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Trade policy reflections beyond the COVID19 outbreak

Editor:
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TRADE POLICY REFLECTIONS BEYOND THE COVID19 OUTBREAK

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ABSTRACT

This note provides an analysis on the implications of the COVID19 on a number of key areas in international trade policy. It reviews the range of existing literature and present findings from some in-house analysis conducted by DG TRADE.

It provides clear evidence in support of the role of trade in the post COVID19 era while highlighting how harmful protectionist measures must be avoided in order to stimulate a successful economic recovery.

Finally, it focuses on bringing together the most recent and persuasive facts and figures to show how embracing new technologies along with an open trade policy will help solve issues with global value chains and improve their preparedness and resilience to any future shocks.

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This paper is the result of a collective effort by the Chief Economist team in DG TRADE: Lars Nilsson, Brian Kennedy, Alessandra Tucci, Beatriz Velazquez, Stefan Nolte and Zornitsa Kutlina-Dimitrova. The views expressed in this paper are those of the authors and do not necessarily reflect the views of the European Commission.

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EXECUTIVE SUMMARY

Using the latest data and analytical research, this note highlights the potential impact of the COVID19 outbreak on EU and international trade policy. The COVID19 pandemic will have a dramatic impact on global GDP and trade. Latest forecasts from the European Commission show that the EU economy will contract by -7.4% in 2020 while global GDP will fall by -3.5%. In addition, research shows that over 140 million people in the developing world could fall into extreme poverty (measured against the $1.90 poverty line) in 2020.

In-house analysis performed by DG TRADE's Chief Economist Unit estimates a decrease of between 10%-16% in global trade for 2020. For the EU27, the predicted reduction is expected to be between 9%-15% for extra-EU27 exports and 11%-14% for extra-EU27 imports (goods and services combined). DG TRADE also estimates that about 70% of EU exports and imports of services via mode 1 might still find their markets, but 30% might be at risk.

Trade has a vital role to play in the post COVID19 era. Total EU trade has increased by almost 25% in the last 5 years alone. 36 million European jobs are directly or indirectly, supported by trade. The share of total imports and exports for goods and services in EU GDP is 35.2%, while the share of intermediate goods in extra-EU imports was 60.3 % and 49.3 % for extra-EU exports.

The role of imports cannot be understated. Just over a quarter (27.1%) of EU firms engaged in extra EU trade were two-way traders (both importers and exporters). In value terms two-way traders accounted for 95% of all goods traded in 2017. Analysis by DG TRADE found that EU import openness has generated a 7.8% or €1.2 trillion real income gain compared to a situation in which no imports would take place.

SMEs account for 87% of total exporting EU companies and support over 13 million jobs in Europe. In normal circumstances, exporting SMEs are individually vulnerable to trade shocks so it is vital to ensure that SMEs survive and adapt in the post COVID19 era. But collectively, given their dispersion across geographical regions, product span and diversity, having a large share of diversified SMEs is also a source of risk mitigation and resilience.

A model of 'open strategic autonomy' should be pursued in order to create an environment that allows for economic competitiveness and growth along with the internal measures that are needed to strengthen the European economy and defend it from unfair and abusive practices. Protectionism is not the answer and DG TRADE research on the impact of a worldwide increase in tariffs up to legally allowed bound rates coupled with an increase in the cost of traded services predicts that the annual worldwide real income losses could be US$211 billion. This would also lead to a fall of US$606 billion in the total trade of goods and services.

The COVID19 outbreak has shown that EU firms in certain sectors are highly dependent on inputs from China. Textiles (46.2%), electrical equipment (46.1%) and electronic products (39.7%) are the EU27 products most reliant on inputs from China. These sectors also account for the largest share of inputs sourced abroad.

Keeping the supply chains of COVID19 related medical products functioning is of vital importance. Estimates from the World Bank show that the impact of current export restrictions could increase the price of medical masks by 20.5% while other products could experience smaller increases. The EU imported €380 billion worth of COVID19 related medical products from third countries about in 2019 and is the world's second largest importer (and largest exporter) of these products.

Global food markets remain relatively stable and well stocked and so far, food prices have been unaffected. However, the current crisis has led to 17 countries to introduce export restrictions on food. Protectionist policies from the 2007-2008 food price crisis saw the global prices of rice and wheat increase by 40% and 30%.

Firms will be forced to rethink their value chains, as they will need to diversify their supplier base to protect against disruptions in production and this rethinking of GVCs will create opportunities for new investment destinations and suppliers. UN Comtrade data shows that buyers around the world have been able to find alternative sources of supply from other non-traditional exporters of PPE at very short notice during the current pandemic.

DG TRADE is already actively engaged in the enforcement and implementing an ambitious trade policy plan. The latest internal estimates show that the removal of 100 barriers over the period 2014-2018 has led to an increase of about 60% of the EU exports of the products previously affected by barriers towards the partners imposing them. This correspond to an additional €8 billion of EU exports in 2019.

Innovation and new production technologies have led to the emergence of newly traded goods and services, which in turn contributes to faster trade growth. In 2017, 65% of global trade was in categories that did not exist in 1992. 3D printing (3DP) has played a direct role in easing the pressure on supply chains and governments during the COVID19 outbreak. However 3DP revenues account for less than 0.1% of global manufacturing revenues. The extent to which the technology will penetrate mainstream industries and markets in the future is unclear.

While there is a wealth of research and data at an aggregated and sectorial level, more detailed firm-level data is required in order to fully understand the impact of the coronavirus outbreak on EU trade, particularly in sectors where production is fragmented globally. Firm-level trade statistics may also improve communication, leading to a more meaningful engagement with stakeholders. This is turn could help reduce public misperceptions about trade policy and could help bring current trade policy in line with global value chains.

1. POST-PANDEMIC INTERNATIONAL TRADE

The outbreak and spread of the COVID19 pandemic will have a devastating impact on the global economy. Governments across the world have introduced measures that shut down businesses temporarily and have restricted travel and the movement of people. These measures have led to sharp contractions in the level of output, household spending, investment and international trade.

1.1. The impact of COVID19 has harmed both GDP and trade

The latest Economic Forecast from the European Commission [1] predicts that the EU economy will contract by -7.4% in 2020 while global GDP will fall by -3.5%. GDP in the US is expected to fall by -6.5% while GDP in China is expected to grow by 1% (see table 1).The pandemic will have a negative impact on all Member States, ranging from -4.3% in Poland to -9.7% in Greece.

The disruptions to the global economy are assumed to be concentrated mostly in the second quarter of 2020. **It is then expected to pick up, assuming that containment measures will be gradually lifted and that after these measures are loosened the pandemic remains under control.** It also assumes that the monetary and fiscal measures implemented by Member States and the EU are effective limiting permanent damage to the economy. The forecast anticipates an economic recovery in 2021 with world growth expected to be 5.2% while EU GDP is expected to increase by 6.1%. Despite this historically high EU growth rate, output in 2021 would be almost 2 percentage points lower than the pre-pandemic level in 2019.

Table 1: World GDP growth and projections, selected economies, (real GDP, % change)

	Global	Advanced Economies	Emerging and Developing Economies	EU 27	USA	China
2019	2.9	1.7	3.7	1.5	2.3	6.1
2020^{P}	-3.5	-6.4	-1.3	-7.4	-6.5	1.0
2021^{P}	5.2	5.0	5.3	6.1	4.9	7.8

Source: European Economic Forecast, spring 2020, P=Projected growth.

The reduction in economic activity following the COVID19 outbreak will lead to a sharp contraction in international trade in 2020. In-house analysis performed by DG TRADE's Chief Economist Unit estimates a decrease of between 10%-16% in global

[1] European Commission (2020), 'European Economic Forecast, Institutional paper No. 125, May 2020, ISSN 2443-8014. Available at: https://ec.europa.eu/info/sites/info/files/economy-finance/ip125_en.pdf

trade for 2020.[2] For the EU27, the predicted reduction is expected to be between 9%-15% for extra-EU27 exports and 11%-14% for extra-EU27 imports (goods and services combined). In absolute terms, using the latest available statistics, this amounts to a reduction in extra-EU27 exports between 282-470 billion EUR and a decrease in extra-EU27 imports between 313-398 billion EUR (goods and services combined).

Exports of primary sectors (other than energy) turn out to be less affected than manufacturing sectors, although most of which see export contractions by 15%. In particular, transport equipment and electrical machinery exports turn out to be the most affected sectors. The WTO secretariat has also recently simulated the potential effects of the COVID19 pandemic on international trade, using a different methodological approach. They forecast that world merchandise trade could fall by between 13% and 32% in 2020, depending on assumptions about the length and severity of the COVID19 crisis.[3]

1.2. Digital services trade is likely to be less affected by the pandemic

Trade in services by modes of supply as produced by WTO and Eurostat provides an opportunity to predict how the current crisis can change EU services trade. Assuming that Covid-19 restrictions primarily affect trade in services via mode 2 (consumption abroad) and mode 4 (presence of natural persons), but also mode 1, cross border trade in transport services linked to passengers, **DG TRADE estimates that about 70% of EU exports and imports of services via mode 1 might still find their markets, but 30% might be at risk, see Figure 1.**[4]

Social distancing may become the new normal and firms will need alternative solutions to ensure their products can be sold and traded across borders without face-to-face interaction. E-commerce and online retail will become increasingly important for the survival of many firms. Data collected by Emarsys and GoodData shows that ecommerce revenue increased by 73% in Europe in April 2020 compared to the same period last year while online retail sales grew by 65%.[5]

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[2] European Commission (2020), 'The impact of the Covid-19 pandemic on global and EU trade' Chief Economist Team, DG Trade, European Commission, Brussels, 27 May 2020.

[3] WTO (2020) Trade set to plunge as COVID-19 pandemic upends global economy, Press/855Press Release, 08 April 2020. Available at: https://www.wto.org/english/news_e/pres20_e/pr855_e.htm

[4] Services trade via mode 3 (commercial presence abroad) is expected to be unaffected and to continue as normal. Therefore, mode 3 services are not included in these calculations.

[5] Emarsys and GoodData, COVID-19 Commerce Insight, 6 May 2020. Available at: https://ccinsight.org/

Figure 1: EU 28 services exports by sector and by modes of supply, 2017, billion euro

Source: Author's calculations based on the WTO TISMOS database.

Latest data shows that almost one-fifth of EU online consumers buy from another Member state.[6] The European Union has carried out a number of initiatives to boost e-commerce and to create new opportunities for both retailers and consumers. These include simplified VAT rules making it easier to buy and sell goods online[7], reducing the costs of cross-border parcel delivery[8] and revising consumer protection rules to include online purchases[9].

[6] European Commission, (2018) 'Fact sheet-E-commerce in the EU', 28 November 2018.

[7] https://ec.europa.eu/taxation_customs/business/vat/modernising-vat-cross-border-ecommerce_en

[8] https://www.europarl.europa.eu/doceo/document/A-8-2017-0315_EN.html?redirect

[9] https://www.europarl.europa.eu/legislative-train/theme-internal-market-and-consumer-protection-imco/file-modernisation-of-consumer-protection-rules

The continued implementation of the WTO's Trade Facilitation Agreement (TFA) could address some of the challenges associated the COVID-19 pandemic.[10] The TFA has several provisions that promote the adoption of improved export, import and transit procedures. For example, the TFA includes provisions that provide for a de minimis shipment value or dutiable amount for which customs duties and taxes will not be collected. For certain WTO members this also extends to the VAT and other internal taxes. The EU has also recently introduced a number of simplifications and digital improvements in customs procedures. For instance, since 1 June 2020, the EU has a new electronic system to manage special trade procedures, such as inward and outward processing trade. This is a welcome development for a non-negligible share of EU trade[11] and for new EU companies willing to engage in trade, notably as part of global supply chains.

1.3. Could developing countries be worse affected?

Projections from its latest European Economic Forecast estimate a -1.3% fall in GDP in emerging and developing countries in 2020 compared to a -6.4% drop for advanced economies (see Table 1). So far, the vast majority of reported COVID-19 infections has been in developed countries however a major COVID-19 outbreak in developing countries would most likely have more significant negative effects than in any developed country. The housing situation in cities and the absence of social safety nets mean that many people cannot afford to stay home from work. Hence, there would be difficulties in enforcing social-distancing rules and lockdown measures and already weak health-care systems would likely quickly become overwhelmed by an outbreak, especially in densely populated areas.

Declining demand for oil and commodities and a collapse in tourism will depress revenues and most governments have no fiscal buffers to stimulate their economies in the wake of confinement measures. Laborde et al (2020)[12] **estimate that over 140 million people in the developing world could fall into extreme poverty (measured against the $1.90 poverty line) in 2020—an increase of 20% from present levels**. Without adequate support, this global health crisis could thus cause a major poverty and food crisis. The IMF acknowledged the gravity of the situation and on Monday 13 April, it approved immediate debt service relief for an initial six months for 25 countries to help them channel more of their scarce financial resources towards vital emergency medical and other relief efforts.

[10] WTO (2020), 'E-Commerce, Trade and the Covid-19 Pandemic' Information note, 4 May 2020.

[11] Cernat L, and M Pajot (2012) 'Assembled in Europe: The role of processing trade in EU export performance', VoxEU, 17 September 2020.

[12] Laborde D, W Martin and R Vos (2020) 'Poverty and food insecurity could grow dramatically as COVID-19 spreads', International Food Policy Research Institute Blog: Research Post, April 16, 2020.

Box 1: Increasing the participation of LDCs in global supply chains

There is clear evidence that existing preferential schemes contributed significantly to boosting least developed countries (LDC) exports.[13] In fact, exports to the European Union from developing countries using special tariff preferences under the EU's Generalised Scheme of Preferences (GSP) reached a new high of €69 billion in 2018.[14] Many seem to believe that there is little the multilateral trading system could further offer LDCs as they have already obtained fairly generous market access to key markets under the current preferential schemes. Given that the LDC exported value-added is used further down the global supply chain as part of third country exports still facing tariffs, one could envisage a global preferential scheme based on "value-added", i.e. products originating in any WTO members should receive an "LDC preferential treatment" proportionate to the value of LDC's inputs content embodied in their exports. If the LDC preferential market access were changed from a simple "LDC direct export" approach to a "GVC approach", LDC exports would receive a considerable boost and market premium under such a "GVC for LDCs" scheme.[15]

Research from CEPR highlights that most developing countries rely heavily on imports to meet their needs of medical supplies essential. This makes developing countries extremely vulnerable to changes in policies by exporters. As a result of export restrictions on key COVID-19 products, access to medical supplies and other critical products could be disrupted for developing countries that need them urgently. Taking multiplier effects into account they estimate that export restrictions could increase prices of COVID-19 relevant goods by 23% on average. [16]

[13] Nilsson L and E Davies (2020) "A comparative analysis of EU and US trade policies towards least developed countries and the African Growth and Opportunity Act beneficiaries", Development Policy Review, Volume 38 Issue 5, forthcoming, 2020. and Klasen, S., I. Martinez-Sarzoso and F.Novak Lehman, (2016), 'Trade Preferences for Least Developed Countries. Are they Effective? Preliminary Econometric Evidence', CDP Policy Review No 4, October 2016

[14] European Commission (2020), 'Report on the Generalised Scheme of Preferences covering the period 2018-2019, Joint Report to the European Parliament and the Council, Brussels, JOIN(2020) 3 final, February 2020.

[15] Antimiani, A and L Cernat (2018) "How to enhance the participation of LDCs in global supply chains: A Global Supply Proposal for a multilateral preferential scheme" 21st Annual Conference on Global Economic Analysis, Cartagena, Colombia. June 2018.

[16] Espitia A, N Rocha, M Ruta, (2020), 'Trade and the COVID-19 crisis in developing countries', Centre for Economic Policy Research Policy Portal, 09 April 2020

2. THE IMPORTANCE OF TRADE TO THE POST COVID RECOVERY

Although future projections for the global economy and trade are pessimistic, global trade openness still remains a key driver of economic prosperity worldwide and complementing this with robust enforcement actions will be key in the EUs pursuit of open strategic autonomy. In times of global crises, trade has a dual impact. On one hand, openness to trade may accelerate the transmission of economic shocks from one country to another. Global crises however cannot be predicted and one cannot preventively insulate from global trade in advance.

On the other hand no country can survive in autarky, even the most protected countries still depend on trade and more importantly, trade plays a critically positive role in the path to recovery. The economic evidence suggests that when countries remain open to trade, a trade-led recovery dampens the negative effects of a systemic, global crisis. Trade contributes to growth both in the context of a positive demand shock and dampens output loss in the context of a global crisis.[17] The effect captured also encompasses the policy reaction triggered by the crisis and its consequences on the real economy.

2.1. Trade has been a key driver of economic prosperity in the EU

Data for 2019 shows that total exports for goods and services in the EU are worth €3.1 trillion while total imports of goods and services are €2.8 trillion. **Total trade has increased by almost 25% in the last 5 years alone.** Thirty six million European jobs are, directly or indirectly, supported by trade and there has been a 12% wage premium as a result of trade-induced competitiveness[18]. **The share of total imports and exports for goods and services in EU GDP is 35.2%,**[19] while the share of intermediate goods in extra-EU imports was 60.3 % and 49.3 % for extra-EU exports.[20]

Imports and exports cannot be considered separately - just over a quarter (27.1%) of EU firms engaged in extra EU trade were two-way traders (both importers and exporters). [21] However, **in value terms two-way traders accounted for 95% of all goods traded** in

[17] Pentecôte J and F Rondeau (2015) Trade spillovers on output growth during the 2008 financial crisis, International Economics, Volume 143, October 2015, Pages 36-47

[18] Kutlina-Dimitrova Z., J M. Rueda-Cantuche, A F. Amores and M. Victoria Román (2018) 'How Important are EU Exports for Jobs in the EU?', DG TRADE. Chief Economist Note no 4/2018, Brussels: Available at: http://trade.ec.europa.eu/doclib/docs/2018/november/tradoc_157551.pdf

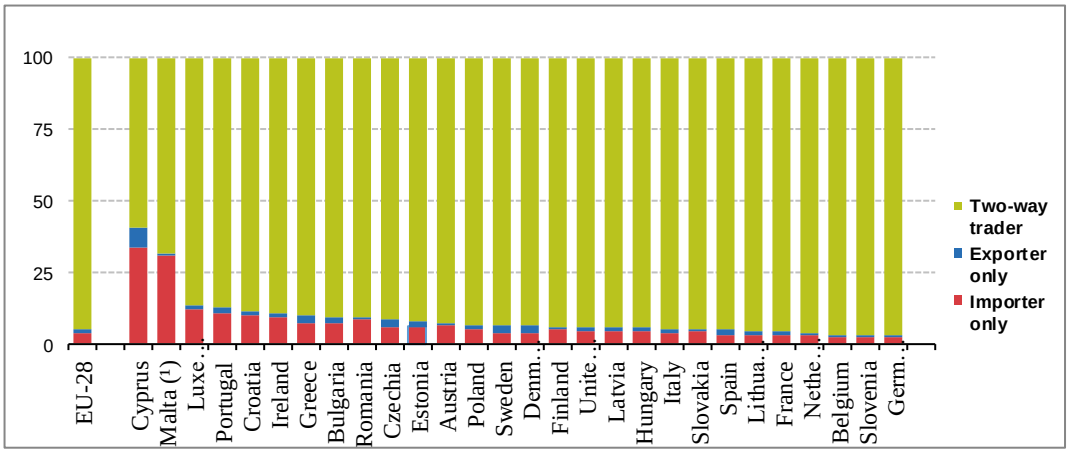
[19] Sources: Eurostat (Comext, Statistical regime 4), Eurostat (bop_its_tot; bop_its6_tot), IMF DOTS, WTO, IMF World Economic Outlook (April 2019)

[20] Source: Eurostat https://ec.europa.eu/eurostat/statistics-explained/index.php/International_trade_in_goods_by_type_of_good

[21] Source: Eurostat https://ec.europa.eu/eurostat/statistics-explained/index.php/International_trade_in_goods_by_enterprise_characteristic

2017 (see figure 2). The highest proportions of two-way traders were recorded for a wide range of different manufacturing activities, whereas for most services it was more commonplace to find that the largest proportion of enterprises engaged in trade were importers only.

Figure 2: Value of trade by type of trader, 2017 (% of total)



Source: Based on Eurostat (online data code: ext_tec06) (1) data for Malta is from 2015.

2.2. Imports are as important as exports

For many decades, EU trade policy has been striving for a greater, gradual trade openness to promote our exports and imports and to serve as an engine for growth and prosperity. However, the importance of imports has rarely been recognised at its true value in policy debates despite the evidence that two-way traders accounted for the vast majority of the value goods traded outside the EU.

Exports are seen as a metric for successful integration in the global economy, but imports are often seen as a liability. This debate gets particularly tense during some free trade agreement (FTA) negotiations. However, imports need to be looked at through another lens. We should not produce goods using inefficiently scarce domestic resources when someone else can do it cheaper and better. It is through imports that a country taps into others countries' resources, production of new and/or cheaper goods and services, ideas and technologies, etc. Imports also lead to lower consumer prices, boost competition, and greater quality and product variety for importing companies and consumers.

Arkolakis et al (2012)[22] show that welfare (real income) changes of trade can be calculated using (i) the share of expenditure on domestic goods and (ii) an elasticity of imports with respect to variable trade costs. Formally, the change (Δ) in real income (RI) equals $\Delta RI=\Delta\lambda^{(-1/\varepsilon)}$, where Δλ equals the change in the share of domestic expenditures and ε_{is} the elasticity.

We build on this methodology and use it to assess the real income gains for the EU economy from imports over time. Based on data on EU GDP, total EU imports and EU imports from non-FTA partners, we provide estimates of the real income gains resulting from EU trade openness in 1995 and in 2017, respectively, compared to autarky, using three different elasticities (-3, -5 and -10).

The results point to that in 2017, **EU import openness has generated a 7.8% or €1.2 trillion real income gain compared to a situation in which no imports would take place** (i.e. autarky). This figure is up from 4.3% in 1995. The greater EU openness to imports in 2017 compared to the situation in 1995 has increased EU income by about €550 billion or more than on average €1,000 per EU citizen. EU trade policy, including negotiations of FTAs and subsequent enlargements of the single market have made the EU better off. Depending on how we measure it, the additional imports generated by EU FTAs have added between €75 billion and €300 billion to EU total income.

Imports are part of our everyday life and therefore an important element for our individual well-being. They are also part of our economic success by supporting our EU exporting companies to remain competitive globally. The policy message from these economic facts is clear: imports are not a liability and curbing imports through protectionist measures will only serve to lower our welfare.

2.3. SMEs: The engine behind EU export performance

EU SMEs play an important role in international trade. Eurostat statistics show that over 615,000 SMEs exported goods to various destinations across the world.[23] This represents 87% of total exporting EU companies and shows that SMEs are an important driving force for EU export performance. In addition, over 1 million SMEs engage in intra-EU exports and these account for 35% of the total value of intra-EU exports. In normal circumstances, exporting SMEs are individually vulnerable to trade shocks as they typically export to only one or two foreign markets and have a very limited product portfolio and client base. But, collectively, having a large number of competitive SMEs engaged in trade is also a source of diversity and risk mitigation in global supply chains.

[22] Arkolakis, C., Costinot, A., and A. Rodríguez-Clare (2012), New Trade Models, Same Old Gains? American Economic Review, Vol. 102, No. 1, pp. 94–130. http://dx.doi.org/10.1257/aer.102.1.94.

[23] Eurostat TEC database (tables ext_tec01, ext_tec03, ext_tec10). Last updated July 2019.

It is therefore vital that SMEs survive and adapt in the post COVID19 era, as they can be a key component in the road to economic recovery.

A recent DG TRADE Chief Economist note[24] finds that EU SMEs exporting goods seem to be more competitive than the OECD average in sectors of medium digital intensity[25]. When compared to the large EU firms, it is striking that the SMEs are competitive in sectors characterised by medium-high digital intensity, where the EU large firms seem to have a comparative disadvantage in extra-EU export. It also finds that **EU exporting SMEs support over 13 million jobs in Europe,** with goods and services exports having a similar contribution.

Research from the World Bank and the OECD[26] on a selection of OECD countries shows that the indirect contribution of SMEs in global value chains is sizable and significantly greater than what the value of direct exports would suggest. Accounting for the contribution that SMEs make to exports as upstream producers, SMEs account for more than half of the total exports of domestic value added. At the total economy level, the contribution of SMEs nearly doubles, from around 16-33% of total exports of domestic value added. The means that the current major disruption to intra-EU supply chains will also severely affect the activity of EU SMEs.

3. STRONG VALUE CHAINS RELY ON TRADE OPENNESS

The benefits of trade to the EU economy are clear to see and trade openness is an important objective and a key driver of future economic prosperity in Europe. However, in response to the COVID19 pandemic, many national governments have taken measures that restrict trade flows. Latest Global Trade Alert data shows that 83 countries have executed a total of 150 export controls on COVID19 medical equipment since the start of 2020.[27] The WTO has encouraged its members to exercise maximal restraint in the use of export restrictions and other measures that could disrupt supply chains and has also

[24] European Commission (2020) 'The role of SMEs in extra-EU Exports: Key Performance Indicators' Chief Economist Note 1/2020, DG TRADE, Brussels, May 2020.

[25] Sectors of medium digital intensity include: leather, coke and refined petroleum products, machinery, furniture, paper, wood, electrical equipment, textiles, pharmaceuticals, chemicals, mineral products, fabricated metal products, rubber, printing and reproduction of recorded media and other manufacturing

[26] OECD and The World Bank (2017), Inclusive Global Value Chains: Policy Options in Trade and Complementary Areas for GVC Integration by Small and Medium Enterprises and Low-Income Developing Countries, The World Bank, Washington, D.C., Available at: https://doi.org/10.1787/9789264249677-en

[27] Source: Weekly data collected by the Global Trade Alert team in a joint project with the European University Institute and the World Bank. Last updated on 08 May 2020.

called on WTO members to improve transparency on any new trade-related measures introduced as a result of the COVID19 pandemic.[28]

The current crisis has also exposed problems in global value chains (GVCs) as firms and sectors that are highly integrated have been negatively affected by disruptions to their transport and distribution networks while reduced economic activity has seen the demand for exports decline. Measures such as export bans further damage the functioning of GVCs.

Reshoring of production has been discussed as a possible strategy to counteract these negative effects as firms seek to shorten their supply chains and move production closer to final markets and consumers. However, as outlined in Section 2.2 of this report, imports are important and reducing our dependency on imports will only serve to lower our welfare. An open trade policy will ensure that firms with highly interconnected and diversified GVCs that produce easily substitutable goods are better prepared in times of economic uncertainty. A model of 'open strategic autonomy' should be pursued in order to create an environment that allows for economic competitiveness and growth along with the internal measures that are needed to strengthen the European economy and defend it from unfair and abusive practices.

3.1. Transparency and coordination boost trade policy effects, not protectionism

The impact of protectionist measures on the world economy and trade is severe. Recent analysis by the European Commission and the World Bank[29] estimated the wide-ranging costs of global protectionism. The authors assessed the impact of a coordinated global withdrawal of tariff commitments from all existing bilateral/regional trade agreements, as well as from unilateral preferential schemes coupled with an increase in the cost of traded services reflecting the value of unbinding services commitments. **This scenario predicts that the annual worldwide real income losses could be 0.3% or US$211 billion. The impact on global trade is more pronounced as exports and imports of goods and services are expected to decline by 2.1% or more than US$606 billion relative to the baseline**.[30]

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[28] WTO (2020), 'Export Prohibitions and Restrictions' Information note, 23 April 2020. Available at: https://www.wto.org/english/tratop_e/covid19_e/export_prohibitions_report_e.pdf

[29] Kutlina-Dimitrova, Z & C. Lakatos, (2017), 'The Global Costs of Protectionism' Policy Research Working Paper No. 8277. World Bank, Washington, DC. World Bank

[30] The analysis also found that a worldwide increase in tariffs up to legally allowed bound rates coupled with an increase in the cost of traded services would translate into annual global real income losses of 0.8% or more than US$634 billion relative to the baseline after three years. The distortion to the global trading system would be significant and result in an annual decline of global trade of 9% or more than US$2.6 trillion relative to the baseline in 2020.

Tariff increases are only one kind of protectionist measure. Government procurement, intellectual property rights, access to raw materials, services and investment, regulatory issues/standards, customs-related barriers are also prevalent and detrimental to EU trade. Analysis by European Commission[31] found that behind-the-border barriers or "murky protectionism" introduced after the 2008-2009 global financial crisis affected around €100 billon of EU exports.

While protectionism abroad has been on the rise, a lot can be done at home to reduce red tape and unilaterally improve our trade performance. A joint report by the DG TRADE and the ITC[32] found that around 20% of issues with non-tariff measures (NTM) declared by exporting companies arise in the EU or in the Member States before shipping goods abroad. This shows that better coordination of trade activities, increased transparency and platforms to boost the use of EU trade policy tools are key to ensuring the functioning of supply chains.

We entered this new crisis in the middle of a bilateral trade war that has already penalised trade and GDP growth prospects. An analysis by FTI consulting[33] using the dynamic GTAP model shows that the tariffs on aluminium and steel coupled with retaliatory measures by trading partners and Trump's retaliatory tariffs on Chinese imports. It finds that US annual GDP could decrease by 0.26 percentage points compared to a situation without the trade war while Chinese GDP is expected to contract by 0.19 percentage points. In addition, we are in the middle of the worst existential crisis for the WTO in its history. The absence of rules or doubts about their enforceability has already generated uncertainty. This is important to remember when analysing the impact of any future issues and problems for global growth and trade as the current international trade climate was already facing serious challenges.

3.2. Global value chains vulnerability and global interdependencies

Sectors and countries with highly interconnected global value chains (GVCs) function seamlessly in normal situations, but they are vulnerable in times of economic crises. Restricted or reduced access to imported intermediates and foreign value-added content can cause major disruptions in supply chains and production. This was the case in 2010 when the Icelandic volcano eruption caused two Nissan manufacturing factories came to

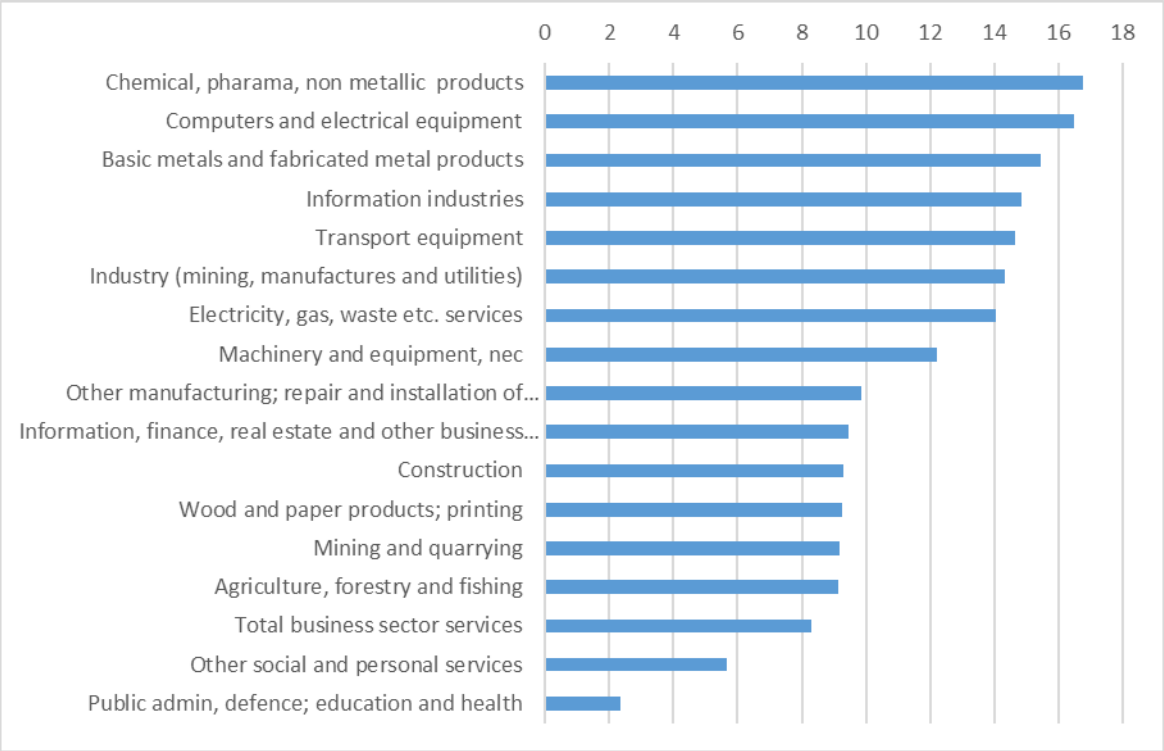
[31] Cernat, L and M. Madsen, (2011) 'The impact of crisis-driven protectionism on EU exports: The "Russian doll" effect,' 23 March 2011, VoxEU and Baldwin, R. and S. Evenett (2009), 'The collapse of global trade, murky protectionism, and the crisis: Recommendations for the G20', March 2009, VoxEU.

[32] European Commission & International Trade Centre (2016), 'Navigating Non-Tariff Measures: Insights from a Business Survey in the European Union', Geneva: ITC/EC, 2016, xi, 53 Doc. No. MAR-16-66.E. Available at: https://trade.ec.europa.eu/doclib/docs/2016/december/tradoc_155191.pdf

[33] FTI consulting (2018), 'The Economic Impact of Steel and Aluminium Tariffs', August 2018

a standstill because they ran out of air pressure sensors which were supplied from Ireland.[34] Figure 3 shows that **EU exports are reliant on foreign value added content in chemical and pharmaceutical products, electronics and metals**.

Figure 3: Foreign value added share of gross EU27 exports, 2015, (%)



Source: Authors' calculations, based on the WTO-OECD TiVA database.

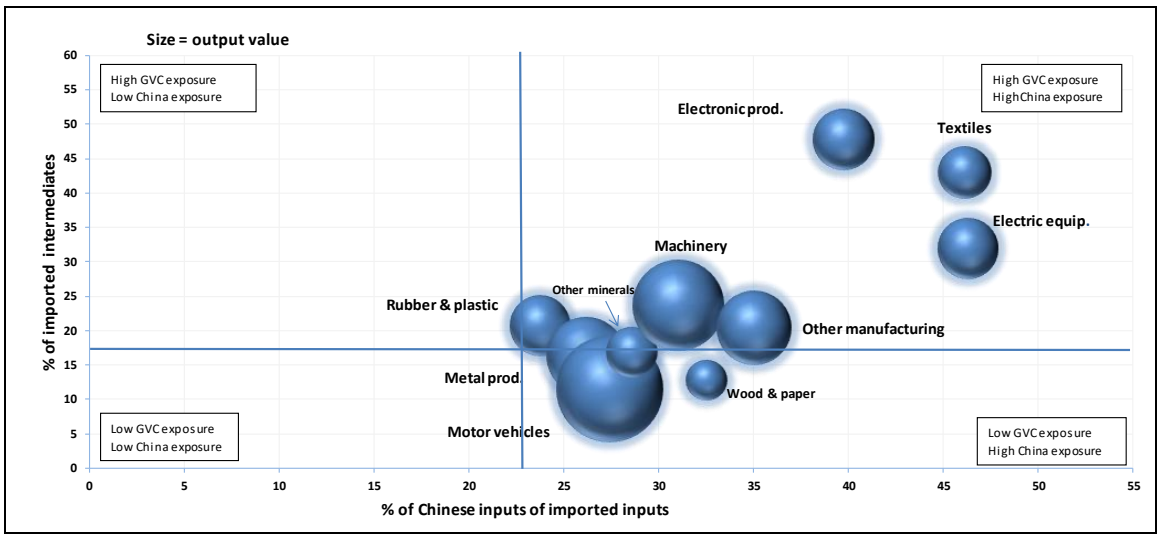
What the COVID19 crisis has taught is that EU firms in certain sectors are highly dependent on inputs from China and value chain disruption was a concern even when COVID19 was mostly confined to China. Figure 4 highlights the exposure of EU27 global value chains to Chinese inputs. It shows the top 10 sectors that are reliant on inputs from China, relative to their share in total imported inputs. The bubble size indicates the total output value of the sector in the EU27.

The figure is divided into four quadrants that are split by the average share of imported intermediates in EU27 value chains (25%) and the average share of Chinese inputs in imported intermediates (23%). While the EU27 mining and energy sectors are heavily reliant on imported inputs, they are omitted, as the share of these inputs imported from

[34] https://www.theguardian.com/business/blog/2010/apr/20/nissan-suspends-car-production-volcano-ash-cloud

China is minuscule. **Textiles (46.2%), electrical equipment (46.1%) and electronic products (39.7%) are the EU27 products most reliant on inputs from China. These sectors also account for the largest share of inputs sourced abroad**.

Figure 4: Chinese share of EU imports of intermediates, 2015



Source: Authors' calculations, based on the WTO-OECD TiVA database.

One of the main challenges facing a number of economies at the moment is to keep the supply chains of essential medical products flowing. Countries are consequently facing supply shortages of essential medical equipment and protectionist national trade policies have further aggravated this problem. Investment is needed to increase production but international trade will also play a key role to ensure the efficient functioning of these supply chains. Individual countries cannot provide the inputs, manufacturing and innovation required in those production on their own. Spreading these functions across a diverse supply chain is a more sensible and secure approach.

A recent WTO paper[35] examining the trade in COVID19 related medical products shows that **imports and exports of medical products totalled about $2 trillion (including intra-EU trade) and account for approximately 5% of total world merchandise trade in 2019**. An individual country can be a large exporter as well as a large importer of medical products so there is there is a strong interdependence in trade associated with the these products. Germany, the USA, and Switzerland supply 35% of medical products while on the import side the USA and Germany along with China account for 34%.

[35] WTO (2020), Trade in Medical Goods in the Context of Tackling COVID-19. April 2020. Available at: https://www.wto.org/english/news_e/news20_e/rese_03apr20_e.pdf

OECD calculations[36] show that Germany imports €0.7 for every euro of German exports of COVID-19 goods while in the US, for every dollar of COVID-19 imports, the US exports $0.75.[37]

In terms of specific medical products, China accounts for 25% of world exports of facemasks, and together with Germany and the US, the three contribute to almost half of the world facemask supply. Breathing apparatus, including respirators and ventilators, are supplied by a small number of countries notably, Singapore, which has 18% market share, followed by the US with 16%, Netherlands 10%, and China 10% so any disruption in exports from these economies will have a major impact on the global availability of these products. The realisation that a small number of countries are responsible for the production of essential medical equipment has led to calls urging more self-reliance and reshoring.

Table 2 shows that the EU imported €380 billion worth of COVID19 related products from third countries about in 2019. **While the EU is the world's second largest importer (and largest exporter) of these essential medical equipment, internal EU trade in COVID19 related products among EU Member States represents a larger share of imports and was valued at €231 billion in 2019, thereby indicating a certain degree of EU self-sufficiency in these products.** The EU's largest external trading partners in terms of imports are the US, Switzerland and the UK. Combined, these account for €84 billion or more than 66% of external EU imports in COVID19-related products. In terms of product groups, the US is the largest supplier to the EU in all items apart from Personal Protective Products were China accounts for 36% of imports.

[36] Using the World Customs Organisation list of COVID19-related goods and BACI data.

[37] IMF, ITC, OECD, UNCTAD, WB, AND WTO (2020) 'Trade and Investment Working Group (TIWG) Report on COVID-19 crisis: implications for trade and investment.'

Table 2: EU27 imports of COVID19-related products, by main partners, 2019

Partner	Medicines (Pharmaceuticals)		Medical Supplies		Medical Equipment		Personal Protective Products		Total	
	Imports € billion	Share of total %	Imports € billion	Share of total %	Imports € billion	Share of total %	Imports € billion	Share of total %	Imports € billion	Share of total %
Extra EU27	**71**	**100%**	**25**	**100%**	**18**	**100%**	**13**	**100%**	**127**	**100%**
USA	19	27%	11	44%	7	36%	2	15%	39	30%
Switzerland	25	36%	2	8%	2	9%	1	6%	30	23%
United Kingdom	9	13%	2	10%	2	9%	2	16%	16	12%
China	1	1%	2	8%	2	12%	5	36%	10	8%
Japan	1	1%	1	3%	1	6%	0	3%	3	3%
South Korea	2	3%	0	1%	0	2%	0	3%	3	3%
Canada	1	2%	0	1%	0	1%	0	1%	2	2%
Mexico	0	0%	1	4%	1	7%	0	1%	2	2%
India	1	2%	0	1%	0	1%	0	1%	2	1%
Intra EU27	**143**	**100%**	**37**	**100%**	**20**	**100%**	**31**	**100%**	**231**	**100%**

Source: ISDB-Comext. Note: Product definition comes from the WTO.

This data shows that there is a strong global interdependence in the production of COVID19-related medical products. Policies such as export restrictions are harmful and can raise the prices and delay the production of these essential products. **Estimates from the World Bank[38] show that the impact of current export restrictions as demand for COVID19-related products surged could increase the price of medical masks by 20.5% while other products could experience smaller increases.** However if further restrictions are imposed then they could increase the price of protective equipment such as aprons by 52% and goggles and masks by 40%. These further restrictions are estimated to increase the prices of COVID-19 relevant medical products by 23% on average.

While there is concern over the supply of essential medical equipment, the latest AMIS Market Monitor[39] shows that **global food markets remain relatively stable and well stocked.** It shows that there is currently enough produce to meet the anticipated demand and that so far, food prices have been unaffected. However, given the prospects of much weaker economic growth due to the current crisis there are still significant risks to global food security as higher transport costs and labour shortages could severely disrupt food supply chains.

Droughts in grain-producing nations and rising oil prices caused many countries to impose export restrictions on staple foods in 2007-2008 that saw world market prices

[38] Espitia A, N Rocha, M Ruta, (2020). 'Trade in Critical COVID-19 Products', World Bank Group Trade and COVID-19 Guidance Note, 27 March 2020.

[39] AMIS Market Monitor No, 7719, April 2020.

sharply increase.[40] Other countries followed this approach in order to contain price increases and protect consumers however, this drove prices higher as major food importing countries in particular suffered greatly. These **protectionist policies saw the global prices of rice and wheat increase by 40% and 30%**.[41]

The current crisis has led to 17 countries to introduce export restrictions on food[42] and while some of these are on a temporary basis, lessons from the 2007-2008 food price crisis show that these restrictions affect all actors along the food supply chain. Open trade policy measures that keep food supply chains flowing will ensure global food shortages and excessive price increases are avoided.

3.3. Open trade policies can boost the recovery

As the evidence outlined in this section shows, the outlook for international trade was already pessimistic before this current crisis however, the continued promotion of an open trade policy is vital for economic recovery in the post-COVID19 era. In addition, open strategic autonomy is also key in supporting the EU's economic recovery. This means that we need to review our dependencies and make our supply chains more resilient and diversified. It does not mean pursuing a goal of self-sufficiency that would increase competition for scarce resources, drive up prices and deepen international hostilities.

DG TRADE is already actively engaged in the enforcement and implementing an ambitious trade policy plan. The efforts in removing non-tariff barriers through diplomacy and legal disputes in the context of the Market Access Strategy have already brought concrete benefits. **The latest internal estimates show that the removal of 100 barriers over the period 2014-2018 has led to an increase of about 60% of the EU exports of the products previously affected by barriers towards the partners imposing them**. This correspond to an additional **€8 billion** of EU exports in 2019.

Completing the trade negotiation agenda will also contribute to improving the trade landscape. The US is still our major trading partner, the destination of more than 350 billion euros of merchandise (17% of total extra-EU27 merchandise exports) and more than 180 billion euros of exports of services (21% of total extra-EU27 services exports).

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[40] Glauber J, D Laborde, W Martin and R Vos, (2020), 'COVID-19: Trade restrictions are worst possible response to safeguard food security' International Food Policy Research Institute Blog: Issue Post March 27, 2020.

[41] Anderson K, W. Martin (2011) 'Export Restrictions and Price Insulation During Commodity Price Booms', World Bank Development Research Group, Policy Research Working Paper 5645,

[42] Source: Food Export Restrictions Tracker. Last updated 04/05/2020 Available at: https://public.tableau.com/profile/laborde6680#!/vizhome/ExportRestrictionsTracker/FoodExportRestrictionsTracker

The tariffs threatened by the US on exports of EU motor vehicles would affect about 49 billion euro of motor vehicles and parts. Together with the 232 steel tariffs, the Boeing-Airbus measures and the digital tax-related response by the US, these elements add up to quite a sizeable share of our bilateral trade so a positive outcome on these issues would be mutually beneficial. **The liberalization of tariffs on industrial goods as foreseen in the Executive Working Group negotiations would increase EU exports to the US by 8% annually and EU imports from the US by 9%**.[43]

At the same time, concluding the ongoing negotiations (FTAs with Australia and New Zealand, Indonesia, Malaysia and Philippines, the Comprehensive modernisation of the EU-Chile FTA, the Comprehensive Investment Agreement (CAI) with China,) or finalising the legislative process of others (Mexico, MERCOSUR and Vietnam) are expected to increase the EU GDP by more than €4 billion. Therefore, in order to reap these benefits and to continuing the current efforts to boost trade in a post-COVID 19 era, it is crucial to ensure that markets remain open and protectionist measures are addressed.

Lessons can be learned from the 2008-2009 economic and financial crisis as it increased the threat of countries using protectionist measures. International trade was also affected by disruptions in the logistic network and in trade finance. A comprehensive analysis of the 2008-2009 global recession and subsequent recovery by Eaton et al (2016)[44] shows that the reduction in trade costs after 2010 relative to the peak of the crisis, has contributed to between 10% and 30% of the recovery in production. This is just below the contribution to **the recovery of the growth of investments in durable goods (50%) and above the contribution of the increase in demand for nondurable goods (about 20%).**

Research from the IMF[45] finds that highly interconnected countries and industries are more vulnerable to economic shocks. When a shock hits, countries with industries heavily involved in the global value chain are more likely to experience disruptions in production. At the same time, highly interconnected countries that produce easily substitutable goods are better positioned to withstand disruptions in trade. Using a highly

[43] European Commission (2019), 'Liberalization of tariffs on industrial goods between the United States of America and the European Union: An economic analysis' DG TRADE Chief Economist Unit, February 2019. Available at: https://trade.ec.europa.eu/doclib/docs/2019/february/tradoc_157704.pdf

[44] Eaton J., S. Kortum, B. Neiman, and J. Romalis (2016) "Trade and the Global Recession", American Economic Review 2016, 106(11): 3401–3438

[45] Korniyenko Y, Pinat M and Dew B (2017) Assessing the Fragility of Global Trade: the Impact of Localized Supply Shocks Using Network Analysis, IMF Working Papers 17/30, International Monetary Fund (IMF)

disaggregated international trade database[46] the authors evaluate and compare the global supply chain fragility[47] of individual traded goods.

Box 2: The EU-US Mutual Recognition Agreement (MRA) on inspections of medicines manufacturers

Facilitating greater market access by encouraging international harmonisation of compliance standards for medical equipment is a key trade policy objective to help deal with the impact of the coronavirus. In 11 July 2019, the EU and the US signed a mutual recognition agreement (MRA) on inspections of manufacturing sites for medicines. This will make it faster and less costly for both economies to bring medicines to the market. 2018 data shows that the US accounts for 43% of the total sales of medical devices in the world while the EU accounts for 29%.

The US will now recognize the good manufacturing practice (GMP) inspections of all EU Member States, and vice versa. Previously, authorities from the EU and US have needed to inspect each other's production sites individually to ensure they are GMP compliant. Now, regulators will be able to rely on each other's inspections for human medicines. The agreement will also free up resources for the inspection of facilities in other countries.

Under this MRA, the EU and US are able to avoid unnecessary duplicate inspections and thereby realise savings of the order of €350,000 ($380,000) per average inspection.[48] However, the agreement only covers certain medical products. Human vaccines and plasma-derived medicinal products (biological drugs such as antibodies) which will become key to the eradication of COVID19 are currently omitted. There are plans to extend the MRA to include these items as well as veterinary medicines. However, a decision regarding human vaccines and plasma derived medicines is not expected until July 15, 2022. Every effort should be made to fast track negotiations on these elements in order to include them in the agreement.

[46] BACI bilateral trade data, based on the harmonized system 2002 classification at the 6-digit level, for the period 2003-2014

[47] The methodology classifies the fragility of the product based on three components. The first characteristic is the presence of central players in the network of traded goods. The second is the tendency of groups of countries to cluster—i.e. to trade more among each other than with the rest of the world. The final component is the degree of international substitutability of the product

[48] European Commission (2019), "EU-U.S. Cooperation: Exploring trade opportunities, from medical devices to the Internet of Things" DG TRADE, Brussels, 25 July 2019. Available at: https://trade.ec.europa.eu/doclib/docs/2019/july/tradoc_158267.pdf

While many countries import vulnerable products, exporters of such products are very concentrated. Each country's share of world exports of vulnerable products varies dramatically, with most countries exporting virtually none, and the G8 countries exporting 59.7% of the total. The U.S. exports the largest share (13.1%) of all vulnerable products, followed by Germany (13%), Japan (8.6%), and China (7.9%). The remaining exporters are all middle- or higher income countries. Producers of vulnerable products can propagate the risk along supply chains, if the domestic production of exports is severely constrained. A temporary domestic shock, emerging from political events or from natural disasters, can thereby be transmitted to other countries through the trade of such products.

It is evident that firms will be forced to rethink their value chains, as they will need to diversify their supplier base to protect against disruptions in production. A diverse value chain will help firms be better prepared to deal with potential further crises such as extreme weather events arising from climate change and new outbreaks of infectious diseases that lead to reduced economic activity. **This rethinking of GVCs will create opportunities for new investment destinations and suppliers**. New analyses[49] finds that many countries in Eastern Europe and Eastern and Southern Mediterranean have a comparative advantage in products exported by China, such as machinery, clothing, furniture and car parts. In addition, research using the latest UN Comtrade data shows that buyers around the world have been able to find alternative sources of supply from other non-traditional exporters of PPE at very short notice during the current pandemic. For example, many countries have been able to import gloves from Sri Lanka and Thailand, and hospital gowns from the Dominican Republic, Honduras and Vietnam.[50]

4. HOW NEW TECHNOLOGIES CAN FACILITATE TRADE IN A POST-COVID19 ECONOMY

Policies that encourage the reshoring of production or that reduce the reliance on GVCs may cause firms to embrace new technological developments such as 3D printing, blockchain, Internet of Things (IoT), Artificial Intelligence (AI), digitalisation, and servicification. These new technologies could help to mitigate supply chain risks, lower trade costs, increase flexibility and improve product standards following the COVID19

[49] Javorcik B, (2020) 'Global supply chains will not be the same in the post-COVID-19 world', Chapter 8 COVID-19 and Trade Policy: Why Turning Inward Won't Work, CEPR Press, April 2020.

[50] Bamber P, K Fernandez-Stark and D Taglioni, (2020), 'Four reasons why globalized production helps meet demand spikes: The case of medical devices and personal and protective equipment' World Bank Blog, 12 May 2020. Available at: https://blogs.worldbank.org/developmenttalk/four-reasons-why-globalized-production-helps-meet-demand-spikes-case-medical

pandemic. In fact, there is evidence that these technologies could enhance international trade and GVCs and not reduce our dependence on them. While there are clear opportunities and benefits associated with the emergence of new technologies, one must also consider the challenges that markets, companies, employees and trade rules will now face.

4.1. Artificial Intelligence (AI) in production and 3D printing: Leading the fight against COVID19

The growth of AI and automation in production has raised concerns about the future of trade and of GVCs. In light of the current unprecedented crisis, they could influence the reshoring decisions of lead firms. A survey carried out on manufacturing firms from eight European countries found that increased flexibility and product quality were the two main drivers for their reshoring activities in 2015.[51]

However, analysis from the World Bank[52] shows that innovation and new production technologies have led to the emergence of newly traded goods and services, which in turn contributes to faster trade growth. **In 2017, 65% of global trade was in categories that did not exist in 1992.** While the analysis finds that AI in production reduces the labour share of income, there is no evidence of a widespread reshoring trend[53]. Artuc et al. (2018)[54] finds that AI in production has led to higher productivity and a larger scale of production, which has led to an increase in the demand for imports of inputs from developing countries particularly in the automotive, rubber and plastics, metals, and electronics sectors.

3D printing (3DP) has played a direct role in easing the pressure on supply chains and governments during the COVID19 outbreak. For instance, the European Association for Additive Manufacturing (CECIMO) was requested by the European Commission to address its membership and query if it would be able to aid in producing

[51] Seric A and D Winkler (2020), 'COVID-19 could spur automation and reverse globalisation – to some extent', The Centre for Economic Policy Research Policy Portal, 28 April 2020.

[52] World Bank (2019), "World Development Report 2020: Trading for Development in the Age of Global Value Chains", Washington, DC: World Bank. https://www.worldbank.org/en/publication/wdr2020

[53] Oldenski, L (2015), 'Reshoring by U.S. Firms: What Do the Data Say?' PIIE Policy Brief 15–14 (September), Peterson Institute for International Economics, Washington, DC.

[54] Artuc, E, P Bastos and B Rijkers (2018), "Robots, Tasks and Trade", World Bank Policy Research Working Paper No. 8674.

personal protective equipment (for instance, valves or ventilators) that hospitals are lacking due to the COVID19 outbreak in Europe.[55]

3DP was invented over 30 years ago, but it has not yet made noticeable inroads in manufacturing. In 2018, **3DP revenues were less than 0.1% of global manufacturing revenues**.[56] The extent to which the technology will penetrate mainstream industries and markets in the future is unclear as the pace of adopting 3DP has been slow to date.

It is not clear what the future impacts of 3DP will have on trade flows or what impact 3DP might have on trade rules. Looking at the existing trade rules, it is likely that 3DP might affect the relative importance and the way in which trade rules will have to be applied and implemented, across several disciplines:

- The General Agreement on Trade in Services (GATS) will become more relevant than before, as more services are being traded due to 3DP.
- The issue of intellectual property rights will be of paramount importance to preserve competitiveness in international markets
- As the WTO does not currently have specific rules on data transfer and storage, the new rules regarding these issues will be a "make or break" for the global 3DP industry.
- Industrial processes will be greatly simplified so much reflection will be needed around which Rules of origin (RoO) are best for 3DP.
- There will be a temptations for national governments to introduce new forms of discriminatory measures and protectionism.

4.2. Blockchain and its potential to facilitate international trade

Blockchain and Distributed Ledger Technologies (DLT) [57] allow participating parties to come to an agreement while making use of (nearly) immutable record transactions and information sharing in a transparent way without the need for often costly intermediary i.e. a centralized platform or authority. The use of these technologies could be an

[55] https://www.cecimo.eu/news/cecimo-press-release-call-to-action-to-additive-manufacturing-companies-to-help-hospitals-in-need/

[56] Wohlers Associates (2019) 'Wohlers Report 2019: 3D Printing and Additive Manufacturing Global State of the Industry, ISBN 978-0-9913332-6-4

[57] Distributed ledger technology is the generic term used to describe the variety of types of blockchain that are being developed. There is no consensus in the literature on the exact definition of blockchain and distributed ledger technology. Therefore, distributed ledger technology is used as an all-inclusive term that encompasses all type of blockchain initiatives.

important step in providing the infrastructure for a fair, inclusive, secure and efficient digital economy.

In terms of the application of digital ledger technologies and blockchain for international trade the INI report of the European Parliament looked in detail how these solutions can facilitate international trade as subject to bilateral Free Trade Agreements (FTAs). [58]The EP resolution finds great potential for the use of blockchain in respect to complying with Rules of Origin (ROO) when obtaining preferential treatment granted by the FTA. Even in the case of non-preferential access, blockchain could be of use in establishing the origin of the goods entering the EU market and thus facilitating trade-defence cases.

The WTO 2018 report "*Can blockchain revolutionize international trade?"* concludes that blockchain's potential trade-related applications could significantly transform international trade in respect to number of areas such as trade finance, customs and certification processes, transportation and logistics, insurance, etc. The potential cost savings in respect to trade finance and shipping would range from 15% to 30% of total cost.[59] Furthermore, according to the World Economic Forum (WEF), the removal of barriers linked to blockchain solutions could result in more than 1 trillion USD of new trade in the next decade. [60]

Incidentally, blockchain becomes highly relevant in the COVID 19 crisis when **electronic (trade) documents are the only way to ensure business continuity in a lockdown and social distancing environment.** Blockchain solutions could be potentially used to ensure trust along a chain of documents required to keep vital supply chains functioning. As a result of these potential trade applications for blockchain technologies, DG TRADE has recently launched an **#EUBlockchain4Trade** pilot project to explore the efficiencies that can be reaped with regard to various trade policy issues (e.g. trade facilitation, rules of origin, compliance with technical standards, sustainable trade and climate change, etc).

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[58] European Parliament (2018), 'Blockchain: a forward-looking trade policy,' European Parliament resolution of 13 December 2018, 2018/2085(INI), available at: https://www.europarl.europa.eu/doceo/document/TA-8-2018-0528_EN.html.

[59] WTO (2018), 'Can blockchain revolutionize international trade?', Geneva.

[60] World Economic Forum (2018), Trade Tech – A New Age for Trade and Supply Chain Finance, White paper.

5. THE WAY FORWARD: BETTER FIRM-LEVEL DATA AND ANALYSIS

Throughout this note we have shown that open trade policy is vital to a post COVID19 recovery. However one of the key challenges we face is explaining the benefit of open supply chains within the EU to support open trade in the internal market but also with the rest of the world.

While there is a wealth of research and data at an aggregated and sectorial level, **more detailed firm-level data is required in order to fully understand the impact of the coronavirus outbreak on EU trade, particularly in sectors where production is fragmented globally.** The scarcity of firm-level data limits our ability to get an overview of the impact on EU firms and the linkages between the supply chains of these firms.

In addition, better data would allow us to fully assess the impact of potential protectionist measures and could highlight the levels of integration along key supply chains. In particular, it could show the importance of imported components in the production and export of COVID19 related medical equipment and allow policy makers to monitor supply chains and ensure essential supplies.

This TradePolicy2.0[61] approach based on firm-level trade statistics could help provide trade policy makers on with more in-depth information on global value chains. For example, data showing that a large share of exporting firms to a particular FTA partner require considerable inputs from a third country would allow for a better understanding of the specificities of rules of origin that should be put in place to ensure a satisfactory preference utilisation rate. Firm-level trade statistics can also be used to derive new micro-policy indicators (e.g. identifying regional exporting clusters, detailed GVC linkages at firm level, the role of product standards or procedural bottlenecks, etc.) that could improve the monitoring and implementation of various trade policy instruments.

Finally, detailed firm-level trade data may also improve communication, leading to a more meaningful engagement with stakeholders and thus reduce public misperceptions about trade policy. This is particularly important to help in the current political context, as evidence-based dialogue is essential to show the impact of trade policy.

[61] Cernat, L. (2014) 'Towards "Trade Policy Analysis 2.0": From national comparative advantage to firm-level trade data', Chief Economist Note 4/2014, DG TRADE. Available online at https://trade.ec.europa.eu/doclib/docs/2014/november/tradoc_152918.pdf

Box 3: Trade policy 2.0 in action: Policy initiatives using firm level data in the time of COVID19

There have been a number of trade policy initiatives taken by the EU and other countries to counteract the impact of COVID19.

The European Commission has used firm level trade data to identify suppliers of medical equipment, which under the Joint EU Procurement Agreement has helped to create a strategic stockpile of medical equipment such as ventilators and protective masks to help EU countries in the context of the COVID-19 pandemic.[62] This coordinated approach gives Member States a strong position when negotiating with industry on availability and price of medical products.

The US has used firm level data to encourage manufacturers of medical equipment to make operational changes in the national interest. In April, it invoked the Defense Production Act to issue an export ban specifically on masks produced by the company 3M. They also issued an executive order requesting motor vehicle manufacturer GM to produce ventilators.

Finally, detailed firm level trade data has enabled the Chinese Ministry of Commerce, General Administration of Customs and the National Medical Products Administration to tighten their rules on the export of medical supplies. Chinese companies exporting test kits, face masks, protective clothing, ventilators and infrared thermometers will now need additional licences and registrations from the National Medical Products Administration. This has been done to protect the reputation of Chinese medical equipment producers after customers complained of being sold substandard products. Access to this firm-level production data and the increased regulations have led to the Chinese Ministry of Commerce issuing a firm-level specific export ban on 2 firms exporting faulty PPE equipment.[63]

Currently, there are issues with obtaining data on EU trade by firm size with individual partners and by trade in services, as Member States are not required to provide a breakdown at this level. Box 3 highlights several initiatives have been undertaken around the world that have allowed policymakers to make more informed decisions on the production of medical equipment. In spite of the role better firm level data could play in providing more detailed information to policymakers, this data is considered commercially sensitive supply chain information. Individual Member States and Export authorities will play a key role in generating firm-level data to ensure its reliability and usefulness.

[62] https://ec.europa.eu/commission/presscorner/detail/en/ip_20_476

[63] https://www.scmp.com/economy/china-economy/article/3079887/coronavirus-china-bans-two-medical-equipment-exporters