

Empirical Paper

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Restrictions applied by WTO countries in international trade in the context of the COVID-19 pandemic

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Abstract:

Objective: The present article discusses changes in tariff and non-tariff restrictions applied in World Trade Organization (WTO) countries during the COVID-19 pandemic.

Methods: The employed research tools were a review and analysis of literature along with source statistical data of WTO, UNCTAD, OECD, and ITC.

Findings: During the pandemic, the average level of tariffs in the WTO countries did not change significantly. From 2019 to 2021, the standard level of duties amounted to less than 15% in more than 90% of the member states. In contrast, 2020 saw an unprecedented increase since 1995 in the number of new non-tariff measures introduced without prior notification. As a result, the restrictions applied as a whole covered the most significant part of world trade since 2009 (13.6%). The newly introduced restrictive measures affected trade worth US\$68.8 billion in 2020, i.e., over half as much as in 2019 (US\$46.2 billion).

Originality: A noneconomic factor (pandemic) caused the WTO countries to introduce restrictions that were permitted but eluded normal procedures. This calls into question the effectiveness of liberalization measures within the WTO.

Keywords: COVID-19, liberalization in international trade, nontariff restrictions, tariff restrictions, WTO

JEL Classification: F10, F13, F14

1 Introduction

In today's international trade, two orientations in trade policy applied by individual countries collide, namely liberal policy and protection policy. Protectionism gains supporters during economic crises when many countries introduce trade restrictions and thus protect their economies [Bussière et al., 2011]. However, such actions hindering and limiting the international flow of goods are perceived by many specialists as a factor delaying the recovery from the crisis [Michalik, 2015].

The present article aims to discuss the changes in the shape of world trade and restrictions applied to international trade during the COVID-19 pandemic by World Trade Organization (WTO) countries. At the same time, a hypothesis was put forward, assuming that the pandemic situation prompted individual countries to introduce new restrictions or strengthen restrictive measures in trade in goods, which resulted in the collapse of world trade and reduced the effectiveness of liberalization measures within the WTO.

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The study used materials and source data, mainly from the WTO and other international organizations, such as International Trade Center (ITC), UNCTAD, and OECD.

2 Literature review

As mentioned, free-trade policy and trade-protection policy are two constantly clashing policy orientations in the modern world economy. Liberalism in foreign trade is supported by an optimal allocation of resources on an international scale increase in production, access to new, foreign technologies, increase in the competitiveness of enterprises on the international market, increase in employment and income of the population, enabling countries to use their comparative advantages (resources, knowledge, location, etc.), reduction of inflation in specific countries, increase in the quality of goods and services, specialization leading to increased efficiency of management, and a greater variety of products and services at more affordable prices [Domiter, 2008; Domańska, 2015; Michalik, 2015; Budnikowski, 2021, pp. 246–264].

When talking about the reasons for protectionism in foreign trade, economic factors are usually mentioned. The literature [Johnson, 1965; Miklaszewski et al., 2003, pp. 45–50; Bożyk, 2004, pp. 23–33; Guzek, 2004, pp. 59–71; Rynarzewski and Zielińska-Głębocka, 2006, pp. 261–400] indicates several traditional arguments for protection, such as shielding of new sectors of sensitive and strategic industries, employment protection, market failure, improvement of the balance of payments and terms of trade, protection of domestic producers, protection against dumping activities of entities from other countries, and budgetary reasons or protection against negative economic impulses from other countries. In addition, noneconomic arguments are also specified: social, cultural, ideological, and worldview considerations, protection of national traditions, and national security [Miklaszewski et al., 2003, pp. 45–50; Bożyk, 2004, pp. 23–33]. Some protective measures may also be employed in response to economic or political steps taken by other countries, assuming the form of economic sanctions [Budnikowski, 2021, pp. 246–264].

Today's literature [Brander and Spencer, 1984; Puślecki, 1992; Brander, 1998; Rynarzewski, 2005; Rynarzewski and Zielińska-Głębocka, 2006, pp. 261–400; Abboushi, 2010; Domiter, 2010; Riedel, 2014] also offers a slightly different approach, in which strategic trade policy is mentioned as the reason for applying trade protectionism, assuming that the state can influence the division of markets between competing oligopoly firms and support domestic entities to gain a greater share by using trade-policy instruments. Domiter [2008] added to this a new economic policy, according to which protectionism stems from the conditions of states' functioning. In turn, Melitz et al. [2018, pp. 377–396] talked about industrial policy as an argument for trade protection. They stated that it is based on the already-mentioned strategic trade policy, understood as the state's ability to use subsidies, and the concept of dynamic comparative advantage, which lays the theoretical foundations for state interference in shaping the production structure.

It is worth noting that these discussions usually neglect the fact that restrictive measures in global trade may be introduced in response to the emergence of a factor other than economic or political, such as the COVID-19 pandemic. In this respect, 2020 was unique.

In the international dimension, the main forum where the directions of trade policy are discussed and the trade terms between countries are negotiated has been the WTO since 1995. Its predecessor was the General Agreement on Tariffs and Trade (GATT), operating since 1948. The achievement of GATT was the reduction of tariffs in world trade and the inclusion of new countries in the exchange system. Tariff reductions contributed to the development of world trade by an average of about 8% per year in the 1950s and 1960s [WTO, 2021c]. However, in the 1970s and early 1980s, there was an economic crisis and subsequent tariff reductions encountered resistance then. This was the result of world trade becoming much more complex, and at the same time, trade in services (not covered by GATT rules) becoming increasingly important. The liberalization of agricultural trade also brought controversies, with no clear success. For these reasons, it was decided to abandon the functioning of the GATT and create a new organization, i.e., the WTO. This happened during the eighth round of negotiations under the GATT (the Uruguay Round).

The WTO has become a negotiating forum for the liberalization of world trade in such areas as liberalization of trade in services, agricultural trade, trade in ICT products, facilitating market access for

the least-developed countries, e-commerce, and technology flow [WTO, 2019b]. Since 1995, the highest decision-making body has been the Ministerial Conferences setting out the directions of the organization's activities. There have been 12 such conferences since the establishment of the WTO [WTO, 2021b, 2022d]. Currently, talks are being held in the next, ninth round of negotiations (the Doha Round), which has been going on since 2001 (so far without clear successes).

Regardless of the liberalizing direction of the international trade policy set by the WTO, the application of selected (new) restrictions in the emergency situations is allowed [Pauwelyn, 2020]. So, in accordance with WTO rules, many countries introduced new barriers in the international trade during the COVID-19 pandemic [Carreño et al., 2020; Casey and Cimino-Isaacs, 2021; Jelisavac Trošić, 2021; Evenett et al., 2022].

3 The general situation in world trade in the years 2009–2022

Since the last economic crisis before the COVID-19 pandemic, i.e., from 2009 to 2019, the value of global exports increased from US\$12.6 trillion to US\$19 trillion. Thus, it grew on average by 4.2% per year. Its physical size also increased (on average by approx. 3.8%). Relevant data are presented in Figures 1 and 2. The decrease in the value of global exports, visible in the statistics in the years 2015–2016, was not the result of the crisis, but a drop in prices, as its physical size did not decrease (Figure 2).

In 2020, there was a significant slump in global trade. According to WTO data, the value of global exports decreased by 7.4%, and the volume of trade in goods fell by 5.3% in 2020 compared to 2019. In 2021, the upward trend in the value of global exchange was visible by as much as 26.7% compared to 2020 and 17.4% compared to 2019 (i.e., the pre-pandemic period), and the volume of global trade in goods was 8.9% higher than the year before. It is therefore easy to see that the surge in the value of world trade was largely due to the increase in prices, e.g., fuels affected by the post-pandemic increase in demand (lifting restrictions on movement) and limiting production. In 2021, fuel prices accelerated by as much as 73% compared to 2020 [WTO, 2022e].

According to WTO data [WTO Stats, 2023], at the end of the third quarter of 2022, the value of global trade amounted to US\$18.6 trillion, which means that it was higher by as much as 48.8% than in the corresponding period of 2020 and 32.9% higher than at the end of the third quarter of 2019. In the publication of December 2022, UNCTAD [2022] estimated that the value of global trade in goods in 2022 would amount to approximately US\$25 trillion. However, it should be emphasized that their physical scale

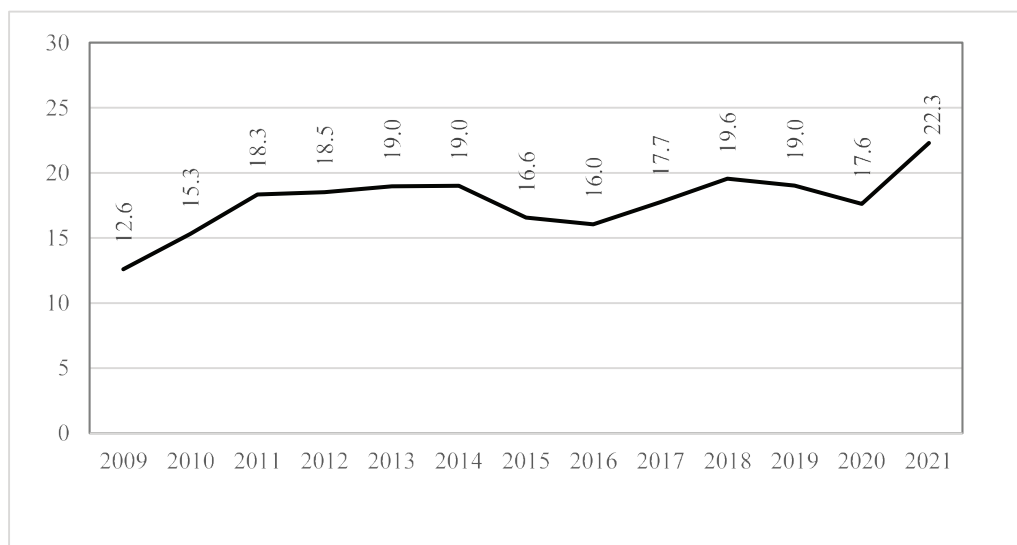


Figure 1. Value of world exports in the years 2009–2021 (in trillion US\$).

Source: [WTO Stats, 2023].

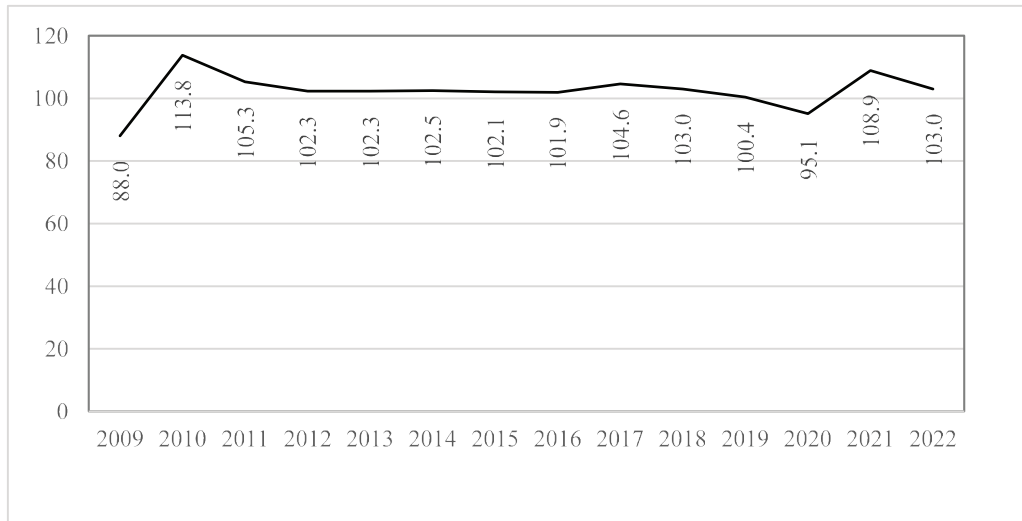


Figure 2. Volume of world exports in the years 2009–2022 (previous year = 100).

Source: [WTO Stats, 2023].

was only 3% larger than in 2021 [WTO Stats, 2023]. This increase in the value of world trade was largely due to the price hikes on an international scale, which were mainly the effect of another noneconomic factor, i.e., Russia's aggression against Ukraine. The increase in the prices of energy carriers translated into a very rapid acceleration of inflation phenomena in national economies and the world economy. It should also be mentioned that the war in Ukraine slowed down the development of international trade because before its outbreak, it was predicted that the volume of world trade in 2022 would be 4.7% higher than in 2021 [WTO, 2022b].

As a result of pandemic restrictions (movement constraints, health restrictions), which prevented or severely limited activities involving the direct provision of services (face-to-face), international trade in services also decreased. In 2020, travel and transport contracted by 63% and 19%, respectively [WTO, 2021a]. In 2021, unequal access to vaccines (different rates of population vaccination in different countries), the emergence of new variants of the coronavirus that causes COVID-19, and border restrictions continued to limit the recovery of tourism and passenger transport. Although trade in noncommercial services increased by 16% in 2021, it remained 5% below prepandemic levels [WTO, 2022a].

4 Tariff restrictions

Tariff restrictions on goods are the area that has been liberalized most rapidly and extensively as a result of GATT and WTO activities. The arrangements adopted during the Uruguay Round of the GATT, which ended in 1995, gradually led to a very significant reduction in tariff rates on a global scale. In 1994, the average level of weighted tariffs in world trade was 8.57%, and it was only 2.59% in 2017 [www1, World Bank, 2023].

During the COVID-19 epidemic, there were no significant increases in duty rates applied in international trade between WTO countries (Table 1).

Analyzing the level of average MFN (most-favoured-nation) tariff rates applied in trade in the years 2016–2021, it can be seen that in 2019 (before the pandemic), about 20% of the countries charged rates below 5%. This was also the case in 2020. In 2019, around 37% of the countries had average tariffs in the range of 5%–10%, and the same proportion applied tariffs in the range of 10%–15%. In total, therefore, as much as 94% of the countries had average tariffs lower than 15%. Only 6% of the countries had average tariffs above 15%. In 2020, this structure changed so much that only about 2.2% of the countries applied average tariffs higher than 15%. A slightly larger percentage (40%) had duties at the average level of 5%–10% and in about 38% of the countries, the average duties were in the range of 10%–15%. In 2021, the structure of countries in terms of the average tariff level was very similar to that in 2020. There was a slightly higher percentage of

Table 1. Applied average tariffs (MFN)* in years 2017–2021

Tariffs (%)	2017		2018		2019		2020		2021	
	Number of countries	In%	Number of countries	In%	Number of countries	In%	Number of countries	In%	Number of countries	In%
0.0–5.0	24	20.5	23	19.5	26	20.0	18	20.0	28	20.4
5.1–10.0	50	42.7	50	42.4	48	36.9	36	40.0	55	40.1
10.1–15.0	37	31.6	39	33.1	48	36.9	34	37.8	47	34.3
Above 15.0	6	5.1	6	5.1	8	6.2	2	2.2	7	5.1
Total	117	100.0	118	100.0	130	100.0	90	100.0	137	100.0

*MFN (most-favoured-nation) tariffs. The number of countries is determined by data availability.

Source: Own elaboration based on [WTO Stats, 2023].

countries with an average tariff level above 15%. They accounted for about 5%. However, it should be noted that data were available for only 90 countries in 2020, compared to 130 and 137 countries in 2019 and 2021, respectively. A significantly smaller sample may slightly distort the picture for 2020.

Examining the data published by the WTO, UNCTAD, and ITC [2020, 2021, 2022], out of 120 countries for which the 2019 and 2021 figures were available, as many as 70 showed no change in MFN tariff rates in 2021 compared to 2019. There was an increase in tariffs in 23 countries (on average by 0.6 p.p.) and a decrease in tariffs in 27 countries (on average by 1.2 p.p.).

Therefore, it can be concluded that there have been no significant changes in tariffs compared to the period before the epidemic. This can be explained by the fact that the MFN tariff rates are applied under prenegotiated WTO agreements, and there is no possibility of increasing their restrictiveness (raising the level) in case of unexpected circumstances.

5 Nontariff restrictions (NTMs)

In addition to tariff measures, countries also have many other means at their disposal within the WTO, generally referred to as nontariff measures (NTMs). These include sanitary and phytosanitary standards (SPS), countervailing (CV) measures, technical barriers (TBT), quantitative restrictions (QR), safety standards, foreign trade licensing rules, etc. This section analyzes selected nontariff measures that were applied by WTO countries in 2009–2021.

Table 2 contains information on the number of CV measures, SPS, and TBT reported for introduction in a given year.

Most notifications concerned technical standards. In 2005, there were almost 900 of them. In 2019 and 2020, there were over 3,300 such notifications, and almost 4,000 in 2021. The number of notifications related to SPS increased over the same period from 856 in 2005 to over 1,700 in 2019 and over 2,100 in 2020. In 2021, there were slightly fewer of them, just over 1,800. The fewest notifications concerned CV measures because there were only 6 of them in 2005, over 30 in 2019, 27 in 2020, and 11 in 2021. Most of them were reported in 2018, when the number of notifications reached 55.

Nontariff measures reported (notified) by WTO members do not exhaust the number of all measures applied by them in practice. In the following years, individual countries introduced new notification measures and extended the application of earlier ones, and at the same time, withdrew some of them. They also applied additional measures in the form of technical and sanitary or phytosanitary standards, which had not been reported to the WTO before the introduction (SPS Specific Trade Concerns – SPS STCs and TBT Specific Trade Concerns – TBT STCs). Data on the new nontariff restrictions introduced in the years 1995–2021 are presented graphically in Figure 3.

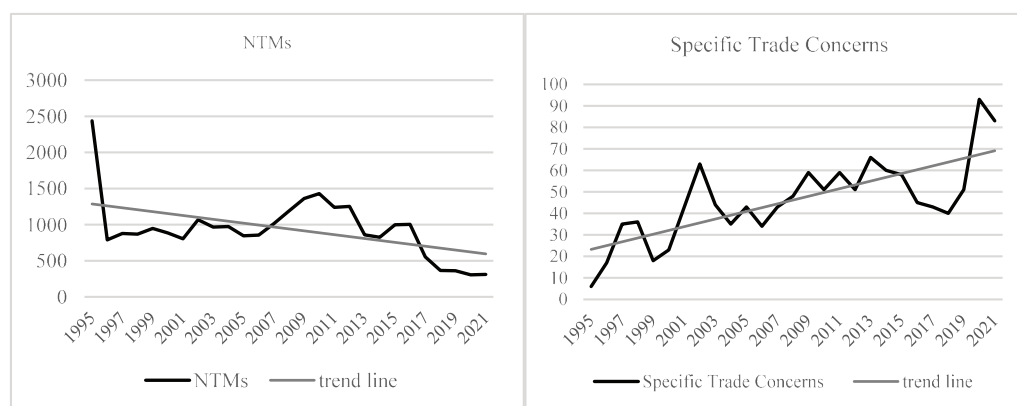
Since 1995, i.e., following the end of the Uruguay Round of the GATT, the number of newly introduced nontariff measures has shown a downward trend (indicated by the trend line in Figure 3 on the left) in the subsequent years. In 2020, WTO countries introduced 306 “regular” new restrictions, i.e., the smallest

Table 2. Number of notifications on SPS, CV measures, and TBT reported by WTO members in 2005–2021

Years	SPS	CV	TBT
2005	856	6	897
2006	1,156	8	1,030
2007	1,196	11	1,229
2008	1,264	16	1,523
2009	1,019	28	1,893
2010	1,408	9	1,869
2011	1,391	25	1,773
2012	1,219	23	2,195
2013	1,299	33	2,140
2014	1,634	45	2,240
2015	1,681	31	1,977
2016	1,392	34	2,331
2017	1,479	41	2,580
2018	1,631	55	3,061
2019	1,757	36	3,337
2020	2,122	27	3,354
2021	1,825	11	3,966

CV, countervailing; SPS, sanitary and phytosanitary standards; TBT, technical barriers.

Source: WTO [2020, 2021a, 2022].

**Figure 3.** Nontariff measures entered into force* in WTO countries in the years 1995–2021.

Source: own elaboration based on: WTO [2023]. NTMs include: SPS, TBT, ADP, CV, QR, TRQ, SG, and XS. Specific trade concerns—TBT and SPS not notified by the imposing country. *Measures entered into force in a given year. As of February 24, 2023. ADP, anti-dumping; CV, countervailing; QR, quantitative restrictions; SG, safeguards and special safeguards; SPS, sanitary and phytosanitary standards; TBT, technical barriers; TRQ, tariff-rate quotas; XS, export subsidies.

number since 1995. In return, the number of measures that were not previously notified, i.e., sanitary, phytosanitary (SPS specific trade concerns), and technical restrictions, has increased (TBT specific trade concerns) (trend line on the right side of Figure 3). The number of these additional new barriers was the highest in 2020 since 1995 (93) and slightly lower in 2021 (83). Compared to 2019 (prepandemic period), WTO countries introduced as much as 83% more of such measures in 2020.

In this context, it is worth looking at the types of nontariff measures introduced in particular years. Data for the years 2009–2021 are presented in Table 3.

In 2009, these nontariff measures were dominated by QR. They accounted for about 36.7% of all nontariff measures (Figure 4). SPS (23%) came second and TBT reached the third position (18.6%). In the following years, a very clear change in the use of nontariff measures can be observed. In the years 2009–2016, the popularity of sanitary and phytosanitary restrictions as well as TBT increased, while the importance of QR decreased. In 2016, among the newly introduced previously notified nontariff measures, TBT accounted for almost 45.6%, sanitary and phytosanitary barriers—32.6%, and anti-dumping (ADP) proceedings—18.6%. In 2020, among the notified measures, there were new TBT (52.6%), ADP proceedings (35.3%), CV measures (7.8%), and safety regulations (4.2%). In 2021, as much as 95.2% of the new restrictions took the form of TBT. The remaining 5% were CV measures (1.9%) and safety regulations (2.9%).

According to the WTO [2021a], new, previously notified cases related to TBT to trade concerned a wide range of regulations and standards, in particular those related to cybersecurity, environmental protection, and required product labeling.

As already stated, in addition to the notified measures, individual countries also applied nontariff measures, previously not reported to the WTO forum (data can be found in Table 3). Information about these measures comes from the “complaints” of the countries affected by the restrictions. The WTO collects information on such measures only for sanitary and phytosanitary barriers (SPS STCs) and TBT (TBT STCs). As the data show, these additional funds emerged in all the years, 2009–2021. In the period before the pandemic, the number of such sanitary and phytosanitary restrictions ranged from 13 to 24. In 2020, this number increased to 36, which when compared to 2019 meant an increase of over 100%. Then in 2021, it was a little lower, with 27 such cases. A similar situation can be observed in the case of TBT. Between 2009 and 2019, their number fluctuated between 22 and 46. In 2020, it was 57, and 56 in 2021, i.e., almost 70% more than in 2019.

It should also be mentioned that although in 2020 no new, notified QR appeared in the official statistics, the WTO stated that as many as 35 WTO Member States applied them in practice (there were only 14 in 2019) [WTO, 2021a]. They were introduced as exceptional measures (allowed under the WTO). They were used temporarily as measures to address the COVID-19 pandemic. Their number increased sharply in the second quarter of 2020, but many of them were withdrawn by the beginning of 2021. The problem of unregistered and in-practice applied barriers did not concern only QR. Lee and Prabhakar [2021] found in their study for UNCTAD that the transparency of NTMs coming into effect during the pandemic was particularly low.

Table 3. NTMs entered into force in WTO countries in the years 2009–2021 by types

Years	SPS	SPS STCs	TBT	TBT STCs	ADP	CV	QR	TRQ	SG
2009	313	13	254	46	155	9	500	3	128
2010	418	22	291	29	138	19	487	0	77
2011	361	16	225	43	104	10	453	0	86
2012	345	16	236	35	130	10	443	2	87
2013	346	24	206	42	180	13	66	4	44
2014	369	14	194	46	165	12	31	15	40
2015	287	21	471	37	193	14	12	0	21
2016	328	14	458	31	187	26	0	0	6
2017	114	17	224	26	190	18	0	0	9
2018	3	18	113	22	210	28	0	0	12
2019	0	17	143	34	164	35	0	0	21
2020	0	36	161	57	108	24	0	0	13
2021	0	27	297	56	6	0	0	0	9

Source: own elaboration based on: WTO [2023].

ADP, anti-dumping; CV, countervailing; QR, quantitative restrictions; SG, safeguards and special safeguards; SPS, sanitary and phytosanitary standards; SPS STCs, sanitary and phytosanitary standards specific trade concerns, TBT, technical barriers; TBT STCs, technical barriers specific trade concerns; TRQ, tariff-rate quotas; WTO, World Trade Organization.

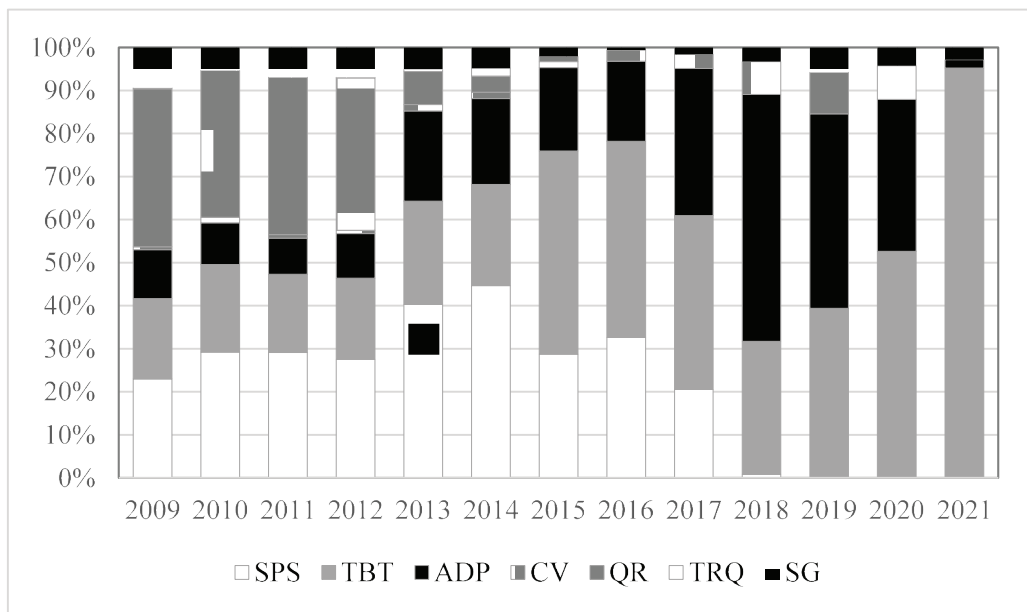


Figure 4. Structure of NTMs entered into force in WTO members in the years 2009–2021.

Source: own elaboration based on: WTO [2023]. ADP, anti-dumping; CV, countervailing; QR, quantitative restrictions; SG, safeguards and special safeguards; SPS, sanitary and phytosanitary standards; TBT, technical barriers; TRQ, tariff-rate quotas; WTO, World Trade Organization.

The data quoted above seem to prove that many additional technical and sanitary restrictions were related to the pandemic. Research by Evenett et al. [2022] showed that there was a clear positive correlation between the number of barriers put in place and the global number of COVID-19 cases. In the case of restrictions concerning medical products, it was 0.5, and in the case of food 0.7 (statistically significant results at $p < 0.05$). This means that the increasing number of restrictions on international trade was related to the growing number of cases. In August 2021, UNCTAD [2021] reported that among all NTMs introduced during the pandemic, those related to medical/personal protective products (73%) dominated. The others included: essential food products (15%), potential carriers of coronavirus: meat, live animals, used textiles (4%), other nonessential goods (3%), and various products (4%).

6 Value of global trade under restrictions in the years 2019–2021

A greater number of technical or sanitary restrictions (especially STCs) introduced by the WTO countries in trade, which were discussed earlier, did not determine the increase in the degree of restrictiveness in world trade. As mentioned, the number of new ones introduced in 2020–2021 was generally small compared to the situation in 1995–2017. However, when analyzing the WTO data (Figure 5), it can be seen that despite a relatively small number of new nontariff restrictions, there was a very clear increase in the percentage of world trade covered by various types of import restrictions in 2020. Since 2009, this share has been growing but at a relatively slow pace. Until 2017, it did not exceed 5% of the value of world trade. A sharp increase could be noticed first in 2018 (7.5% compared to 4.7% in 2017), and then in 2020, when import restrictions already covered 13.6% of the value of global trade. In 2021, this percentage decreased to 8.7%, i.e., to the 2019 level.

In the early stages of the pandemic, most of the measures introduced by WTO members were trade-restrictive measures. However, in mid-October 2020, already about 58% of the measures could be considered trade-facilitating, and only 42% of them were trade-restrictive [WTO, 2021a]. In mid-October 2021, these proportions were as follows: 66% were trade-facilitating measures and 34% were trade-restrictive measures [WTO, 2022a]. About 39% of the restrictive measures applied in response to the pandemic had been lifted by mid-October 2020, but at the same time, about 18% of the trade-facilitating measures during the pandemic

had also been eliminated [WTO, 2021a]. The WTO estimated the value of trade affected by pandemic restrictions at approximately US\$180 billion in 2020, while the value of pandemic trade facilitation was US\$227 billion (Figure 6). In 2021, the WTO members showed restraint in imposing new COVID-19-related trade-restrictive measures and continued to roll back restrictions previously adopted during the pandemic. As of mid-October 2021 [WTO, 2022a], 205 trade-facilitating measures, representing around US\$112 billion in trade, were still in force, compared to 56 trade-restrictive measures, with an estimated trade volume of US\$92 billion.

Between October 2019 and October 2021, the WTO members also introduced “regular” trade regulations (both those facilitating and hindering trade). The word “regular” refers to regulations unrelated to the COVID-19 pandemic. Trade affected by such restrictive measures fell from US\$746.9 billion to US\$440.9 billion, while facilitated trade increased from US\$544.7 billion to US\$731.3 billion. The reasons for the decline in trade affected by the restrictions were: the general decline in trade and the concentration of the governments of individual countries on fighting the pandemic. In 2021, the turnover covered by the

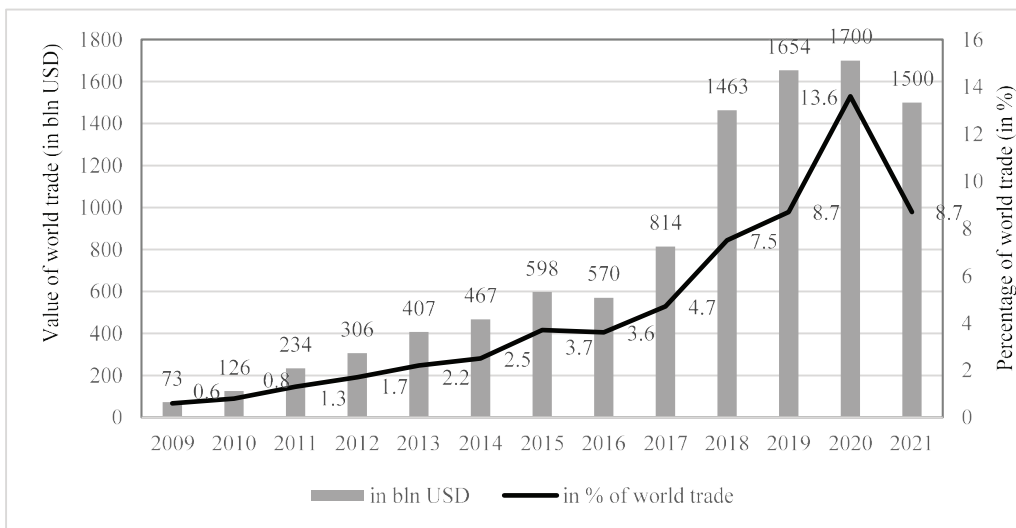


Figure 5. World trade under import restrictions in the years 2009–2021*.

Source: WTO [2020, 2021a, 2022], [WTO Stats, 2023]. *The data as of the end of the third quarter.

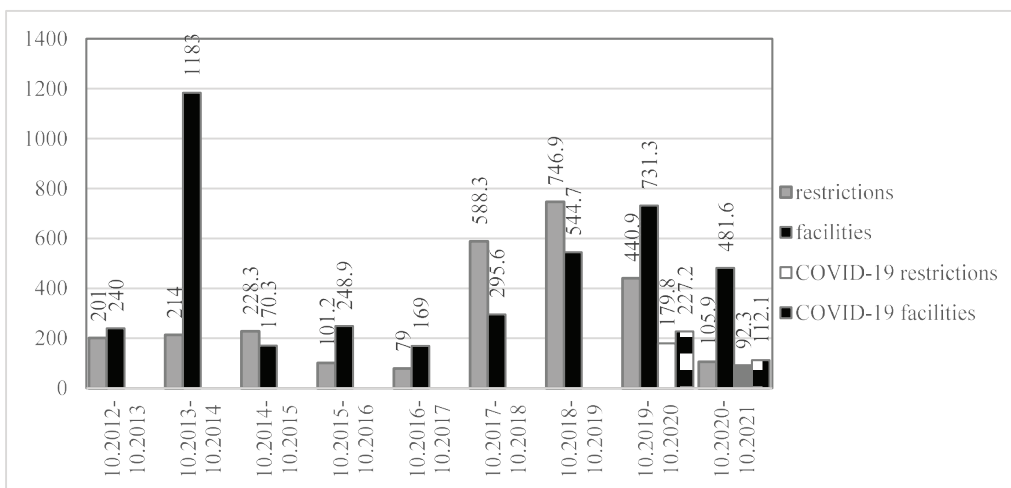


Figure 6. Value* of world trade under import restrictions and facilitations introduced in the years 2012–2021 (in US\$ billion).

*Value of trade subject to new measures introduced in a given period.

Source: WTO [2015, 2016, 2017, 2018, 2019a, 2020, 2021a, 2022].

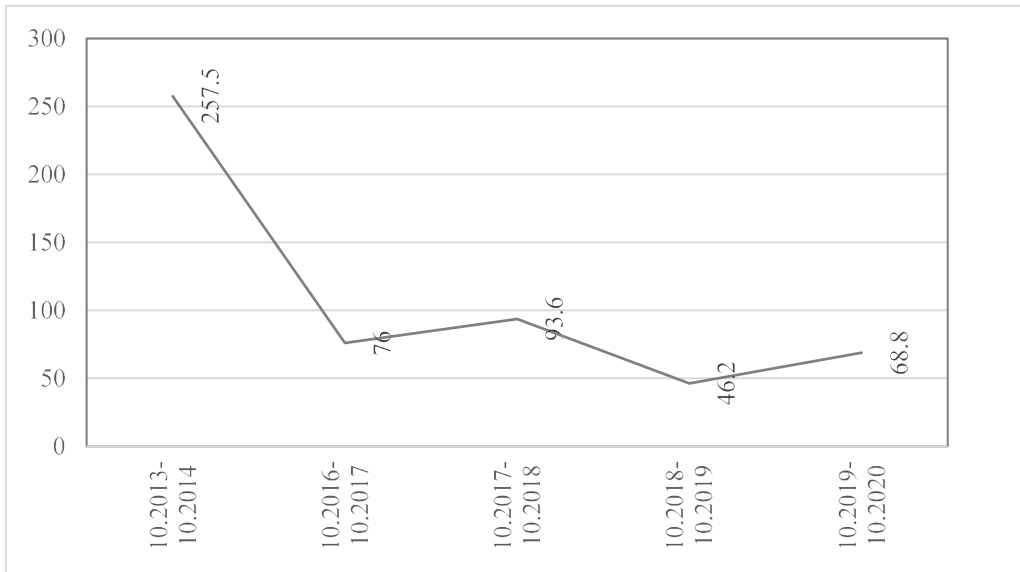


Figure 7. Value of world trade under nontariff measures* introduced in the years 2012–2020 (in US\$ billion). *Value of trade subject to new measures introduced in a given period. Applies to measures: ADP, CV, and safeguards.

Source: WTO [2015, 2016, 2017, 2018, 2019a, 2020, 2021a]. ADP, anti-dumping. CV, countervailing.

postpandemic restrictions was lower than in 2020 because its value amounted to approximately US\$106 billion, while trade covered by facilitations other than those related to COVID-19 reached the value of approximately US\$480 billion.

To complete this picture, it can be mentioned that between October 2019 and October 2020, the value of world trade subject to new nontariff restrictions (ADP, CV, and safety regulations) increased from US\$46.2 billion to US\$68.8 billion, i.e., by half (Figure 7).

7 Significance of international trade in the COVID-19 pandemic context

During the pandemic, international trade played a very important role in maintaining the supply of key goods. It was a channel of access to a variety of medical products for many countries. The value of trade in medical goods was overall 16% higher in 2020 [WTO, 2021a] and 30% higher in 2021 than in 2019 [WTO, 2022c].

The WTO forum noted a particularly disturbing phenomenon of introducing export restrictions in trade in medical products and food, which was caused by the pandemic [WTO, 2021a]. It was critical because it is hard to imagine vaccine production without international trade. A typical vaccine is manufactured in a production chain that uses around 9,000 various materials, supplied by approximately 300 suppliers from approximately 30 different countries [WTO, 2021a]. The WTO estimates suggested that the global exports of some critical materials used in the production of vaccines (such as nucleic acids, amino acid phenols, acyclic amides, lecithin, and sterols) increased by as much as 49% in the first half of 2020 and reached a value of US\$15.5 billion [WTO, 2021a]. In July 2021, the World Economic Forum noted that tariffs and other export restrictions delayed and hindered the distribution of vaccines and other products related to COVID-19 diagnostics and therapy [Brant and Burns, 2021]. It was then emphasized that WTO members should take decisive action to remove restrictions on the supply of products to combat the pandemic. They resulted in an increase in the cost of producing vaccines, equipment, diagnostic materials, and anti-COVID-19 drugs. These costs are usually borne by end users, i.e., patients.

Already in the report of June 2020, the OECD [2020] stated that one of the most important tasks during the pandemic was to uphold the free movement of goods on an international scale, which would enable the

maintenance of supply chains. It emphasized that this task was made more difficult by the fact that many countries had introduced additional restrictions on foreign trade, starting from raising tariffs on certain products (e.g., medical), through increasing nontariff barriers, ending with the introduction of government support for many sectors of their economies.

This problem was also noticed in the WTO forum [2021a]. In 2020–2021, the WTO talks focused on curbing activities that hinder international trade, such as border delays, discriminatory domestic taxation, and, in particular, the application of import and export restrictions. It should be emphasized that many of these problems had already been noticed before the pandemic and raised in the WTO forum previously, but many of them were new and came as a result of the pandemic. In addition, during the talks within the WTO [2021a] in 2021, the special role of maintaining open markets and international trade as a factor supporting economic development after the COVID-19 pandemic was stressed. This is confirmed by the results of research indicating that maintaining the freedom of trade under regional trade agreements resulted in a smaller reduction in the value of exports during the pandemic than in the case of trade outside these agreements [Nicita and Saygili, 2021].

8 Conclusions

The analysis of the data showed that despite the trade liberalization processes under the WTO, consisting of a gradual reduction of tariff rates and efforts to eliminate other restrictive measures, the percentage of world trade subject to restrictions was already growing before the pandemic. In the years 2009–2017, it increased from 0.6% to 4.7% of the total value of international exchange. This already calls into question the effectiveness of liberalization activities under the WTO.

Protectionist trends have intensified during the pandemic. Many countries have introduced additional restrictive measures in foreign trade in the form of sanitary, phytosanitary, and TBT, the application of which is allowed under the WTO. A significant part of these barriers was introduced temporarily and quickly abandoned, but it should be noted that many such barriers were implemented without prior notification (i.e., without appropriate information about the intention to apply them). Therefore, they eluded the normal procedures that apply within the WTO, which certainly did not lead to an increase in the effectiveness of this organization's activities in the field of world trade liberalization. It also did not have a positive impact on the stabilization of the situation in international trade. Although during the pandemic (October 2019–October 2020) the value of trade covered by the restrictions applied before the pandemic decreased, new restrictions related to the COVID-19 pandemic were introduced at the same time.

It should be remembered that the decrease in the trade value subject to restrictions was largely the effect of a contraction in the value of global trade in goods. As a result, the limitations covered a much larger share of world trade than before the pandemic. The WTO estimated that import restrictions covered 13.6% of world trade in 2020, compared to 8.7% in 2019. The newly introduced restrictive measures affected trade worth US\$68.8 billion in 2020, i.e., over half as much as in 2019 (US\$46.2 billion). These data allow us to conclude that the hypothesis put forward earlier turned out to be true. During the pandemic, protectionism in international trade intensified. The need to protect human health and life forced countries to implement restrictions that were not the result of a worsening economic situation (a downturn). Data on the value and volume of world trade in the prepandemic years do not indicate a deterioration in economic conditions that would justify the introduction of new restrictions in 2020. The slump in world trade and the global economy was therefore their effect rather than the original cause and additionally suppressed liberalization activities within the WTO.

In conclusion, it should be emphasized once again that the effectiveness of liberalization measures within the WTO proves to be debatable at best. This is particularly evident in the COVID-19 pandemic context. Tariff burdens have not increased and in this respect, the arrangements adopted in the GATT/WTO negotiation rounds have proven to be effective. But on the other hand, Member States applied new barriers, which, though licit, were introduced in significant quantities otherwise than this usually happens (notification was omitted) or in practice employed restrictions (mainly quantitative), although they were

not reported at all. The pandemic has shown that emergencies force restrictive actions that the WTO is unable to fully control or counteract effectively. Therefore, if the WTO is to fulfill one of its main tasks, which is to strive for greater liberalization of international trade. It seems that this may not be possible without broader regulation on the use of nontariff barriers.

References

- Abboushi, S. (2010), Trade protectionism: Reasons and outcomes, *Competitiveness Review*, Vol. 20, No. 5, pp. 384–394, DOI: 10.1108/10595421011080760.
- Bożyk, P. (2004), *Zagraniczna i międzynarodowa polityka ekonomiczna*, PWE, Warszawa.
- Brander, J.A. (1998), Rationales for strategic trade and industrial policy, in P.R. Krugman, (Ed), *Strategic trade policy and the new international economics*, MIT Press, Cambridge, pp. 23–46.
- Brander, J.A., Spencer, B.J. (1984), Tariff protection and imperfect competition, in: H. Kierzkowski (Ed), *Monopolistic competition and international trade*, Oxford Economic Press, New York, pp. 194–206.
- Brant, J., Burns, T. (2021), *Trade restrictions are delaying the COVID response. The WTO must act*, World Economic Forum, retrieved from <https://www.weforum.org/agenda/2021/07/wto-members-must-launch-new-work-to-reinforce-the-covid-response-in-november/> [18th November 2021].
- Budnikowski A. (2021), *Ekonomia międzynarodowa*, PWE, Warszawa.
- Bussière, M., Pérez-Barreiro, E., Straub, R., Taglioni, D. (2011), Protectionist responses to the crisis: Global trends and implications, *The World Economy*, Vol. 34, No. 5, pp. 826–852, DOI: 10.1111/j.1467-9701.2011.01355.x
- Carreño, I., Dolle, T., Medina, L., Brandenburger, M. (2020), The implications of the COVID-19 pandemic on trade, *European Journal of Risk Regulation*, Vol. 11, No. 2, pp. 402–410, DOI: 10.1017/err.2020.48
- Casey, C.A., Cimino-Isaacs, C.D. (2021), *Export restrictions in response to the COVID-19 pandemic*, Congressional Research Service, retrieved from <https://crsreports.congress.gov/product/pdf/IF/IF11551> [5th March 2023].
- Domańska, A. (2015), Znaczenie procesu liberalizacji obrotów handlowych dla współczesnych międzynarodowych stosunków gospodarczych, in: M. Maciejewski, S. Wydymus (Eds), *Liberalizacja i protekcjonizm we współczesnym handlu międzynarodowym*, CeDeWu, Warszawa, pp. 17–40.
- Domiter, M. (2008), Eksport w doktrynie i polityce gospodarczej na tle procesów liberalizacyjnych i integracyjnych, *Prace Naukowe Akademii Ekonomicznej we Wrocławiu. Seria: Monografie i Opracowania*, nr. 1194, Wydawnictwo Akademii Ekonomicznej we Wrocławiu, Wrocław.
- Domiter, M. (2010), Polityka wymiany międzynarodowej, w: J. Rymarczyk (Ed), *Międzynarodowe stosunki gospodarcze*, PWE, Warszawa, s. 59–105.
- Evenett, S., Fiorini, M., Fritz, J., Hoekman, B., Lukaszuk, P., Rocha, N., Ruta, M., Santi, F., Shinghal, A. (2022), Trade policy responses to the COVID-19 pandemic crisis: Evidence from a new data set, *The World Economy*, Vol. 45, No. 2, pp. 342–364, DOI: 10.1111/twec.13119.
- Guzek, M. (2004), *Międzynarodowe stosunki gospodarcze*, Wydawnictwo Wyższej Szkoły Bankowej, Poznań.
- Jelisavac Trošić, S. (2021), The World Trade Organization and COVID-19-related trade measures, in: S. Jelisavac Trošić, J. Gordanić, (Eds), *International organizations and states' response to COVID-19*, Institute of International Politics and Economics, Belgrade, pp. 127–144.
- Johnson, H.G. (1965), An economic theory of protectionism, tariff bargaining and the formation of customs union, *Journal of Political Economy*, Vol. 73, No. 3, pp. 256–283, retrieved from <https://www.jstor.org/stable/1829039> [3rd March 2023].
- Lee, S., Prabhakar, D. (2021), COVID-19 non-tariff measures: The good and the bad, through a sustainable development lens, UNCTAD Research Paper, No. 60, retrieved from <https://unctad.org/publication/covid-19-non-tariff-measures-good-and-bad-through-sustainable-development-lens> [3rd March 2023].
- Melitz, M.J., Krugman, P.R., Obstfeld, M. (2018), *Ekonomia międzynarodowa*, t. 1, PWN, Warszawa.
- Michalik, A. (2015), Wolny handel a protekcjonizm w świetle wybranych teorii ekonomicznych, in: S. Wydymus, A. Hajdukiewicz (Eds), *Liberalizacja handlu a protekcjonizm. Korzyści i zagrożenia dla wymiany handlowej Polski*, Difin, Warszawa, pp. 15–31.
- Miklaszewski, S., Mesjasz, L., Molendowski, E., Małecki, P., Pera, J., Bieda, M., Garlińska-Bielawska, J. (2003), *Międzynarodowe stosunki gospodarcze u progu XX wieku*, Difin, Warszawa.
- Nicita, A., Saygili, M. (2021), Trade agreements and trade resilience during COVID-19 pandemic, UNCTAD Research Paper, No. 70, retrieved from <https://unctad.org/webflyer/trade-agreements-and-trade-resilience-during-covid-19-pandemic> [13th November 2021].
- OECD (2020), COVID-19 and international trade: Issues and actions, retrieved from <https://www.oecd.org/trade/documents/covid-19-international-trade-issues-actions.pdf> [6th April 2022].
- Pauwelyn, J. (2020), *Export restriction in times of pandemic: Options and limits under international trade agreements*, retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3579965 [5th March 2023].

- Puślecki, Z. (1992), Tradycyjne i nowe argumenty protekcjonizmu handlowego na przykładzie Wspólnoty Europejskiej, *Ruch Prawniczy, Ekonomiczny i Socjologiczny*, nr. 1, s. 99–114.
- Riedel, R. (2014), Protekcjonizm europejski i jego konsekwencje, w: A. Paczeński, M. Klimowicz (Eds), *Procesy integracyjne i dezintegracyjne w Europie*, OTO-Wrocław, Wrocław, pp. 241–257.
- Rynarzewski, T. (2005), *Strategiczna polityka handlu międzynarodowego*, PWE, Warszawa.
- Rynarzewski, T., Zielińska-Głębocka, A. (2006), *Międzynarodowe stosunki gospodarcze. Teoria wymiany i polityki handlu międzynarodowego*, PWN, Warszawa.
- UNCTAD. (2021), *COVID-19 and NTMs*, retrieved from <https://unctad.org/topic/trade-analysis/non-tariff-measures/covid-19-and-ntms> [3rd March 2023].
- UNCTAD. (December 2022), *Global trade update*, retrieved from https://unctad.org/system/files/official-document/ditcinf2022d4_en.pdf [22nd February 2023].
- World Bank. (2023), *World development indicators*, retrieved from <https://data.worldbank.org/indicator/TM.TAX.MRCH.WM.AR.ZS> [24th February 2023].
- WTO. (2015), *Annual Report 2015*, WTO, Geneva.
- WTO. (2016), *Annual Report 2016*, WTO, Geneva.
- WTO. (2017), *Annual Report 2017*, WTO, Geneva.
- WTO. (2018), *Annual Report 2018*, WTO, Geneva.
- WTO. (2019a), *Annual Report 2019*, WTO, Geneva.
- WTO. (2019b), *WTO Ministerial Conferences. Key Outcomes*, Cambridge University Press, retrieved from https://www.wto.org/english/res_e/publications_e/mc_outcomes_e.htm [24th November 2021].
- WTO. (2020), *Annual Report 2020*, WTO, Geneva.
- WTO. (2021a), *Annual Report 2021*, WTO, Geneva.
- WTO. (2021b), *Ministerial Conferences*, retrieved from https://www.wto.org/english/thewto_e/minist_e/minist_e.htm [24th November 2021].
- WTO. (2021c), *The GATT years: from Havana to Marrakesh*, retrieved from https://www.wto.org/English/thewto_e/whatis_e/tif_e/fact4_e.htm [24th November 2021].
- WTO. (2022a), *Annual Report 2022*, WTO, Geneva.
- WTO. (2022b), *Russia-Ukraine conflict puts fragile global trade recovery at risk*, Press Release 902, retrieved from https://www.wto.org/english/news_e/pres22_e/pr902_e.htm [3rd March 2023].
- WTO. (2022c), *Trade in medical goods in the context of tackling COVID-19: developments in 2019-2021*, retrieved from https://www.wto.org/english/tratop_e/covid19_e/med_goods_2019_21_e.pdf [3rd March 2023].
- WTO. (2022d), *Twelfth WTO Ministerial Conference*, retrieved from https://www.wto.org/english/thewto_e/minist_e/mc12_e/mc12_e.htm [3rd March 2023].
- WTO. (2022e), *World Statistical Review 2022*, WTO, Geneva.
- WTO. (2023), *Integrated Trade Intelligence Portal*, retrieved from <http://i-tip.wto.org/goods/Forms/MemberView.aspx?mode=modify&action=search> [24th February 2023].
- WTO Stats. (2023), retrieved from <https://stats.wto.org> [21st February 2023].
- WTO, ITC, UNCTAD. (2020), *World Tariff Profiles 2020*, WTO, ITC, UNCTAD, Geneva.
- WTO, ITC, UNCTAD. (2021), *World Tariff Profiles 2021*, WTO, ITC, UNCTAD, Geneva.
- WTO, ITC, UNCTAD. (2022), *World Tariff Profiles 2022*, WTO, ITC, UNCTAD, Geneva. www1. (2023), retrieved from <https://ourworldindata.org/grapher/tariff-rates> [6th March 2023].