



TASK FORCE
WORKING GROUP
REPORT

STRATEGIC VALUE CHAINS

Towards a Resilient and Sustainable
Post-Pandemic Recovery



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Task Force Working Group Report

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GLOBAL TRENDS IN VALUE CHAINS

Value chains are defined as:

- a set of interdependent economic activities that add value to a product, process or service
- a group of interlinked economic actors that operate in a strategic network that includes firms of different sizes, sectors, and countries.

In other words, they constitute an industry model of production where raw materials and intermediate goods are shipped around the globe multiple times and then assembled in another location.

The OECD (2020a) reports that value chains are an important source of international trade. Today, about 70% of international trade involves global value chains (GVCs), with services, raw materials, parts, components, data and information crossing borders – often numerous times. The financial crisis of 2008-09 slowed but did not stop the growth of GVCs, and the pace picked up again in 2017 (WTO, 2019). It can be argued that globalisation is still in place, without any evidence of a long period of ‘slow-globalisation’; but that it is shifting towards trade in services and trade in data and information.

Value chains evolved into global value chains in the 1990s. The promise of this new production system was enormous: boosting demand by globalising production, involving developing countries in global trade, tapping into local skills and resources, exploiting comparative advantages, and creating unprecedented efficiencies. This led to the rise of multinational enterprises with a truly global footprint, accompanied by a growing optimism and trust in the potential of global trade to create a more inclusive and sustainable economic model.

The impact of the globalisation of value chains was positive in many countries, especially developing ones. However, since the early 2000s, it has become questionable whether fair practices along value chains are being respected. It has become progressively clearer that GVCs should be made more sustainable from a social and environmental point of view. Indeed, in the absence of appropriate guidelines and regulatory mechanisms, GVCs might exploit poor working conditions in developing

countries, hinder social inclusiveness, take advantage of low environmental standards, increase use of transport logistics, and thus global emissions. The negative effects and vulnerabilities of globalisation and the system of production characterised by value chains often leads to criticism that it goes too far.

Furthermore, the financial crisis of 2008-09 and the Covid-19 pandemic have exposed how value chains can be naturally vulnerable to disruptions. A 2011 World Economic Forum (WEF) study identified the main external events, beyond the control of an organisation and with global implications, that might cause widespread and systemic disruptions to supply chains and transport networks. Table 1 lists the disruptions according to four categories of risk: environmental, geopolitical, economic, and technological. Regulatory shocks (such as Europe’s ambition to introduce a mandatory due diligence obligation) could be added.

Table 1. Triggers of global supply chain disruptions

Category	Trigger	Percentage	Control Status
Environmental	Natural disasters	59%	Uncontrollable
	Extreme weather	30%	Influenceable
	Pandemic	11%	Influenceable
Geopolitical	Conflict and political unrest	46%	Influenceable
	Export/import restrictions	33%	Controllable
	Terrorism	32%	Influenceable
	Corruption	17%	Influenceable
	Illicit trade and organized crime	15%	Influenceable
	Maritime piracy	9%	Influenceable
	Nuclear/biological/chemical weapons	6%	Controllable
Economic	Sudden demand shocks	44%	Influenceable
	Extreme volatility in commodity prices	30%	Influenceable
	Border delays	26%	Influenceable
	Currency fluctuations	26%	Influenceable
	Global energy shortages	19%	Influenceable
	Ownership/investment restrictions	17%	Controllable
	Shortage of labour	17%	Influenceable
Technological	Information and communications disruptions	30%	Controllable
	Transport infrastructure failures	6%	Controllable

Note: percentages reflect the number of experts surveyed in the WEF study that indicated the risk likely to cause systematic supply chains disruption.

Source: WEF (2011), Supply Chain and Transport Risk Survey 2011, p. 8.

Against the backdrop of the Covid-19 pandemic, there have been radical changes in the way GVCs operate globally. These changes can be attributed to three broad developments:

- i) *A rapid shift towards digital globalisation.* The Fourth Industrial Revolution brings benefits, but digitalisation also affects the context in which value chains operate. The global map of value creation and distribution started to change after the financial crisis, and even more so with digitalisation. The available evidence shows a gradual rise in market concentration and mark-ups, imbalances in the distribution of value, and a constant quest for efficiency and cost cutting. This has ended up depriving GVCs of the reiteration and resilience they need to face unexpected events. Indeed, as explained by Autor et al. (2020), globalisation and technological changes push sales towards the most productive firms in each industry, increasing market concentration. Industries become dominated by ‘superstar firms’, which are characterised by above-average mark-ups and below-average labour share of value added.

In addition, the Fourth Industrial Revolution is shifting GVCs towards their ‘servitisation’, increasing the flow of services and other intangible inputs. Indeed, digitalisation is characterised by a large growth of data and information flows rather than product flows. This possibly exerts a significant impact on offshoring strategies, increasingly favouring territories with a highly skilled labour force, access to infrastructure and low energy costs. The digital transformation will facilitate diversification of especially industrial manufacturing in various locations with favourable characteristics.

Automation is another consequence of digitalisation. As discussed by Stapleton (2019), an increased shift towards automation is assumed to reduce the incentive for further offshoring to developing countries or lead to a wave of reshoring. Theoretically, the incentive for firms to take advantage of labour cost differentials would be reduced by automation: in sectors where automation is feasible and cheaper than human labour, firms are expected to automate rather than seeking out new low-cost production locations.

The Covid-19 crisis has also accelerated the digitalisation of the economy, where an intense exchange of data is favoured over intermediate or final goods (Bianchi and Labory, 2020).

- ii) *An urgent need for sustainable practices to cope with climate change.* As well as digitalisation, the growing attention on social and environmental sustainability might mean the geography of value chains changes, so that only markets that are able to respect the new standards are favoured. While governments tend to intervene in the supply chain management of corporations, introducing standards and requirements companies have to comply with, institutions are required to make efforts to ensure a level playing field.
- iii) *Geopolitical tensions between the main actors of the world economy creating uncertainty.* Geopolitical decoupling of the US from China is increasing, with the effect of separating the global business and technology space into two spheres. This has contributed to growing tensions between the two countries, creating further barriers to global trade and the use of protectionist measures.

The Covid-19 pandemic has shown that it might be too simplistic to base decisions about production locations solely on easily observable economic factors (Seric et al., 2020). Indeed, in many cases, outsourcing has been mostly driven by multinational firms’ desire to optimise their operations by minimising costs, reducing inventories, and driving up asset utilisation. The Covid-19 pandemic has provoked a rethinking of the spread of production across the globe, intensifying the debate about reshoring, nearshoring, or geographically diversifying the value chains to avoid overdependencies from a too-limited number of suppliers. Influenced by the pandemic and rising geopolitical tensions, governments are making resilience their objective, which may mean less room for companies to focus on efficiency alone. An example of this is US President Biden’s executive order on America’s supply chains.¹ Besides the growing desirability of exerting national control on the value chains, several studies have highlighted the importance of diversification and of having long value chains.

In the first phase of the Covid-19 crisis, GVCs were heavily disrupted by many countries closing their frontiers. Yet GVCs are frequently disrupted, often badly so. According to McKinsey (2020), disruptions in value chains which last a month or longer occur every 3.7 years on average and shorter disruptions even more frequently. It has also been observed that there is high heterogeneity in the way Covid-19 has affected the value chains belonging to different sectors and different regions.

Seric et al. (2020) find that the supply chain disruptions of early 2020 were temporary and that the GVCs currently interlinking many firms and economies seem to be, at least to some extent, resilient to trade and economic shocks. Global trade declined by approximately 13% during the first months of Covid-19 (February–June 2020) (Espitia et al., 2021). According to a 2021 WTO analysis, the decline in trade during the Covid-19 pandemic has been of a similar magnitude to that of the 2008-09 global financial crisis. GDP, however, has contracted much more in the current recession.

The EU governance of value chains

The recent acceleration in the use of technology, the urgent challenges brought about by climate change and the ongoing economic and health emergency due to the Covid-19 pandemic have refocused the EU on developing an industry that is greener, more digital and at the same time competitive on the global stage. The Portuguese Presidency of the Council of the European Union (January 2021-June 2021) made it a priority of the EU to “defend Europe’s autonomy by developing a dynamic industrial strategy, that promotes European value chains and pays attention to strengthening small and medium-sized enterprises (SMEs) and the sectors worst hit by the crisis”.ⁱⁱ

The outbreak of Covid-19 led the EU to identify the vulnerabilities of the European industrial system and, in particular, its dependency on third countries for certain strategic products. As a consequence, EU leaders are underlining the need to secure the EU’s open strategic autonomy, defined as a need to produce critical goods in Europe, to invest in strategic value chains and to reduce overdependency on third countries.ⁱⁱⁱ Many third countries also have

significant dependence on the EU for critical goods (notably finished medicines and vaccines, for which the EU is the largest global exporter) and regions outside Europe are also seeking to reshore production through measures such as export restrictions. This will likewise have a negative impact on competitiveness and indeed risks undermining the benefit of global supply chains.

With the assumption that globalised supply chains keep it efficient and competitive, the EU is endeavouring to make industrial paths, and development paths in general, greener and more digital. The European Green Deal proposed by the European Commission makes this clear and is largely welcomed by the member states. In the EU, the twin transition of greening and digitalising EU industry, and global competition, will rapidly change the context in which the value chains are placed.

Value chains are bound by geopolitical decisions and the need to mitigate dependence on third countries. The Strategic Forum on Important Projects of Common European Interest (IPCEI) and the Industry 2030 High Level Industrial Roundtable advised the European Commission to analyse and assess the needs and risks of the different ecosystems of EU industry. The most promising markets were identified and priority given to improving global productivity, combating climate change and technological development. The Strategic Forum identified three defining characteristics of strategic value chains: technological innovativeness, economic and market potential, and societal and political importance. Europe’s nine strategic value chains are: clean, connected, and autonomous vehicles; low CO₂ emissions industry; smart health; hydrogen technologies and systems; industrial Internet of Things (IoT); cybersecurity; batteries; microelectronics; and high-performance computing.

In light of the EU’s priority to look strategically at industrial policy, it is crucial to establish a strong industrial governance framework to guide the transition process. The EU currently has several governance tools in place.

- First, flexible state aid rules facilitate the funding of IPCEIs. These often involve high risk and require joint and well-coordinated efforts as well as public and private investment from several

member states. Article 107(3)(b) of the Treaty on the Functioning of the European Union (TFEU) approves state aid for IPCEIs.

- Second, industrial alliances play a successful role in achieving the EU's strategic objectives. They facilitate stronger cooperation and joint action between all relevant partners along a value chain. An industrial alliance and an IPCEI can go hand in hand; indeed, the latter are designed by the EU countries and need separate approval by the Commission.
- Third, the European Commission works closely with the Industrial Forum (established in January 2021). This consists of industry representatives, including SMEs, big companies, social partners, researchers, as well as member states and EU institutions. The Forum supports the European Commission in its systematic analysis of industrial ecosystems, helps assess the risks for and needs of EU industry as it embarks on the digital and green transition, and identifies new opportunities and challenges to strengthen its resilience.

The European Commission's newest communications, including the European Green Deal, the Industrial Strategy for Europe, and the Trade Policy Review, declare its commitment to the transformation of value chains by promoting new standards for sustainable growth. Indeed, strengthening the resilience and sustainability of the EU economy and its supply chains is now a pillar of the European Union that drives it towards open strategic autonomy. The first Foresight Report of the European Commission also highlights that resilience provides a new compass for all EU policies that directs the transition needed to cope with the coronavirus pandemic. Enhancing the resilience of supply chains goes hand in hand with their sustainability.

The Covid-19 crisis has made the resilience of GVCs an even more urgent goal and also emphasised the need to strengthen human rights and environmental due diligence by multinational companies.^{iv} As part of the Sustainable Corporate Governance initiative, the European Commission is working towards mandatory due diligence legislation for the respect

of human rights and the protection of the environment along the value chains, expanding on the voluntary approach set by the OECD Due Diligence Guidance for Responsible Business Conduct. As well as having a positive impact on human rights and the environment, a due diligence legislation would contribute to a level playing field for all companies operating in the EU market. It would bring legal clarity and establish effective enforcement and sanction mechanisms with a flexible approach according to the sector of activity and company type and size. However, the EU should consider and assess what specific counteractions to this system other countries could undertake.

The involvement of the private sector is crucial if the goal of making European value chains more resilient and sustainable is to be achieved; the way companies do business is pivotal, and sits alongside the role of institutions in defining a regulatory framework.

With the Invest EU programme, the EU set its objective of strengthening EU value chains through strategic investment.^v Achieving open strategic autonomy for European industrial ecosystems by building resilient and sustainable value chains also requires closer collaboration between the public and private sectors.

The Covid-19 pandemic has seen existing trends accelerate. In the global context, geopolitical relations are more fragile and there is more attention being paid to the environment, sustainability and governance.

A profound rethinking of production systems and relations between EU institutions, national governments and the business environment must therefore be part of any effective response to the current crisis. Only through an organic approach shared by all stakeholders will it be possible to leverage the resources made available by the EU over the next few years. In this way, a development path can be built that restores the centrality of the European industrial system, promoting its competitiveness and growth.

The following policy recommendations, while not exhaustive, underline the proposed direction.

GROUP 1: RECOVER FROM THE CURRENT CRISIS AND PRESSING CHALLENGES

The EU industrial system is facing important challenges. The disruptions caused by Covid-19, the geopolitical rivalry between the US and China and the digital and green transitions require its production systems to be rethought or reconfigured on the basis of value chains. Supply chains need to be able to absorb shocks and offer options to adjust and speed up recovery once the shock becomes manifest. The United Nations and other multilateral policy institutions advocate a coordinated policy response to avoid prolonged economic distress in the global economy.

R1. Perform stress tests to assess the resilience of value chains.

Stress tests should be introduced to assess the resilience of specific value chains. Similar to the stress test tool used on banks during the financial crisis, these would strike a balance between opportunities to make production more efficient and the risks of excessive length and complexity in logistics and trade.

A value chain stress test could assess resilience in a comprehensive way using five dimensions: industry attractiveness, corporate resilience, supply-chain exposure, operations exposure, and customer exposure. And because supply-chain risks are always changing, this stress test should not be a one-off but a recurring exercise (McKinsey, 2020).

The stress test can identify both the time it would take for a particular node in the supply chain to be restored to full functionality after a disruption (i.e. 'time to recover') and the maximum duration the supply chain can match supply with demand after a disruption (i.e. 'time to survive').

As noted by Simchi-Levi (2020), this approach could be particularly useful for critical supply chains, such as pharmaceuticals or personal protective equipment (PPE), as in case of the Covid-19 crisis, or more generally for supply chains heavily dependent on other countries. In addition, the promotion of dual

sources would help to manage and mitigate the risks through diversification, which is essential to avoid excessive dependence on a single supplier. The Covid-19 pandemic caused some countries to call for nationalisation or regionalisation of supply chains to avoid future supply chain bottlenecks and increase resilience. However, it has been found that lower diversification might not be entirely beneficial (OECD, 2020). The pandemic showed that multilateral approaches are necessary to enable inclusive and sustainable industrial development (Seric et al., 2020b). Furthermore, despite regionalised value chains often being considered an important risk-mitigation mechanism, it may prevent firms and economies from allocating their resources efficiently, increasing productivity or realising higher potentials from specialisation (Seric et al., 2020a).

In light of these considerations, the systematic adoption of stress tests for value chains can become a fundamental tool for verifying the degree of autonomy and strength on international markets.

R2. Establish a mandatory due diligence obligation.

Mandatory environmental, human and labour rights' due diligence legislation should be established to ensure sustainable and responsible value chains. On 10 March 2021, the European Parliament adopted a resolution setting out recommendations to the European Commission on corporate due diligence and accountability, including a draft directive. The European Commission is working towards the introduction of a legislative proposal for a mandatory EU system of due diligence for supply chains to account for the potential harms on the environment and human rights that might arise along the value chains in the EU and beyond. The introduction of mandatory requirements should provide legal clarity and an effective enforcement system in the event of non-compliance. A fair and balanced legislation seems to be the priority for promoting a level playing

field, to the extent that these requirements are also imposed on non-EU established companies with a significant footprint in the internal market (to be measured by a turnover threshold, for instance). Indeed, in introducing due diligence requirements, the European Commission should account for the specific needs of SMEs and make the legislation SME-friendly so that the measures adopted are proportionate to the size of the companies, thus encouraging their participation in value chains. However, this should be a well-established system that would be able to deal with possible counteractions from other countries (e.g. China).

R3. Foster cross-border and international cooperation.

Cooperation should be fostered across the EU borders and international trade by relying on a multilateral system of rules. This is key if the benefits of globalised supply chains are to be fully reaped. Interregional cooperation across borders can also play a crucial role in this context. Although GVCs have acted as transmitters of shocks, econometric results focusing on the first six months of the health crisis showed that exports of domestic producers participating in GVCs fared better during the pandemic, as diversification through trade is considered an asset (Espitia et al., 2021). The effect of European and GVCs is that they spread the benefits of extra-EU exports all over the EU. Indeed, exports from an EU country incorporate intermediate goods and services from other EU countries. Interestingly, domestic value chains have been found to be less resilient than GVCs (Miroudot, 2020). Open and cross-border trade is necessary to allow global supply chain networks to function

uninterrupted. Indeed, an open global trading system ensures agility and flexibility, especially in times of crisis. Global diversification ensures more flexibility, which is a key factor for avoiding dependency and enabling a consistent response to external shocks.

International cooperation could for instance focus on further promoting trade and transport facilitation measures. It could increase competition on major portal hubs to prevent international freight congestion (e.g. from ongoing scarcity and/or geographical misallocation of containers), including sanitary rules applicable for aviation and ship crews, and the traceability of international freight.

R4. Introduce phase-out measures.

Focused and temporary phase-out measures that make best use of the Recovery and Resilience Facility (RRF) should be introduced to aid recovery from the negative economic effects of the Covid-19 pandemic. In particular, financial support should be provided to SMEs so they can more easily export their products. The constraints on accessing finance that companies along the value chains might face should also be loosened. Indeed, the WTO (2018) estimated that over half of SME requests to access financial support are rejected, as opposed to only 7% of large firms' requests.

Structural solutions are needed as well as ad hoc measures. For example, the European Commission's plan to introduce the Single Market Emergency Instrument is meaningful because it creates a structural solution to future crises. Lessons learned from the current crisis would ensure the functionality of the single market and allow fast-track decisions to be made in times of crisis.

GROUP 2: IMPROVE THE EU GOVERNANCE OF STRATEGIC VALUE CHAINS

Despite being owned by private companies, value chains are nowadays becoming increasingly politicised, with governments tending to intervene, in different ways, in their management. The EU is justified in intervening in value chains because some sectors and products are considered strategic for building and maintaining its global competitiveness, and for reducing excessive dependencies so open strategic autonomy can be achieved. In this context, the EU seems to recognise the need for a strategic vision regarding value chain management, which requires efficient governance mechanisms.

R5. Adopt a bottom-up approach.

A bottom-up approach that fosters discussion between EU companies and institutions should be adopted to satisfy the specific needs of EU industry. One tool is the regional Smart Specialisation Strategy, which encourages cooperation within regional ecosystems and with other regional ecosystems with complementary skills, thus enabling Europe-wide value chains and innovation pathways to be created. Imposing top-down solutions does not seem beneficial since EU companies often have practical solutions in place already, and these cope with disruptions along the value chains. EU institutions and EU industries should join forces to ensure flexible, productive, and functional value chains. New and agile alliances would help achieve powerful cooperation among all the stakeholders along the value chains.

R6. Effectively revise the IPCEIs communication.

The European Commission has announced that the Communication on Important projects of European interest (IPCEIs) will be revised by the end of 2021. The IPCEI approach is fit for purpose, but some changes are needed because of its limitations. First, the EU is de facto a loose collaboration and not all member states have the same chances to invest resources and to take part in such projects, and

second, insufficient flexibility means projects are prevented from evolving over time.

In addition, it should be ensured that projects are truly pan-European. This also implies that the differences in the participation in IPCEIs between big and small enterprises should be minimised, favouring access for SMEs. In concrete terms, this could mean reducing the complexity, simplifying the procedure, and providing a timely dissemination of project descriptions to increase the interest (and reduce the entry level for SMEs) in setting up potential IPCEIs. Then, the structure of the projects should be flexible enough to ensure that the project can evolve once established. To this end, annual reports to assess the development of the projects are essential.

The European Commission should also revise the IPCEI framework to improve the efficiency of the procedures, particularly with regard to approval deadlines and notification procedures. Bearing in mind project spillovers, and the effects of the possible synergies with other EU initiatives and projects, the IPCEI tool should also be used to finance projects that are of interest to the entire European Union, and not just those that benefit only certain member states.

R7. Make use of PPPs.

Public-private partnerships (PPPs) should be used to define the relationship between governments and corporations as a contract to deliver on strategic projects. Indeed, PPPs helped some industries make it through the crisis, and public and private investments can be used to harness the potential of the digital transition and foster a period of technological growth and innovation in Europe to recover from the pandemic. PPPs should identify relevant stakeholders, partnerships, and collaborations.

Thorpe (2018) finds that PPPs applied to value chains seek to catalyse new investments, support

chain upgrading, or improve the performance of poorly functioning chains through joint activities that capitalise on complementary resources and competencies of public and private partners. Usually, small firms are the ones that can benefit more from a PPP. As highlighted by Thorpe (2018), public sector actors, through PPPs, are able to shape governance within value chains.

R8. Analyse and recognise strategic elements along the value chains.

It is essential to recognise strategic elements along the value chains and identify key value chains that are crucial for Europe's future resilience and open strategic autonomy. Strategic value chains depend strongly on the external context, and therefore the concept of what is strategic evolves over time. The Covid-19 crisis highlighted the strategic importance of new value chains such as pharmaceuticals and protective medical equipment.

To accompany the update of the 2020 New Industrial Strategy, the European Commission published an analysis of the EU's strategic dependencies and capacities. The EU has significant dependencies on raw materials that are sourced exclusively from abroad. In particular, 98% of rare earth elements needed by the EU come from China

and 98% of borate comes from Turkey. Many of these imports are essential for a broad range of strategically important new technologies. For example, the EU imports lithium for electric cars, platinum to produce clean hydrogen, and silicon metal for solar panels. All the value chains should be mapped to give a clear view of the EU strategic dependencies from abroad. The circular economy should be considered as part of the solution to reduce external dependency on raw materials by reusing and recycling products.

R9. Promote coherent and consistent actions across the EU.

Well-coordinated industrial policy measures should be promoted to ensure actions that are coherent and consistent across the EU. In a market like the EU's, without internal borders, companies' value chains are deeply interwoven (Kalf and Renda 2019). A consistent strategy should be applied to ensure the coordination of the EU multilevel governance and the elimination of the existing barriers that hinder the deepening of the single European market policies. European, national, regional and local levels should work together to enable European industry to deliver jobs, growth, and innovation in Europe.

GROUP 3: INCREASE TRANSPARENCY AND THE USE OF DATA ALONG THE VALUE CHAINS

The acceleration of technological innovation, the growing circulation of data and the increased trade in services along the GVCs push towards an overall rethinking in the organisation of production systems. In the context of the digital revolution, promoting the resilience and flexibility of strategic value chains requires, on the one hand, particular attention to transparency, and on the other hand, an updating of the tools used to regulate relations between the various players. The formation of human capital, which increasingly requires new skills to face the challenges of the transition promoted at European level, is another important element.

R10. Increase transparency of supply chains.

Better transparency along all the stages of the supply chains would help improve conditions in terms of resilience and sustainability by revealing information about the operations of the firms along the value chain. The complexity of supply chains might easily lead to generalised low transparency and knowledge sharing along the different stages of the value chains; in general, companies only know their immediate upstream and downstream partners. There is little knowledge of what is happening along a value chain beyond the closest suppliers. Data are not always available, and this makes it more difficult to identify and resolve disruptions that might occur along the value chain. Data sharing along the value chains can be facilitated by new technologies such as blockchain solutions. More data would lead to more information, making it easier to trace the supply chains, map the global value chains and eventually find which situations have excessive dependencies. This can be facilitated by the introduction of a common European data space in specific value chains (i.e. GAIA-X).

R11. Redesign contracts.

Contracts along the value chains should be redesigned to privilege smart contracts, while accounting for sustainability, protection of SMEs against predatory behaviour of large firms, and the

promotion of high standards. Since value chains are chains of contracts, their contractual aspect is fundamental. Smart contracts, supported by blockchain technology, are able to provide decentralised, verifiable, and secure solutions that would allow time and cost savings. As stated by Kalff and Renda (2019), with increasingly complex value chains, large companies have the option of outsourcing entire phases of the value chains to smaller companies by establishing relational contracting schemes. These schemes are long-term contractual relationships, often based on trust and governance structures. The complexity of value chains requires that their management is based on transparency and traceability; the use of smart contracts is an important element that helps overcome the challenge. In this respect, while maintaining the bottom-up approach referred to above, the European Commission, in connection with sector-specific bodies, could develop non-binding guidelines towards EU companies. Directed at SMEs in particular, these would provide advice on redesigning contracts and toolkits to self-assess the robustness of their individual supply chain, and help find tailor-made remedies.

R12. Make the best use of new technologies in value chains.

Blockchain and data in the value chains will reap the benefits of digitalisation. The EU needs to modernise the single market utilising digital and new technologies. Regulatory sandboxes could be vital in helping companies experiment by enhancing the integration of innovation and new technologies in the value chains. Decentralised solutions to storing data such as blockchain should also be privileged. It should be recalled, however, that SMEs need specific support in the use of digital tools. Indeed, a report from the WTO (2019) specifies that the significant challenges SMEs face trying to enter into GVCs are often exacerbated by the new digital economy. Although the digital economy could open up new

opportunities for them, SMEs lag behind large firms in terms of digital technology use and capability. They face specific difficulties in accessing e-commerce platforms and payment systems and are adversely affected by complex customs procedures, regulatory uncertainty, and barriers to services trade. To add to this, firms are estimated to derive between \$1.3 trillion and \$2 trillion a year in economic value from the integration of artificial intelligence (AI) into supply chains and manufacturing, but SMEs could lose out on these economic benefits if they are not helped to access the new technologies.

R13. Invest in new skills for the workforce.

The twin green and digital transitions are reshaping the way people work. Moreover, the Covid-19 pandemic has accelerated the digital transition, and

now more than ever the digital skills gap is a critical source of inequality. The European Union should invest in all the skills that the workforce needs to face the disruptive technological changes and to ensure the competitiveness of European enterprises globally. Investment in skills is fundamental for the new digitalised smart production processes; governments, regions and cities have an important role to play in attracting and developing skills, ensuring sound institutions and the good living environments that attract and develop talents (Bianchi and Labory, 2020). To efficiently allocate the new jobs to the workforce, the European Commission needs to be committed to providing European workers with new skills. Initiatives such as the Pact for Skills, launched in November 2020, will help the EU succeed in the evolving labour market.

CONCLUSIONS

The Strategic Value Chains working group has several synergies with other working groups in the Industrial Policy Task Force, so its work is overarching. Indeed, strategic value chains are related to European industrial policy in general rather than to a specific ecosystem identified by the European Commission, as is the case for other working groups.

The working group discussed the important challenges faced by the EU industrial system. Considering the disruptions caused by Covid-19, the geopolitical rivalry between the US and China and the digital and green transitions, the working group believe that the EU's production systems should be rethought or reconfigured on the basis of value chains. In particular, supply chains need to be able to absorb shocks and offer options to adjust and speed up recovery once the shock becomes manifest. A coordinated policy response is needed to avoid prolonged economic distress in the global economy.

The working group questioned whether the EU has enough room for action in value chains. Although value chains are nowadays owned by private companies, they are becoming increasingly politicised, as governments tend to intervene in the management of value chains in different ways. The EU is justified in intervening in value chains because

some sectors and products are considered strategic for building and maintaining its global competitiveness and for reducing excessive dependencies to achieve open strategic autonomy. In this context, the EU seems to recognise the need for a strategic vision regarding value chain management, which requires efficient governance mechanisms.

To increase its competitiveness in the global economy, the EU has to find innovative ways to respond to the new and pervasive economic trends such as digitalisation and servitisation. In the context of the Fourth Industrial Revolution, promoting the resilience and flexibility of strategic value chains requires that particular attention is paid to transparency, and that the tools used to regulate relations between the various players are updated. The formation of human capital, which increasingly requires new skills to face the challenges of the transition promoted at European level, is another important element.

Geopolitics is increasingly important when it comes to competitive positioning in the international arena and the EU needs to make every possible effort to gain and retain strength amid the tensions between other global players.

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LIST OF RECOMMENDATIONS

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R2.	Establish a mandatory due diligence obligation.....	5
R3.	Foster cross-border and international cooperation.....	6
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R5.	Adopt a bottom-up approach.....	7
R6.	Effectively revise the IPCEIs communication.....	7
R7.	Make use of PPPs.....	7
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R9.	Promote coherent and consistent actions across the EU.....	8
R10.	Increase transparency of supply chains.....	9
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WORKING GROUP SESSIONS AND SPEAKERS

- Chair: Andrea Montanino, Chief Economist, Cassa Depositi e Prestiti, and President of the Italian Investment Fund SGR
- Rapporteur: Chiara Del Giovane

THE EVOLUTION OF VALUE CHAINS: THE PROSPECTS FOR DIVERSIFICATION AND RESHORING

- **Jennifer Bair**, Professor and Chair, Department of Sociology, University of Virginia
- **Adnan Seric**, Research and Industrial Policy Officer, United Nations Industrial Development Organization (UNIDO)
- **Patrizio Bianchi**, Full Professor, University of Ferrara (and Italian Minister of Education)
- **Slawomir Tokarski** - Director of Industrial Policy and Innovation, European Commission, DG GROW.

GOVERNANCE AND POLICY OF STRATEGIC VALUE CHAINS IN EUROPE

- **Demos Spatharis**, Head of Unit on R&D&I, IPCEI and environment, DG COMP, European Commission
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The Working Group Members are comprised of representatives of commercial companies, trade associations, consumer interest groups and individuals from EU Institutions, policymakers, academics, regulators and supervisors. They are participating in the activities of the Working Group in a *personal* capacity.¹

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- United Nations Industrial Development Organization (UNIDO)

¹ Please refer to Part I of the “Principles and Guidelines for the Task Force and its Working Groups”.

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NOTES

ⁱ www.whitehouse.gov/briefing-room/presidential-actions/2021/02/24/executive-order-on-americas-supply-chains/

ⁱⁱ www.2021portugal.eu/en/programme/priorities/

ⁱⁱⁱ Communication from the European Commission, the European Council, the Council, the European Economic and Social Committee, the Committee of the Regions 'Europe's moment: Repair and Prepare for the Next Generation' COM/2020/456 final

(<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1590732521013&uri=COM:2020:456:FIN>).

^{iv} European Parliament resolution of 10 March 2021 with recommendations to the Commission on corporate due diligence and corporate accountability (2020/2129(INL)) (www.europarl.europa.eu/doceo/document/TA-9-2021-0073_EN.html).

^v Regulation (EU) 2021/523 of the European Parliament and of the Council of 24 March 2021 establishing the InvestEU Programme and amending Regulation (EU) 2015/1017 (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R0523&qid=1617090511360>).