

# Covid-19 effects on Central Europe

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ROMAN RÖMISCH

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## 1. COVID-19 EFFECTS ON THE INTERREG CE AREA

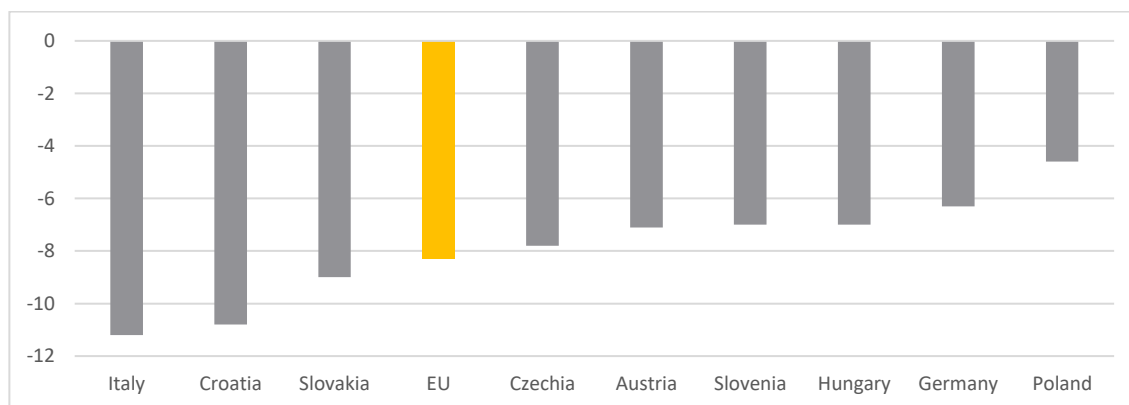
The emergence of COVID-19 and the subsequent measures to contain it were a sudden and massive shock to public and private life. The effects of this are visible in every aspect, starting with an economic downturn, to new social challenges, changed working routines, reduced transport and energy consumption etc. This paper provides a brief summary of the main effects COVID-19 had so far on the countries in the Interreg CENTRAL EUROPE area and, from this, develops some proposals for the Interreg CE Programme 2021+ to support dealing with and overcoming the pandemic.

For this, the paper highlights COVID-19 effects on: a) the CE economies, b) the territorial development, c) digitalisation, d) tourism, e) transport and f) environment. Based on this, conclusions have been developed.

### ECONOMIC EFFECTS

The COVID-19 related lockdown measures that were implemented all over Europe had massive effects on the economy, putting it in a state of 'hibernation'. As factories were shut down, supply chains cut or the services industries, especially restaurants, hotels and retail trade, forced to close temporarily, economic activity dropped by an unprecedented amount. Latest estimates from the EU Commission (EU Commission, 2020a) suggest that EU GDP for the year 2020 declined by around 8 percent compared to 2019 (see Figure 1).

**Figure 1: Estimated GDP growth rate, 2020**



Source: EU Commission, 2020

In the CE countries the economic effects were differentiated. The CE countries affected most by the COVID-19 related downturn are Italy, as it was hit first and hardest by the pandemic in Europe and Croatia, which particularly suffers from the decline in tourism. In both countries GDP is expected to decline by around 11 percent in 2020. Effects in Poland, Germany and Hungary are estimated to be more moderate. Nevertheless, also in these countries GDP is likely to decline by around 4.6 to 7 percent in the year 2020.

Combined with the economy, the EU labour markets deteriorated massively because of COVID-19. Because of the policy measures taken to contain the pandemic's effects on employment, this decline translated mostly to a reduction in the number of hours worked, and less in the number of people employed or unemployed.

This is illustrated by Figure 2 that shows the unemployment rates for the Interreg CE countries and the EU in the months June 2019 and June 2020 (left graph) as well as the changes between those months.

**Figure 2: Unemployment rates June 2019 & June 2020; Quarterly change in total hours worked 4<sup>th</sup> quarter 2019 to 1<sup>st</sup> quarter 2020**



Hours worked: Quarterly data, seasonally adjusted data, index: 2006 = 100; no data for Germany  
Source: Eurostat

In June 2019, in most Interreg CE countries, except Italy, unemployment rates were lower than the EU on average, particularly in Czech Republic, Poland or Germany. So far, the pandemic has not changed this fact. However, the labour market reactions to the COVID-19 lockdowns in most Interreg CE countries were stronger than in the EU on average. Hence in Croatia, unemployment rate rose by 2.2 percentage points from 6.6% in June 2019 to 8.8% in June 2020. In other countries changes were more moderate, though in Hungary, Austria and Germany unemployment rates still increased by over 1 percentage point from June 2019 to June 2020. This was double the increase of the EU on average. Unemployment rates in Italy as well as Poland in June 2020 were lower compared to June 2019. This is because in both countries the labour markets developed positively up until the COVID-19 outbreak. On a month-to-month basis it shows that also Italy and Poland saw an increase in unemployment rates because of the pandemic.

The relatively mild unemployment response to the health crisis was largely due to measures supporting short-time work. Hence, at least until now, COVID-19 effects on the labour market are mostly seen as a strong reduction in the hours worked. This is illustrated in the right graph of Figure 2, that shows the changes in the Eurostat working hour index for women and men between the last quarter of 2019 and the first quarter of 2020. It shows that because of the lockdowns the hours worked declined, particularly in those countries where health safety measures were implemented early, like Italy, Austria and Slovakia. Here the hours worked declined between 8 and 12 percentage points. Despite data being only available for the first quarter 2020, it can be expected that this reduction in working time a) continued during the second quarter of 2020 and b) also more and more affected countries that were less affected in the begin like Poland or Slovenia.

Notably, in most Interreg CE countries, except Hungary, as well as in the EU on average, women had to reduce their working much more than men. This is because, COVID-19 affected sectors with larger proportions of female employment, e.g. like retail trade, more than male-dominated industries.

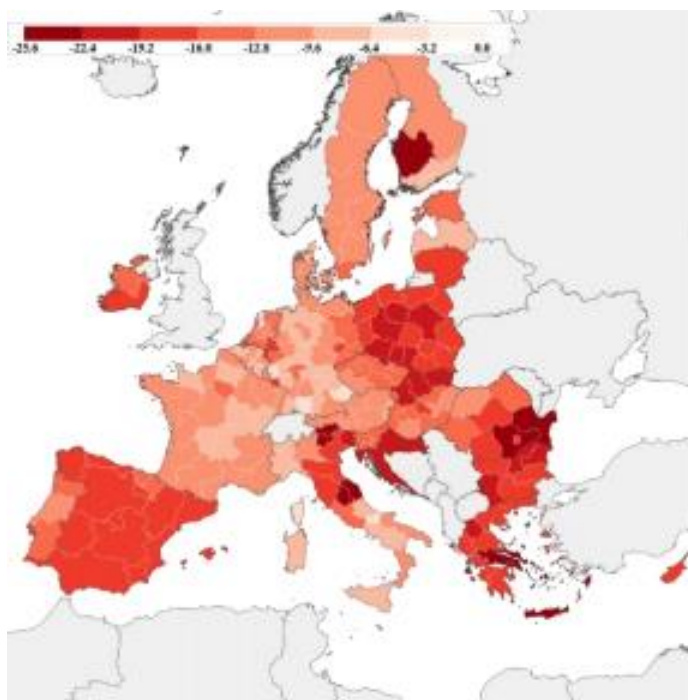
EU Commission prospects for 2021 are positive and indicate a substantial economic rebound from the COVID-19 slump (EU Commission 2020a). These forecasts are however subject to significant uncertainties regarding the future development of the pandemic.

## TERRITORIAL EFFECTS

It is very likely that there are big intra-country differences regarding the COVID-19 related effect. These will depend on the degree of the regions' participation in global value chains, their pattern of specialisation, their degree of urbanisation, the quality of governance and whether or not they are pandemic hotspots (see OECD 2020a). Presently, there are only estimates (Conte et al. 2020) on the potential COVID-19 related economic effects on the regions, as well as short assessments on the regions' vulnerabilities to the health-crisis (Böhme and Besana, 2020).

Conte et al. use the RHOMOLO model to forecast the changes in the regions' GDP caused by the pandemic (see Figure 3). Their results show that some of the Italian Interreg CE regions are amongst the economically hardest hit regions in Europe with potential GDP losses of over 20 percent. Other regions heavily affected are the more industrial regions in Poland, the Slovak regions except Bratislava and all of Croatia. By contrast, Austrian, Czech, German, Hungarian or Slovenian regions are less negatively affected by the health-crisis.

**Figure 3: COVID-19 effects on regional GDP, in %**

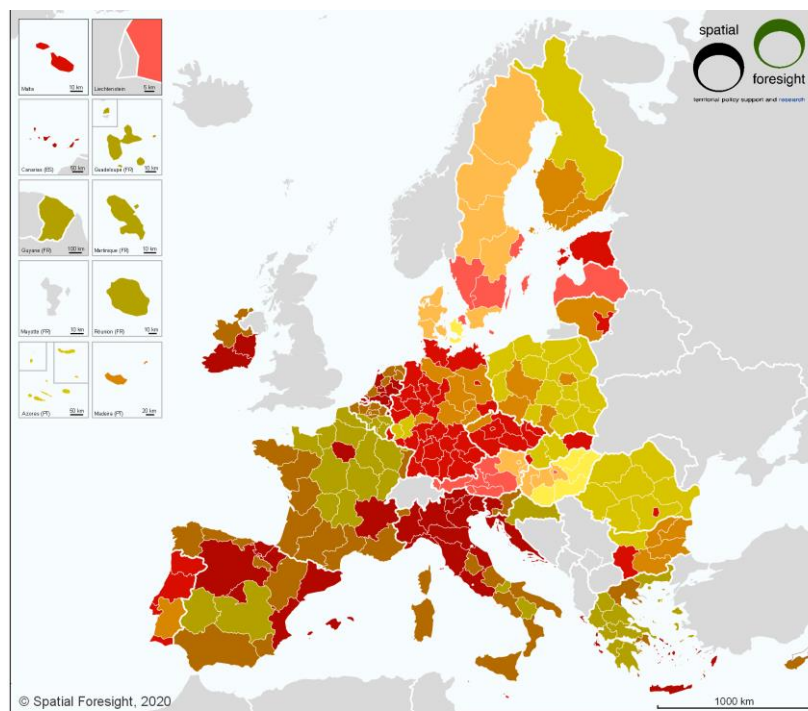


Source: Conte et al. 2020

Böhme and Besana construct an index measuring the regions' exposure and sensitivity to the COVID-19 crisis. Exposure is estimated using information on a) the rigidity of the lockdown restrictions in the regions and b) the macroeconomic risks. Sensitivity is estimated with data on a) the regions' employment in risk sectors (like manufacturing industries, transport etc.) and b) the reliance on tourism. Given these, regions can be highly exposed to COVID-19 shocks (like Northern Italy as a hotspot of the outbreak), but it also depends on the regions' sensitivity to what extent they will be affected by the health crisis in the end. If they are highly sensitive, they will react strongly to being exposed to COVID-19, while the less sensitive regions are the more resilient their development will be. In total, Böhme and Besana created 9 categories of the index, including low, medium and high categories of exposure and sensitivity. The index is illustrated in Figure 4.

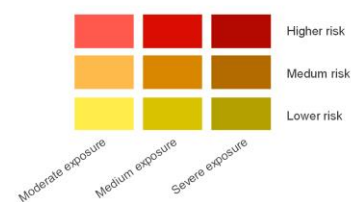
The results show that the Italian regions and the coastal Croatian as well as the Western Slovenian region are particularly vulnerable to the COVID-19 crisis. Potentially strong effects could also occur in the industrially strong regions in Southern Germany and Czech Republic and Slovakia. By contrast, Polish and especially Hungarian regions are estimated to be relatively resilient to the pandemic.

**Figure 4: COVID-19 exposure and sensitivity index**



Administrative boundaries: Eurostat GISCO, NUTS 2 (2016)  
Source: own elaboration on Eurostat data

**Cross-classification of exposure and sensitivity**



The map summarises: sensitivity and exposure of European regions to the economic crisis induced by Covid-19. The sensitivity is calculated combining a) I) employment per sector and related risk and II) comparative reliance on tourism sector. The exposure is calculated combining I) rigidity of restriction measures per country II) estimated effects on GDP for 2020.

a) Number of persons employed as a share of the total population in the age group 15-64; Statistical Classification of Economic Activities in the European Community: NACE rev 2 Assessment of impact per sector; own elaboration based on International Labour Organization (ILO) monitor: "COVID-19 and the world of work"; II) Capacity of collective tourist accommodation: bed-places from Eurostat regional tourism statistics by NUTS classification

b) I) JRC assessment of restriction measures per country used in the "Joint European Roadmap towards lifting COVID-19 containment measures" on 15th April 2020. II) European Economic Forecast published by the EU Commission (DG ECFIN) on 6th May 2020. No data for Mayotte

Source: Böhme and Besana, 2020

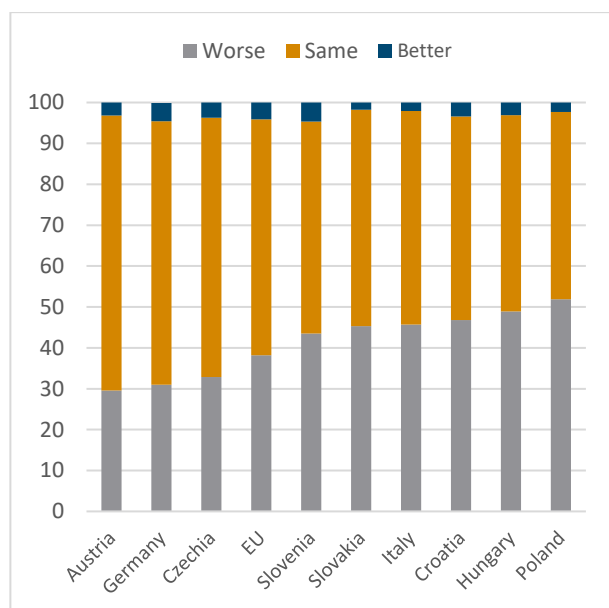
Notably, the Rhomolo model and Böhme and Besana come to different conclusions regarding which regions are affected most by the pandemic. In a way, this shows the high level of uncertainty regarding the future development of the health crisis.

## HEALTH & SOCIAL SITUATION

The rise in unemployment, the decrease hours worked and the economic losses because of the pandemic will have negative effects on the social situation of many people in the Interreg CE countries. There is a certain lack of data to show this, especially regarding solid data. There are however survey data (see Figure 5) that suggest that the financial situation in many households worsened since the outbreak of the pandemic. That is, in Austria, Germany and Czech Republic for around 30%-33% percent of the survey respondents the current income is less than their income 3 months ago. Conversely, for only 3%-4.5% incomes increased.

In the other Interreg CE countries, the share of respondents whose income declined in the last three months is above 40%, and thus also higher than the EU average of around 38%. In Hungary and Poland, this share is even around 50%, i.e. for half of the respondents' income declined during the pandemic.

**Figure 5: Financial situation of household now compared to 3 months ago**

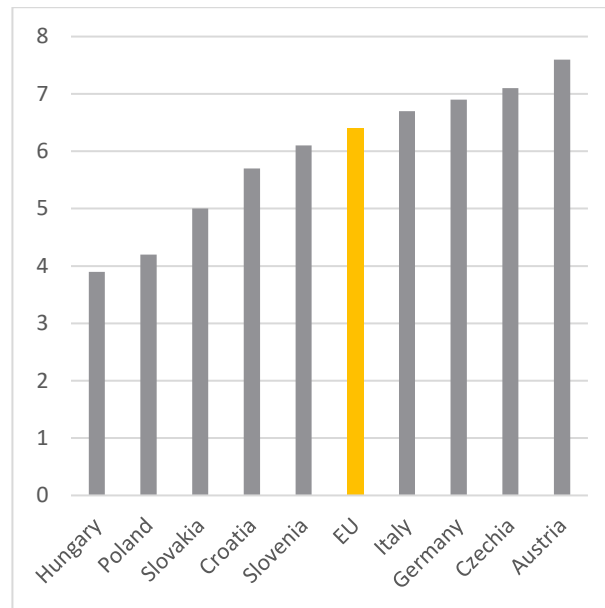


Source: Eurofound (2020), Living, working and COVID-19 dataset

Taking account of the health situation is difficult, as the extent of pandemic is constantly changing, and now, at the beginning of September 2020 currently increasing. That is, at the time this overview is published any information in this respect might already be outdated. There is however an interesting survey result that illustrates the perceived reliability of the health systems in the Interreg CE countries. In detail, the survey question asked how much people trust the healthcare system in their country on a scale from 1 (low) to 10 (high). The results of this survey are shown in Figure 6.

It shows that the trust in the healthcare system is comparatively low especially in Hungary and Poland, but also in Slovakia, where the average trust rating is between 4-5 and thus lower than the EU average of 6.4. In turn, trust in the healthcare system is highest in Austria, the Czech Republic, Germany and Italy.

**Figure 6: Personal trust in the healthcare system –scale 1 (low trust) to 10 (high trust)**



Source: Eurofound (2020), Living, working and COVID-19 dataset

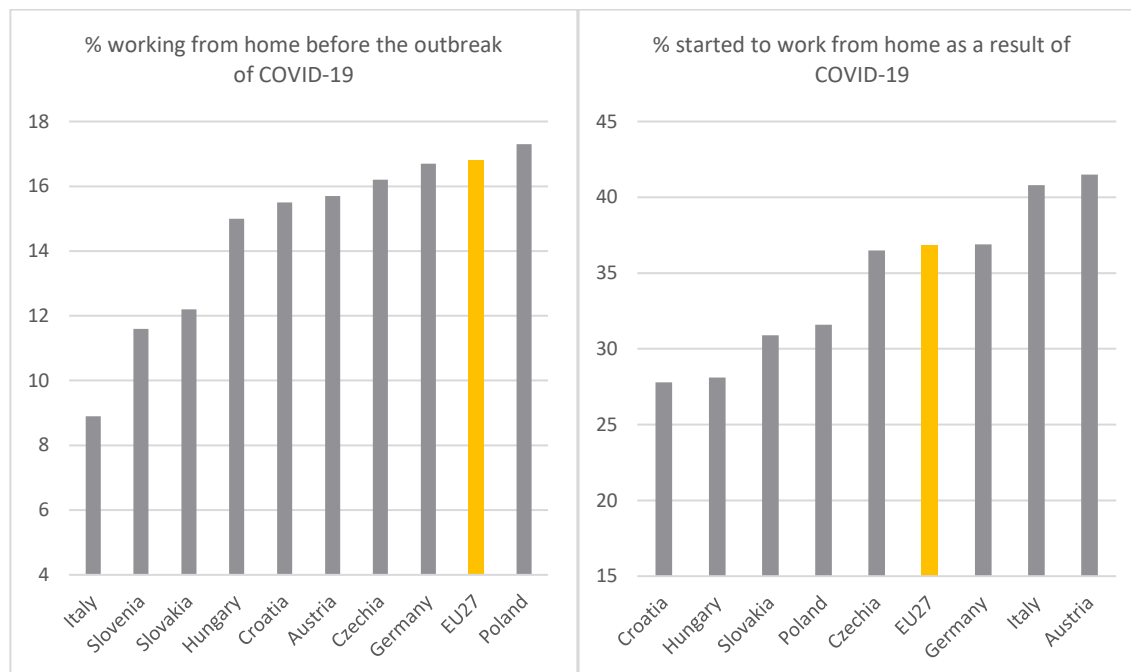
## DIGITALISATION

The pandemic is likely to have accelerated the digital transformation and shown its importance to mitigate potential negative effects, e.g. keeping up employment through teleworking. Amongst other things digitalisation has helped to keep up the access to goods and services via online-supply, which is particularly important for individuals in health- confinement and SMEs to keep up their activities (see OECD 2020c).

A specific COVID-19 related effect was the increase in teleworking. Figure 7 shows survey results addressing the share of people working from home before the crisis (left graph) and the share of persons starting to work from home because of COVID-19. It shows, that the propensity to work from home before the crisis in the Interreg CE countries was, except for Poland, lower than in the EU on average. This applies particularly to Italy, Slovenia and Slovakia, where only 9% to 12% of the people worked from home. In the other Interreg CE countries this proportion was higher at 15% or more. In Poland, around 17% of the people worked from home.

The pandemic revealed strong differences in the ability to switch to working from home in the Interreg CE countries. It was lowest in Croatia, Hungary, Slovakia and Poland, where around 28% to 32% the survey respondents started to work from home because of COVID-19. In Czech Republic and Germany this share was around the EU average (i.e. 37%), in Italy and Austria this share was higher (41%).

**Figure 7: Percent of respondents working from home before COVID-19 (left graph); percent of respondents that started to work from home because of COVID-19**



Source: Eurofound (2020), Living, working and COVID-19 dataset

Sostero et al. (2020) argue that the variation in teleworking before the crisis was only partly due to the industrial structure in the countries. Other determining factors include the occupational composition within sectors, the digital capacities and capabilities of firms and workers as well as organisation cultures. The outbreak of COVID-19 can lead to a convergence in teleworking shares across countries.

The main issue for Sostero et al. is that this trend might create a new digital divide, mainly between white-collar, high education and wage activities that are teleworkable and blue-collar labour with little teleworking potential. According to Sostero et al. “*nearly three quarters of those in the top wage quintile could potentially telework compared to around one in twenty in the bottom wage quintile*”. This emerging divide can have significant social and territorial consequences, as e.g. those that could work from home were more likely to remain employed during the crisis.

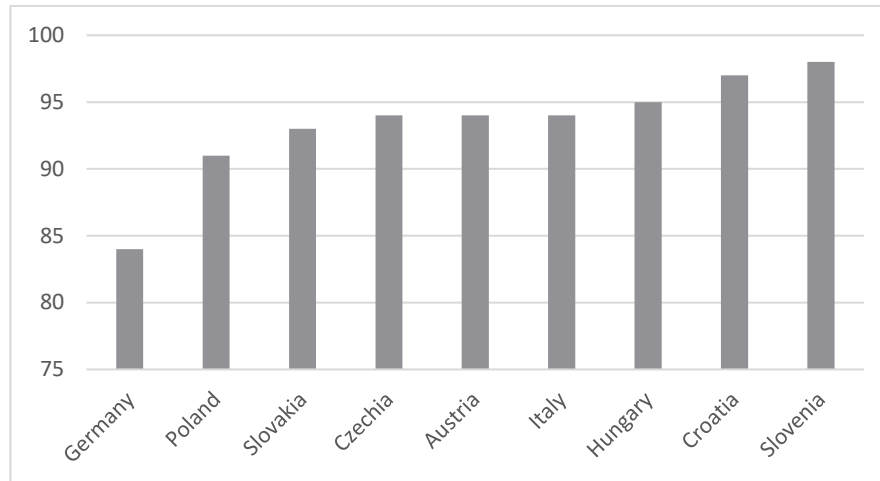
## TOURISM

The tourism industry was hit hard by the health-crisis and the subsequent measures to contain it. Comparing the tourism nights spent<sup>1</sup> in the period April/May 2019 and April/May 2020 shows that tourism declined massively in the Interreg CE countries. That is, the drop in nights spent ranges from 84% to 97% and 98% in

<sup>1</sup> This includes stays at: hotels; holiday and other short-stay accommodation; camping grounds, recreational vehicle parks and trailer parks.

Croatia and Slovenia, respectively. As the containment measures have been partly lifted over summer, tourism numbers improved, but are most likely still far below the numbers of previous years<sup>2</sup>.

**Figure 8: Decline in tourism nights in %, April/May 2019 - April/May 2020**

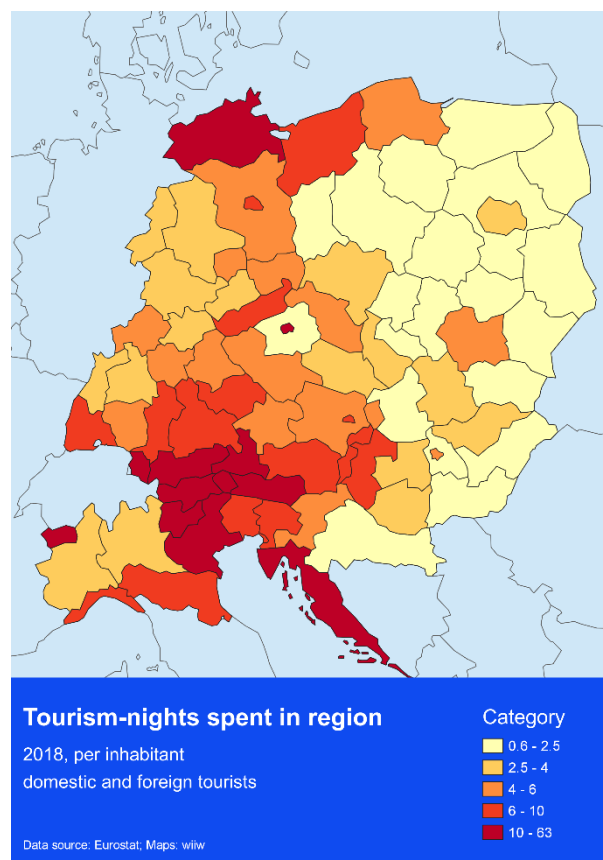


Eurostat

The impact of the strong decline in tourism on the Interreg CE regions depends on their reliance on tourism as source of income and employment. To illustrate this Figure 9 shows the tourism nights spent per inhabitant in the Interreg CE NUTS-2 regions for 2018. From this, it is clearly visible that especially the coastal regions in Croatia, Italy and Germany, the mountainous regions in Austria and Italy, as well as a number of capital cities (e.g. Prague) are centres of tourism. For these regions, the drop in visitors and the corresponding drop in incomes and employment opportunities will be felt most. This makes the development of adaption strategies that allow some tourism despite the pandemic particularly important to avoid too sudden changes to those regions' economic and social fabric.

<sup>2</sup> This is an expert estimation as by now (early September 2020) no data are available for the months after May.

**Figure 9: Tourism nights spent in Interreg CE regions, 2018, per inhabitant**



Source: Eurostat, wiiw

## TRANSPORT

The pandemic induced economic decline caused an equal decline in transport activities. Public transport has collapsed because of stay-at-home orders, while freight transport dropped as direct consequence of the travel restrictions and the reduction in economic activities.

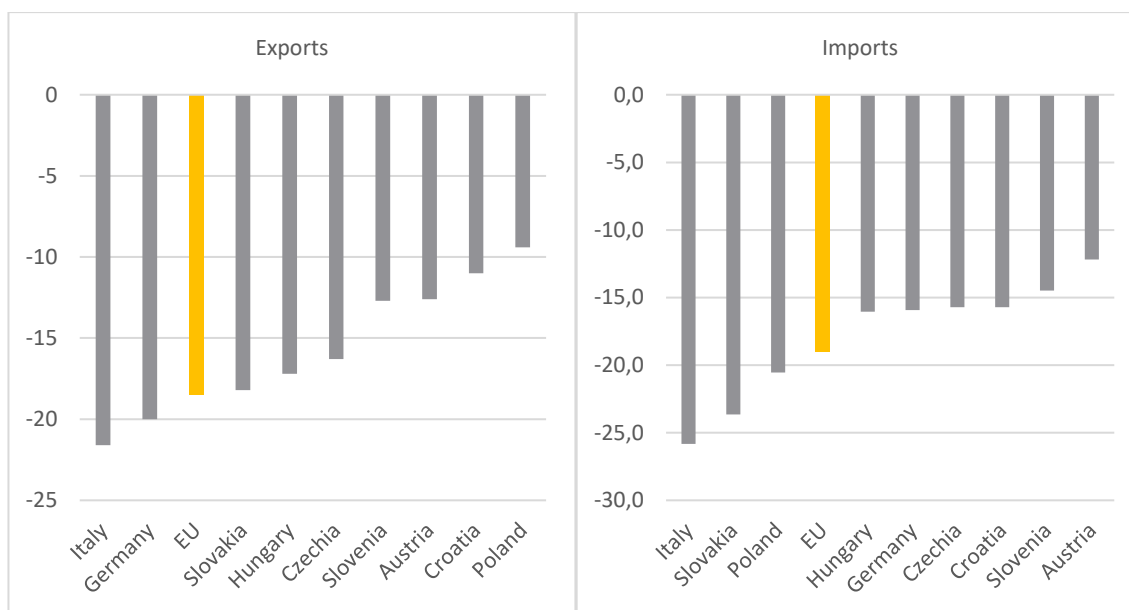
There is no up-to-date data for transport activities available to show the COVID-19 related effects. Instead, to illustrate potential transport related effects of the pandemic, transport is approximated by the highly correlated monthly data on global trade. Figure 10 shows the change in global exports (left) and import (right) of the Interreg CE countries and the EU between the months May/June 2019 and May/June 2020.

Both, exports and imports declined strongly in all Interreg CE countries, though not without major differentiation. Thus, exports of Italy and Germany declined massively on a year-to-year basis, at over 20%, followed by Slovakia, Hungary and Czech Republic, where exports dropped by over 15%. In the other Interreg CE countries exports dropped by less, but still by around or over 10%. In terms of imports, Italy, Slovakia and Poland showed the largest decline; Italian imports shrank by over 25%, Slovakian and Polish imports by over 20%. In the other Interreg CE countries imports declined by around 12% to 15%.

These numbers suggest that freight transport activities may have declined strongest for Italy, which was hit hardest in terms of the severity of the health crisis and the lock-down measures. For the other countries detailed differentiation is more difficult, but from the numbers, it is clear that transport activities must have declined strongly everywhere, given the sophisticated transnational value chains that have developed over the last decades. This includes just-in-time production schemes, e.g. in car manufacturing, where the decline or stop of production in one link of the supply chain has immediate effects on a large number of up- and downstream companies. .

A consequence of the lower transport activities was a reduction of green-house gas (GHG) emissions. Estimates suggest (Le Quéré et al., 2020) that daily fossil CO<sub>2</sub> emissions in April 2020 were 11% to 25% lower than in April 2019, because of confinement measures and low economic activity levels. For the whole year 2020 CO<sub>2</sub> emissions are estimated to be 4.2% to 7.5% lower than 2019, partly because economies return to a slight growth path. Additionally, most of these reductions are considered temporary as they do not reflect structural changes in the transport systems.

**Figure 10: Change in global exports and imports, in % - May/June 2019 to May/June 2020**



Source: Eurostat

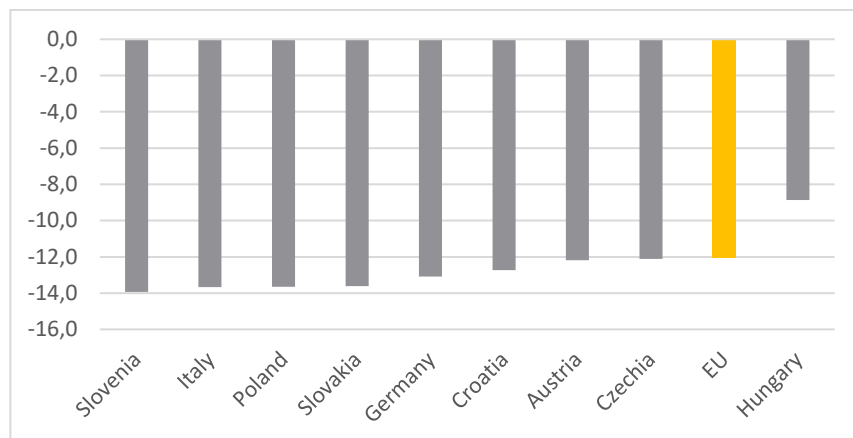
## ENVIRONMENT

Zambrano-Monserrate et al. (2020) expect that COVID-19, because of the associated contingency measures, had positive impacts on air quality and led to reduction in noise. Again, there is no actual environmentally related data to show this. Instead, we use data on electricity consumption, which is expected to be correlated with the production of green-house-gas emissions.

Comparing total electricity consumption in April/May 2019 to the consumption in April/May 2020, it shows that the decline was rather homogeneous in the Interreg CE countries. There, electricity consumption dropped by

around 12% to 14%, and thus by a bit more than in the EU on average. The only exception is Hungary, where electricity consumption declined by 8%.

**Figure 11: Change in electricity consumption in %, April/May 2019 – April/May 2020**



Source: Eurostat

Despite this improvement in air quality and reduction in emissions, there also can be secondary negative effects the COVID-19 pandemic, such as a reduction in recycling and an increase in household waste. Additionally, Zambrano-Monserrate et al. expect that with the rebound of economic activity emissions will increase again, to that the positive environmental effects are only temporary.

## 2. CONCLUSIONS AND RECOMMENDATIONS

The COVID-19 pandemic has shown how quickly and deeply the economic and social systems in the Interreg CE countries can become vulnerable and brought to their limits. It has also shown how quickly the countries turn to national solutions when facing a global crisis, thereby interrupting the flow of people, goods and services across borders. This deepened the COVID-19 related economic and social crisis.

It seems natural to argue for a coordinated approach across European countries in general and Interreg CE countries in special to address the challenges of the “borderless” pandemic. Here, COVID-19 has shown that such concepts are highly necessary, yet still largely missing. From this, a general conclusion following the pandemic is, that transnational as well as cross-border cooperation programmes are highly important, to establish links between the national, regional and local governments and other actors to make increase the joint resilience to new crisis and challenges of all countries involved.

In mid-July 2020 EU leaders agreed a Covid-19 recovery package, i.e. the Next Generation EU (NGEU) instrument, as well as the 2021-2027 Multiannual Financial Framework (MFF). In extent of the 1,074 billion Euro allocated to the MFF, the NGEU will provide the EU with up to additional 750 billion Euro to rebuild after the pandemic and support investment in the green and digital transitions.

Transnational cooperation will only receive a small share of these funds. Nevertheless, with its tools and through supporting cooperation across countries it can contribute to this rebuilding process. There are already

first suggestions raised by high-level institutions of what policy could do in this respect. These suggestions or recommendations refer mostly either to countries or mainstream EU policies. Still, some of these recommendations also apply to transnational cooperation. Therefore, in line with these institutions, first recommendations are:

The pandemic has revealed **investment needs** to reduce the excessive reliance on third countries for strategic supply chains, e.g. medical equipment. Hence transnational cooperation can help to reduce the EU import dependence by developing within EU supply chains for e.g. medical products and pharmaceuticals, key enabling technologies, critical materials or strategic digital infrastructure (EU Commission, 2020b).

To address **social needs**, it is suggested to support investments for labour mobility and retraining and -skilling as unemployment rates are rising because of COVID-19 and are expected to remain at a higher level once the pandemic is overcome. An additional field of investment is the health system, which has been brought to its limits and beyond by the pandemic. Here the Commission suggests supporting the accessibility, quality and efficiency of health systems, including through an emphasis on smart digitalisation and strengthening health prevention (EU Commission, 2020b).

Regarding the **territorial needs**, the following points are suggested (OECD, 2020b):

- Supporting the use and diffusion of digital tools, to support remote working, learning and e-services. This is especially important in rural areas.
- Support local business and enterprises to accommodate a pandemic related shift in buying habits in favour of local goods and tourism sites.
- Supporting communities to strengthen their local networks and co-operative structures to increase their economic and social resilience to shocks.

Connected to the investment and territorial needs the importance of supporting the **social economy** needs to be emphasised (OECD, 2020d), as it can help to promoting inclusive and sustainable economic models as well as social innovation, all of which contribute to a bigger resilience of the national, regional or local economies.

As far as reviving tourism after the pandemic is concerned, policy measures that are well suited for transnational cooperation include (OECD 2020e):

- Developing new health protocols for travelling.
- Restoring traveller confidence with new safe and clean labels for the sector, information apps for visitors and domestic tourism promotion campaigns.
- Preparing comprehensive tourism recovery plans.

As far as transport is concerned, transnational cooperation can address a number of challenges. They include (ITF 2020a and 2020b):

- A short-term decrease in public transport and an increase in cycling, walking and car travel because of the pandemic. This necessitates the re-allocation of space between transport modes.
- Management of excess post-confinement car traffic.

- Increased importance of deliveries of e-commerce purchases, which includes an increasing number of vehicles delivering goods.

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