



TRADE INTERDEPENDENCIES IN COVID-19 GOODS

05 May 2020

No single country produces efficiently all the goods it needs to fight COVID-19. Indeed, while the United States and Germany tend to specialise in the production of medical devices, China and Malaysia are most specialised in producing protective garments.

- This means there is strong interdependence in trade in COVID-19 goods. A country might be a top producer of one COVID-19 good, but an importer of others. For instance, for every euro of German exports of COVID-19 goods, Germany imports EUR 0.72 of COVID-19 goods. In the United States, for every dollar of COVID-19 good imports, the US exports USD 0.75 of COVID-19 goods.
 - Trade allows production to locate where it is most efficient, helping increase access to more goods at more affordable prices.
 - However, many of the countries that tend to supply COVID-19 goods are also those that have been worst hit by the virus to date. This has resulted in growing, albeit often temporary, export restrictions which are currently in place in 69 countries.
 - But the export restrictions of one country are restrictions on imports of another; with the high degree of interdependence in trade in COVID-19 products, such measures can have wider impacts, including for developing and low income countries that rely on imports for COVID-19 goods.
 - Reducing import barriers on imports of COVID-19 products, even if temporarily, would also help.
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Ensuring access to medical equipment and medicines is one of the most immediate issues arising from the COVID-19 crisis. Health services not only need these to fight the virus, but also to protect their workers and others from infection. Increasingly, workers employed in other critical sectors, and the wider public, are also relying on protective garments, such as plastic gloves or facemasks, to reduce transmission.

This note looks at the trade links between countries in some of the products that matter for the fight against COVID-19 (referred to as COVID-19 goods). It uses a recently developed World Customs Organisation (WCO) list identifying COVID-19 critical products, which includes test-kits, protective garments, medical devices and disinfectants¹ and trade data from the BACI database to identify trade in these products during the latest available year (2018).² While slightly dated, this trade data can nonetheless help identify top suppliers and consumers of some of the products that matter for the fight against COVID-19.

Table 1. Types of COVID-19 products by broad categories

Test kits / instruments and apparatus in diagnostic testing	Protective garments	Disinfectants and sterilisation products	Oxygen therapy equipment	Other medical devices	Medical consumables	Vehicles	Other items
Diagnostic reagents based on PCR nucleic acid test or on immunological reactions.	Face and Eye protection: Textile face-masks, gas masks, protective spectacles and goggles	Alcohol solution (ethyl alcohol)	Medical ventilators (machine and ventilation bags, ECMO, CPAP units, BPap units, and oxygen concentrators)	Computed tomography scanners, Ultrasound machines, Electrocardiograph, Patient monitoring stations	Medical oxygen	Wheelchairs	Medical or surgical furniture
Instruments used in clinical laboratories for In vitro diagnosis	Gloves: Plastic gloves, surgical rubber gloves, knitted or crocheted gloves, textile gloves	Hand sanitiser and other disinfectant preparations	Oxygen delivery devices to supply oxygen (Oxygen masks, Venturi masks, nasal prongs and catheters)	Laryngoscopes, CO2 detectors, intubation forceps, intubation kits	Wadding, gauze, and similar articles, surgical tape, adhesive plasters	Mobile clinics vehicles	Pressure Swing Adsorption (PSA) oxygen plant
Swab and Viral transport medium set	Other: Disposable hair nets, protective garments for surgical/medical use	Medical, surgical or laboratory sterilisers	Oxygen humidifiers for oxygen therapy applications	Infusion pumps, medical suction pumps, medical drills for vascular access	Syringes, metal needles, Paper bed sheets, Hazardous waste disposable bags, urine bags	Mobile radiological vehicles	Medical gas cylinders, for oxygen
		Hydrogen peroxide in bulk, as medicament or in disinfectant preparations	Flowmeters flowsplitters, and pulse oximeters	Electronic drop counters, infrared thermometers, kidney basins, stethoscopes	Disposable emergency cricothyrotomy set		
		Other chemical disinfectants			Soap		
					Conductive gel, lubricating jelly		

Source: Adapted from World Customs Organisation. See Annex A for detailed list.

¹ The analysis uses the second revision of the WCOs HS classification reference for Covid-19 medical supplies updated on 9 April 2020, http://www.wcoomd.org/-/media/wco/public/global/pdf/topics/nomenclature/covid_19/hs-classification-reference_en.pdf?la=en.

² For details about the BACI data construction, see Guillaume Gaulier and Soledad Zignago (2010), "BACI: International Trade Database at the Product-Level. The 1994-2007 Version," *CEPII Working Paper 2010- 23*, CEPII.



While this data can provide a useful illustration of some of the issues and interdependencies, several caveats need to be noted.

- While the WCO has provided guidance on the types of products that matter for the fight against COVID-19, the list is unlikely to be static. As new issues arise, new products might be added.³ Moreover, some products which may be critical intermediates for the production of these products are not captured (e.g. rubber for the production of rubber gloves). As such, others, including the World Bank Group and the World Trade Organisation, are developing more detailed and complementary lists.
- Comparable international trade statistics often only cover more aggregate products (i.e. at the HS 6-digit level) than those directly relevant to COVID-19 (e.g. HS code 481890 covers a broad category of paper articles, of which only some are paper bed sheets on the COVID-19 list and similar aggregation issues arise for face masks (HS 630790), protective garments for medical use (HS 621010), and other products).
- Since the data refers to trade before the COVID-19, the analysis does not capture what trade in these products looks like today. It also does not include products such as the COVID-19 tests (including HS 382200 and HS 300215) which were not produced prior to the crisis.

Trade in COVID-19 products is concentrated in a few countries

Global exports of COVID-19 related goods are concentrated in a few, mostly OECD, countries: over 86% of global exports are from just 20 countries. The top 5 global exporters, which together account for 49% of trade, are Germany, the United States, Switzerland, the People's Republic of China (hereafter "China"), and Ireland. Similar patterns emerge for imports, where the top 20 countries represent 76% of trade in COVID-19 related goods; the United States alone represents 18% of global imports (Figure 1).

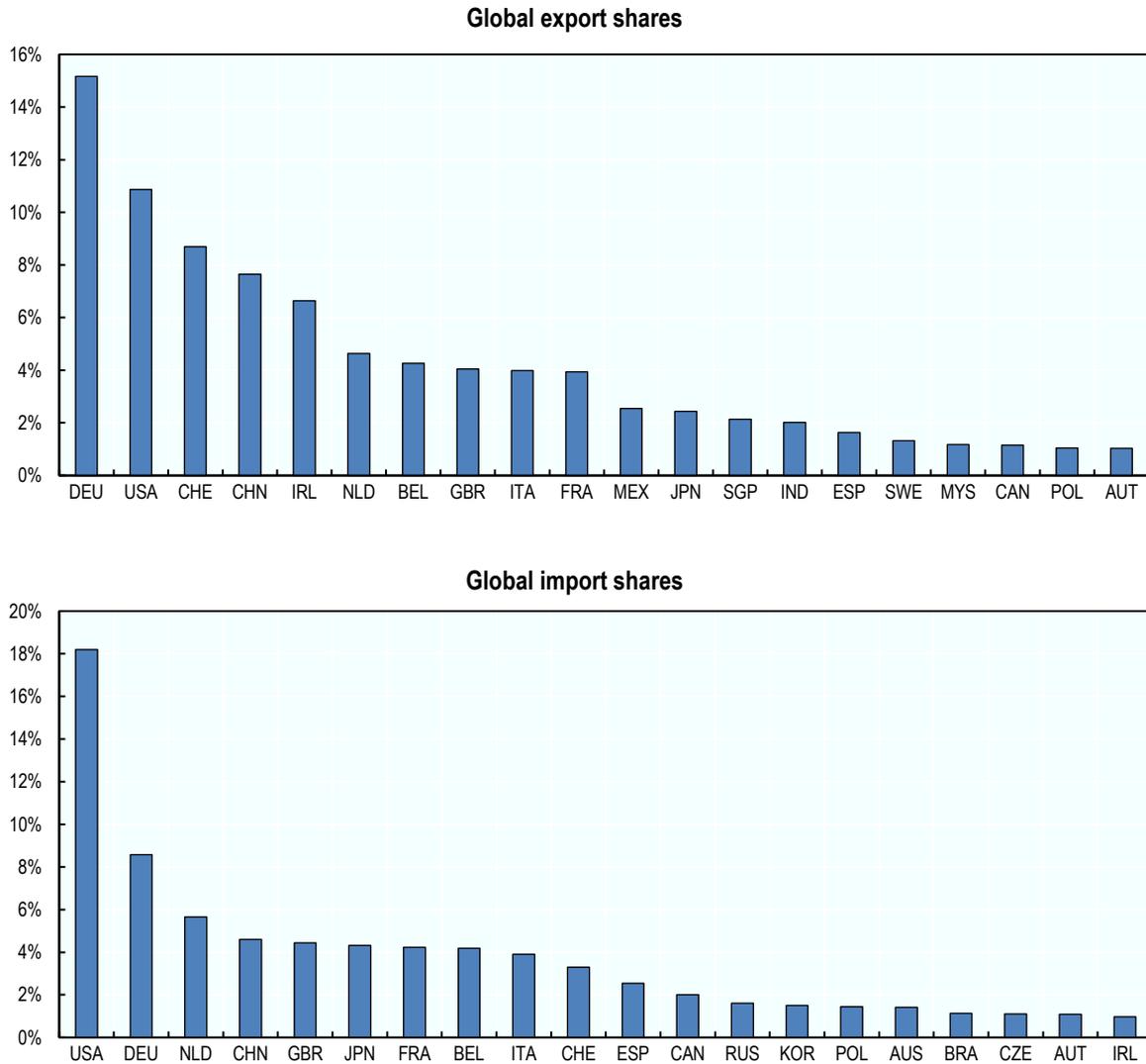
While, in aggregate, there is strong concentration in trade in COVID-19 products, product-level information shows a much more dispersed picture, with a high degree of specialisation (Figure 2 and Table 2).⁴ Indeed, OECD countries are the main exporters of items such as medical devices and instruments and apparatus for diagnostic testing. However, exports of medical consumables and protective garments are dominated by China and, for the latter in particular, other Southeast Asian countries. For imports, across all categories of products, the United States is the largest importer, with Germany also appearing as an important importer across all categories.

³ Indeed, subsequent to the release of its first list of COVID-19 goods in March 2020, the WCO released an updated list on 9 April, 2020

⁴ This may reflect the fact that the more costly categories of COVID-19 products could be driving the overall distribution of trade in Figure 1.



Figure 1. Global export and import shares of COVID-19 related goods, 2018

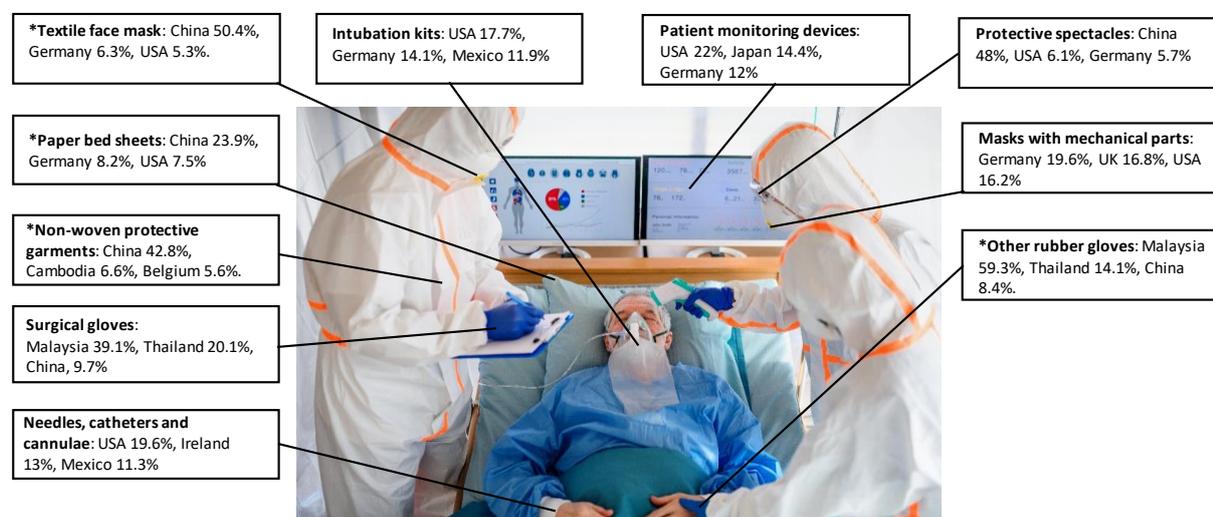


Source: Own calculations using World Customs Organisation list of COVID-19 goods (Annex A) and BACI data.



Figure 2. Top exporters of certain COVID-19 goods, 2018

Country shares in global exports by good



Note: For illustrative purposes only. The products marked with an * belong to broader categories of goods than those captured in the shares meaning that these include other products which might not be essential in the fight against COVID-19.

Source: OECD calculations using World Customs Organisation list of COVID-19 goods and BACI data. Photo from BBC news.

Table 2. Top 5 exporters and importers of COVID-19 product categories, 2018

Country shares in global exports by categories

Test kits / instruments and apparatus in diagnostic testing		Protective garments		Disinfectants and sterilisation products		Oxygen therapy and other medical equipment		Medical consumables		Vehicles		Other items	
Exports													
DEU	21.0%	CHN	41.0%	DEU	15.3%	USA	17.6%	CHN	16.5%	DEU	15.0%	DEU	18.4%
USA	16.3%	MYS	10.1%	CHE	13.0%	DEU	13.5%	DEU	12.4%	USA	14.5%	CHN	11.9%
CHE	13.7%	DEU	5.2%	IRL	8.9%	CHN	9.0%	USA	9.8%	CHN	13.0%	USA	9.6%
IRL	10.4%	VNM	4.2%	USA	8.1%	MEX	8.8%	MEX	4.5%	ITA	11.4%	MEX	6.1%
NLD	5.7%	THA	3.7%	FRA	5.7%	JPN	5.7%	NLD	4.4%	FRA	4.6%	GBR	5.1%
Top 5	67.2%	Top 5	64.2%	Top 5	50.9%	Top 5	54.6%	Top 5	47.5%	Top 5	58.5%	Top 5	51.1%
Imports													
USA	12.9%	USA	28.2%	USA	19.6%	USA	22.9%	USA	14.7%	USA	9.2%	USA	15.7%
DEU	9.6%	DEU	7.4%	DEU	8.0%	DEU	8.0%	DEU	9.1%	CAN	7.8%	DEU	11.9%
NLD	8.8%	JPN	6.3%	NLD	4.8%	CHN	7.1%	NLD	5.7%	FRA	6.3%	CHN	5.3%
BEL	5.8%	FRA	4.7%	CHE	4.8%	NLD	6.8%	CHN	5.1%	DEU	5.2%	GBR	4.4%
ITA	5.8%	GBR	4.0%	GBR	4.7%	JPN	5.1%	FRA	4.7%	GBR	4.4%	CAN	3.9%
Top 5	42.8%	Top 5	50.7%	Top 5	41.9%	Top 5	49.9%	Top 5	39.2%	Top 5	32.9%	Top 5	41.0%

Source: Own calculations using World Customs Organisation list of COVID-19 goods and BACI data.



There is a high degree of interdependence in trade in COVID-19 products

There is considerable overlap in top suppliers' imports and exports of COVID-19 products, as measured by indicators of intra-industry trade (Table 3).⁵ Countries tend to be both importers and exporters of COVID-19 goods, highlighting a high degree of interdependence among countries on these essential items. That is, a country might be a top supplier of one COVID-19 good, but an importer of others. For instance, for every euro of German exports of COVID-19 goods, Germany imports EUR 0.72 of related COVID-19 goods. Likewise, for every dollar of COVID-19 goods the United States imports, it exports USD 0.75 of related COVID-19 goods (Table 3). This high degree of aggregate intra-industry trade reveals that countries need each other to satisfy demand or production needs.

Table 3. Top traders in COVID-19 goods and trade overlap, 2018

Country	Share in total country exports	Share in global exports	Share in total country imports	Share in global imports	Intra-industry trade index
DEU	7%	15%	5%	9%	0.72
USA	6%	11%	6%	18%	0.75
CHE	21%	9%	8%	3%	0.55
CHN	2%	8%	2%	5%	0.75
IRL	27%	7%	7%	1%	0.25
NLD	6%	5%	7%	6%	0.90
BEL	7%	4%	7%	4%	0.99
GBR	6%	4%	5%	4%	0.95
ITA	5%	4%	6%	4%	0.99
FRA	5%	4%	5%	4%	0.96
MEX	4%	3%	2%	1%	0.48
JPN	2%	2%	5%	4%	0.72
SGP	6%	2%	2%	1%	0.52
IND	5%	2%	1%	1%	0.56
ESP	4%	2%	5%	3%	0.78
SWE	6%	1%	4%	1%	0.83
MYS	3%	1%	2%	0%	0.54
CAN	2%	1%	4%	2%	0.73
POL	3%	1%	4%	1%	0.84
AUT	4%	1%	5%	1%	0.97
Average	7%		4%		0.74
Sum		86%		73%	

Note: Share in total country exports/imports identifies share of COVID-19 goods in exports/imports of country. Share in global exports/imports identifies country share of COVID-19 goods in global exports/imports of COVID-19 goods. See footnote 5 for intra-industry trade index.

Source: Own calculations using World Customs Organisation list of COVID-19 goods (Annex A) and BACI data.

G20 and OECD countries need each other

Mapping the extent of bilateral intra-industry trade in COVID-19 products among OECD and other G20 countries further highlights interdependencies (see Figure 3 for selected countries). For example, 65% of the value of bilateral trade in COVID-19 products between China and Germany is two-way trade. The data show that, in 44% of all bilateral trade relations between G20 and OECD countries, the value of imports and exports of COVID-19 goods overlaps by more than 50% (green shading). That is, more than half of bilateral trade is two-way. This high degree of intra-industry trade reflects the fact that, while some

⁵ Overlap is identified by way of a Grubel-Lloyd Index. If a country only imports or exports COVID-19 products then the index would be zero, if it exports as much as it imports, the indicator would be one. This means that the higher the overlap, the more two way trade in specific products is taking place. It is calculated $GL_{i,k} = 1 - \left(\frac{|X_{i,k} - M_{j,k}|}{X_{i,k} + M_{j,k}} \right)$ where $X_{i,k}$ are exports of country i of good k and $M_{j,k}$ are imports from country j of good k. The indicator ranges from zero to one. The closer to one the indicator is the higher the overlap between what it imports and exports.



countries specialise and export some products, such as medical equipment, others specialise in and export other products such as protective gear.

Figure 3. Trade overlap between selected G20 and OECD partners

	ARG	AUS	BRA	CAN	CHE	CHN	DEU	ESP	FRA	GBR	IDN	IND	IRL	ITA	JPN	KOR	MEX	NLD	RUS	USA	
AUS		0.10																			
BRA		0.53	0.67																		
CAN		0.02	0.63	0.32																	
CHE		0.00	0.09	0.02	0.06																
CHN		0.08	0.62	0.03	0.15	0.23															
DEU		0.04	0.11	0.04	0.19	1.00	0.65														
ESP		0.04	0.07	0.14	0.46	0.92	0.52	0.58													
FRA		0.02	0.29	0.29	0.53	0.67	0.74	0.65	0.77												
GBR		0.02	0.25	0.05	0.19	0.54	0.87	0.79	0.69	0.97											
IDN		0.48	0.65	0.76	0.76	0.20	0.20	0.45	0.41	0.48	0.34										
IND		0.71	0.18	0.14	0.12	0.18	0.18	0.69	0.48	0.97	0.40	0.93									
IRL		0.00	0.06	0.00	0.20	0.79	0.63	0.38	0.18	0.20	0.86	0.03	0.80								
ITA		0.09	0.03	0.03	0.62	0.76	0.90	0.70	0.64	0.86	0.88	0.73	0.69	0.13							
JPN		0.01	0.97	0.52	0.99	0.34	0.83	0.57	0.50	0.81	0.58	0.83	0.63	0.05	0.31						
KOR		0.18	0.93	0.67	0.61	0.10	0.87	0.29	0.57	0.60	0.46	0.51	0.40	0.03	0.68	0.69					
MEX		0.44	0.12	0.86	0.57	0.38	0.80	0.77	0.90	0.82	0.98	0.86	0.48	0.66	0.43	0.38	0.67				
NLD		0.06	0.90	0.44	0.88	0.28	0.67	0.66	0.38	0.70	0.64	0.83	0.72	0.18	0.60	0.89	0.86	0.68			
RUS		0.01	0.13	0.66	0.09	0.01	0.02	0.01	0.08	0.01	0.02	0.62	0.10	0.00	0.02	0.01	0.02	0.01	0.01		
USA		0.10	0.37	0.44	0.89	0.31	0.62	0.60	0.52	0.76	0.94	0.86	0.35	0.18	1.00	0.80	0.71	0.27	0.35	0.04	
ZAF		0.15	0.95	0.64	0.82	0.04	0.08	0.98	0.82	0.13	0.94	0.63	0.08	0.04	0.07	0.49	0.67	0.32	0.92	0.94	0.65

Note: The figure identifies the overlap in imports and exports of COVID-19 goods by country pair for a selection of OECD and G20 countries. For example, the entry where China meets Germany shows that 65% of bilateral trade between these two countries is two-way trade. The relationships where the overlap is above 0.5, marking that more than 50% of bilateral trade is two-way are highlighted.

Source: Own calculations using World Customs Organisation list of COVID-19 goods and BACI data.

Other countries need G20 and OECD countries

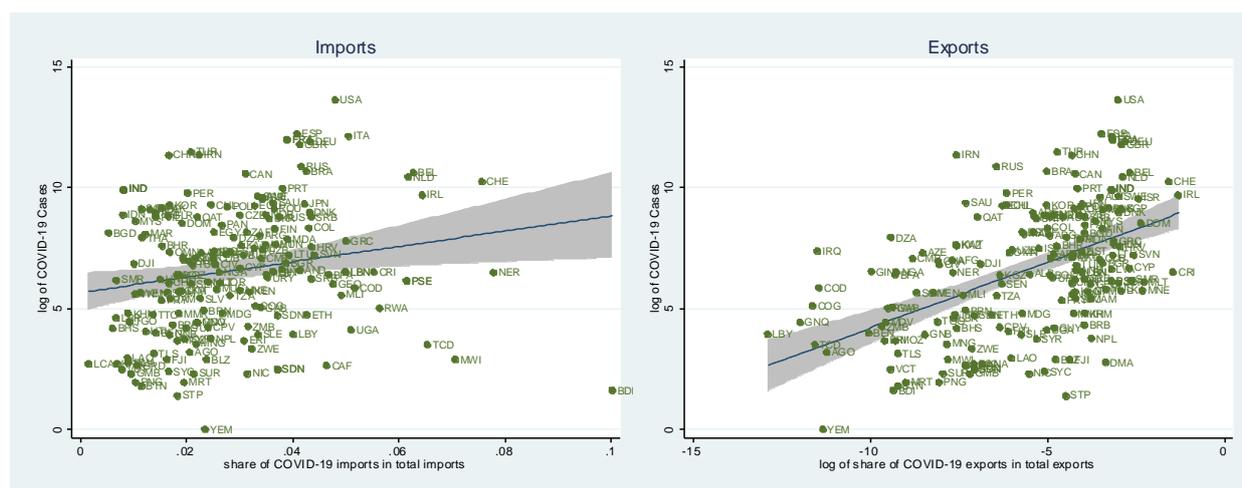
By contrast, for many developing and low-income countries trade in COVID-19 products is much more one-way (Figure 4). Only in 0.6% of all possible bilateral trade interactions is the overlap in trade over 50%. This means that these developing and low-income countries do not engage in trade in these products with each other, or either import or export COVID-19 goods but do not do both. Critically, the data highlight that trade on COVID-19 goods among developing and low-income countries is relatively limited; that is, there is strong dependence on OECD and G20 countries for access to COVID-19 goods.



The largest suppliers and importers of COVID-19 products are those hit hardest by the virus to date

The countries that are the largest suppliers of COVID-19 goods are also those which – to date – have been most severely hit by the COVID-19 pandemic. At the same time, these are also the countries that rely most on imports for other COVID-19 products (Figure 5).⁶

Figure 5. Supply and demand for COVID-19 products is highest in worst hit places



Source: Own calculations using World Customs Organisation list of COVID-19 goods (Annex A), BACI data and Johns Hopkins database <https://coronavirus.jhu.edu/map.html> (accessed 22 April).

There are important challenges ahead, but policies matter

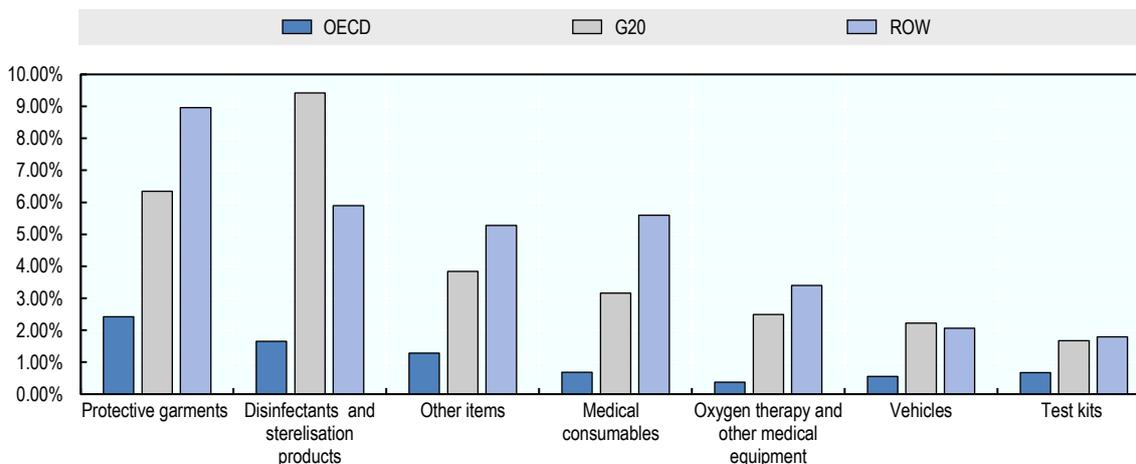
Tariffs on COVID-19 products

Tariffs on COVID-19 products remained in 2017-2018 across all groups of countries (OECD, G20, and other developing and low-income countries).⁷ In relative terms, these were highest in developing and low-income countries but they were also relatively high in some non-OECD G20 countries for disinfectants (Figure 6). Unless lifted in response to the crisis, this could have implications for the ability of all countries to move quickly to deal with the increased demand for these goods.

⁶ Export shares are used to identify key suppliers of COVID-19 goods and import shares to capture key consumers.

⁷ Here OECD refers to all OECD members, G20 to G20 members, including those that are also OECD members. All other economies for which data was available are captured in the rest of the world (RoW) category, comprising other developing and low-income countries.



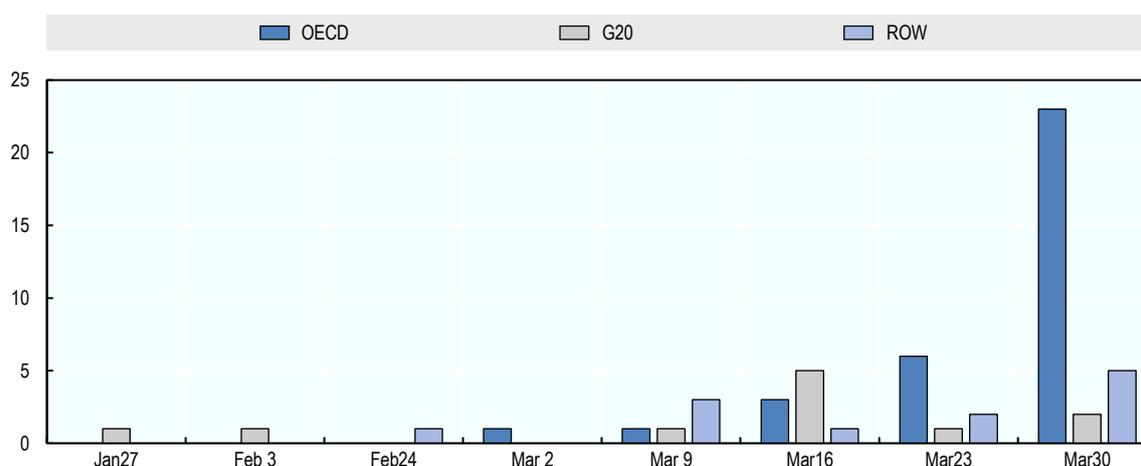
Figure 6. Tariffs on COVID-19 products remain

Note: These are simple average applied tariffs for the years 2017-2018 for 128 countries where information was available. Member countries appear in both the OECD and the G20 category.

Source: Own calculations using World Customs Organisation list of COVID-19 goods (Annex A) and TRAINS data.

Countries are adopting import liberalisation measures

At the same time, an increasing number of countries are adopting import liberalisation measures, including removal of import licensing requirements, tariff reductions and suspension of anti-dumping duties. In the second week of March, only China, Ecuador, and the United States had taken steps to liberalise import barriers on medical supplies; however, from the week of 9 March onwards, a considerable number of OECD and G20 countries have taken steps to liberalise the inflow of medical supplies, including through plurilateral initiatives seeking to remove existing trade restriction on medical supplies.⁸

Figure 7. Import liberalisation measures

Note: G20 category excludes OECD countries to avoid double counting. EU-wide measures are counted for each individual EU country. Excludes trade facilitation measures such as simplification of import procedures and deferral of payment for customs duties.

Source: Own calculations, updated on 14 April 2020.

⁸ For example, at the end of March 2020, Australia, Brunei, Canada, Chile, Myanmar, New Zealand, and Singapore committed to keeping supply and trade links open by removing existing trade restrictive measures on essential goods, especially medical supplies (see <https://www.beehive.govt.nz/release/canada-australia-chile-brunei-and-myanmar-join-nz-and-singapore-committing-keeping-supply>).



But export restrictions are also being adopted

That said, countries are also increasingly imposing export restrictions on COVID-19 products, many of which are identified as temporary (Figure 8). As at end-April, 2020, there were 69 countries with at least one export restriction on a COVID-19 good, with a large proportion taking the form of export prohibitions.⁹

Figure 8. Export restrictions on COVID-19 products

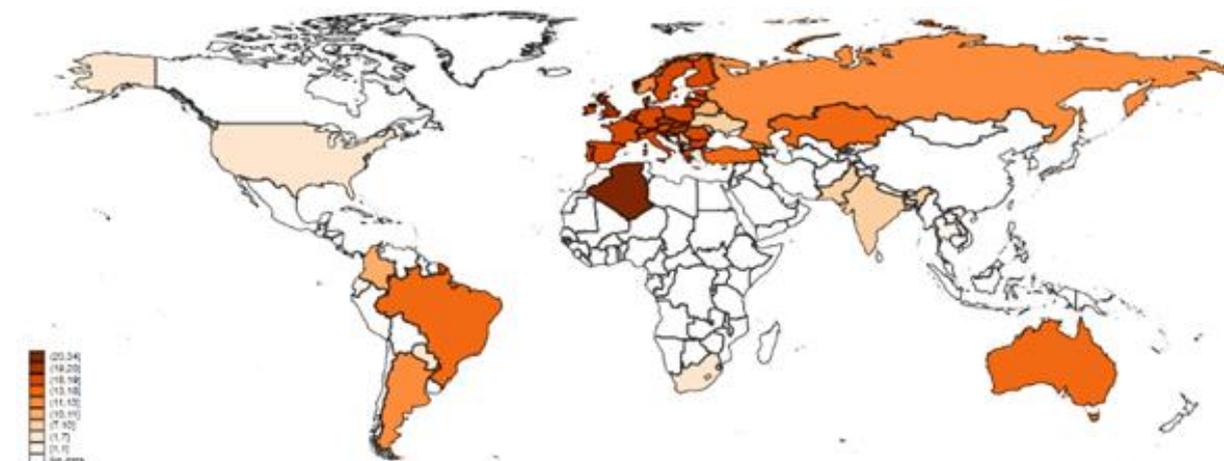
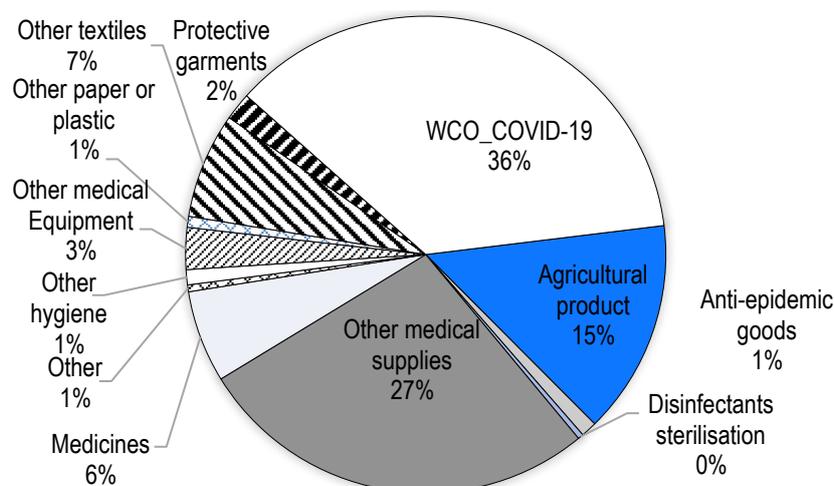


Figure 9. Export restrictions by product category

Source: Own calculations.

Conclusion

No single country produces efficiently all the goods it needs to fight COVID-19. Indeed, trade data show that there are strong trade interdependencies between countries. For example, while the United States and Germany tend to specialise in the production of medical devices, China and Malaysia are most specialised in producing protective garments.

Trade allows production to locate where it is most efficient, allowing production of more goods, in a shorter time frame, at more affordable prices. Open markets are important for cost-effectiveness of health systems, and to enable countries to access the products they themselves need to tackle the crisis.

However, it is the countries that tend to supply COVID-19 goods which have been worst hit by the virus to date, resulting in growing, albeit often temporary shortages, followed by export restrictions. But the export restrictions of one country are restrictions on imports of another; with the high degree of interdependence in trade in COVID-19 products, such measures can have wider impacts, especially in developing and low-income countries which rely on trade to access COVID-19 goods.

Keeping markets open is key to ensuring the supply of essential products and facilitating access to medical supplies. This means avoiding export restrictions, removing tariffs on essential goods, and enabling wider trade facilitation to help the movement of critical goods across borders and renewing commitment to rules-based trade (OECD, 2020).¹⁰

¹⁰ See OECD (2020) "COVID-19 and International Trade: Issues and Actions", accessed 28 April 2020: https://read.oecd-ilibrary.org/view/?ref=128_128542-3ijg8kfswh&title=COVID-19-and-international-trade-issues-and-actions.



Annex A. HS classification reference for Covid-19 medical supplies

Categories	Product names	Brief info	HS Classification
I. COVID-19 Test kits/ Instruments and apparatus used in Diagnostic Test	COVID-19 Test kits	Diagnostic reagents based on polymerase chain reaction (PCR) nucleic acid test.	3822.00
	COVID-19 Test kits	Diagnostic reagents based on immunological reactions	3002.15
	COVID-19 Diagnostic Test instruments and apparatus	Instruments used in clinical laboratories for In Vitro Diagnosis	9027.80
	Swab and Viral transport medium set	A vial containing a culture media for the maintenance of a viral sample and a cotton tipped swab to collect the sample put up together	3821.00
II. Protective garments and the like (For disposable protective products that are not worn (e.g. drapes, bed pads), see "Section VI. Other Medical Consumables")	Face and eye protection		
	Cellulose/paper masks		4818.50
	☐ Textile face-masks, without a replaceable filter or mechanical parts , including surgical masks and disposable face-masks made of non-woven textiles.		6307.90
	☐ Gas masks with mechanical parts or replaceable filters for protection against biological agents. Also includes such masks incorporating eye protection or facial shields.		9020.00
	☐ Protective spectacles and goggles		9004.90
	☐ Plastic face shields (covering more than the eye area)		3926.20
	Gloves		
	☐ Plastic gloves		3926.20
	☐ Surgical rubber gloves		4015.11
	☐ Other rubber gloves.		4015.19
	☐ Knitted or crocheted gloves which have been impregnated or covered with plastics or rubber		6116.10
	☐ Textile gloves that are not knitted or crocheted		6216.00
	Other		
	☐ Disposable hair nets		6505.00
	Protective unisex garments made of plastic sheeting, textile reinforced plastics or textile backed plastics.		3926.20
	Protective unisex garments made of rubber sheeting, textile reinforced rubber or textile backed rubber.		4015.90
	Paper or cellulose garments and clothing accessories such as disposable paper hospital gowns, paper shoe covers etc. These are covered here provided that they are made of paper, paper pulp, cellulose wadding or webs of cellulose fibres. Please check with the Customs administration in the importing country if they are not solely paper or cellulose as they may be classified elsewhere.		4818.50
☐ Protective garments for surgical/medical use made up of felt or nonwovens whether or not impregnated, coated, covered or laminated (fabrics of heading 56.02 or 56.03). This includes spun-bonded garments.		6210.10	
Unisex protective garments for surgical/medical use made of woven textiles of that are impregnated, coated, covered or laminated with plastics.		6210.50	
Unisex protective garments made of rubberised textile fabrics.		6210.50	
III. Disinfectants and sterilisation products (For soaps, see "Section VI. Other Medical Consumables")	Alcohol solution	Undenatured, containing by volume 80% or more ethyl alcohol	2207.10
	Alcohol solution	Undenatured, 75% ethyl alcohol	2208.90
	Hand sanitizer	A liquid or gel generally used to decrease infectious agents on the hands, alcohol-based type.	3808.94
	Other disinfectant preparations	Put up in forms or packings for retail sale such as rubs and wipes impregnated with alcohol or other disinfectants.	3808.94
	Medical, surgical or laboratory sterilisers	Function by steam or boiling water	8419.20
	Hydrogen peroxide in bulk	Bulk H ₂ O ₂ whether or not with solidified with urea.	2847.00
	Hydrogen peroxide presented as a medicament	H ₂ O ₂ put up for internal or external use as a medicine, including as an antiseptic for the skin. Only covered here if in measured doses or in forms or packings for retail sale (including directly to hospitals) for such use.	3004.90
	Hydrogen peroxide put up in disinfectant preparations for cleaning surfaces	H ₂ O ₂ put up as cleaning solutions for surfaces or apparatus.	3808.94
	Other chemical disinfectants	Put up in forms or packings for retail sale as disinfectants or as disinfectant preparations, containing alcohol, benzalkonium	3808.94



Categories	Product names	Brief info	HS Classification	
IV. Oxygen Therapy equipment and pulse oximeters	Medical ventilators (artificial respiration apparatus)	chloride solution or peroxyacids, or other disinfectants. Provides ventilation by moving breathable air into and out of the lungs. This includes both: ventilator machines and compressible self-refilling ventilation bags that are normally supplied with a valve and mask (also known as 'bag valve mask' (BVM) ventilators).	9019.20	
	Extracorporeal membrane oxygenation (ECMO)	Provides prolonged cardiac and respiratory support by removing blood from the person's body and artificially removing the carbon dioxide and oxygenating red blood cells.		
	Continuous Positive Airway Pressure (CPAP) units	Positive airway pressure ventilators, which apply mild air pressure on a continuous basis, to keep the airways continuously open in people who are able to breathe spontaneously on their own, but need help keeping their airway unobstructed.		
	Bilevel positive airway pressure (BiPap or BPap) units	Similar to CPAP unit, except that the pressurized air is delivered at two alternating levels with a higher inspiratory positive airway pressure (IPAP) and a lower expiratory positive airway pressure (EPAP)		
	Oxygen concentrators (See "Section VIII. Other" for oxygen generating plants and "Section VI. Other Medical Consumables" for oxygen)	Devices designed to concentrate oxygen from ambient air and deliver the concentrated oxygen, typically through an attached nasal cannula (or prongs), to a patient requiring oxygen therapy. These differ from oxygen plant in that they supply oxygen directly to patients according to their specific needs.		
	Oxygen humidifiers for oxygen therapy applications	Medical devices that can be integrated into oxygen delivery systems to humidify supplemental oxygen when it is delivered at higher-than-standard flow rates, or the method of oxygen delivery bypasses the nose (e.g., through nasopharyngeal catheters).	9019.20	
	Oxygen delivery devices to supply oxygen from the device to the patient		Oxygen masks; Venturi masks; Oxygen tents; Oxygen head boxes; and Similar oxygen delivery devices	9019.20
			Nasal prongs (nasal cannulae): nasal cannulae consist of plastic tubes that end in two short tapered prongs that are placed in the nostrils for delivering oxygen.	9018.39
			Nasal catheter: a thin, flexible tube that is passed into the nose and ends with its tip in the nasal cavity for delivering oxygen.	9018.39
	Flowmeter, Thorpe tube for oxygen 0-15L/min	The Thorpe tube flowmeter is composed of inlet and outlet ports, a regulator, a valve and a clear tapered measuring tube. It is suitable for connection with various medical gas sources, such as centralized system, cylinders, concentrators or compressors. Standard (absolute, non-compensated) and pressure-compensated flowmeter versions, suitable for specific flow ranges.	9026.80	
Flow splitters	A device intended to distribute medical oxygen from a single source to multiple independent outlets.	9019.20		
Pulse oximeters	Devices for measuring the oxygen saturation of haemoglobin in arterial blood (SpO ₂). They use the principle of differential light absorption to determine SpO ₂ when the sensor (also called a probe) is applied to an area of the body (e.g. a finger, toe or earlobe).	9018.19		
V. Other medical devices and equipment	Computed tomography (CT) scanners	Uses a rotating X-ray machine to image thin slices of the body to diagnose diseases such as pneumonia.	9022.12	
	Ultrasound machines	Portable ultrasound machines are usually imported with their own specifically designed trolley and accessories	9018.12	
	Electrocardiograph	Portable electrocardiographs are normally presented with various accessories	9018.11	
	Multiparametric Patient Monitoring devices	Monitoring stations used for the continuous monitoring of <i>multiple</i> vital signs.	9018.19	
	Laryngoscopes	*It is noted that there is some variance between administrations as to the classification of endoscopes as either electro-	9018.19 or 9018.90*	



Categories	Product names	Brief info	HS Classification
		diagnostic apparatus or other medical apparatus – please check with the relevant Customs administration	
	Colorimetric end tidal CO ₂ detector	Sizes compatible with child and adult endotracheal tube. Single use.	9027.80
	Infrared thermometers		9025.19
	Stethoscopes		9018.90
	Magill intubation forceps	Angled forceps used to guide a tracheal tube into the larynx or a nasogastric tube into the oesophagus under direct vision	9018.90
	Intubation kits	Reusable intubation kits	9018.90
	Infusion pump*, with or without accessories	*It is noted that there is some variance between administrations as to the classification of infusion pumps as either pumps or other medical apparatus – please check with the relevant Customs administration	8413.19 or 9018.90*
	Electronic drop counter, IV fluids	Counts the drops and calculates real-time drop rate	9028.20
	Medical suction pumps	Used to clear the airway of bodily secretions	9018.90
	Medical drills for vascular access	May be presented with accessories	9018.90
	Kidney basins	Shallow kidney-shaped basins made of stainless steel and used for the collection of bodily discharges and other sanitary purposes	7324.90
VI. Medical Consumables	Medical oxygen* (* Some countries may require cylinders to be separately reported as well as the oxygen – check with the relevant Customs administration if unsure.)	Medical oxygen has as a minimum 82% pure oxygen, is free from any contamination, and is generated by an oil-free compressor. This subheading includes both compressed oxygen supplied in cylinders and liquid oxygen.	2804.40
	Wadding, gauze, bandages, cotton sticks and similar articles	Impregnated or coated with pharmaceutical substances or put up in forms or packings for retail sale for medical use.	3005.90
	Surgical tape	Self-adhesive, hypoallergenic	3005.10
	Transparent adhesive plasters		3005.10
	Soap	Liquid or powder form	3401.20
		Bar form	3401.11
	Syringes, with or without needles		9018.31
	Tubular metal needles and needles for sutures		9018.32
	Needles (except for tubular metal needles and needles for sutures), catheters, cannulae and the like	Includes, among other things: <ul style="list-style-type: none"> • endotracheal tubes (catheters), with or without cuffs; • Nasopharyngeal airways (catheters); and • Oropharyngeal airways (catheters). Endotracheal tube introducers (bougies or stylets) are also classified here by virtue of Note 2 to Chapter 90.	9018.39
	Intubation kits	Single use disposable intubation kits	9018.90
	Disposable emergency cricothyrotomy set	Set for performing an emergency incision or puncture through the skin and cricothyroid membrane to establish a patent airway during certain life-threatening situations	9018 (subheading will depend on set contents)
	Plastic hazardous waste disposal bags	Disposal bag for bio-hazardous waste, with "Bio Hazard" print, autoclavable polypropylene, 50 or 70 micron thickness	3923.29
	Urine bags	Plastic bags for collecting urine, with outlet tap, with non-return valve	3926.90
	Paper bed sheets		4818.90
	Conductive gel for use in an ECG or ultrasound procedure	Used between the body and the ECG or ultrasound instruments to reduce the body's impedance	3006.70
	Lubricating jelly	Lubricant for medical procedures	3006.70
VII. Vehicles	Wheelchairs	Carriages for disabled persons, whether or not motorised or otherwise mechanically propelled.	8713.10 8713.90
	Mobile clinics vehicles	Mobile clinics (medical) with operating theatre, anaesthetic equipment and other surgical apparatus.	8705.90
	Mobile radiological vehicles	Mobile radiological units (e.g., fitted with an examination room, dark room and complete radiological equipment).	8705.90
VIII. Other items	Medical or surgical furniture	Includes operating tables, examination tables, hospital beds with mechanical fittings, specially designed tables for instruments, anaesthetic or surgical supplies, and their parts.	9402.90
	Pressure Swing Adsorption (PSA) oxygen plant for a central	Large, onsite, central source of medical grade oxygen that is piped directly to terminal units within patient areas or used to	8421.39



Categories	Product names	Brief info	HS Classification
	oxygen supply system of medical grade oxygen.	refill cylinders. Plants adsorb nitrogen out of ambient air and filter out contaminants to provide a supply of oxygen that can be used in various oxygen therapy apparatus. They do not act as therapeutic devices themselves, but simply create a supply of oxygen for use in therapeutic devices.	
	Empty medical gas cylinders, portable, for oxygen, fitted with a valve and a pressure and flow regulator	Steel or steel alloy	7311.00

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