit in 1996 defined

food security as existing "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (FAO, 2006). Singapore, which is almost wholly dependent on imports of agricultural products, ranks 19th in food security out of 113 countries according to the Economist Intelligence Unit's Global Food Security Index (2021). Meanwhile, Indonesia's food security in the same index is ranked 65th—far below Malaysia (43rd), and lower than Thailand (51st), and Vietnam (63rd)—due to poor affordability and lack of dietary diversity. According to 2018 figures from the Indonesian Ministry of Health, 22 million Indonesians were enduring hunger and almost nine million Indonesian children under five years old were suffering from undernutrition, exhibiting stunting, wasting, and/ or being underweight (30.8%, 10.2%, and 17.7% of children respectively) (Asian Development Bank, 2019; Ministry of Health, 2018).

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Since the onset of the Covid-19 pandemic in 2020, more people have fallen into poverty and have had to endure hunger due to unemployment and economic downturn. By September 2020, an additional 2.76 million Indonesians had fallen into poverty compared to the previous year, totalling to 27.5 million Indonesians living in poverty (Statistics Indonesia, 2021a). The World Bank's survey on 4,000 households found that in November 2020, 23% of households reported experiencing food shortages, and 29% of households reported eating less (World Bank, 2021).

The United Nations Food and Agriculture Organization (FAO) argues that food trade can lead to more stable food security by increasing the quantity and variety of food available, reducing food prices, encouraging a more balanced diet, and mitigating risk of shortages when there are disruptions to local production (Gadhok, 2016). This argument has been tested by two large-scale studies with different methods—D'Odorico et al.'s (2014) study on a set of 153 countries between 1986 and 2010 and Dithmer & Abdulai's (2017) study across 151 countries between 1980 and 2007. Both studies concluded that countries with more open food trade are more likely to have better food security.

In addition to food security, global food and agricultural trade can also increase Indonesia's participation in global value chains (GVC) in which production processes of food products are spread into various stages in different countries to achieve efficiency gains. Participation in GVCs is associated with economic growth, better jobs, and reduced poverty (World Bank Group, 2020). GVC participation can be in the form of forward-linkages, in which raw agricultural materials are supplied to other countries to process, or in the form of more advanced backward-linkages, such as manufacturing and processing through the food and beverage industry. Backward-linkage participation in GVCs is shown to bring greater benefits through the domestic value-adding activities, yet Indonesia's participation has been mostly in the form of forward-linkages (Asian Development Bank & Islamic Development Bank, 2019). Both types of linkages have generally declined from 2007 to 2017. Over the same time period, Indonesia's food, beverages, and tobacco

manufacturing industries showed increased competitiveness as measured by New Revealed Comparative Advantage (NRCA) index (ADB & ISDB, 2019, p. 54). This indicates there is huge potential for Indonesia to maximize its comparative advantage by strengthening its food and beverage industry in GVCs to compete globally and grow its economy.

Major Policy Shift Must be Followed Through to Reform Complex Food Trade Policy

Despite its significance for food security and economic development, food trade has been heavily restricted in Indonesia by the country's past self-sufficiency ambitions. Law No. 18/2012 on Food (Food Law) mandated that food and agricultural imports are allowed only when domestic supply is deemed insufficient, despite notoriously unreliable agriculture data. Import control is practically enforced through tariffs and NTMs such as quantitative restrictions or quotas that specify the amount of food allowed to be imported or monopoly rights for state-owned enterprise to import certain commodities like rice, maize, and white crystal sugar. Previous studies on beef (Respatiadi & Nabila, 2017a), sugar (Saputri & Respatiadi, 2018), and rice (Octania & Biru, 2019; Respatiadi & Nabila, 2017b) show how import restrictions correlate with higher prices for Indonesian consumers.

In November 2020 the Indonesian House of Representatives passed the Omnibus Law No. 11/2020 on Job Creation (Omnibus Law). In a major policy shift, the Omnibus Law revises the provisions in the Food Law that discouraged food import to now allow food import as a source of food supply (Table 1), and therefore contribute to food security. With this policy reform, food imports have equal legal standing with food from domestic production. This is a positive departure from the harmful protectionist aspects of Indonesia's food policy to a policy that can potentially boost Indonesia's food security and economic development.

Table 1.
Changes in the Omnibus Law on Job Creation relating to food import

	Food Law	Omnibus Law
Article 1(7)	Food availability is the condition of the availability of food from domestic production and National Food Reserve as well as import if the two main sources cannot meet demand	Food availability is the condition of the availability of food from domestic production, National Food Reserve, and food imports
Article 14(1)	The source of food availability comes from domestic food production and National Food Reserve	The source of food availability is prioritized from: a. Domestic food production b. National Food Reserve; and/or c. Food imports
Article 14(2)	In case food supply as elaborated in (1) is not sufficient, food can be supplied from imports according to demand	Source of food as elaborated in (1) is implemented with consideration of the interests of farmers, fishermen, seafood breeders, and micro- and small- food businesses, through tariff and NTMs.
Article 36(1)	Food imports can only be conducted if domestic food production is not enough and/or if it cannot be produced in the country	Food imports are conducted to fulfil domestic demand
Article 36(2)	Staple food imports can only be conducted if domestic food production and National Food Reserve are not sufficient	Staple food imports are conducted to fulfil domestic demand and National Food Reserve
Article 36(3)	The sufficiency of domestic food production and the National Food Reserve are set by the ministry or government agency in charge of food	Food imports as described in (1) and (2) are set by the central government with consideration of the interests of farmers, fishermen, seafood breeders, and micro- and small- food businesses

Source: CIPS (2020)

While on the surface this change in the Law signifies liberalization of Indonesia's food trade, the effect of the change will depend on the implementation and how far Indonesia can reform its complex food trade policy. The changes in the Omnibus Law will be further elaborated in implementing regulations. In the meantime, existing Ministry of Agriculture and Ministry of Trade regulations on food imports will remain in force until revoked. These regulations can undermine the food trade reform intended by the Omnibus Law, as the NTMs within the current regulations significantly restrict imports or make them more costly.

To maximize the food security and economic gains that Indonesia can achieve from its recent food trade liberalization policy, existing NTMs and their impacts must be critically examined.

To maximize the food security and economic gains that Indonesia can achieve from its recent food trade liberalization policy, existing NTMs and their impacts must be critically examined. Further, as Article 14(2) indicates that tariffs and NTMs will still be used in the interest of farmers, fishermen, and micro- and small- food businesses, it is worth considering the balance between NTMs that set necessary standards for public health and safety versus those that are mostly protectionist by nature and harm consumers and producers that rely on imported materials.

All countries that participate in trade apply NTMs to help facilitate and regulate trade. NTMs are requirements that exported products must meet before they can be accepted by an importing country. For food and

agricultural products, sanitary and phytosanitary (SPS) measures and technical barriers to trade (TBT) are the dominant categories. SPS measures are quarantine and biosecurity measures which are applied to protect human, animal or plant life or health. TBTs are technical regulations and standards, including for food packaging and labelling, animal welfare and agriculture and veterinary chemical use. Other NTMs include quantitative quotas, licensing, pre-shipment regulation, labelling requirements, export-related requirements, price control measures and anti-competitive measures.

These instruments are categorized in an international classification as chapters according to their scope and/or design (See Table 2). This classification was developed and agreed by several international organizations as part of a multi-agency initiative on NTMs led by the United Nations Conference on Trade and Development (UNCTAD).

Table 2. International NTM classification by chapter

		Α	Sanitary and phytosanitary measures (SPS)
	Technical measures	В	Technical barriers to trade (TBT)
		С	Pre-shipment inspection and other formalities (PSI)
		D	Price control measures
		Е	Licences, quotas, prohibitions and other quantity control measures
		F	Charges, taxes and other para-tariff measures
		G	Finance measures
Imports		Н	Anti-competitive measures
트	Non-technical	I	Trade-related investment measures
	measures	J	Distribution restrictions
		K	Restrictions on post-sales services
		L	Subsidies (excluding export subsidies)
		М	Government procurement restrictions
		N	Intellectual property
		0	Rules of origin
	Export	Р	Export-related measures

Source: UNCTAD (2018)

In some cases, an NTM may be unfair or act as an overly costly barrier to trade. The WTO provides guidelines that state NTMs must be transparent, not overly restrictive to trade and not arbitrarily applied. These rules help distinguish legitimate policy regulations and procedures from protectionist measures that may impede trade. As such, various types of NTMs and their potential effects on Indonesian food security must be explored.

INDONESIA'S USE OF NTMS

In the Asia-Pacific region, applied tariffs have halved in the past two decades, but NTMs have increased by more than four times (United Nations, 2019, p. 4). Indonesia also follows the same trend as it has been reducing tariffs through various free trade agreements while significantly increasing its use of NTMs. Yet, NTMs often become barriers used as protectionist tools that can have a bigger influence on trade than tariffs (Cadot, Malouche, & Saez, 2012; UNCTAD, 2013; UNCTAD & The World Bank, 2018). An NTM tends to be less transparent than a tariff since it is not just a number, but rather information that is contained in various legal and regulatory documents, which makes its effect harder to assess or quantify. Hence, careful analysis is needed to dissect how NTMs affect trade, especially in food and agriculture.

Just between 2015 and 2018, the number of regulations containing NTMs in Indonesia increased by almost 14%, from 169 in 2015 to 192 in 2018. It is important to note that one regulation can contain multiple NTMs and each NTM can cover many individual products. Under these regulations, the number of coded NTMs (that is, according to pre-defined NTM classifications) also increased significantly by 27%, from 767 in 2015 to 977 in 2018 covering 7,759 tariff lines or 77.5% of total tariff lines. These NTMs originated from 13 issuing government agencies, with the Ministry of Trade responsible for contributing the most (28.6%), followed by the Ministry of Industry (27.4%) and Ministry of Agriculture (19.9%). The Ministry of Agriculture, in particular, has been the most active in introducing new NTMs in recent years, increasing measures under their responsibility by 47%, from 132 in 2015 to 194 in 2018 (Munadi, 2019, pp. 72–73).

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Indonesia uses NTMs more extensively in comparison to other countries, creating significant trade barriers. According to the Trade Barrier Index 2019 that measures countries' use of trade barriers, Indonesia ranks 72nd out of 86 countries worldwide and 8th out of 14 countries regionally, partly due to the prevalence of NTMs applied to all partners and/or bilaterally. For the use of NTMs specifically, Indonesia ranks 70th with a score of 2.12 (out of 10 with higher score indicating a more extensive use of NTMs) which is higher than the global median (1.87) and peer countries like Singapore (1.67), Malaysia (1.69), and Vietnam (2.09) (Thompson & Montanari, 2019, p. 17). These findings were confirmed by

Global Economic Openness Index that shows from 2009 to 2019, Indonesia's ranking based on the prevalence of non-tariff barriers, a subset of NTM that carries a negative impact on trade, dropped from 34th to 80th out of 141 countries which means the non-tariff barriers are resulting in significant market distortion (Brien & Herring, 2019, p. 87).²

¹ Scoring is calculated based on NTMs identified in the UNCTAD-TRAINS database.

² Scoring is based on responses to the World Economic Forum's Executive Opinion survey question "In your country, to what extent do non-tariff barriers (e.g. health and product standards, technical and labelling requirements, etc.) limit the ability of imported goods to compete in the domestic market?"

The increasing use of restrictive NTMs in Indonesia continues to contradict its international stance as an obligated member of various international trade organizations, in particular ASEAN, APEC, and WTO. As a member of ASEAN and the ASEAN Free Trade Area (AFTA), Indonesia has made a commitment to work on the "eventual elimination of unnecessary and unjustifiable non-tariff measures", particularly in agriculture (ASEAN, 2019). Indonesia has also agreed to the ASEAN Guidelines for the Implementation of ASEAN Commitments on Non-Tariff Measures on Goods. They outline principles and best practices in the process of setting up NTMs, including

- a regulatory review process through Regulatory Impact Assessment (RIA) or similar methods (Box 1),
- providing opportunity for consultancy and engagement,
- ensuring transparency, non-discrimination, and impartiality, and
- conducting periodic review (AFTA Council, 2018).

These processes can improve regulatory quality, but Indonesia has yet to have a formal mechanism and procedures. As a result, many of Indonesia's policies including on food and food products are unclear, inconsistent, confusing and enforced in a haphazard manner (USDA, 2021; Wardhani, 2020).

As a member of the World Trade Organization (WTO), Indonesia must also follow the initial General Agreement on Tariffs and Trade (GATT) and subsequent WTO rules that were established to reduce or eliminate trade barriers. Yet, Indonesia's NTMs often infringe on these commitments. As of November 2019, there have been 15 dispute cases lodged against Indonesia in the WTO, seven of which relate to measures on animal, vegetable, and food products³ (World Trade Organization, 2019). These dispute cases indicate that the trade barriers in the agro-food sector are perceived by Indonesia's trading partners as violations of the global trade rules.

³ In the UNCTAD NTM databases, **animal** refers to any minimally processed commodity originating from animal sources, including fisheries; **vegetable** refers to any plant product, including forestry products; and **food products** are processed food products.

Box 1. Regulatory Impact Assessment for NTMs

Regulatory Impact Assessment (RIA) refers to the process of systematic assessment of proposed and existing regulations. RIA helps inform policymakers of the advantages and disadvantages of a proposed or existing policy, its potential impact to individuals, businesses, community, and the broader economy, as well as possible policy alternatives. Regulatory Impact Assessment can be conducted ex-ante during policy formulation, or ex-post to evaluate the implementation of the policy.

Many developing and developed countries have integrated the RIA process in their policymaking. Australia, New Zealand, and Malaysia, for example, require policymakers to conduct an assessment and produce a Regulatory Impact Statement (RIS) before submitting a regulatory proposal (Commonwealth of Australia, n.d.; The Treasury, Government of New Zealand, 2015; OECD, 2015a). The RIS must include the problem statement, assessment on the needs for government intervention, policy options, consulted stakeholders, cost and benefit, alternatives and implementation plan. This is considered an important element to make sure the proposed policies do not lead to obstacles for businesses.

In 2011, the Indonesian Ministry of Trade planned to establish a review process and a new unit (Non-Tariff Policy Team) within the Ministry to conduct RIAs on NTMs, coordinate with relevant agencies for the formulation and implementation of NTMs, and monitor and evaluate the implementation of the NTMs. The Ministry also introduced standard operating procedures (SOP) for how the team would conduct the independent and objective review (Cadot, Malouche, & Sáez, 2012). However, the plan fell through. There is yet to be a dedicated institution in Indonesia that regularly or systematically carries out regulatory reviews of NTMs (Munadi, 2019).

Indonesian NTMs on Food and Agriculture

Animal, vegetable, and food products are commodities with the most NTMs, contributing the largest share (22%) of all Indonesian NTMs (Brien & Herring, 2019, p. 32s). As of January 2021,

there were 466 coded NTMs on these products administered by eight different ministries and agencies. According to the World Bank, the NTM frequency ratio or the percentage of products in that group subject to at least one NTM is 100% for animal products, 91.77% for vegetable products, and 99% for food products. Meanwhile, coverage ratio, or share of total imports covered by NTMs, is 100% or total coverage for animal products, 99.27% for vegetable products, and 98.82% for food products (WITS, 2019). Animal, vegetable, and food products are more regulated than other product groups (See Figure 1).

Animal, vegetable, and food products are commodities with the most NTMs, contributing the largest share (22%) of all Indonesian NTMs.

Figure 1. NTM frequency and coverage ratio by sector, 2018 Animal Vegetable Food Products Fuels Transportation Textiles and Clothing Hides and Skins Chemicals All Import Products 0% 20% 40% 60% 80% 100% ■ NTM frequency ratio NTM coverage ratio

 $Source: World\ Integrated\ Trade\ Solutions\ (WITS)\ https://wits.worldbank.org/$

Indonesian NTMs on food and agricultural products consist of technical measures (74%) and non-technical measures (26%). Their different effect on trade and price will be explained further.

Table 3. Indonesian NTMs on agro-food products (HS 01-24)

Technical Measures			Non-Technical Measures					
	SPS	ТВТ	Inspection	Quantity Control	Price Control	Others	Exports	Total
All partners	225	79	22	30	9	7	74	446
Bilateral	10	6	1	1	-	-	2	20
TOTAL	235	85	23	31	97		76	466

Note: UNCTAD-TRAINS data as of 7 January 2021 (2021) https://trains.unctad.org/

Technical NTMs

In terms of number of measures, most of the NTMs in the animal, vegetable, and food product groups are technical measures. SPS measures related to animal and plant health are the most common measure (50%). The larger number of SPS measures indicate a greater concern for quality and safety of products. Munadi (2019) observed that as a country's income rises, the preference for quality products also rises, which may explain the large increase of SPS measures compared to other types of NTMs.

TBT measures such as importer registration, labelling, product certification, and inspection requirements other than lab testing for hygiene are the second most common (18%). Preshipment inspections (PSI) where products must be certified at the port of origin are also commonplace, including for horticulture and raw sugar. In addition to PSI in loading ports, when arriving in Indonesia, imported food and agriculture products can only go through a select few ports due to limited availability of quarantine and inspection facilities. For example, onion and garlic imports can only come through Belawan Seaport, Medan; Tanjung Perak Seaport, Surabaya; Soekarno-Hatta Seaport, Makassar; and Soekarno-Hatta Airport, Jakarta; and free trade zones, as regulated in the Ministry of Agriculture Regulation No. 16/2012, while fruits and vegetables can come through those ports plus Tanjung Priok Seaport, Jakarta as regulated in Ministry of Agriculture Regulation No. 42/2012. During busy seasons, the limited ports of entry for food commodities can be congested which results in extra costs and delays. This creates high inefficiency in the import process.

The technical NTMs are in place with the intention to protect consumers and the environment by ensuring health and safety. Nevertheless, their excessive use can have the consequences of affecting the market structure and imposing burdensome costs to businesses which can be passed on to consumers.

In an International Trade Centre survey of Indonesian companies' perspectives of NTMs, importers reported that the technical NTMs often result in costly delays and procedural obstacles. Inefficiencies in the system and enforcement of the NTM are caused by the local infrastructure

and the capacity of officials. The reported procedural obstacles on food and agriculture trade include numerous administrative windows⁴, multiple documents that are often redundant, high fees and charges for certification, arbitrary behaviour of officials, and even informal payments (International Trade Centre, 2016). These procedural obstacles accrue high compliance costs as well as costs associated with delays. Indonesia's average dwelling time is estimated at around five days, which is longer than its neighbours Singapore (1.5 days) and Hong Kong (two days) and partly due to long customs clearance process and inspection procedures (Hassan, Gurning, & Handani,

Nevertheless, their excessive use can have the consequences of affecting the market structure and imposing burdensome costs to businesses which can be passed on to consumers.

2020). In many cases, the processes of checking import documentation and inspections take even longer, even weeks and months, exacerbated by port congestion during busy periods, which result in extra demurrage cost (International Trade Centre, 2016; European Commission, 2017). A fruit trader reported that the compliance costs plus the protocols related to cold storage could contribute an additional 6% cost on top of the total value (Marks, 2016).

Quantitative Restriction and Non-Automatic Import Licensing System

Another crucial NTM in the food and agricultural sector are quantitative restrictions (QR). While quantitative restrictions only account for 7% of Indonesia's NTMs on animal, vegetable, and food products, they are considered to be major barriers to the food trade. Quantitative restrictions are a non SPS-related prohibition that set limits on the quantity of a commodity a country can import. They are non-technical restrictions and are usually decided based on the estimated gap between domestic supply (including stock) and demand. Once an import quota is set, it is divided among registered importers. In order to get a quota allocation, importers must apply for a recommendation letter from the Ministry of Agriculture (or the Ministry of Industry for raw material import for industrial use) and an import license (*Surat Persetujuan Impor* or SPI) from the Ministry of Trade (Figure 2).

⁴ Administrative windows refer to the various platforms and websites managed by different agencies that companies must go through to submit administrative documents for export import.

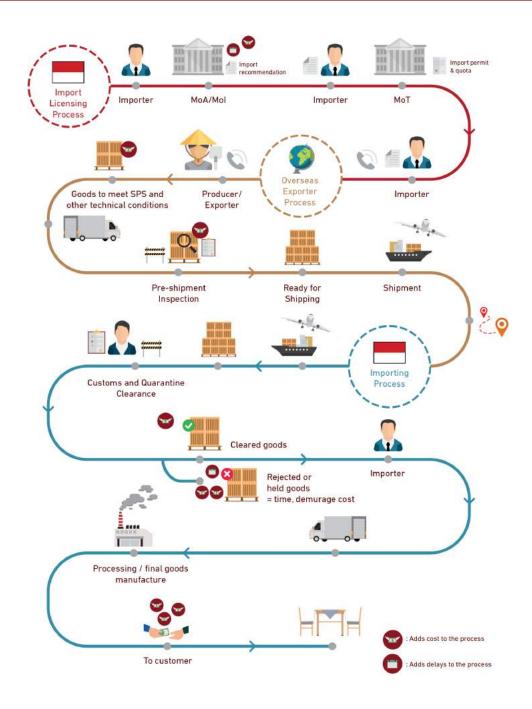
For some staple commodities, the import quota is reserved for state-owned enterprises. For medium-quality rice (stipulated in Coordinating Ministry of Economic Affairs Regulation No. 05/2018) and maize for feed and consumption⁵ (stipulated in Ministry of Trade Regulation No. 21/2018), which are two of Indonesia's staple commodities, the import monopoly lies with Indonesia's state-owned logistics company, Bulog. For white crystal sugar, imports are reserved only for state-owned enterprises, as stipulated in Ministry of Trade Regulation No. 14/2020. These state-owned enterprises do not have the flexibility to import anytime. They can only import a certain amount based on a decision made in a national coordination meeting (*Rapat Koordinasi Terbatas* or Rakortas) between the Coordinating Ministry of Economic Affairs, the Ministry of Trade, the Ministry of Agriculture, the Ministry of State-Owned Enterprises, and the related state-owned enterprise itself.

Import decisions are made under the authority of the Ministry of Trade when domestic stocks are low based on available production and stock data. Political considerations affect the decisions when the import quota gets published. This also prevents importers from being responsive to international market prices and taking advantage of low global food price or bargains (Marks, 2015).

 $^{^{5}}$ Maize for industrial raw material can be imported by food and beverage producers.

Figure 2. Import process for private sector

NTMs such as SPS and technical barriers, pre-shipment inspections, import licences, quotas and other quantity control measures all increase costs (and time) of exporting and importing, with consumers ultimately paying higher food prices



Some commodities will have additional requirements on top of the general import process. To obtain the recommendation from the Ministry of Agriculture to import garlic and onions, importers must prove their commitments to plant 5% of the total volume of import in Indonesia. The Ministry of Agriculture verifies their track record of fulfilling this requirement before issuing the recommendation (Ministry of Agriculture Regulation No. 39/2019 on Import Recommendation for Horticulture Product). Feeder cattle importers must import breeder cattle, as much as 5% of the imported feeder cattle (Ministry of Agriculture Regulation No. 41/2019 on Import of Ruminant Livestock to Indonesia).

The additional measures required alongside the import license system are intended to boost domestic production towards Indonesia's self-sufficiency goals. However, in practice, these recommendations are hard to implement. Importers who are not skilled at growing garlic find it difficult to find appropriate locations to grow garlic or maintain garlic farms. Meanwhile, feedlots have limited capacity to accommodate more breeder cattle. Breeder cattle need to be kept much longer than feeder cattle (years rather than months), taking up valuable space and resources and affecting business viability. Partnering with local farmers also brings its own complexities. As a result, both the garlic and the cattle programs have not reached their expected targets. The Ministry of Agriculture reported that only 30% of the expected mandatory garlic farm area has been achieved, while only 13.6% of the breeder import requirements have been fulfilled (Laoli, 2018; Nasution, 2021).

In March 2021, the Ministry of Trade announced the decision to allow an import of 1 million tonnes of rice during harvest season, which was immediately met with strong backlash from the media and the public. Indonesian President Joko Widodo then renounced the decision and ordered there will be no import until at least June 2021 (President of the Republic of Indonesia Bureau of Press, Media, and Information, 2021). Quantitative restrictions are usually placed to "protect" the domestic producers from global competition. Such protection undermines the opportunity for structural change and productivity improvement as it may remove the motivation and urgency to do so. In reality, quantitative restrictions create a tall trade barrier to affordable and often better-quality goods from the international market. It creates artificial scarcity because supply is restricted, resulting in higher prices and losses for the Indonesian consumers (Cheok & Kuriyama, 2017).

Quantitative restrictions are associated with import delays due to the complicated process, which results in shortages in the market, and skyrocketing prices. In early 2020, Indonesian Commission for Supervision of Business Competition's investigation (*Komisi Pengawas Persaingan Usaha* or KPPU) found that delays in issuing garlic import permits caused garlic prices to shoot up 49% in retail markets (KPPU, 2020). KPPU attributed delays to the process of verifying the mandatory planting requirement before issuing the import recommendation and SPI, and recommended changing the process to issue SPI first and to verify the mandatory planting area afterwards.

The non-automatic import licensing process does not only cause delays, but it has also led to corruption. Policymakers were found guilty of receiving bribes in exchange for granting import licenses (Neilson, 2018). The market distortion and welfare loss from quantitative restrictions may actually be greater than the benefits for Indonesian producers.

Box 2. Automatic vs Non-Automatic Import Licensing System

According to WTO rules, import licensing system can be either automatic or non-automatic. In an automatic import licensing system, an import license application is granted within ten working days in all cases. The system is administered neutrally and must not have any discriminatory effect on those applying for the license. Any person or firm that fulfils the legal requirements can equally apply for and obtain import licenses.

In contrast, non-automatic import licensing system is used to administer quantitative restriction. WTO and ASEAN rules state that non-automatic import licensing system must also be administered in a neutral, fair, equitable, transparent, and predictable manner. There are provisions that applications must be processed in a first-comefirst-serve basis within 30 days, or simultaneously within 60 days. However, in reality, Indonesia's non-automatic import licensing system has been criticized for being non-transparent and unpredictable, as evident by the WTO trade disputes.

QUANTIFYING THE IMPACT OF NTMS

NTMs on the food trade impose additional cost to the import of food items and affect their market prices. For commodities with significant import volumes such as sugar and beef, the NTMs add compliance costs to the food price, due to the additional requirements and procedural obstacles such as for licensing, packaging, quarantine, and labelling. Direct administrative costs may not be significant and they are often fixed. For example, PSI is estimated to be 0.35% of the border price, while quarantine is estimated to be 1.5% of the shipment value (Marks, 2017). However, costs for delays and additional logistics can swell up.

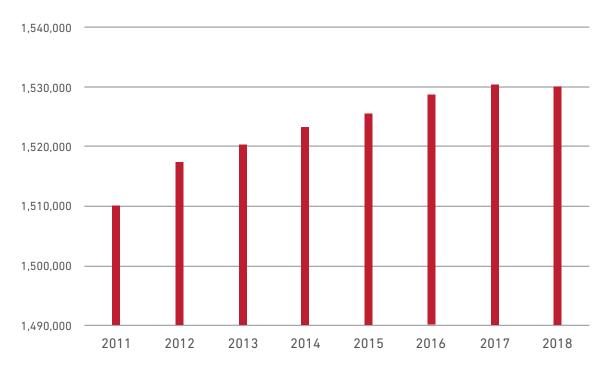
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NTMs also reduce trade volumes. This is most obvious in quantitative restrictions, but other NTMs may affect the trade structure and can also reduce trade. Because of this supply restriction, Indonesia's access is limited to more expensive domestic produce, causing an indirect cost borne by consumers.

Quantifying these costs is technically challenging due to the complexity of the measures and the data availability, especially since the application of the measures may differ across commodities. Previous studies may offer some cost estimates.

Kee et al. (2008) estimated the percentage (ad valorem) tax equivalents of NTMs on a product level. This is convenient as it allows policymakers to consider an NTM as a tax. Indonesian NTMs on agriculture and food (HS chapters 1-24) were equivalent to a 49% tax on a simple average basis in 2008. Rice, meat and dairy faced average NTM tax-equivalents greater than 50%, while fruit, vegetables and other cereals still faced average NTMs equivalent to a tax of higher than 40%. Since these estimates were produced in 2008, the number of NTMs and the number of products affected have only increased, as shown below (Figure 3).

Figure 3.
Indonesia's food and agriculture products affected by
NTMs have been rising over recent years



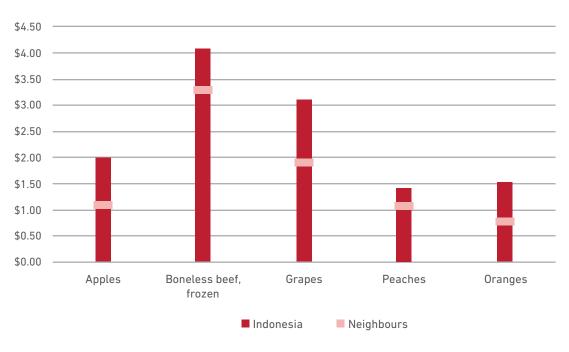
Source: UNCTAD-TRAINS database https://trains.unctad.org/
Note: graph starts at 2011, reflecting data availability. Graph shows data at the HS6 level for HS chapters 1-24,
which cover agriculture and food.

Kee et al.'s estimates were not exporter-specific, which means that they are not bilateral and do not relate to exports from specific countries. Instead, they are measured just for Indonesia as an individual importer. It would be challenging to quantify the effects of NTMs on a combined exporter-specific, importer-specific and commodity-specific level for a given year (Fell, 2020). A more specific analysis remains a challenge because it relates to multiple events occurring at the same single point in time, and involves isolating the effects of each individual event on prices. Specifically, Indonesia's NTMs affect prices for an individual commodity, but at the same time, Indonesia's consumer incomes and consumer preferences are also affecting prices. On an individual commodity level, there is insufficient information to be able to isolate the effects of the NTMs. This problem challenges the accuracy of any bilateral commodity-level estimates of NTMs on prices at a single point in time.

Despite these challenges, the general influence of NTMs on prices is evident. The extensive imposition of pseudo-taxes on consumers results in high prices of agriculture and food goods landed in Indonesia. Figure 4 shows how much higher the unit value of agricultural and food products landed in Indonesia are compared to the neighbouring countries of Malaysia and the Philippines.

Figure 4.

Border prices for meat and fruit products in Indonesia and in neighbouring Malaysia and Philippines (USD, averaged over 2015-2019)



Source: UN Comtrade (2020)

For Indonesia the estimate is negative, meaning that taxpayers and producers are effectively taking money away from consumers. In 2019, the transfers away from consumers were estimated at IDR 309 trillion.

The significant burden placed on Indonesian consumers is confirmed by OECD (2020). The OECD's Consumer Support Estimate measures the total value of transfers from producers and taxpayers to consumers. For Indonesia the estimate is negative, meaning that taxpayers and producers are effectively taking money away from consumers. In 2019, the transfers away from consumers were estimated at IDR 309 trillion. This included IDR 340 trillion transferred from consumers to producers, which was just partially offset by taxpayer transfers of IDR 31 trillion to consumers.

Another way of quantifying the impact of NTMs is by calculating the rate of protection it provides to domestic industries. A study by Marks (2017) estimated the nominal rate of protection (NRP), which indicates the percentage by which restrictive policies raise domestic prices relative to border prices. The study

found that the nominal rates of protection for food crops in Indonesia was 27.7%. Marks also estimated effective rates of protection (ERP) which indicate the percentage by which value added per unit of output is increased by trade interventions relative to free trade scenario. Where NRP measures the protection given to the final product, ERP measures the protection given to the inputs as well. A positive ERP indicates that the price of a sector's output is raised by more than the prices of its intermediate inputs and this is due to trade interventions. A positive ERP gives a local processor or manufacturer a price advantage in the domestic market through protection from global competition, which can be to the disadvantage of consumers who have to pay the price. Indonesia's trade restrictions on food crops amounted to an ERP of 64.3%. Among the

different commodities, rice, sugar, meat, and fruits have higher levels of protection from the trade restrictions (Table 4).

The biggest contributor to the rates of protection are the quantitative restrictions. If the quantitative restrictions are excluded, the rest of the NTMs would amount to a much lower nominal rate of protection of 6.5% or effective rates of protection of 15.9%. The effect of quantitative restrictions is quite substantial in rice and meat which are subject to more stringent quantitative restrictions compared to fruits. Marks further estimated how much these rates of protection translate to an increase in cost of living and found that, when accounting for all NTM trade policies across all commodities in effect, the cost of living is 7.8% higher than in a free trade scenario. Marks identified rice as the greatest contributor to this increase.

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Table 4.

Nominal and effective rates of protection, 2015 (%)

	All Trade Po	licies in Effect	Quantitative Restrictions Excluded		
Description	NRP	ERPc	NRP	ERPc	
Food crops (sector)	27.7	64.3	6.5	15.9	
Field rice	67.2	204.3	8.4	35.6	
Milled, polished rice	67.8	103.6	8.8	12.5	
Sugar	48.1	87.6	12.5	18.0	
Meat and viscera	37.4	116.5	4.8	9.4	
Fruits	24.5	27.2	7.9	8.6	

Source: Marks (2017). ERPc refers to ERP calculated using the Corden (1966) methods

THE EFFECTS OF NON-TARIFF MEASURES IN FOOD AND AGRICULTURE ON FOOD SECURITY

The prevalence of NTMs in the agro-food sector has huge implications for food security in Indonesia, affecting price, quantity, and quality of the food being consumed. Indonesia's domestic

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agricultural sector has been unable to produce the quantity, and often the quality of food to meet the increasing demand of the growing population. The Indonesian agriculture sector suffers from low productivity, reduced agricultural land due to land conversion and urbanisation, lack of necessary infrastructure, and climate change-related environmental risks, among many other factors, that in combination significantly inhibit the sector's ability to produce efficiently (Asian Development Bank, 2019). As a response, food import plays an important role in ensuring availability, accessibility, affordability, and quality of food.

Despite Indonesia's ambition for self-sufficiency under the previous Food Law, it still needed to import key food commodities, including rice, soybeans,

and sugar to supplement the huge deficit in agricultural production. Indonesia also imports other everyday food items such as garlic and beef, for which it can only produce a small percentage of the national demand. Yet, with the prevalence of NTMs covering these products, the trade of these important food commodities is often stifled. For example, the complex centralized buying process through Bulog relies on a national coordination meeting, which often delays decisions, leads to shortages and price spikes (Octania, 2021; Respatiadi & Nabila, 2017).

Quantitative restrictions prevent prices from coming down to international levels by restricting the number of imports allowed. Because of the restriction, Indonesian consumers can only access local supply that is more expensive than international products due to on-farm challenges, such as the high input cost, low productivity and yield, and a long distribution chain. The production cost of rice in Indonesia is three times higher than the production cost of rice in Vietnam (IFPRI). The import restrictions limit Indonesia's access to cheaper international rice, and has led to the growing divergence between Indonesia's domestic rice price and the international rice price (Figure 5).

Figure 5.

Domestic rice price versus international rice price (per kilogram)



Source: Statistics Indonesia and Bank of Thailand

Note: The domestic price series is represented by the wholesale prices of IR-64 rice variety and the world price series is represented by the wholesale prices of Thai 25% broken rice variety. It is converted into Indonesian rupiah, adding a \$20/ton shipping and handling cost, \$5/ton import profit and the ongoing, specific tariffs (Rp 430/kg from January to December 2006, Rp 550/kg from January to November 2007, and Rp 450/kg from December 2007 onward).

Quantitative restrictions are commonly believed to be necessary to protect farmers. With high production costs, Indonesian farmers cannot compete with Vietnam or Thailand and may lose if quantitative restrictions are removed. Examining this hypothesis further, Greenville (2018) found that integrating the Indonesian rice market into the global market by removing NTMs will only reduce Indonesia's rice self-sufficiency from close to 100% to 90%. Hence, the argument of farmers' loss is overestimated, and the small effect can be mitigated by efforts to retrain and reskill farmers. In fact, farmers are already affected by the high price of food, since two-thirds of them are net consumers who spend more on food than what they receive from their harvest. Yusuf and Warr (2018) found that protection in the food and agricultural sector has a larger price effect on household's living cost than income effect on rural population that are dominated by farmers.

In addition to supply restrictions, the high compliance costs of NTMs directly contribute to the high prices of imported food. The NTMs make the import process expensive, lessening the potential benefit that import could have and even undermining health improvements. Even after importing beef to fulfil the national demand, beef is still expensive in Indonesia, averaging at IDR 118,000 in 2020 (PIHPS, 2021). That is equal to 10% of the average monthly expenditures of Indonesians⁶. Hence, very few Indonesians can afford to buy protein-rich beef. As a result, Indonesia has very

⁵ Average expenditure for Indonesians is IDR 1,165,241 per capita per month in 2019 according to Statistics Indonesia https://www.bps.go.id/statictable/2014/12/18/966/rata-rata-pengeluaran-per-kapita-sebulan-menurut-kelompok-barang-rupiah-2013-2019. html

low meat consumption level, with only 2.2 kilograms of beef and veal per capita per year, lower than the world average of 6.4 kilograms per year (OECD, 2021). The World Food Programme (2017) found that vitamin B12, iron, and calcium are essential nutrients that mainly come from animal source foods which were too expensive and difficult to afford for Indonesian households.

NTMs undermine Indonesia's chance of sourcing affordable food through imports, and hence threaten Indonesia's food security in the availability, affordability, and utilization dimension. Limiting availability creates artificial scarcity, reduces affordability and consumer options. While insulation from international market may help Indonesia avoid food insecurity due to external shocks, it results in chronic food insecurity due to internal risks such as domestic economic and natural disasters (OECD, 2015b). Low-income consumers are particularly disadvantaged, as they spend a larger share of their income on food and are more vulnerable to price spikes.

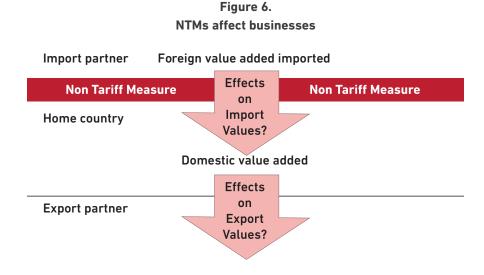
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THE EFFECTS OF NON-TARIFF MEASURES IN FOOD AND AGRICULTURE ON ECONOMIC DEVELOPMENT

The costs of protectionist NTMs on food and agriculture are also borne by Indonesia's food and beverage industry. This has an impact on the Indonesian economy because the food and beverage (F&B) manufacturing industry alone contributed 6.25% to the Indonesian GDP in 2018 (Kementerian Perindustrian, 2019). It is the largest sector with a 39.5% share of the non-oil and gas manufacturing GDP in the second quarter of 2020 (Kementerian Perindustrian, 2020). It was also among the few sectors that still showed a 1.66% cumulative growth amid the Covid-19 pandemic in 2020 (Statistics Indonesia, 2021b). Even during the pandemic, it employed around 5 million Indonesians or 27.6% percent of the total manufacturing workforce in Indonesia (Kementerian Perindustrian, 2020). Hence, this industry is vital for Indonesia's economic development.

The F&B manufacturing industry is considerably integrated in global trade, both to source its raw material and to export its products. The industry contributes the highest export value among other manufacturing industries, reaching USD 13.7 billion in the first semester of 2020. This was a 10.2% increase from the same period of the previous year. It also imported raw materials valued at USD 5.6 billion in the same period (Kementerian Perindustrian, 2020).

The growing number of NTMs in Indonesia and its trading partners limit corporate access to the global market and may reduce their productivity and competitiveness. NTMs can affect firms and industries in two ways—by increasing the cost of inputs, or by imposing measures when exporting to other countries (Figure 6) (Ghodsi & Stehrer, 2016). They impose additional costs to businesses through enforcement costs, sourcing costs, and process-adaptation costs (Ing, Cadot, Anandhika, & Urata, 2016).



Source: Adapted from Franssen & Solleder (n.d.)

On the input side, the F&B industry still imports raw materials since domestic production of commodities is often insufficient in quantity and quality for processing. For example, wheat, a key ingredient for instant noodles, is almost 100% sourced from import because it cannot be optimally grown in Indonesia. Even though Indonesia is among the top five chocolate producers in the world, chocolate manufacturers in Indonesia also have to rely on imported cocoa beans due to the low quality of Indonesian cocoa beans (Kementerian Perdagangan, 2019).

Despite the scarcity of raw materials for industrial use, firms must also go through a complicated import licensing process and wait for the release of the importation quota by the relevant ministries, including the Ministry of Industry. One case that exemplifies the complicated licensing requirement for industry is sugar. According to the Ministry of Industry Regulation No. 3/2021, imports of raw sugar are restricted through a quota system based on recommendations from the Ministry of Industry. It is reserved only for new sugar mills operating since 2010 and state-owned enterprises. There are only six new sugar mills out of 66 total mills that can utilize this facilitation provision, leaving the majority of the mills unable to access raw materials (USDA, 2019). Furthermore, new sugar mills must be integrated with sugar plantations in their possession or through partnership with local farmers. After years of this policy in place, Indonesia's sugar production did not show any significant progress. Domestic sugar production is still not enough to fulfil the industry's demand, only producing a total of 2.1 million tonnes per year while the industry uses 4 million tonnes per year (United States Department of Agriculture, 2020). The quantitative restrictions instead often delay sugar imports and cause significant constraints to the sugar industry. Firms, represented through the Indonesian Food and Beverage Association (Gabungan Pengusaha Makanan dan Minuman Seluruh Indonesia or GAPMMI), publicly expressed their frustrations in an official letter to the media, foreseeing sugar shortages due to import delays (Sandi, 2020).

Many NTMs imposed on raw food and agriculture materials for industrial use, such as in the sugar case, are intended to foster backward linkages to the domestic economy, to prioritize domestic production, and to increase domestic value add. Yet, they are often ineffective. As Patunru and Rahardja (2015) argued, such a protectionist industrial policy is not effective in a world characterized by increasingly global value chains. Forced linkages may reallocate resources to few sectors at the expense of existing and potential industries. According to OECD (2013), protectionist policies on imports of intermediate products can act as taxes on exports. They increase commodity prices and make them less competitive globally.

Bigger firms, which can afford to import in larger quantities, can accrue smaller additional costs per unit as the fixed costs are applied to larger import quantities. Smaller firms, however, can only spread the fixed costs over a smaller import quantity, therefore will accrue higher extra costs per unit.

The disadvantages of NTMs are more burdensome to smaller firms. The costs associated with the technical import process, such as PSIs, are fixed costs, meaning that additional costs will not change depending on the traded goods' quantity or value (Ahn & Gnutzmann-Mkrtchyan, 2019). Bigger firms, which can afford to import in larger quantities, can accrue smaller additional costs per unit as the fixed costs are applied to larger import quantities. Smaller firms, however, can only spread the fixed costs over a smaller import quantity, therefore will accrue higher extra costs per unit. As a result, the prices of the end-product might be higher for smaller firms and make it less competitive in the market.

Empirical data on how NTMs affect firms and industries are mixed, but

generally point to potential negative effects. Estimation by Wardani, Mulatsih, & Rindayati (2018) on RCEP countries found that NTMs do not have a significant effect on the export of Indonesia's food industry, but they acknowledge their findings were different from previous studies and concluded by emphasizing the need to address NTMs in the RCEP agreement. A more recent study by Korwatanasakul & Baek (2020) contends NTMs have negative impacts on firms' import of intermediate goods to be exported, also known as backward GVC participation, and that the effect is greater than that of tariffs.

POLICY RECOMMENDATIONS

Food and agriculture trade is an important component for food security and economic development. However, the proliferation of NTMs imposed on food and agricultural trade is costly and has contributed to the increasing gap between Indonesia's high food prices and global food prices. This has negatively affected the poorest population and smaller firms in particular.

The policy reform in the Omnibus Law has acknowledged the importance of liberalizing Indonesia's food trade. Within this understanding, the Indonesian government, especially the Ministry of Trade, the Ministry of Agriculture, and the Ministry of Industry, should address NTMs in existing regulations in order to support the reform. Given the complexity of NTMs, three broad level recommendations may minimize the cost of NTMs:

Conduct Regulatory Impact Assessment on NTMs as basis for reform

This study has shown that quantifying the cost of NTMs are difficult given their complex nature. The true cost of NTMs is often hidden behind the details and may even undermine the original intention of the government when legislating reforms in the Omnibus Law. The Ministry of Trade, the Ministry of Agriculture, and the Ministry of Industry should conduct a comprehensive review of existing NTMs through a Regulatory Impact Assessment framework (RIA). RIAs can help clarify the cost and benefits of specific NTMs. RIAs should be conducted in consultation with the private sector that has the information and that is most affected. The result of the RIAs should be used to streamline existing NTMs. If NTMs are found to have greater costs and few benefits, those NTMs should be removed.

RIAs should also be conducted for existing and future NTMs. This step ensures government accountability on the design of their policies, and supports an improved regulatory process. Through RIAs, future NTMs can be designed with the least trade distortionary effects on quantities or price.

Improve enforcement infrastructure and systems to minimize compliance cost

Technical NTMs like SPS are necessary to protect public health and the environment. In order to effectively implement these NTMs with the lowest cost possible, investments must be made to upgrade infrastructure, such as inspection capacities in ports and quarantine facilities. This applies not just to physical infrastructure, but also human resources that are involved in the process. This will reduce costly procedural delays. In addition, trade systems used for administrative purposes, such as the Indonesian National Single Window (INSW) and ASEAN Single Window (ASW) that connects national single windows in ASEAN countries, must be improved and streamlined in order to reduce red tape. Developing a system that connects all relevant windows will reduce the need to resubmit the same document multiple times, reduce room for discretion and potential abuse on different levels, and speed up the importing process.

Introduce automatic import licensing system in place of non-automatic licensing and quota system

QR and the non-automatic import licensing system have been identified as having large distortionary effects on trade, contributing the largest share to the rate of protection. The process has resulted in costly delays, shortages, and corruption cases, with negative effects on domestic producers including the domestic F&B manufacturing industry. The Ministry of Trade should reform its import licensing system and adopt a transparent automatic import licensing system. An automatic import licensing system will issue an import permit automatically as long as an importer fulfils technical requirements.

An automatic import licensing system will result in a faster and more transparent import process. This will allow importers to compete fairly and Indonesian consumers to enjoy greater access to cheaper goods.

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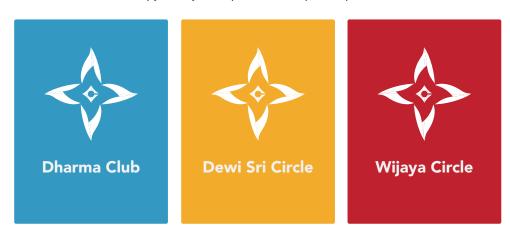
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