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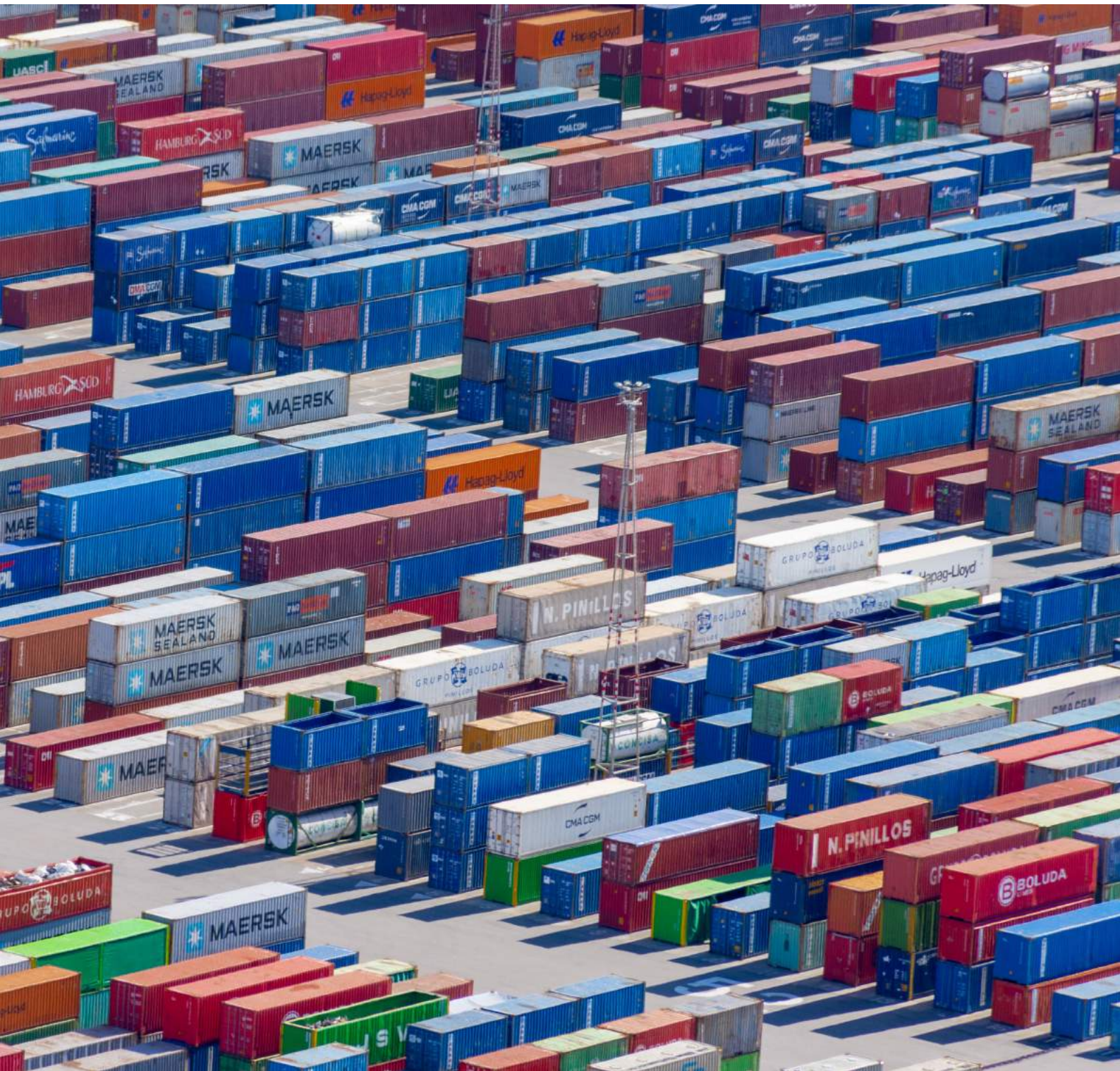
Discussion Paper No. 10

Negative Effects of Non-Tariff Trade Barriers on the Welfare of Indonesians

by Felippa Amanta & Iqbal Dawam Wibisono



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CONTENT

List of Tables

List of Figures

GLOSSARY

NTM:
Non-tariff measures

SPS:
Sanitary and phytosanitary measures

TBT:
Technical barriers to trade

QR:
Quantitative restrictions

EXECUTIVE SUMMARY

Indonesia has made progress in poverty reduction and improvement in health and nutrition indicators. But this progress has been undermined by expensive food prices. Food spending accounts for almost half of Indonesians' average spending. More than a third of Indonesians cannot afford to eat a nutritious diet and high food prices contribute to poverty. It is estimated that for every 1% increase in price, the national poverty headcount increases by 1%.

A major contributor to high food prices is the prevalence of non-tariff measures (NTM) imposed on international trade in food and agriculture. As of 2020, 466 non-tariff measures applied to goods in food and agriculture. These NTMs included quantitative restrictions, sanitary and phytosanitary measures, pre-shipment inspections, and technical barriers to trade. Marks (2017) calculated that NTMs on rice produce an effect equivalent to a nominal rate of protection[1] of 67.2%, while NTMs on meat produce an effect equivalent to a rate of 37.4%. Most of the price differential can be attributed to quantitative restrictions or quotas.

It is estimated that removing non-tariff measures on rice and meat would lead to an overall reduction of the poverty rate by 2.8 percentage points. The removal of NTMs on rice would have the greatest effect (2.52 percentage points), while removal of NTMs on meat and viscera would have a much smaller effect, reducing poverty by only an estimated 0.21 percentage points. The estimated effect on poverty rates of removing these trade barriers is greater in rural areas and in the poorest provinces, especially in East Nusa Tenggara (-7.28 percentage points), West Papua (-4.87 percentage points), and Maluku (-4.17 percentage points). Removal of quantitative restrictions would lead to the largest estimated reduction in poverty. A quantitative restrictions removal on rice alone would reduce Indonesia's poverty incidence by 2.31 percentage points, and quantitative restriction reversal for both rice and meat could reduce poverty by 2.6 percentage points.

Inequality, measured using the Gini coefficient, is also expected to fall in the event of NTM removal on rice and meat, but the effect is small, only a 1.76% reduction. The reduction is more significant in rural areas (2.5%), compared to urban areas (0.98%). In addition, food consumption, measured by expenditure on rice and meat, would increase.

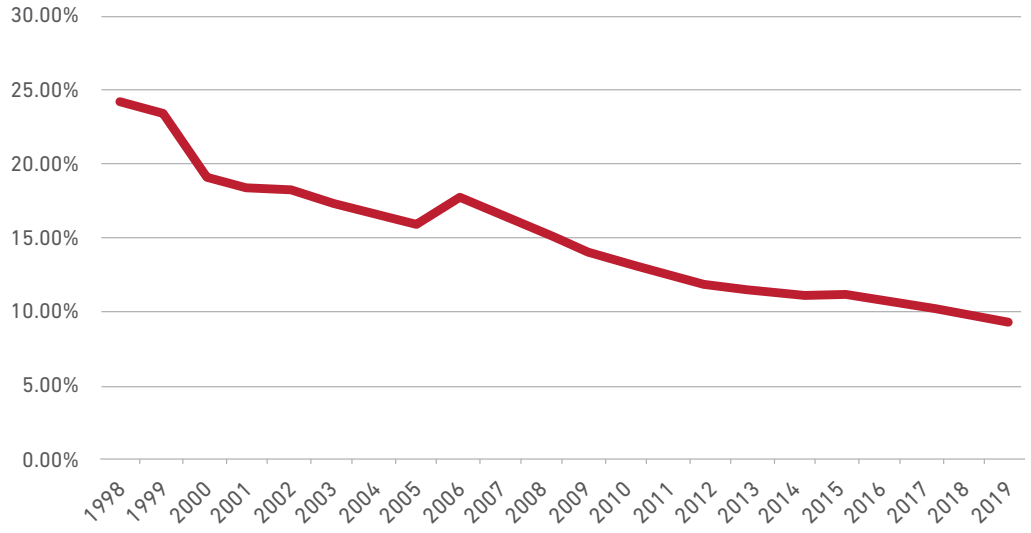
These estimates illustrate why Indonesia must reduce non-tariff measures on food and agricultural goods to support poverty reduction efforts and nutritional improvement. Removing quotas and moving to automatic import licensing are two changes expected to yield the greatest benefit. Liberalizing the food trade must be accompanied by increased competition among importers, improved systems to facilitate import processes, and innovative agriculture policies to increase the competitiveness of domestic producers.

[1] The nominal rate of protection denotes the difference between the world price and the domestic price that can be attributed to non-tariff measures obstructing trade.

POVERTY AND NUTRITION IN INDONESIA

Indonesia is an upper middle-income country that has made enormous gains in poverty reduction and improved living conditions. In the last two decades, poverty[2] has been cut by more than half, from 24.2% of the population in 1998 to 9.2% in 2019 (Figure 1). As of 2019, there were 24.7 million people living in poverty in the total population of 270 million, down from 32.5 million people in 2009 (Statistics Indonesia, 2019c). While this progress is significant, it falls short of the poverty reduction targets set in the National Medium-Term Development Plan 2015–2019, which aimed to lower poverty to between 7% and 8% by 2019. In addition, the World Bank estimated approximately 20.19% of the population are vulnerable to falling into poverty because their income is only marginally above the national poverty line (World Bank, 2020b).

Figure 1.
Poverty rate, 1998–2019



Source: Statistics Indonesia

> Indonesia's success in poverty reduction did not benefit all regions of the country equally.

Indonesia's success in poverty reduction did not benefit all regions of the country equally. Income inequality as measured by the Gini coefficient stood at 0.382 in 2019, slightly higher than the 0.36 target set in the National Medium-Term Development Plan 2015–2019 (Statistics Indonesia, 2019a). Poverty continues to be concentrated in rural areas where 13.2% of the population live below the national poverty line, compared to 7.02% in urban areas (Statistics Indonesia, 2019b). Smallholder farmers in rural areas are disproportionately poor, with an 18% poverty rate—double the national poverty rate (FAO, 2018).

[2] Numbers are based on the national poverty line. In September 2019, Statistics Indonesia set the national poverty line at Rp440,358 per capita per month, equivalent to approximately USD 1 a day.

People living in Eastern Indonesia are also more likely to be living in poverty. The five provinces with the highest poverty rate are all located in Eastern Indonesia: Papua (26.64%), West Papua (21.37%), East Nusa Tenggara (20.9%), Maluku (17.44%), and Gorontalo (15.22%). In comparison, the five provinces with the lowest poverty rate are Bali (3.78%), South Kalimantan (4.38%), Bangka Belitung (4.53%), DKI Jakarta (4.53%), and Central Kalimantan (4.82%) (Statistics Indonesia, 2019d).

While even unequal poverty reduction has generally come with improvements in the health and nutrition of Indonesians, many areas of concern remain. The percentage of people consuming less than 1,400 kilocalories[3] per day was reduced from 12.96% in 2015 to 8.23% in 2018 (Statistics Indonesia, 2019e), and Indonesia's score in the Global Hunger Index improved from 24.9 in 2010 to 20.1 in 2019. But these improved measures still signify a serious level of hunger. Indonesia fares worse than Malaysia (13.1) and Viet Nam (15.3) which have only moderate levels of hunger, and Thailand (9.2) has low levels of hunger (Grebmer et al., 2019). Indonesia's score reflects that in spite of improvements, 22 million Indonesians endured hunger between 2016 and 2018 (Asian Development Bank, 2019).

The Economist Intelligence Unit (2019) increased Indonesia's ranking in the Global Food Security Index from 65th out of 113 countries in 2018 to 62nd in 2019. This is far below regional neighbors Singapore (1st), Malaysia (28th), Thailand (52nd), and Viet Nam (54th). Indonesia's ranking is held down by its poor scores in quality and safety indicators, particularly those for dietary diversity, protein quality, and micronutrient availability (Economist Intelligence Unit, 2019). Indonesians consume primarily less nutritious grains like rice, which contributes 39.55% to average daily calorie intake (Pusat Data dan Sistem Informasi Pertanian Kementerian Pertanian, 2019). Meanwhile, consumption of nutritious foods like meat, fish, fruits, and vegetables remains low. The average fruit and vegetable consumption of 171.33 grams and 119.82 grams per day respectively are well below the World Health Organization's recommended consumption of around 200 grams per day (Ritchie & Roser, 2017). Indonesia also ranks among the lowest in the world for per capita meat consumption. Indonesians consume little poultry (7.6 kilogram per capita per year) and even less beef and veal (2.0 kilogram per capita per year). In comparison, Malaysians annually consume 48.7 kilogram of poultry meat per capita and 5.3 kilograms of beef and veal per capita (OECD, 2020). The lack of dietary diversity adds complexity to the issue of food security in Indonesia. It emphasizes the need to not only increase consumption, but also to increase the variety of nutritious food consumed.

A key reason for this lack of dietary diversity is the inability of many people to afford the foods they need for a healthy diet. This deficiency carries serious health implications. An estimated 38% of Indonesians cannot afford the food they need to follow nutrient intake guidelines. This proportion is greater in provinces with higher poverty rates, such as Maluku (56%), Papua (48%), and East Nusa Tenggara (68%) (World Food Programme, 2017). Insufficient nutritious food

"A key reason for this lack of dietary diversity is the inability of many people to afford the foods they need for a healthy diet."

[3] 1,400 kilocalories is significantly less than the recommended average energy intake of at least 2,100 kilocalories per capita per day according to Ministry of Health Regulation No. 28/2019. 1,400 kilocalories is the recommended energy consumption for four- to six-year-old children.

consumption leads to persistent health problems such as stunting, which affected 27.67% of children under five in 2019 (Ministry of Health, 2020). Stunting rates are even higher in poorer provinces, such as East Nusa Tenggara (40.3%) and West Sulawesi (40%) (Databoks 2018).

The persistent problems of poverty and poor nutrition will become even more important in the aftermath of the Covid-19 pandemic. The economic impact of this pandemic threatens to undo recent achievements in poverty reduction. Millions of people have lost their jobs or been put on unpaid leave, leaving them with no income and putting them at risk of hunger. One estimate suggests that the poverty rate will increase to 9.7% in the mildest pandemic scenario or to 16.6% in the most severe scenario, which means between 1.3 million to 19.7 million additional people will be pushed into poverty (Suryahadi, Al Izzati, & Suryadarma, 2020). Poverty and hunger will be among the greatest challenges to address after the pandemic.

Even before the pandemic, the rate of poverty reduction in Indonesia had slowed over the past two decades. Indonesia's poverty reduction rate post-Asian Financial Crisis in 1997–1998 was slower than pre-crisis. In fact, the poverty reduction rate has stagnated since 2012 (Suryahadi & Al Izzati, 2018; Suryahadi, Hadiwidjaja, & Sumarto, 2012). Research suggests this lagging poverty reduction is not simply the result of slower economic growth, but can be tied to steep increases in food prices and their effects on food consumption (Suryahadi et al., 2012; Warr 2011).

The strong correlation between food prices and poverty incidence is widely accepted. In Indonesia, spending on food is the largest category of household expenses. It is estimated that on average, Indonesians dedicate 48.55% of their expenditures on food and beverages. For the segment of the population with the lowest consumption, spending less than USD 2.97 per capita per day, the share of food in household expenditures is even greater at 56.21% (World Bank, 2020a). The significance of food expenditures to household budgets makes these Indonesians vulnerable to being pushed into poverty by food price inflation. Food is a basic necessity of life. People have to purchase something to eat regardless of price. Yusuf and Sumner (2015) have calculated how increases in staple food prices, particularly for rice, contribute to an increase in poverty. They estimate that for every 1% increase in the price of rice, the national poverty headcount will increase by more than 1%, holding other factors constant. Poverty reduction efforts must address high food prices.

"The significance of food expenditures to household budgets makes these Indonesians vulnerable to being pushed into poverty by food price inflation."

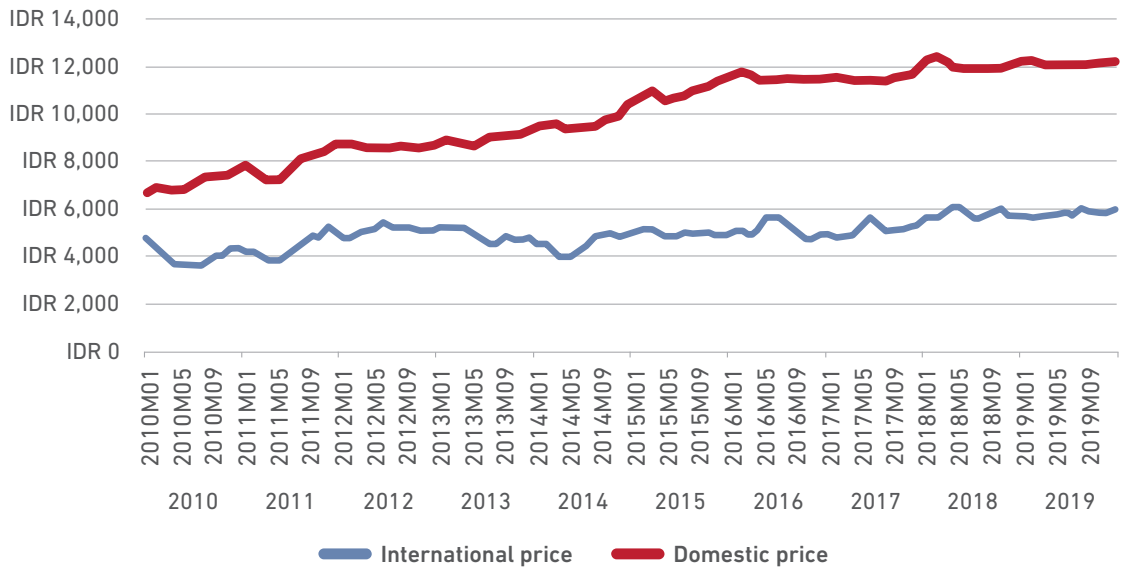
INDONESIAN FOOD PRICES: RECENT TRENDS AND FACTORS

In the hopes of stabilizing food prices, the Indonesian government has imposed a maximum retail price for rice and published reference prices for eight other strategic commodities: corn, soybeans, sugar, cooking oil, shallots, beef, chicken, and eggs.[4] The maximum retail price for medium-quality rice is set in Ministry of Trade Regulation No. 57/2017 at between IDR 9,450 to IDR 10,250 depending on the region, while the reference prices for the other commodities are set in Ministry of Trade Regulation No. 07/2020. However, food prices in Indonesia remain higher than the reference prices and significantly more expensive than international prices. This means that these important foods are unaffordable for many Indonesians. The high price can be attributed to challenges with domestic agriculture and trade policies that limit and regulate cheaper food imports.

From 2010 to 2019, Indonesian rice prices were consistently higher than international prices—and the gap was growing (Figure 2). In 2010, the price was 41% higher than the international price. By 2019 the domestic price had more than doubled with an average price at IDR 11,762 (USD 0.83) per kilogram compared to the international price of IDR 5,947 (USD 0.418) per kilogram (author's calculation based on data from Statistics Indonesia, 2020; World Bank, 2020c).

> From 2010 to 2019, Indonesian rice prices were consistently higher than international prices—and the gap was growing

Figure 2.
Domestic and international price of rice, 2010–2019 (IDR/kg)



Source: Indonesian rice price is represented by medium-quality white rice wholesale price retrieved from Statistics Indonesia (https://www.bps.go.id/linkTableDinamis/view/id/963); international rice price is represented by rice (Thailand), 25% broken, white rice, milled indicative survey price, government standard, free on board (f.o.b.) price retrieved from World Bank pink sheet (https://www.worldbank.org/en/research/commodity-markets)

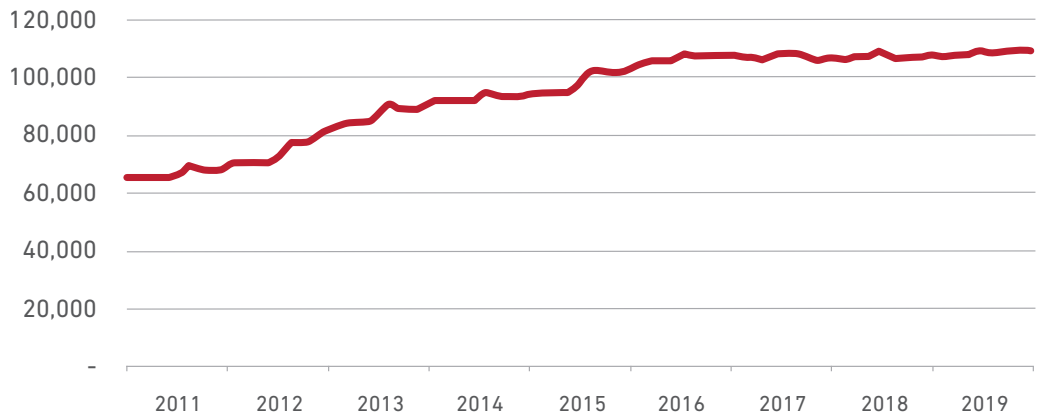
Several domestic factors contribute to the high price of rice, Indonesia's staple food. Indonesia's agriculture sector suffers from low productivity, high production costs, limited agricultural land, a lack of necessary infrastructure, and climate change-related environmental risks, all of which significantly inhibit efficient production (Asian Development Bank, 2019).

Producing rice in Indonesia is 2.5 times more expensive than in Viet Nam (Arifin et al., 2019). In addition to on-farm factors, additional costs accumulate through the long supply chain for rice, which often involves between three to six different actors: producers, millers, wholesalers, distributors, retailers, and consumers. It is estimated that 20.83% of the price paid by the consumer is added along the supply chain to the price at which producers sell rice (Statistics Indonesia, 2019f). The supply chain for rice contains oligopsony and oligopoly markets, with few millers who buy from farmers and few wholesalers that sell to retailers (International Center for Applied Finance and Economics, 2018; Octania, 2020). And, as mentioned above, demand for food is inelastic. These market dynamics give millers and wholesalers more bargaining power than other actors along the supply chain, including producers and consumers, to set the price. Finally, costs related to distribution and logistics can be quite high, especially in the outer islands of the archipelago (Herliana & Parsons, 2011).

Beef is still considered a luxury food item in Indonesia. The average beef price in 2019 was IDR 108,380 (USD 7.63) per kilogram, above the reference price of IDR 80,000 (USD 5.63) and 60% higher than the international price of IDR 67,706 (USD 4.76) (Statistics Indonesia, 2020; World Bank, 2020c) (Figure 3).

Domestic beef production is hampered by the small size, slow growth, and low productivity of the breeding herd, inefficiencies in beef processing, and, as with rice, a long and costly supply chain involving producers, traders, feedlots, butchers, wholesalers, retailers, and consumers (Agus & Widi, 2018). Consequently, domestic beef production is insufficient to satisfy national demand and prices continue to increase.

Figure 3.
Domestic retail price of beef, 2011-2019 (IDR/kg)



Source: Statistics Indonesia. Indonesian price is average retail beef price.

Despite the challenges in domestic production, the Indonesian government has implemented strong protectionist policies to prevent rice and beef imports. These policies are based on nationalistic self-sufficiency goals (Neilson, 2018). Food and agricultural products remain among the most restricted and regulated import sectors (Munadi, 2019). Law No. 18/2012 on Food allow food imports only when domestic food production is deemed insufficient. Imports are prevented by quantitative restrictions (quotas, or QR) that limit the timing and amount of imports.

Despite these strong protectionist policies, Indonesia has not achieved its self-sufficiency goals. Indonesia has been a net rice importer for all but three brief periods in the last decade (Patunru, forthcoming). In 2018, Indonesia imported 6.2% of its rice when domestic supply was insufficient to meet growing demand. Indonesia imported even larger shares of other commodities: 28.4% of beef, 69.9% of sugar, 72.5% of soybeans, 93.7% of garlic, and 100% of its wheat (World Food Programme, 2020).

In spite of the obvious need for imported food, the import process is regulated through costly tariff and non-tariff measures (NTMs). NTMs are policy measures other than tariffs imposed on international trade in goods. These measures can affect quantity traded, price, or both (UNCTAD, 2018). Examples of NTMs include sanitary and phytosanitary measures (SPS) such as quarantine, technical barriers to trade (TBT) such as packaging or labelling requirements, QRs, and pre-shipment inspections (PSI). NTMs can serve legitimate and necessary purposes, such as ensuring food safety and health, but they also add to the cost of internationally traded goods (Ing, Cordoba, & Cadot, 2016; United Nations, 2019). Most NTMs are imposed by the Ministry of Agriculture and the Ministry of Trade.

Though tariffs have been declining, NTMs have increased in recent years, especially on food and agricultural commodities. In 2020, there were a total of 466 specific NTMs imposed on agro-food products, an increase of 33 measures from 2019 (UNCTAD, 2020).

NTMs create an artificially high price by preventing international competition that would otherwise push down domestic prices (Andriamananjara et al., 2011). A study by Marks (2017) found that restrictions from Indonesia's NTMs on food imports have imposed an effective rate of protection of between 33% and 41% for agriculture products (excluding forestry and fisheries). This means that domestic food producers can charge a premium of between 33% to 41% on their products because they are shielded from competition from cheaper imported products. NTMs can affect food prices in a variety of ways.

Quantitative Restrictions and Non-Automatic Licensing System

Indonesia's food imports are controlled by the government through QRs, also known as import quotas. Indonesia's import quotas are managed through a non-automatic import licensing system in which the Ministry of Trade grants import permits and import quotas to registered importers. Securing these permits depends on a recommendation letter from the Minister of Agriculture and the decision made at a special coordination meeting (Rakortas) involving the Coordinating Ministry for Economic Affairs, the Ministry of Trade, and the Ministry of Agriculture. The import decision is intended to take national production, stock, and consumption data into consideration. The state-owned logistics company, Bulog, has a monopoly on imports of medium-quality rice[5] for general consumption and can only import after it receives approval and a quota from the Ministry of Trade (mandated in Ministry of Trade Regulation No. 01/2018).

A review of import licensing regimes in the APEC region found that import licensing regimes are responsible for market access problems, artificial scarcity, higher prices, higher administrative costs, and even rent-seeking behaviour such as bribery and corruption in the form of using personal connections to obtain licenses (Cheok & Kuriyama, 2017). These problems have also manifested in Indonesia.

> "Importers have reported that the complicated process for obtaining an import approval increases the cost of importing."

Importers have reported that the complicated process for obtaining an import approval increases the cost of importing. This increased cost is eventually passed on to consumers (Munadi, 2019). Marks (2017) calculated that QRs contributed the most to effective protection rate, accounting for a 23.8% to 30.9% protection rate. This increased price is the result of the restricted supply and reduced competition sought by the quota. Quotas prioritize more expensive food from domestic production.

Indonesia's import restrictions on rice can illustrate the problem of artificial scarcity and higher prices. After the Asian Financial Crisis in 1997–1998, Indonesia temporarily abolished both import quotas and Bulog's monopoly on rice imports, allowing private sector importers to buy rice subject to specific tariffs. In 2004, medium-quality rice imports were banned. Bulog regained its monopoly and private sector importers were only allowed to import specialty rice. The ban caused an increase in rice prices of almost 80% between 2004 to 2007. This increase is generally perceived as a major contributor to the increase in poverty from 15.97% in 2005 to 17.75% in 2006 (McCulloch, 2008; Suryahadi & Al Izzati, 2018; Warr, 2011, p. 62). Inequality as measured by the Gini coefficient also increased during this period because the economic burden fell more heavily on the poorest population, who spend a larger proportion of their income on food (Niimi & Chatani, 2013, p. 92). The import monopoly and rice import quota remain in place today.

> "The non-automatic import licensing system regularly delays import licenses, causing supply shortages and dramatically higher prices."

The non-automatic import licensing system regularly delays import licenses, causing supply shortages and dramatically higher prices. Because import licenses for food and agriculture still rely on the discretion of the Ministry of Trade and the Ministry of Agriculture, the process to obtain them often takes

[5] Medium-quality rice refers to >5% broken rice, the type preferred by Indonesian consumers (Arifin et al, 2018). In contrast, 100% broken rice (used for raw materials), premium rice (<5% broken), and specialty rice such as glutinous rice, Hom Mali rice, Japonica rice can be imported by private sector importers or other state-owned enterprises.

months. The Commission for the Supervision of Business Competition (*Komisi Pengawasan Persaingan Usaha* or KPPU) reported that delays in issuing import licenses caused garlic prices in DKI Jakarta to spike from IDR 40,000 per kilogram in January to IDR 70,000 per kilogram in February 2020. KPPU noted that this is a regular occurrence, happening in the first quarter of every year when import licenses are usually issued (KPPU, 2020b). KPPU also reported that, because the Ministry of Trade was late in providing the import licenses, domestic sugar prices soared to 240% and 260% above international sugar prices in April and May 2020 (based on estimates by the International Sugar Organization; KPPU, 2020a). In the end, these unnecessary delays cost consumers.

Box 1.
Social Cost of Non-Automatic Import Licensing System

Quantitative restriction imposed through a non-automatic import licensing system comes not just with economic costs, but broader social costs. Rent-seeking behavior and blatant corruption plague Indonesia's food import licensing system.

In 2013, a member of People's Representative Council was charged with accepting bribes worth IDR 1,3 billion from a pledged amount of IDR 40 billion for his intervention with the Minister of Agriculture to issue import recommendation letters for beef after quotas were no longer available. In 2017, a judge of the Constitutional Court was found guilty of accepting bribes in relation to beef imports and sentenced to eight years in jail and an IDR 300 million fine. During the same year, another parliamentarian was found guilty of corruption in sugar import licenses (Neilson, 2018, p. 84; Tampubolon, Lele, Kumorotomo, & Suripto, 2020). In 2020, another former member of People's Representative Council was sentenced to seven years of imprisonment for accepting bribes in exchange for issuing an import quota permit for garlic (Adjie, 2020).

Technical Measures

In addition to QRs and the non-automatic import licensing system, Indonesia imposes multiple technical measures on food products, such as sanitary and phytosanitary measures (SPS), technical barriers to trade (TBT), and pre-shipment inspections (PSI). These technical NTMs involve various ministries and government agencies, adding to the time needed for and cost of food imports. For example, importing beef requires eight steps from getting the import permit to the arrival of the product (Table 1).

Table 1.
Import process for beef

Step	Process	Requirements	Regulation
1.	Registered importers (holding *Angka Pengenal Importir-Umum* or API-U) apply for recommendation from the Ministry of Agriculture	11 administrative requirements and 4 technical requirements	Ministry of Agriculture Regulation No. 42/2019 on Entry of Carcass, Meat, Offal, and/or its Products to Indonesia
2.	Importers apply for Import License Permit (*Surat Persetujuan Impor* or SPI) from the Ministry of Trade	7 requirements	Ministry of Trade Regulation No. 29/2019 on Export and Import Requirements for Animals and Animal Products
3.	Importers given specific quota[6] for imports, set through the coordination meeting (Rakortas) between the Coordinating Ministry for Economic Affairs, the Ministry of Agriculture, the Ministry of Trade, and Bulog		Ministry of Trade Regulation No. 29/2019 on Export and Import Requirements for Animals and Animal Product
4.	Importers must go through a pre-shipment inspection in the country of origin and entry is restricted through only a limited number of ports in Indonesia	Obtain surveyor report from government-approved surveyor organization which asks for six requirements	Ministry of Trade Regulation No. 24/2019 Revision of MoT Regulation No. 87/2015 on Import Requirement for Certain Products
5.	Mandatory quarantine clearance of imports		Ministry of Agriculture Regulation No. 42/2019 on Entry of Carcass, Meat, Offal, and/or its Products to Indonesia
6.	Importers apply for Import Certification License (*Surat Keterangan Impor* or SKI) from National Agency for Drug and Food Control (NA-DFC)	8 administrative requirements to register in NA-DFC, and at least 7 technical requirements to obtain the SKI	NADFC Regulation No. 29/2017 and No. 30/2017 on Supervision of Drug and Food Entry to Indonesia
7.	Customs clearance	Checking the documents (surveyor report)	MoT Regulation No. 87/2015 on Import Requirement for Certain Products

Note: For further reading, please refer to a compilation of food import requirements by the United States Department of Agriculture (2020).

Assigned food importers report that these technical requirements carry high fees and charges (International Trade Centre, 2016). The primary cost is compliance with the requirement itself, for example to pay the government-approved third-party surveyor for pre-shipment inspection or to pay for the quarantine process. But more significant and unpredictable are costs associated with delays, such as handling, storage, and cargo parking (demurrage), and informal payments made to officials, as reported by private sector importers (International Trade Centre, 2016).

Ing and Cadot (2017) calculated that the *Ad Valorem Equivalent* (AVE), or the additional cost to imports, caused by SPS requirements on food and agriculture added 7.6% to product prices in Indonesia. The highest AVE is on animal products at 16.1%, significantly above the costs of SPS requirements in Malaysia (6.2%), Philippines (9.2%), and Singapore (8.0%). Another estimate on the cost of PSI and the cold-storage requirements for fruit imports suggest it could be as high as 6% of the price paid at the border by importers (Marks, 2015, p. 39). The costs of complying with the various technical measures could significantly add up, and should be kept as low as possible while fulfilling needed functions.

In contrast to some domestic factors, such as natural geographic limitations and longstanding agricultural challenges, trade barriers such as NTMs are self-imposed through policy decisions that can be reversed. Although systemic reforms to domestic agriculture would need to be significant and likely take time, removing NTMs would have more immediate effect. During the Covid-19 pandemic in 2020, the Ministry of Trade temporarily eliminated import licensing requirements for garlic and onions, resulting in an immediate price reduction from IDR 57,350 per kilogram in March to IDR 40,650 in April (PIHPS Nasional 2020). The same price reducing effect can be expected from NTM removal from other food commodities. Therefore, NTM removal on food can be explored as a potential policy to reduce food price. This paper will explore the extent to which price changes attributed to NTM removal can be expected to affect poverty, inequality, and consumption.

To showcase these expected effects, rice and meat[7] have been selected as commodities for a simulation of the effects of NTM reversal on food prices. Rice and meat were selected because of their relative importance for alleviating poverty and inequality in Indonesia (Table 2). Rice and meat represent two ends of the spectrum: the most consumed and least consumed food items. Indonesia has the highest consumption of rice in Southeast Asia, with an average consumption of 1.86 kilograms per capita per week (Pusat Data dan Sistem Informasi Pertanian Kementerian Pertanian, 2019, p. 14). The country is also one of the lowest for meat consumption in the world—only 2.0 kilograms of beef is consumed per capita per year (OECD, 2020). Since pork cannot be consumed by the Muslim majority, beef is an important source of animal protein and lower prices should contribute to overcoming nutritional and growth issues in Indonesian children. Including meat in the simulation therefore allows for a test of whether an NTM reversal would lead to price effects that can encourage Indonesians to diversify consumption patterns and consume more nutritious food. Significant quantities of both items are sourced from abroad, with Indonesia importing 6.2% of its rice and 28.4% of its beef.

[6] Quotas for importing state-owned enterprises are set directly in the Rakortas. For private importers, they are decided by the Ministry of Trade.
[7] In the simulation, "meat" refers to beef, and the terms are used interchangeably. "Meat and viscera" are both from beef cattle.

Marks (2017) calculated the nominal rate of protection (NRP), which estimates the price change that would result if NTMs were removed. The NRP refers to the difference between the world price of a product at the receiving country's border, accounting for costs of insurance and freight, and the domestic price of a good protected by NTM. It establishes the price difference that can be attributed to existing NTMs (Bora, Kuwahara, & Laird, 2002; Marks, 2017; UNCTAD, 2018). For rice, the NTMs are equivalent to an NRP of 67.2%. In other words, the domestic price of rice was 67.2% higher than the international price as a result of NTMs. If all NTMs are removed, the price of rice in Indonesia will fall by 40.19%, assuming unrestricted rice imports are allowed. The largest contributor to the NRP is the quantitative restriction. Excluding the QR, the NRP for all other NTMs on rice is only 8.4%.

NTMs on meat and viscera produce an NRP of 37.4%. If they are removed, the price will fall by 27.2%. Again, QR is the most significant NTM. Without QR, the remaining NTMs on meat and viscera amount to only a 4.8% NRP (Table 2).

Table 2.
Nominal rate of protection of selected commodities

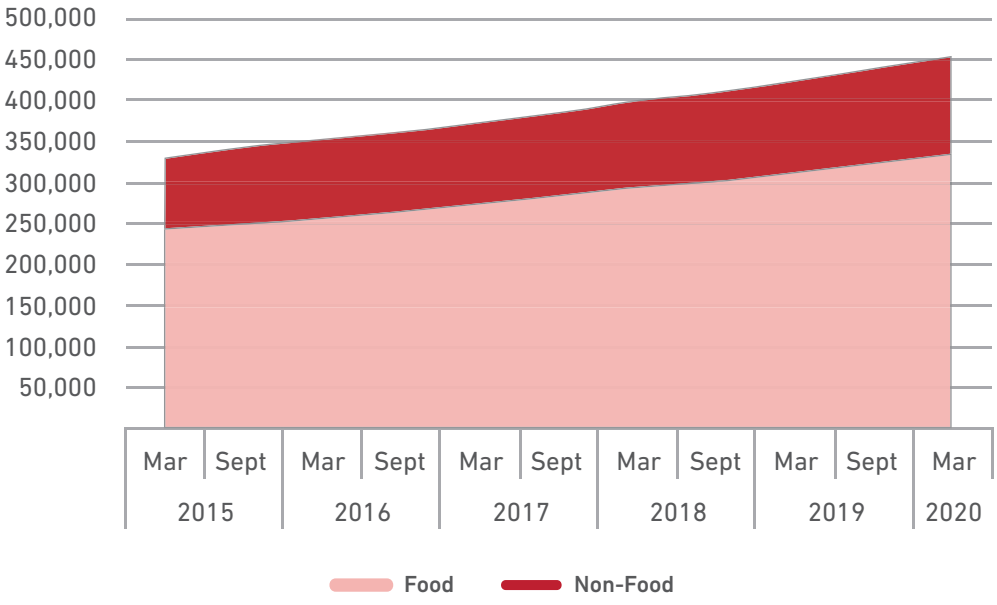
Description	NRP of all trade policies	NRP without quantitative restrictions
Rice	67.2%	8.4%
Meat and viscera	37.4%	4.8%

EFFECTS OF NON-TARIFF MEASURE REVERSAL ON POVERTY

Rice and meat price changes affect poverty, inequality, and consumption behaviour. Using the Almost Ideal Demand System (AIDS), this study estimates changes in consumer welfare due to price changes and their effects on poverty and inequality. Calculations are based on a 2015 data set from the National Social Economic Survey (*Survey Sosial Ekonomi Nasional* or SUSENAS) (see Appendix). The study estimates the change in welfare as depicted by the expenditure function before and after a simulated NTM reversal. The change in welfare, expressed through a change in real expenditure, corresponds with an equivalent change in poverty and inequality.

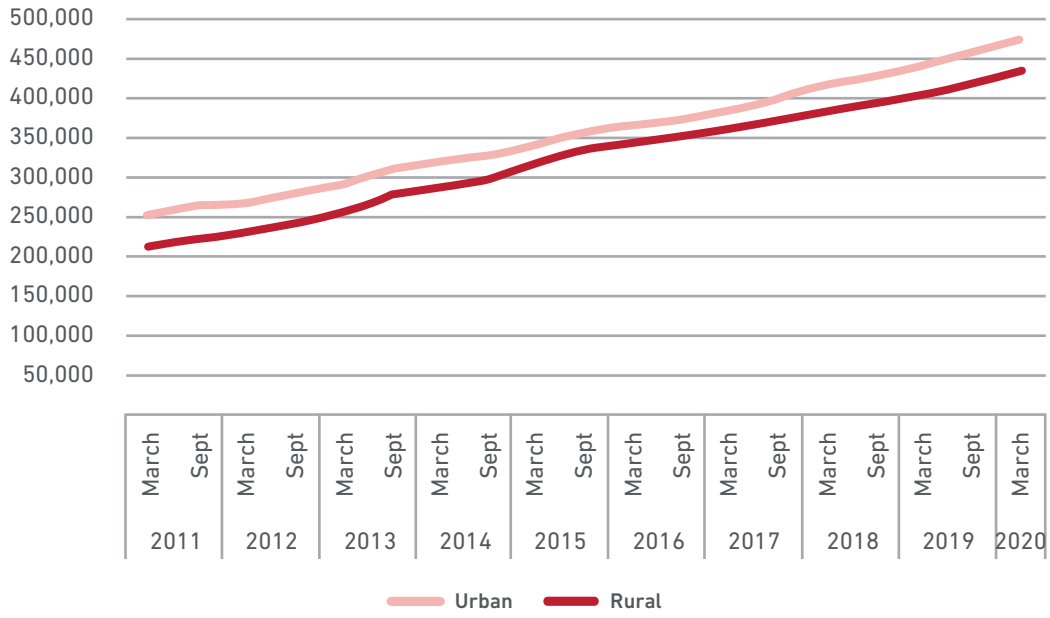
Expenditure calculation is a common method of estimating poverty in Indonesia. The Indonesian national poverty line is determined through a basic needs approach that estimates the approximate expenditure to obtain basic food and non-food items. Food items include 52 commodities (grains, tubers, fish, meat, vegetables, fruits, egg, milk, nuts, oil and fat, and others) that are regularly consumed to meet 2,100 kilocalories per person per day. Non-food items satisfy other basic needs, such as housing, clothing, education, and healthcare (Statistics Indonesia, n.d.). Food items contribute a larger proportion than non-food items to the expenditures that determine the poverty line (Figure 4), which is updated every six months and differentiates between urban and rural areas to account for price differences (Figure 5).

Figure 4.
Food and non-food item expenditure lines, urban and rural, 2015–2020 (IDR)



Source: Statistics Indonesia

Figure 5.
Poverty line, 2011–2020 (IDR)



Source: Statistics Indonesia

> When food becomes cheaper, consumers' welfare increases. They can buy more food items or consume the same amount and save more money.

When food becomes cheaper, consumers' welfare increases. They can buy more food items or consume the same amount and save more money, depending on their consumption preferences. A person living under the poverty line with a monthly income of IDR 440,000, when faced with the 2019 average beef price of IDR 108,000 per kilogram, is unlikely to buy beef. A lower price would allow that same person to purchase beef without a change in income.

The analysis conducted in the simulation first calculates poverty and inequality without any intervention. Then the analysis explores the effects of removing NTMs on rice only, on meat and viscera only, and then the removal of NTMs on both rice and meat and viscera. Finally, the analysis disaggregates the removal of only QRs. To measure the welfare effect of an NTM removal scenario on the demand side, this study assumes an infinite elasticity of supply. It makes no difference whether the supplies come from domestic producers or international producers.

By simulating the removal of NTM on rice and meat and viscera, the estimation assumes that imported rice and meat and viscera will enter the Indonesian market with no additional transaction costs and no QRs, creating a supply increase that reduces prices to international levels. This would also increase the share of imports in the domestic market because the removal of QRs would allow food imports to enter Indonesia without any arbitrary limits. Domestic producers who are able to compete with international prices may endure, but those producing at higher costs will likely be out competed. While this is a cause for concern, especially with respect to poor farmers, the overall import replacement effect is likely to be small since almost all rice consumed in Indonesia is produced domestically. Greenville (2018, p. 42) estimated that the

removal of non-tariff import barriers on rice in Indonesia would lower the self-sufficiency rate from close to 100% to 90%.

The simulation shows that removing NTMs would have an effect on poverty. The reversal of NTMs and QR on rice will have the greatest effect, reducing poverty incidence by 2.52 percentage points (Table 3). Because meat and viscera are less widely consumed, the reversal of NTMs would reduce poverty only by an estimated 0.21 percentage points. If NTMs for both rice and meat are removed, the poverty incidence will decline by 2.83 percentage points.

> If NTMs for both rice and meat are removed, the poverty incidence will decline by 2.83 percentage points.

Consistent with findings from previous studies, QRs are the most significant trade restrictions (Marks, 2017; Yusuf & Warr, 2018) and their removal is expected to yield the greatest poverty reduction effect. QR accounts for 91.6% of the poverty reduction effect on rice and 90.4% on meat. This is because removing QR would allow importers to import at any time and take advantage of lower global food prices. A QR reversal on rice alone would reduce Indonesia's poverty incidence by 2.31 percentage points. QR reversal for both rice and meat reduces poverty by 2.6 percentage points.

Quantitative restrictions also contribute to higher import prices by delaying import decisions and providing early signals to international suppliers that Indonesia is about to purchase large amounts of food commodities. When importers like Bulog finally receive the decision from the Rakortas or the Ministry of Trade, international prices have often increased in anticipation. A previous study by the Center for Indonesian Policy Studies calculated that if Bulog had been able to import rice a month before it actually did, it could have saved more than IDR 303 billion (USD 21.33 million) between January 2010 to March 2017 (Respatiadi & Nabila, 2017, p. 17). These savings could have been passed on to consumers and contributed to poverty reduction.

Table 3.
Effects of NTM reversal on poverty

Scenario	Poverty Rate	Change
Initial Condition	10.54%	
Rice NTM reversal	8.01%	-2.52%
Meat NTM reversal	10.33%	-0.21%
Rice and meat NTM reversal	7.71%	-2.83%
Rice QR reversal	8.22%	-2.31%
Meat QR reversal	10.35%	-0.19%
Rice and meat QR reversal	7.93%	-2.60%

Note: Detailed methodology of the calculation is provided in the appendix.

The simulation also differentiated between urban and rural areas. Since poverty is concentrated in rural areas, the effects of removing NTM is expected to be greater in rural than in urban areas. The simulation confirmed that, estimating that the poverty rate in rural areas will fall by 3.77 percentage points if NTMs on rice and meat are removed, while it will fall by 1.90 percentage points in urban areas (Table 4). Again, the effect is dominated by the reversal of QR on imports.

Table 4.
Effects of NTM reversal by urban-rural

Scenario	Urban		Rural	
	Poverty Rate	Change (percentage points)	Poverty Rate	Change (percentage points)
Initial Condition	7.94%		13.17%	
Rice NTM reversal	6.30%	-1.64	9.76%	-3.41
Meat NTM reversal	7.82%	-0.12	12.88%	-0.29
Rice and meat NTM reversal	6.04%	-1.90	9.41%	-3.77
Rice QR reversal	6.45%	-1.50	10.03%	-3.15
Meat QR reversal	7.83%	-0.11	12.91%	-0.27
Rice and meat QR reversal	6.21%	-1.73	9.69%	-3.49

Note: Detailed methodology of the calculation is provided in the appendix.

Reversing NTM has greater effects on poverty in regions with higher poverty rates and those farther from the main island of Java (Table 5). The biggest decline in poverty was calculated for West Papua and East Nusa Tenggara, with as much as 4.37 percentage point and 6.66 percentage point reduction in poverty respectively. Interestingly, Papua is only expected to experience a small but substantial reduction of 1.20 percentage points. While sago, maize, and cassava remain popular staple foods in Papua, West Papua, and East Nusa Tenggara provinces, rice consumption has been increasing and has even overtaken other local commodities as the primary staple food (Arifin, et al., 2018). Thus, cheaper rice prices due to a reversal of NTM is expected to benefit the poor populations of those provinces.

> "Reversing NTM has greater effects on poverty in regions with higher poverty rates and those farther from the main island of Java."

Table 5.
Effects of NTM reversal on poverty in poorest provinces

Province		Initial	Rice		Meat		Rice and Meat	
			All NTM	QR	All NTM	QR	All NTM	QR
Papua	Poverty rate	23.23%	22.03%	22.14%	22.85%	22.88%	21.36%	21.55%
	Change		-1.20	-1.09	-0.38	-0.35	-1.87	-1.69
West Papua	Poverty rate	23.41%	19.04%	19.29%	22.81%	22.88%	18.54%	18.88%
	Change		-4.37	-4.12	-0.60	-0.54	-4.87	-4.53
East Nusa Tenggara	Poverty rate	20.34%	13.68%	14.16%	19.49%	19.55%	13.06%	13.61%
	Change		-6.66	-6.18	-0.85	-0.79	-7.28	-6.73
Maluku	Poverty rate	17.35%	13.71%	14.04%	16.98%	16.98%	13.18%	13.60%
	Change		-3.64	-3.30	-0.37	-0.36	-4.17	-3.75
Gorontalo	Poverty rate	16.94%	14.11%	14.19%	16.52%	16.52%	13.75%	13.98%
	Change		-2.83	-2.76	-0.42	-0.42	-3.20	-2.97

Note: Detailed methodology of the calculation is provided in the appendix.

Since meat does not constitute a major part of local food intake, the reversal of NTMs on meat will have only a small effect on poverty across these provinces. The largest effect is a 0.85 percentage point reduction in East Nusa Tenggara province. This can be partially explained because fish is the preferred source of animal protein in these provinces, resulting in even lower meat consumption than in Indonesia as a whole. This is especially pertinent to those living in coastal areas who work as small-scale fishers and secure fish directly for household consumption (Gibson, Stacey, Sunderland, & Adhuri, 2020). Based on a household survey conducted by FAO (2015), average fish consumption is as high as 26.9 kilogram per capita per year in Maluku, 20.7 kilogram in West Papua, and 19.8 kilogram in Gorontalo, surpassing the national annual average of 12.78 kilogram per capita. It is far above the annual meat consumption of only 2.0 kilogram per capita for beef and 7.8 kilogram per capita for poultry. Hence, lower prices of meat will not substantially affect consumption patterns.

Only when effects for both rice and meat are combined will the reversal of NTM lead to a significant change in poverty: reductions of 7.28 percentage points in East Nusa Tenggara, 4.87 percentage points in West Papua, and 4.17 percentage points in Maluku.

The estimated poverty reduction effects are based on the assumption that rice is equally distributed in the provinces of Eastern Indonesia. In reality, the Eastern parts of Indonesia have higher food prices because of more complicated and expensive logistics and distribution. Delays in distribution often lead to shortages. A World Bank (2015) study found that logistics costs, including freight and additional costs associated with delays when shipping rice from Surabaya to Ambon, Maluku Island, accounts for 18% of the price of rice. Furthermore, difficulties in shipping and the remoteness of regions reduces the 'tradability' of food products and raises the risk of price increases. People in Eastern Indonesia are already more likely to be poor and so are more vulnerable to faster and longer-lasting price inflation while they wait for the next shipment of food.

For example, shipping a container from Makassar, South Sulawesi (a shipment hub) to Sorong, West Papua can take up to 20 days because of bottlenecks in the inter-island supply chain (Center for Logistics and Supply Chain Studies, STC-Group, World Bank, & Asosiasi Logistik Indonesia, 2015). The reversal of NTMs can facilitate the trade of imported food products in remote regions, if the reversal is supported by continued improvements in logistics and infrastructure.

EFFECTS OF NON-TARIFF MEASURES REVERSAL ON INEQUALITY

Non-tariff measures also affect inequality. As discussed above, high food prices disproportionately affect the lower income population. A previous study showed that the top 5% of Indonesia's income earners can even benefit from QRs, since they are receiving rents from the system (Yusuf & Warr, 2018). Furthermore, while farmers expect a positive income effect from the protection provided by NTMs because they can charge a higher price for their harvest, their expenses for food are higher than their income from food commodities, resulting in a negative overall income effect (Yusuf & Warr, 2018). This applies even to the households of rice farmers—90.55% of rice farmers are net *consumers*, more affected by the negative price effects on expenditures than by positive price effects on income (Respati, Gafara, & Izzati, 2016). This data debunks the common misconception that farmers benefit from protection against food imports (Neilson, 2018; Yusuf & Warr, 2018). In effect, non-tariff measures do not reduce inequality by increasing farmers' incomes. Instead, they actually lead to greater inequality.

Table 6 shows the effects of a reversal of NTMs on rice and meat on inequality as measured by the Gini coefficient. The Gini coefficient measures income inequality on a scale of 0 to 1, with 0 indicating complete equality of incomes and 1 indicating complete inequality (one person has all the income while all others have none). The reversal of NTMs on both commodities will lead to a 1.76% reduction of the Gini coefficient in Indonesia. The reversal of NTM on meat alone results in an insignificant change of 0.03%.

> "The reversal of NTMs on both commodities will lead to a 1.76% reduction of the Gini coefficient in Indonesia."

Table 6.
Effects of NTM reversal on inequality

	Initial Condition	Rice		Meat		Rice and Meat	
		All NTM	QR	All NTM	QR	All NTM	QR
Gini Coefficient	0.4148	0.4075	0.4079	0.4147	0.4147	0.4075	0.4079
Percentage Change		-1.77	-1.66	-0.03	-0.03	-1.76	-1.65

Note: Detailed methodology of the calculation is provided in the appendix

Urban and rural inequality contribute differently to overall inequality in Indonesia. Urban inequality is higher than rural inequality. Along with rapid urbanization, urban inequality has shown an upward trend in the past 20 years (Gibson, 2017). In spite of this, the reversal of NTMs affects inequality in rural areas much more than in urban areas (Table 7). Reversal of restrictions on rice and meat allows a 2.5% reduction in the Gini coefficient in rural areas, compared to 0.98% in urban areas.

Table 7.
Effects of NTM reversal on inequality, by urban and rural

	Initial Condition	Rice		Meat		Rice and Meat	
		All NTM	QR	All NTM	QR	All NTM	QR
Urban							
Gini Coefficient	0.4342	0.4299	0.4301	0.4340	0.4340	0.4299	0.4301
Percentage Change		-0.98	-0.93	-0.04	-0.04	-0.98	-0.94
Rural							
Gini Coefficient	0.3388	0.3301	0.3307	0.3389	0.3389	0.3303	0.3309
Percentage Change		-2.57	-2.39	0.03	0.03	-2.50	-2.33

Note: Detailed methodology of the calculation is provided in the annex.

EFFECTS OF LOWER FOOD PRICES ON CONSUMPTION

NTM reversals on food and agricultural goods not only reduce poverty and inequality, they also affect food demand and food consumption. People respond to price changes by adjusting their consumption patterns. In the case of food, this alters their household nutrition bundle. The effect depends on the type of food and demographic characteristics. Poor households in urban Indonesia are more responsive to price changes than affluent households. An increase in cereal prices will adversely affect food demand in urban areas both in Java and outside Java and disproportionally affect poor families (Widarjono & Rucbha, 2016, p. 175).

The aforementioned effect of food prices on consumption is confirmed by a previous simulation conducted by Center for Indonesian Policy Studies with women in Sumba Island. The simulation finds that when rice and egg prices increase by IDR 500 per kilogram, Indonesians will reduce their rice consumption from 11.89 kilogram per month to 10.10 kilogram per month (Ilman, 2020). Notably, increases in rice prices also changes overall consumption patterns. Instant noodle consumption increases by approximately two packs per month following the price change, indicating that poor households shift to cheaper and less nutritious meals when rice becomes less affordable.

The same study simulated price increases in animal protein and analyzed the resulting food consumption patterns. When chicken, beef, and egg prices increase, households decrease their spending on those items, as expected. In exchange, they purchase more rice and instant noddle (Ilman, 2020). This finding confirms a previous study by Pangaribowo (2014) on poor Indonesian households, which predicts that households will increase their staple food consumption, including rice, by 2.3% if prices for meat and fish increased by 10%. This consumption pattern of shifting from nutrient-rich animal protein to cheaper calorie staple foods can lead to malnutrition and health issues, such as stunting.

Changing household dietary patterns is not just a matter of affordability. It also depends on consumers' behavior and preferences, which are hard to capture in a simulation. Complementing simulation findings are other studies that have shown that consumers would like to consume more animal protein. A survey on consumers in Jakarta and Medan shows that an overwhelming majority (95%) of respondents believe beef is nutritious. The survey found that the relative price of beef and family income levels are key factors influencing beef consumption. Respondents said they are likely to increase beef consumption if either their income increases or beef becomes cheaper (EY Sweeney, 2018).

More affordable food prices can lead to increased consumption and more diversified food choices. It is highly likely that food price reductions achieved through NTM removal would bring positive change to household consumption patterns, especially through improving access to more nutritious animal protein. The evidence for meat consumption particularly highlights the importance of reducing barriers on meat imports to encourage people to consume more animal protein.

“It is highly likely that food price reductions achieved through NTM removal would bring positive change to household consumption patterns, especially through improving access to more nutritious animal protein.”

CONCLUSION

The increasing prevalence of non-tariff measures has contributed to consistently high food prices in Indonesia. This disproportionately affects the lower income population, who spend a larger percentage of their income on food. This leads to increased poverty, inequality, and risk of malnutrition.

The removal of NTMs on rice and meat will aid in poverty reduction, potentially reducing poverty incidence by an estimated 2.83 percentage points. The effects of removing QRs are the most significant of any NTM removal, and more significant for rice compared to meat. Findings from this estimation suggest a need to reduce the number of NTMs on food and agricultural imports to help support poverty reduction efforts in Indonesia. Some SPS NTMs are necessary to protect consumer health and safety. However, other technical NTMs, imposed without SPS justification, are unnecessary and can be removed. These NTMs have become trade barriers with greater costs than benefits.

The analysis highlights that out of all of NTMs, QRs or quotas imposed on food commodities are the most trade restrictive and trade distorting. As a result, they also have the greatest effect on food prices and consequently poverty. The simulation illustrates that removing QR could bring significant poverty reduction, especially for lower-income and rural populations. This is a strong argument in support a more open import regime that would allow Indonesians to access cheaper, quality food from abroad.

Indonesia's food trade can be further liberalized by setting up an automatic import licensing system. An automatic import licensing system, as is used elsewhere in the world, approves imports for registered importers, and is only administered to collect statistical and other factual information about imports (WTO 2020). This reduces bureaucratic delays and eliminates the opportunities for corruption that have plagued Indonesia's non-automatic licensing system. The automatic import licensing system does not abolish necessary SPS requirements that ensure food quality and safety or technical NTMs that ensure standards. What it would do is facilitate the import process by allowing importers to import at any time without having to rely on government decisions.

An automatic import licensing system would allow for greater competition between importers that would benefit consumers and increase overall welfare. Competition would increase as import licenses would no longer be given based on the discretion of Ministry officials, but fairly to any registered importers who wish to enter the market. However, there is a risk that only a few large importers would be able to fulfil the administrative and technical requirements. Competitive trade will be necessary so that no importer can control the stock and price in Indonesia. Market entry barriers for importers during the registration process for the Import Identification Number (API-U) must be lowered so more importers can participate in food trade.

While liberalizing food trade will immensely improve Indonesia's welfare, removing existing protection is likely to have negative effects on the agriculture sector. This does not mean that

imports will immediately flood the domestic market and completely replace domestic agriculture production, but less efficient producers will likely be affected and pushed out of the market. However, this effect is expected to be small.

To ensure that the agriculture sector does not lose out, trade policies must be accompanied with innovative agriculture policies to increase the competitiveness of domestic producers. The domestic factors that lead to high prices must be addressed through policies such as increased research and development, access to cheaper inputs, and improvements in infrastructure. These efforts have been underway for many years but fail to achieve the necessary effectiveness in the absence of competitive forces from foreign producers.

Removal of NTMs on food and agriculture shows great potential for poverty reduction, but it must be complemented with other policies to strengthen domestic agriculture production and increase competitiveness in the food trade. Further research on specific policy recommendations to access these trade benefits must be considered.

APPENDIX: METHODOLOGY

Almost Ideal Demand System (AIDS)

Based on Banks, Blundell and Lewbell (1997), the quadratic AIDS model is derived from indirect utility function

$$lnV(p,m) = \left[\left\{\frac{ln\ m - ln\ a(p)}{b(p)}\right\}^{-1} + \lambda(p)\right]^{-1}$$

where p is a vector of prices and m is total expenditure. ln a(p) is the transcendental logarithm function

$$ln\ a(p) = \alpha_0 + \sum_{i=1}^{k} \alpha_i lnp_i + \frac{1}{2}\sum_{i=1}^{k}\sum_{j=1}^{k} \gamma_{ij}\ lnp_i\ lnp_n$$

where i=,...,n described commodities and b(p) is the Cobb-Douglas price aggregator.

$$b(p) = \prod_{i=1}^{k} p_i^{\beta_i}$$

$$\lambda(p) = \sum_{i=1}^{k} \lambda_i\ lnp_i$$

Adding up, homogeneity, and Slutsky symmetry require that

$$\sum_{i=1}^{k} \alpha_i = 1$$

$$\sum_{i=1}^{k} \beta_i = 0$$

$$\sum_{j=1}^{k} \gamma_{ij} = 0$$

$$\sum_{i=1}^{k} \gamma_i = 0$$

and

$$\gamma_{ij} = \gamma_{ji}$$

Uncompensated price elasticity of good I with respect to changes in the price of good j is

$$w_i = \alpha_i + \Sigma_{j=1}^{n} \gamma_{ij} ln\, p_j + \beta_i\, ln\, ln \left\{\frac{m}{a(p)}\right\} + \frac{\gamma_i}{b(p)} \left[ln\, ln \left\{\frac{m}{a(p)}\right\}\right]^2, \qquad i = 1, \ldots, n$$

$$\mu_i = -\delta_{ij} + \frac{1}{w_i}\left(\gamma_{ij} - \left[\beta_i + \eta'_i z + \frac{2\lambda_i}{b(p)c(p,z)} ln\, ln \left\{\frac{m}{\underline{m}_0(z)a(p)}\right\}\right]\left(a_j + \sum_l \gamma jl ln p_l\right) - \frac{(\beta_j + \eta'_i z)\lambda_i}{b(p)c(p,z)}\left[ln\, ln \left\{\frac{m}{\underline{m}_0(z)a(p)}\right\}\right]^2\right)$$

The demand system is estimated using Quadratic Almost Ideal Demand System (QUAIDS) package in STATA.

The National Socioeconomic Survey (SUSENAS) 2015 dataset was used to analyse the effects of removing NTMs on poverty, inequality, and consumption in Indonesia. SUSENAS is a nationally representative large-scale survey conducted by Statistics Indonesia. It contains two types of data: Core data, which consist of individual and household socio-economic information such as sex, age, marital status housing, education, health, and labor force experiences; and Module data, which contain information on detailed household consumption. In terms of sample size, SUSENAS 2015 covers 300,000 households spread across 34 provinces and 511 regencies and cities in Indonesia. SUSENAS Module data were used for the analysis since they capture comprehensive information on household consumption, including food, housing, utilities, health and other services.

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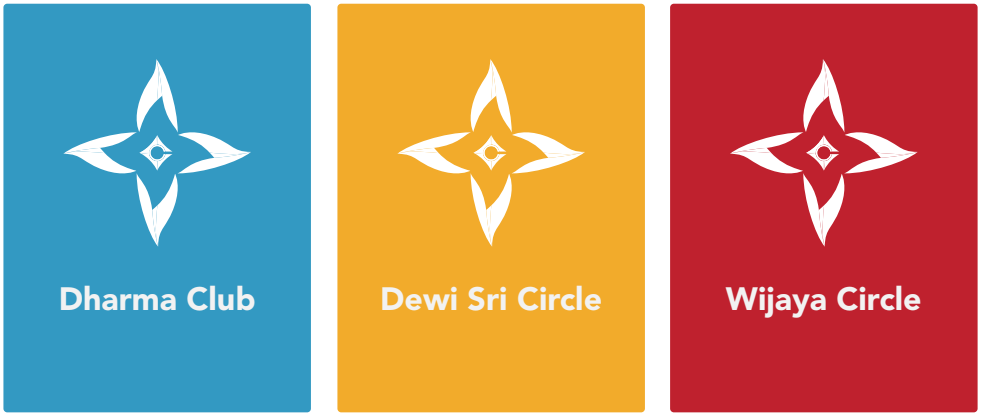

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