WORLD MANUFACTURING FOUNDATION

# BACK TO THE FUTURE

# MANUFACTURING BEYOND COVID-19

## WHO WINS AND WHO LOSES
How COVID-19 crisis has impacted
and will redesign global industrial value chains

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# INTRODUCTION

Among its numerous effects, the ongoing COVID-19 pandemic is heavily impacting Global Value Chains (GVCs). It is leading many businesses to reconsider the organisation of their GVCs while shifting the distribution of influence across the world.

The objective of this paper is to address questions related to the impact of COVID-19 through focusing on how it has altered GVCs, with a view to promoting policies that will ensure smarter, more secure and diverse supply chains, particularly for SMEs. This should aid a sustainable economic recovery.

The paper begins with an **overview of the difficulties** that companies are facing. Next, we emphasize the role of **Governments** and **Institutions** in the recovery, the **background** within which the pandemic is advancing and raise of concepts of "technical sovereignty", "national security" and "self-reliance". We highlight how **barriers to trade** have impacted GVCs and the strategies some regions are considering putting in place, for instance by prioritizing regional over global value chains. We then analyse which **companies** and **sectors** have been most impacted by the crisis and those that have suddenly become more important. This section contains a specific focus on Micro, Small & Medium Enterprises (MSMEs).

We conclude by highlighting how in some industries and sectors diverse **sourcing** and an acceleration in **digitalisation** could be vital in building smarter supply chains and ensuring a sustainable long-term economic recovery.

# CONTEXT

The global spread of COVID-19 has put the intricate and detailed workings of GVCs in the spotlight. It has also demonstrated how reliant our global economy and societies are on supply chains.

Trade and GVC growth were already slowing down prior to the COVID-19 crisis. Since the 2008-9 financial crisis (Figure 1), GVCs stopped expanding as they had in previous decades, mainly due to the slowdown of the overall economic growth, investments and commodities' trade and to slower pace of trade reforms. However, ever since the COVID-19 crisis hit early in 2020, local and national lock-downs, travel restrictions, sharp falls in demand and a marked decline in investments worldwide have led to an unprecedented disruption to many GVCs.

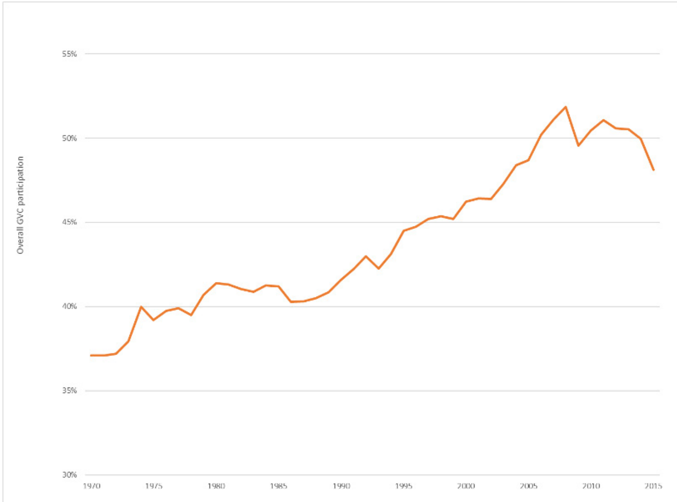


**Figure 1: World Development Report 2020 (World Bank Group)**

In some regions, production or business openings are limited by measures to contain the virus, as well as by new cases of infection and border closures. Such is the high degree of interdependence of GVCs, if only one input of a complex product is missing, goods cannot be completed, despite the restart of the assembly line.

Business to business activities suffered significantly as a result as most could not take place following existing practices. Neither could most business to consumer output at the end of the chain.

The World Bank has recognized four main shock transmission channels to firms: 1. The demand channel; 2. The supply channel; 3. The financial channel; 4. The uncertainty channel[1]. In particular, the high and persistent levels of uncertainty is a drag on global trade. According to estimates, over 20 previous shocks in the period 1990-2010, uncertainty was responsible for a 15% reduction of long-term trade flows (Taglioni and Zavacka, 2013).

Among the COVID-19 pandemic's far-reaching consequences for the global economy, the Least Developed

Countries (LDCs) face the most daunting challenges, especially in those countries which have achieved a high degree of integration into global value chains[2]. Here the impact on labour[3] has hit citizens' livelihoods hard.

## ROLE OF GOVERNMENTS AND INSTITUTIONS

So far, the measures taken by governments have been social, economic and financial, spanning job-support schemes for employees in the most impacted sectors, policies to encourage their reskilling and tax deferrals.

Not all the measures have been judicious. The information available suggests that 80 countries and separate customs territories have introduced export prohibitions or restrictions as a result of the COVID-19 pandemic, including 46 WTO members (72 if EU member states are counted individually) and 8 non-WTO members. Most of these have been described as temporary measures. At least 2 members have already removed some of those restrictions.

While import-restrictive measures introduced by Group of 20 (G20) economies continue to cover a growing share of trade, the WTO's latest biannual monitoring report on trade measures points to significant moves to facilitate imports too, including products related to COVID-19. During the mid-October 2019 to mid-May 2020 review period, G20 economies implemented 154 new trade and trade-related measures, 95 of them import-facilitating and 59 import-restrictive. Of these measures, 93 (about 60%) were linked to the COVID-19 pandemic[4].

Some countries also temporarily reduced import duties on urgently needed products but this was very inconsistently implemented. For instance, the EU eliminated import duties on government Personal Protective Equipment (PPE) purchases. Regrettably, industry and, to a certain extent, citizens that also needed PPE continue to pay full import duties.

While mobility-related measures and policies to ensure "social distancing" have had a strong overall impact on many services sectors and services trade, governments have also adopted measures related to specific services sectors and modes of supply in response to the crisis. These include: measures to ensure that more telecommunications capacity is made available to operators; measures facilitating access for the population to internet and mobile data and to online education and health services; measures to provide – and in certain instances reintroduce – flexibility for suppliers of transport services and facilitate the continued supply of cross-border transport of freight; and more lenient requirements imposed on banks (such as in terms of liquidity and capital requirements) to ensure that they are well positioned to continue to provide credit.

Many governments have also announced support measures in favour of the air transport sector, such as reductions in airport, air navigation and other charges and broader financial support measures, including loan guarantees, long-term loans and acquisition of equity stakes in airlines.

In the field of transport, on 26 May 2020, the International Civil Aviation Organization, the International Labour Organization and the International Maritime Organization issued an important joint call on governments to ensure "key worker" designations for the millions of skilled personnel maintaining essential global air and sea trade capacities.

Governments have introduced urgent stimulus and backstop measures also for MSMEs (Figure 2), such as liquidity support to address cash flow issues, with the aim of preserving jobs and ensuring business continuity, as well as measures to expand trade opportunities for MSMEs. A few governments have also introduced measures aimed at developing the resilience of MSMEs and building their capacity to overcome future shocks to demand and supply chains.


**Figure 2: World Bank Group MAP of SME-Support Measures in response to COVID-19 (10 June 2020)**

As for LDCs, some of their Governments have announced stimulus packages, which have covered export-oriented sectors. They have also strengthened healthcare systems and ensured social relief packages and liquidity support to SMEs. The international community has announced support measures ranging from debt relief to strengthening social sectors and providing social safety nets for the most vulnerable.

## INTERNATIONAL CONTEXT AND TRADE

At global level we can see a degree of regional decoupling driven by a marked divergence in de-globalization strategies between three hubs: US, China and EU with their three different approaches[5].

In the US companies are rethinking their international supply chains due to the increasing pressure from the US government to move their foreign production back to the US, a trend that pre-dates the COVID-19 crisis; China is accelerating its plans on forced localization and blockages to market access for Foreign Direct Investments (FDI); meanwhile the EU is focusing on technological sovereignty and the reinforcement of FDI controls[6].

Uncertainty is thus growing not only because of the COVID-19 crisis but also due to rising geopolitical tensions from these clashing de-globalization processes. Campaigns for self-reliance and disengagement from one single nation as a provider are rising[7]. According to Fitch Solutions Country Risk & Industry Research[8], in the medium term, governments and companies could begin to diversify and restructure their supply chains away from Chinese manufacturing and closer to home, with onshoring and near-shoring creating opportunities for some economies (Figure 3).

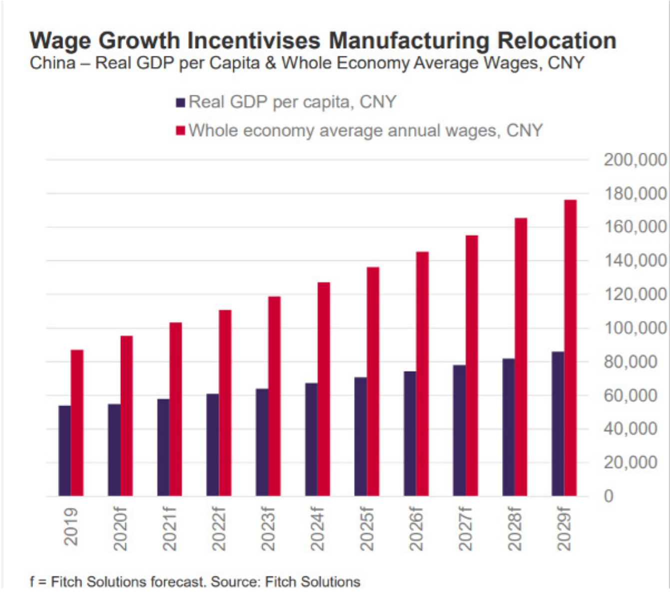


**Figure 3: Fitch Solutions Country Risk & Industry Research**

The idea of localising or shortening supply chains, particularly for critical goods (PPE, Medical Devices (MD), medicines), has been brought to the forefront of policy debates globally but the risks attached to this, less. Going forward, attention to those risks, especially in the presence of the likely systemic uncertainty (Knightian uncertainty) that climate change and geopolitical tensions may generate, could become a main concern of policy makers.

### Perceived benefits and costs of regionalization

According to European companies represented by BusinessEurope,[9] if the concepts of technological sovereignty in Europe, self reliance in China and national security in the US[10] are understood in a positive manner, to propel regional excellence in certain sectors without implementing protectionist measures, they may even aid GVCs. It is reasonable that some regions are looking into making themselves self-sufficient in critical sectors or technologies (i.e. in terms of national security), so that if a second wave occurs or another global crisis, then the closure of borders or local lock-down measures need not impact the delivery of essential goods and services.

Due to COVID-19 and many other challenges (natural disasters, policy risks), many industries have been de-risking supply chains through geographic diversification and regionalization where appropriate.

It should be noted, however, that increased regionalization can bring costs that could be considerable, particularly in locations that lack supporting services, specialist suppliers or efficient transport and communication links. Similarly, the creation of regional value chains will require significant coordination between members of regional blocs, leading to additional costs[11].

### Barriers to trade have impacted all GVCs but in different ways depending on the region

In Europe, the single market saw Member States invoke free movement of goods barriers in the interests of public health. Some Member States began to stockpile much needed medical supplies. Free movement of people was also restricted in a patch-work manner. This had knock-on effects, especially on manufacturing and disrupted GVCs generally. Eventually barriers were lowered, particularly for essential goods, and "green lanes" were implemented throughout Europe to ensure continuous flow of goods across Member States. One of the key lessons learned in the EU was that border closures harm the security of supply of critical goods like medicine or food because EU countries rely on a cross-border supply chain.

Nevertheless, in the pharmaceutical field, Europe was probably the least affected region in the world because companies managed to keep manufacturing fully operational during the COVID lockdown. While China and India suffered temporary production declines. These were mainly associated with restrictions on the movement of people which significantly reduced the labor force available to work in factories. In Europe, people were allowed to work in critical industries – like medicines manufacturing.

Most industries are now operating factories again by applying COVID-19 preventive measures, some of them successfully, other unsuccessfully. Sharing best practice among industry on how to effectively apply preventive measures has also been recognised as a key factor to enable industrial production to continue during pandemics or other crises.

In East Africa, national export restrictions were placed on PPE and agriculture, to the detriment particularly of the agriculture sector, which accounts for around third of East Africa's GDP and half of its workforce. While the regional manufacturing sector (the sector has traditionally played a key role in the economic growth of developing countries like East Africa[12]) has not been directly hampered by trade restrictions, it has been impacted by lockdowns.

However, it is clear that even Africa is highly reliant on GVCs (Figure 4). This can be demonstrated in West Africa, which depends on input from India and China and relies on Europe as an export market destination. During COVID pandemic West Africa faced a 5% drop in imports, affecting in particular their light manufacturing sector.

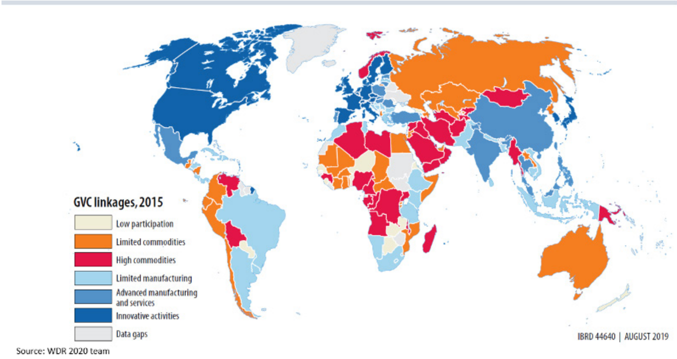


**Figure 4: GVC linkages - World Development Report 2020 , based on the GVC taxonomy for 2015**

As economic activity shrinks and domestic demand declines due to the spread of COVID-19, some countries have raised tariffs on steel and other products to protect domestic industries. Raising tariffs within the scope of the bound tariff rate is not immediately incompatible with the WTO. However, from the perspective of preventing a chain reaction of protectionist measures, transparency of any export restrictions should be achieved by notifying the WTO of the items covered and the period for which the restrictions will be implemented.

# ARE THERE WINNERS AND LOSERS?

Businesses that continue to exist within these GVCs have felt the impact of the COVID-19 crisis in various ways.
Demand raised in certain sectors, notably in healthcare, including pharmaceuticals, and essential consumer goods. This seems set to continue in the future, particularly with the threat of consecutive outbreaks and waves of COVID-19.
We also experienced a more rapid shift to data intensive services (Figure 5, Mattoo and Taglioni). While this was growing pre-COVID-19, particularly in the US (Figure 6), it is clear that it is now taking place more rapidly across the globe. That means the tech sector will continue its high growth path. As will e-commerce retail. Data services clearly present horizontal opportunities and the manufacturing sector itself could also take advantage of this shift.

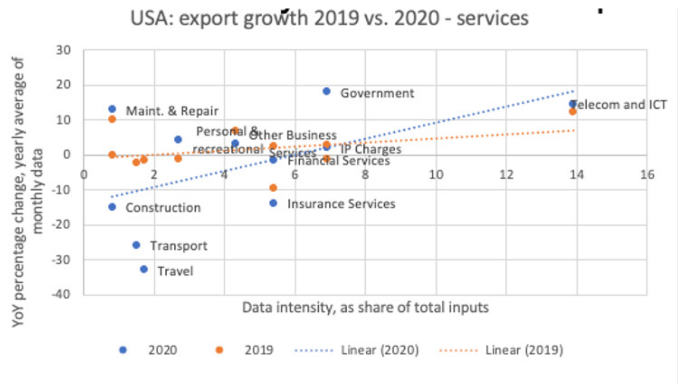


**Figure 5: Mattoo and Taglioni, World Bank**

Global internet companies are the top performers, managing to maintain their momentum even during the worst of the coronavirus crisis. Growth has been driven by cloud services as they benefited from increased teleworking, new subscriptions and e-commerce.
On the other hand, face to face, high density, services sectors have been heavily affected by the COVID-19 pandemic. Tourism (which includes services such as hotels, restaurants, tour operators), travel, transport and distribution services have arguably been the hardest hit by the crisis so far[13], due to the fact that mobility restrictions and border closures halted the movement of tourists abroad. Given the role of services such as travel and distribution in connecting firms and individuals involved in supply chains (Figure 7), disruptions in these services' supply are having a broad economic and trade impact, particularly on less data-reliant industries[14].

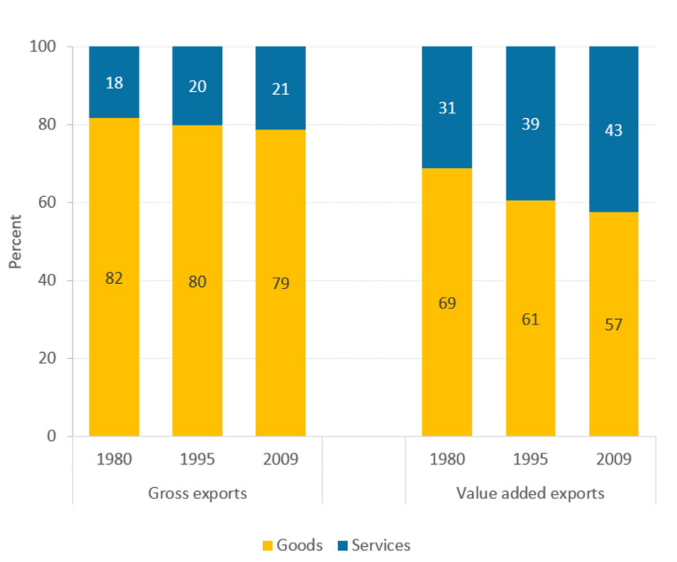


**Figure 6: World Development Report 2020 (World Bank Group)**

Manufacturing was heavily hit particularly for machinery and the automotive industry, which furthermore suffered also from a drop in demand due to the global systemic economic uncertainty associated with the health crisis and its duration. Global passenger vehicle (PV) sales declined by nearly 7% YoY in July, despite regions showing varied signs of month-on-month recovery from COVID-19 induced lockdowns . Aircraft makers will continue to face cash-flow shortages, production challenges, and cascading effects throughout the supply chain that may weaken the industrial base that supports complex manufacturing[16]. The cancellation of investments, which are highly sensitive to uncertainty, has also dramatically impacted the construction sector with a knock-on impact to real estate sales in general.
Another big loser in the pandemic is the oil and energy sector, due to the collapse of crude oil prices since February 2020.
Fashion was deemed non-essential during the coronavirus emergency. Shops selling clothing were closed during lockdowns.

**Collapse of demand and loss of capital are harming participation of MSMEs in GVCs**

Some of the most severe economic impacts are being felt by MSMEs and their workforces, in both developed and developing economies.

MSMEs represent 95% of all companies worldwide and account for 60% of employment[17]. They are the backbone of the global economy and are fundamental to the day-to-day provision of goods and services around the world.

But recent reports indicate that many MSMEs do not have enough working capital to last thirty days in this crisis[18]. They have limited financial and borrowing capacities. On average, they only have around 2 months of cash flow.

Where MSMEs are highly integrated into global value chains (GVCs), supply chain disruptions can create an existential risk for MSME importers and exporters, either because of shortages of necessary parts or through shocks to demand.

As force majeure rights were not being granted on contracts, many lost capital due to the fact that existing and new contracts could no longer be carried out.

In the healthcare sector specifically, "panic buying" by governments took place. A lot of procurement was placed but not fulfilled, for example in Europe and the US. In Europe, MSMEs would participate in these vast procurements by holding products, like medicines, but then could never release them as there was no guarantee of purchasing by governments.

This in the end favoured larger businesses.

While it is natural for regions to compete in the global economy, the only time governments made clear buying commitments was when they wanted to gain an advantage over regional neighbours by stockpiling critical goods (i.e. PPE, MD and medicines). This had a detrimental knock-on effect for MSMEs.

Another worrying aspect as pointed out in a Joint Statement issued on 9 July by the WTO, the International Chamber of Commerce (ICC) and B20 Saudi Arabia is the diminishing availability of trade finance. This will particularly affect MSMEs and businesses in developing countries, with important implications for jobs and incomes[19].

Some regions have cushioned the blow offering funding, particularly in Europe and the US, but more developing regions found this hard to do, although it has taken place. West and East Africa[20] is an example of this due to resource constraints.

The WTO can contribute to supporting MSMEs in several ways, such as: through the exchange of good practices in terms of MSME support measures; through full implementation of the Trade Facilitation Agreement; through continued efforts in enhancing access for MSMEs to trade finance; by harnessing transparent, fair and open procurement markets; and by supporting trade digitalization efforts, including through the development of e-commerce rules.

In Europe, MSMEs are now part of the top priorities identified as part of the European Commission's post-COVID19 ongoing EU Trade Policy Review.[21]

More measures supporting SMEs are also included in the Next Generation EU (Recovery Plan[22]). This 750 billion EUR fund aims to support a twin sustainable recovery through favouring a green and digital transition and assisting MSMEs down this path. On the other side, however, EU high long-term innovative growth programs such as Horizon Europe and the Digital Europe programme were cut vastly.

This is also not only about loss of financing. The global economic downturn also means a loss of distribution of technical know-how from larger companies to smaller ones, which is one of the two key drivers of the exceptional growth associated with GVC (World Bank's World Development Report, 2020). This could have the longer-term economic effect of sizeable growth differentials between countries and types of firms, which are not yet explicitly foreseeable but are certainly being felt by SMEs who usually benefit from the distribution of technology.

## OPPORTUNITIES & RECOMMENDATIONS

**In the wake of COVID-19 many companies revaluate their GVCs**

Many countries and regions are using this moment as an opportunity to take stock of how their nations are tied to GVCs and how they could rethink their organization to aid a faster and more sustainable recovery.

According to recent surveys, most companies around the world are planning to take steps to make their supply chains more resilient, including building in redundancy across suppliers, nearshoring, reducing the number of unique parts, and regionalizing their supply chains[23].

As data becomes available, we are getting a more precise picture of how the crisis has impacted on trade and GVCs. In Eastern Africa, while the initial shock caused by the COVID-19 crisis looked dramatic in terms of the overall decline in trade, Kenyan domestic exports actually held up very well under the circumstances[24]. Other countries in Africa have not been so fortunate, however – particularly those countries dependent heavily on export of commodities like oil, the collapse of export revenues has been dramatic. Preliminary data from UNCTAD based on national statistics indicate that Africa's exports in 2020 declined by 5 per cent in February, 16 per cent in March and 32 per cent in April (compared to the same month the previous year). Intra-African trade has been heavily impacted, especially for landlocked countries[25]. Against this backdrop, the longer-term goal of implementing the African Continental Free Trade Agreement (AfCFTA) has come to the fore.[26]

In Europe, many businesses are looking to find alternative suppliers within their countries. This is particularly true for smaller companies, which are more oriented towards Europe[27] than larger enterprises.

At the same time, businesses are re-thinking their risk assessments of the supply chains they rely upon to have two or more alternative suppliers. Strategic production is now placed with a more careful eye on the supply chain to use.

Financial markets are playing an important role in firms' long-term strategies. Firms that are more directly subject to stock market pressures have demonstrated greater short-termism than other firms. Short-term performance pressures on investors can result in an excessive focus on their parts on quarterly earnings, with less attention paid to strategy, fundamentals and long-term value creation.

Given this background, policy needs to support manufacturing and accompany the growth of excellence in strategic sectors. Taking the example of the financial sector, governments and firms should collaborate on systems of circuit breakers, fail-safe protocols, backup systems and stress tests for lead firms in GVCs[28]. These measures that have been successfully used in the finance sector could be similarly used to grant both flexibility from diversification and resilience for the manufacturing sector.

For the healthcare sector, for example, it has been commonplace for governments to care more about cutting costs rather than encouraging companies to invest in improving production capacities. Also, some aspects of pharmaceutical regulation need to be amended to improve contingency planning such as maintaining alternative suppliers in the supply chain which considerably increases the regulatory burden on companies without any reward in the market. Similarly, in this sector, stockpiling of medicines may not solve the problem as during COVID-19 demand for certain medicines increased between 300-900% which would not be possible to stockpile. The reliance of many countries, particularly in Europe and Africa, on active ingredients imported from a few international suppliers made them vulnerable to a crisis affecting both exporters and importers.

Countries/regions should avoid export restrictions on critical medical supplies as this generates beggar-thy-neighbour responses globally and undermines access to critical goods for all countries. Future trade agreements should include clear rules to limit the misuse of export restrictions[29] and industry-government dialogue on supply chain security with critical industries is crucial in this regard.

In some cases, the crisis did already demonstrate the ability for businesses to be flexible as many diversified their products towards basic medical supplies. Creative thinking and cooperation between different sectors aided economies to keep moving as much as possible. For example, in Africa, the horticulture sector cooperated with the aviation sector so that unused passenger planes were converted in order to distribute goods. In Europe, the pharmaceutical sector established cooperation under the guidance of the European Commission and special competition law guidance to enable cooperation between manufacturers of intensive care unit medicine that was in high demand during COVID-19. This cooperation project enabled the industry to work with the Commission to massively scale up production output to supply COVID-19 patients with the medicines required. These new ways of thinking aided both sectors that previously belonged to alternative GVCs.

**Digital capacities have proved crucial in supporting GVCs**

The digital capacity of a region has proved crucial in its ability to fight the virus just as much as it is for sustaining its economy and society. Technologies are enabling citizens to stay in-touch, work, study, shop and reach public services in these difficult moments. Industry is also playing its role in tracking medical assets to manage resources, using health data to predict peaking outbreaks, enabling 3D printers to aid ventilator supply, freeing up bandwidth, prioritising items for delivery, offering users free data communications and using privacy compliant AI applications to monitor recovering patients.

As the crisis subsides, governments should wisely focus on how they can support digitalisation of their industries bearing in mind that ICT has also facilitated production closer to the market making profits no longer dependent on cheap labour.

One way governments can play a role is to set the example by digitizing the government services that regulate industry. For example, highly regulated sectors like pharmaceuticals require constant interaction between regulatory agencies and industry to monitory medicines' quality or to control the movement of narcotic-based medicines. In the EU, for example, there have been persistent delays of projects to digitize the regulatory system due to inadequate IT project management. The lack of digital infrastructure had a direct negative impact on the supply of critical medicines. Most governments had limited visibility on their stockpiles of medicines in hospitals which led to panic whereas a digital system which could connect regulatory and supply chain data had been proposed by the industry years ago. Similarly, the UN system to control the movement of narcotics gives governments the choice to use a paper based or a digital platform. Most governments in Europe still use the paper-based system – which slowed the movement of critical pain medicines to COVID-19 patients in need. There is no excuse to continue delaying the inevitable introduction of digital regulatory systems by governments.

Public services supporting GVCs, particularly compliance, should be supported digitally to make them more effective. Greater public sector investment is needed in this regard.

The digitalisation of foreign trade and trade financing must also be intensively promoted. To do so, countries should lift existing national legal restrictions on the use of electronic commercial documents, they should incorporate international rules such as the UNCITRAL Model Law on E-Commerce into national laws.

We have a long way to go. The increased use of online services during the COVID-19 pandemic has accentuated technology and connectivity disparities, as online classes are not feasible for students without computers and telework is not an option for employees without broadband. Digital competence is not evenly shared across the globe or even within regions. This needs to change so that opportunities for all are spread. Otherwise we will not fulfil the industrial potential of each region.

Data will also be crucial in this regard. But simply permitting a small amount of digital platforms to sit on large amounts of it will not derive its full power for our societies. The economic power of data - industrial data (i.e. non-personal) and "exhaust data" (i.e. data generated as a byproduct of people's online actions and choices[30]) - relies on its ability to be accessed by multiple parties and reused. All the important reports on digital competition issued in 2019 (US Stigler Report, EU Commission Report, UK Furman Report) have underscored the dangers posed by the inherent tendency of digital markets towards concentration, abuse of dominant position and the practice of killer mergers.

We need to work toward competitive markets and to incentivise greater business-to-business data sharing in order to further digital transformation of our industrial sectors. This should offer greater opportunities for all and aid more sustainable GVCs.

Also, realizing Data Free Flow with Trust (DFFT) is crucial. Discussions on concluding the e-Commerce Agreement are under way at the WTO. In realizing DFFT, the future WTO scheme should be complemented with bilateral/regional regulatory cooperation, such as promotion of mutual recognition taking into account the level of personal data protection under each domestic law.

The path towards digitalisation and diversification of technologies is also not without risks. Cybersecurity concerns are on the rise globally. This actually rose during the COVID-19 outbreak where we saw a rise in cyberespionage activities aiming to steal Industrial Intellectual Property (IP) or at disrupting critical health services or industries which should be solved through applying coordinated diplomatic pressure with like-minded regions on non-cooperative states.

## CONCLUSIONS

The COVID-19 crisis has demonstrated how connected the world is. The global patchwork of national strategies and trade restrictions to contain the pandemic has created a lot of uncertainty for the global business community. This has led to the following conclusions:

1. In the **short-term**: as economies recover slowly the need for open and fully functioning GVCs should be supported through lowering trade barriers and curtailing protectionist measures. Government funding should be released where possible in order to ensure the continued viability of MSMEs and to improve their access to (trade) finance.
2. In the **medium term**: as economies begin to approach pre-crisis levels, governments and business should coordinate more efficient, equitable and sustainable GVCs that are flexible enough to regional or lower risk sources in case of further crisis. Any local lock-downs should only be proportionate to the circumstances. Better coordination under the umbrella of regional organisations and the WTO would improve transparency of the various export restrictions and facilitate and accelerate the lifting of these restrictions.
3. In the **long-term**: full digitalization of GVCs and compliance control to ensure their functioning. Policy changes to improve security of supply should be done through transparent processes carried out by policy-makers and industry, which has knowledge of the global supply chain. This would make GVCs more efficient and sustainable to any futures impacts.

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For more information on the project and to read other topic-focused white papers that are part of the initiative, visit https://worldmanufacturing.org/report/whitepaper-back-to-the-future/

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