

EXOGENOUS SHOCKS AND GLOBAL VALUE CHAINS RECONFIGURATION: IMPACT ON CROATIA AS A NEW EU MEMBER STATE

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Abstract

Since the 2020 pandemic, we have been living in an era of multiple exogenous shocks that significantly affected global economic and trade flows bringing important disruptions in the global supply and value chains, and resulting in contraction of economic activities. The European economies, including Croatia, have been struggling with the impact of poly-crises among which the effects of climate change, energy crises, and geopolitical conflicts such as the 2022 war in Ukraine, are most threatening.

unprecedented one, there were other important exogenous shocks happening in parallel or straight after the pandemic. The 2022 Russian invasion of Ukraine was yet another major shock, revealing how vulnerable global trade and production systems are. The consequent energy crisis and inflation made it clear that we need to pay more attention to how GVCs are changing and how this reconfiguration will affect future trade and investment trends.

Impact of exogenous shocks on GVC reconfiguration

The COVID-19 pandemic and Russia's invasion of Ukraine created significant economic challenges worldwide. One major issue is the disruption of global production processes, which are at the heart of GVCs.

According to many analysts, these processes were generally beneficial for productivity growth and consequential growth of wages, as well as for specialisation in producing certain products. However, the downside of the rising vertical integration of production processes via GVC was an intensive dependency and interconnectedness on intermediate products and, consequently on the international transmission of global shocks.

The recent study of the [European Parliament \(2023\)](#) has accented that currently, European Union (EU) economies are exposed to three dominant types of supply and value chain vulnerabilities, which may be caused by exogenous shocks: geo-political, volatility of prices, and structural vulnerabilities in some highly competitive fragments of GVC. When you add two pivotal deep economic transformations already on the way on top: digitalisation and greening of the economies, the scope of challenges exerted on economies and their main actors is huge.

Introduction

The global pandemic caused by the COVID-19 virus in 2020 has brought large-scale disruptions in global economic trade and investment flows, which triggered a significant decline in global economic activity. The World Development Report 2022 estimates that the global contraction of the world economic output in 2020 was as high as 3 percent of global gross domestic product. The global pandemic hugely disrupted the Global Value Chains (GVC), as according to the OECD (2020) data, more than 70% of world trade occurred via participation in GVC. Although participation in GVC has been moderating since the global financial crisis, the most notable decrease in GVC participation occurred since the start of the COVID-19 global pandemic in 2020. Apart from the pandemic, which had a profound disrupting impact as it was a very new and

[The EBRD 2022-2023 Transition Report](#) shows that after the COVID-19 pandemic, more than 75% of all firms participating in global supply chains have implemented at least one measure with the goal of strengthening the resilience of their supply chains, where the most common measure was an increase in stocks of inputs, followed by diversification of the supplier base. These trends intensified in 2022 by the energy crisis caused by the war in Ukraine, which brought persistent economic uncertainties back on the scene and blocked further swift post-COVID economic recovery.

Most of the recent literature explored expects further reconfiguring and “resilience-oriented restructuring” of current GVCs to ensure development sustainability at micro and macro levels. However, broader processes of their sharp de-globalisation via near-shoring and re-shoring were not pronounced although such business decisions were supported by short-term government intervention policies in most of the EU countries in 2020-2022, both after the beginning of the COVID-19 pandemic and energy crises after the start of the war in Ukraine. In short, according to [WTO GVC Development Report 2021](#), international trade via GVC remained rather robust despite pressures of multiple uncertainties and it is more likely to expect their further evolution rather than disappearance.

[Zahn \(2021\)](#) argues that GVCs will experience a substantial transformation and reconfiguration in the next decade, leading to a major change in global trade and investment flows and a complete shift in the “investment-development paradigm”. The main drivers of this shift, according to him, are the realignment of economic governance, the new industrial revolution driven by technology, the sustainability endeavour, corporate accountability, and resilience-oriented restructuring. Precisely, there are several noteworthy changes expected for the GVC by the year 2030. These may include a

transition towards more regional GVC, a shift away from fragmented manufacturing to more concentrated value-added processes, an uptick in platform-driven and asset-light GVC governance, a greater percentage of services involved in GVC and offshoring, as well as a diversification of GVC due to growing concerns around resilience and national security.

Participation of new EU Member States in GVCs, with a focus on Croatia

The COVID-19 pandemic as well as the 2022 energy crises hit very hard the EU, both in terms of trade and production. However, not all members were hit to the same degree. Based on the available data, Croatia doesn't have a strong position within the GVCs. However, there has been some improvement since it joined the EU in 2013. Some [analysts](#) attribute this to various factors, including Croatia's economic structure and the fact that it joined the EU relatively late.

The World Integrated Trade Solution data show that new EU Members tend to have a larger share of backward than forward GVC participation. This could mean that they have a better position in the GVC due to the higher foreign content of exports, thus improving their position in the downstream part of the value chain as a sourcing and production location for more advanced global and EU producers.

How did exogenous shocks such as the COVID-19 pandemic affect the economic performance of Croatia and its export sector, and what implications on its GVC participation we could expect in the future, considering the current megatrends? According to [World Trade Organisation 2018 data](#), GVCs-linked exports represent 37% of

Croatia's gross exports, with 13.3% being forward linkages and 23.7% backward linkages.

In our recently published research ([Čučković and Vučković, 2023](#)), we examined this impact from the perspective of Croatian two-way traders involved in GVC based on the data from the three rounds of the World Bank Enterprise Survey in 2019-2021. Our research on the performance of Croatian exporting firms that participate in GVC provided an analytical window into the immediate changes triggered by the pandemic at the firm level. In short, the econometric analyses of WB data showed that the probability of firms recording a fall in exports in relation to the pre-COVID period increases for the manufacturing sector, and for firms that recorded a decrease in demand for its products and services. Conversely, the probability of a decrease in exports falls for firms using a technology licensed from a foreign-owned company. With regard to the size of the exporting firm, the probability of a decrease in exports is also smaller for small firms, relative to large ones.

As for the participation of Croatia in service sector exports and in-service support to manufacturing exports, [Kersan-Škabić \(2022\)](#) analyses of OECD Trend in Value Added data for 2005-2016 demonstrate a high share of domestic value added in export of services in total gross exports (51%) because of tourism as a dominant services sector. On the other side, the support services' total value-added participation in manufacturing exports is, together with Greece, among the lowest in the EU, i.e. below 30% in 2016. That is pointing towards lesser developed "servisication" of the manufacturing sector, i.e. various types of services which directly support and ease exports of manufacturing production such as ICT, finance and insurance, transportation and storage services, and public administration services.

Regarding the policy implications of the ongoing process of reconfiguring the GVCs, some of the current trends may benefit the upgrading of GVC's position and the international trade of Croatian exporters' production networks. One of these benefits could be the increased regionalisation of Croatian exports toward the EU market. However, it remains uncertain whether the Croatian export sector will be able to take advantage of this window of opportunity given the prolonged uncertainties that are causing recessionary trends in its main EU trading partners. Namely, according to the November 2022 Reuters-Maersk Report on the reconfiguration process of supply and value chains, Croatia is not seen by the surveyed EU firms as a preferred production relocation or nearshoring place. [Mikic \(2023\)](#) stresses that such preferences should be kept in mind when realistically assessing the chances for upgrading the GVC position of Croatia.

With the new geopolitical situation brought about by the war in Europe, the low participation in GVC has appeared to be an advantage for Croatia in the short term. This is because the international exogenous shocks caused by COVID-19 and the conflict in Ukraine have not affected Croatia as severely as Germany or Italy, which have a higher position in GVC flows. One possible explanation could be found in the low share of the industry in Croatia's economic structure of 11.5 % (data for 2022) and therefore the dependency and interconnectedness on international trade of this sector was less pronounced. More precisely, in 2020, the first pandemic year, relative to 2019, Croatia increased its forward component while decreasing its backward component; however, as a one-off reaction to the shock. However, when looking at the data for 2021, we can see that Croatia decreased both pure backward and forward participation. In the longer run, it would be in the interest of both exporters and the whole economy to reap more benefits

from international trade by upgrading its position in GVC.

Concluding remarks and policy implications

In 2021 and 2022, according to data from the Croatian Bureau of Statistics, the level of trade with the EU countries intensified after the outbreak of the pandemic, especially related to manufacturing exports, as well as to imports of intermediate products on which Croatian export is dependent. According to data from the World Bank Enterprise Survey, 2020-2021, given the low participation rates, Croatian exporting firms, particularly SMEs were less dependent on GVC-related trade and investment flows than the most of New EU member countries. Therefore, the impact of global disruptions of supply chains caused both by COVID-19 and the Russian invasion of Ukraine was not as profound as in the countries with more intensive participation in the GVC, especially the ones such as Germany that were in the very core of EU GVC production and trade participation networks. Namely, diversified disruption impact is highly correlated with the position and the role in GVC participation networks, and peripheral EU participants are less exposed to vulnerability than the core ones, as the 2023 study of the EU Parliament shows.

As for the policy implications of our analyses, we identified that some of the current GVC transformation trends may actually work in favour of upgrading GVC's position and international trade of Croatian exporting firms' production and support services networks. More intense GVC links with the EU would be one of them, and Croatia joining both the Eurozone and Schengen Area in effect from January 2023 might provide important impulses toward that direction in the longer run.

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