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Central Europe Economics View

Assessing the impact of COVID-19 outbreak

- The rapid spread of new coronavirus in China and other countries is an important but difficult to quantify risk to our forecasts. In this note we try to assess potential consequences of the outbreak.
- China is not an important destination for exports from Central Europe but the external shock can be felt in the region if German economy decelerates. This impact should be, however, moderate and could be estimated at around ~0.2% point for the CEE.
- However, the above estimates do not include the most important and the most uncertain part of the shock. We would be much more worried about growth outlook if the COVID-19 outbreak led to disruptions in supply chains.
- Industries most exposed to potential supply chain disruptions are: 'computer, electronic products', 'electrical equipment' as well as 'textiles'. All CE3 economies could be affected, though Czech Republic and Hungary appear to have somewhat higher exposure to these industries.
- Our estimates suggest also the impact of the lost tourist traffic on CEE economies would be small especially as compared to potential risks related to supply chain disruptions or risks related with slowdown in Germany.

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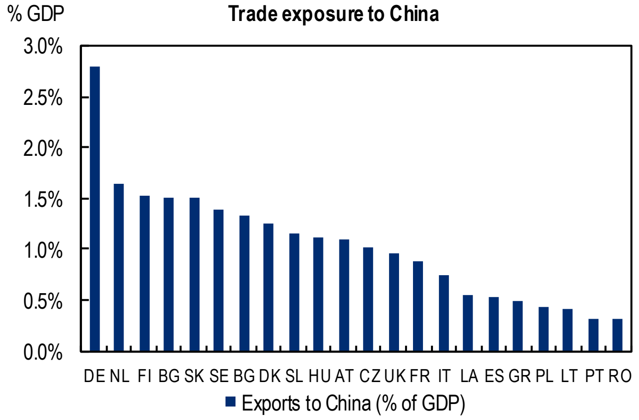
Assessing economic impact of the outbreak

The rapid spread of new coronavirus in China and other countries is an important but difficult to quantify risk to our forecasts. This difficulty is compounded by the uncertainty regarding the future development of the outbreak and the steps that might need to be taken to limit the transmission in the coming weeks or months. However, what we know is that the already implemented measures and developments are having an impact on some economies and are likely to result in significantly lower economic growth in China in first months of 2020. Having said this, in our note we try to identify key channels through which the SARS-CoV-2 virus could affect Central European economies. In particular we look at the direct impact on CEE exports, the functioning of supply chains and the tourism sector.

Impact on exports

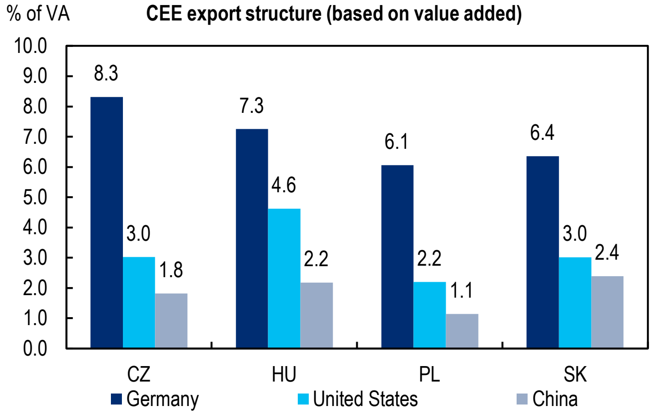
China is not an important destination for exports from Central Europe. Its share in CEE exports slightly exceeds 1%, which is negligible as compared to the region's exposure to European markets. Furthermore exports to China amount to ~1% of GDP in Hungary and Czech Republic and less than half of that in Poland. This suggests the weakness in Chinese demand might have little direct impact on exports from Central Europe. However, indirect links should be taken into account as well due to the fact that Germany has large export exposure to China, well exceeding that of other euro area or Central European economies (Figure 1). Since CEE exporters constitute an important part of German supply chains this could open a transmission channel from China's growth shocks to CEE. Indeed, based on OECD statistics on trade in value added we estimate that the share of Chinese demand in CEE value added is around 2% (Figure 2) and is higher than nominal export exposure would suggest. This confirms that some of the goods produced in the region and sold to other countries, eventually end up in China. However, even based on this measure the exposure of Central European economies appears relatively low and definitively too small to have a large impact on growth forecasts in the region.

Figure 1. Goods exports to China (% of GDP), 2018.



Source: Eurostat, Citi Handlowy Research

Figure 2. Direct and indirect exposure of CEE exports to Chinese demand is relatively low



Source: OECD TiVA (2015), Citi Handlowy Research. Note: The data show value added from CEE countries in final demand of Germany, US and China (expressed as % of value added of respective CEE economies)

What matters is the fact that correlation between cyclical activity in CEE and Germany is high. Therefore the region may not react directly to developments in China and changes in China's demand but it may be heavily affected by changes in euro area's business cycle. If – as we expect - German economy suffers due to Chinese slowdown, this will eventually feed into weaker activity in the region in excess of what direct and indirect export exposure would suggest. In particular, weaker growth in Germany would probably result in lower foreign orders for CEE products and lower business confidence. This would eventually lead to weaker domestic investment activity as the firms would plan to adjust their capacity to less favorable growth outlook. Eventually this could result in an uptick in unemployment rate. Usually in periods of external growth shocks CEE exporters try to increase sales to new markets but this time the room for such a move would be limited. Already in 2018 and 2019 the CEE economies were forced to re-direct some of their exports to other markets in order to mitigate the impact of shocks related to trade wars. Weakening of CEE manufacturing growth in recent quarters suggest that this re-direction had only a temporary impact on activity. The fact the weakness in Chinese growth is affecting all markets simultaneously also supports our view that the ability of CEE to diversify exports to new markets is now limited.

Assuming that slowdown in China could shave off 0.3% point from 2020 growth in Germany, we think the impact on CEE economies could be estimated on average at around ~0.2% point. Using historical relations and the importance of exports in CEE GDP, we think the Czech Republic and Hungary would likely be more exposed to slowdown in Germany, while the impact on Poland would be slightly smaller. Country wise, the weaker 2020 German GDP outlook represents a risk of 0.2-0.3% point for Czech GDP growth as it would, together with weaker Q3-Q4 2019, suggest 1.5%YoY growth in 2020. This highlights a downside risk to the CNB's 2020 GDP forecast at 2.3% that assumes the GDP growth accelerating to 0.8% in Q1-2020 supported by stronger private consumption (buoyed by fiscal policy and hike in minimum wages) and rebound in exports (which we view too optimistic). In turn for Poland, the cost of German slowdown would be probably lower and would not exceed 0.2% points. In such a scenario 2020 growth in Poland could be slightly below 3%. The above estimates, however, do not take into account the consequences of potential disruptions in supply chains.

Figure 3. Dependence of CEE economies on imports of intermediate goods from China

	Imports of intermediate goods from China (% of total intermediate imports)				
	Total	Capital goods - parts and accessories	Industrial supplies - primary	Industrial supplies - processed	Transport equipment - parts and accessories
CZ	3.7	9.5	1.3	2.7	2.3
HU	5.1	13.3	1.4	3.7	2.6
PL	6.1	17.3	3.2	5.5	5.6
RO	4.8	9.2	1.7	4.3	5.4
SI	4.9	13.4	0.7	5.5	2.5
SK	3.2	11.9	1.1	2.1	1.4

Source: Eurostat, Citi Handlowy Research

Impact on supply chains

In the context of coronavirus outbreak the soft spot of CEE economies is their dependence on global supply chains. While it is possible to estimate the impact of weaker growth in China on GDP growth in Germany and consequently on Central Europe (see previous section), the impact of supply chains disruptions might be much harder to describe. First, supply chain links are complex and difficult to map. Second, consequences of disruptions could be non-linear as prolonged delays in supplies could lead to a disproportionally large change in production, possibly leading to temporary factory closures. Third, in case of supply chains quality sometimes trumps quantity – i.e. a small drop in imports of a crucial component may have a more serious impact on production process than a more significant fall in imports of easily substituted components.

Figure 4. Value added from China in CEE gross exports (as % of total exports of exporting industries)

	Food products, beverages and tobacco	Textiles, wearing apparel	Wood and paper	Chemicals and non-metallic mineral products	Basic metals, metal products	Computer, electronic and optical products	Electrical equipment	Machinery and equipment	Motor vehicles	Other transport equip.	Other
CZ	1.4	**5.2**	1.7	2.1	2.2	**15.0**	**4.8**	3.2	3.8	3.5	3.5
HU	1.1	**2.6**	1.6	1.6	2.0	**10.7**	**6.3**	3.0	3.1	2.8	2.6
PL	1.3	**6.1**	1.8	1.9	2.2	**11.6**	**6.6**	3.9	3.4	4.2	3.4
RO	0.5	**1.8**	1.3	1.1	1.3	**3.3**	**2.2**	2.0	1.8	1.9	1.5
SI	1.0	**6.2**	1.9	2.1	2.2	**5.9**	**4.5**	2.8	2.8	2.7	2.5
SK	1.2	**8.2**	1.5	1.9	2.2	**14.6**	**7.0**	4.3	3.5	3.9	4.2

Source: OECD TiVA, Citi Handlowy Research

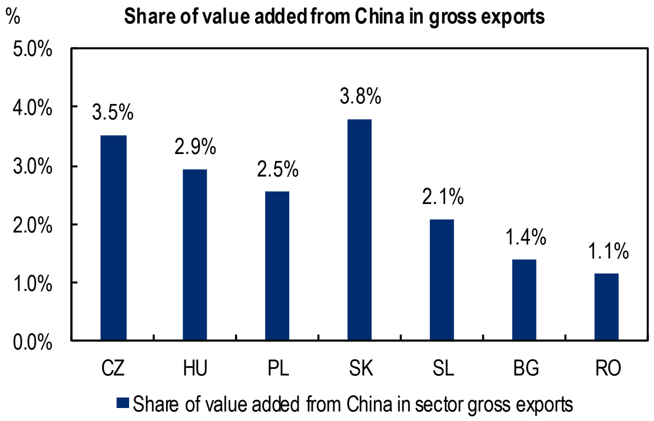
Figure 5. Share of value added from China in total value added of particular industries (%)

	Food products, beverages and tobacco	Textiles, wearing apparel	Wood and paper	Chemicals and non-metallic mineral products	Basic metals, metal products	Computer, electronic and optical products	Electrical equipment	Machinery and equipment	Motor vehicles	Other transport equip.	Other
CZ	0.2	0.6	0.2	0.2	0.2	**3.1**	**0.8**	0.5	0.8	0.2	0.2
HU	0.3	0.4	0.3	0.3	0.3	**2.6**	**1.7**	0.5	0.4	0.6	0.2
PL	0.2	0.6	0.2	0.3	0.3	**2.2**	**1.9**	1.0	0.4	0.6	0.2
RO	0.0	0.1	0.2	0.1	0.1	**0.3**	**0.3**	0.4	0.2	1.0	0.1
SI	0.2	1.4	0.7	0.5	0.4	**0.8**	**1.1**	0.7	0.6	0.5	0.3
SK	0.2	0.8	0.2	0.3	0.4	**3.5**	**1.6**	1.2	0.6	0.6	0.3

Source: OECD TiVA, Citi Handlowy Research

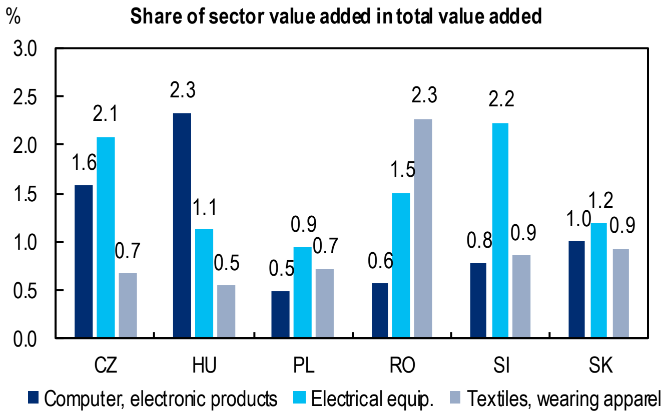
The actual vulnerability of CEE economies to supply chain disruptions may depend on several factors but one of them is related to the dependence of industries on intermediate goods from China. Figure 3 tries to measure this issue. It shows the share of intermediate imports from China in total imports of CEE economies. In this comparison Poland stands out as a country with highest share of Chinese intermediate goods in total intermediate imports. However, in all countries this share is particularly high in the category of capital goods (parts and accessories). We think disruptions in this particular category may have a relatively smaller impact on production activities of CEE firms. That is because unlike in case of industrial supplies, the delays in deliveries of capital goods do not need to lead to production stoppages. These estimates, however, have some shortcomings. The data shows only direct import flows from China, while the supply chains may fail if Chinese inputs are used at one of earlier stages, which would not be reflected in direct exports data. Therefore in our view it is also worth checking which sectors use the highest share of Chinese value added (instead of direct imports from China). Moreover any attempts to assess the impact of potential supply chain disruptions should focus on particular industries instead of the full economy. That is because some industries are naturally more dependent on supplies from China than others. Consequently economy averages do not show where actual vulnerabilities ca be found.

Figure 6. Value added from China constitutes 2.5-3.5% of CE3 exports



Source: OECD TiVA, Citi Handlowy Research

Figure 7. Industries most exposed to China supply chain disruptions (computers and electrical equipment) account for 3.5% of total value added in CZ and HU



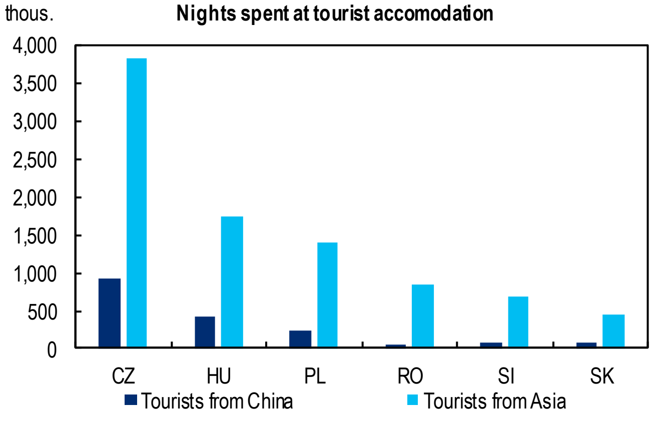
Source: OECD TiVA, Citi Handlowy Research

One useful way to assess the impact of supply chain disruptions is by looking at imports of Chinese value added as compared to total exports. This metric tries to identify industries that are particularly reliant on inputs imported directly or *indirectly* from China. The latter includes products from China that were used at an earlier stage in the production process in other countries. Since total exports are in a denominator it also highlights potential impact on export performance of particular firms. Figure 4 shows that exporters of computers, electronic and optical products are most vulnerable, with the share of Chinese value added ranging between 10 and 15% of exports in Czech Republic, Hungary and Poland. Other highly exposed industries are ‘electrical equipment’ as well as ‘textiles and wearing apparel’. In turn exporters of food products, wood, paper products and chemicals are less dependent on inputs from China. In our view one caveat is worth emphasizing here. While Figures 4 and 5 show which sectors rely on Chinese imports, they do not show for which sectors Chinese value added is essential to maintain production. It is possible that in some cases CEE firms are capable of diversification and would be able to use suppliers from other countries. Unfortunately this is much more difficult to assess. We suppose, however, that industries with more sophisticated (technology) products are also those where it may be more difficult to find substitutes, at least in the near term. If we are right, industries producing computer and electronic products could be even more vulnerable. As compared to total value added, these two most exposed sectors have biggest share in Czech Republic and Hungary, reaching ~3.5% (Figure 7).

Tourism

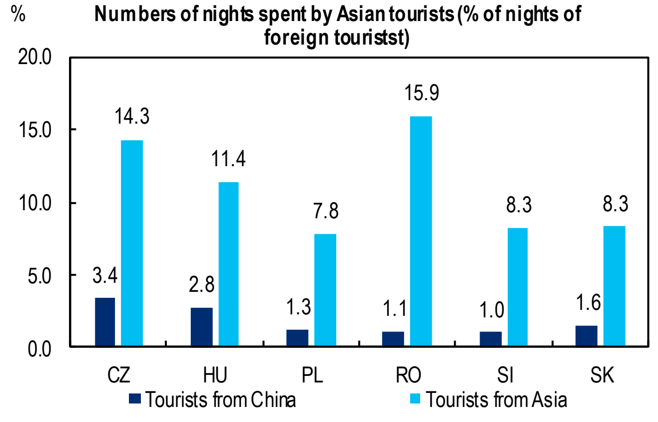
One of likely consequences of COVID-19 outbreak is a drop in tourist traffic. According to Bloomberg, a number of European airlines suspended connections with China, including among others: Austrian Airlines, British Airways, Lufthansa and Polish LOT. This fact as well as the fear of a new virus will likely result in a lower number of visitors from Asia. Eurostat data suggest that out of CEE countries Czech Republic is the most popular destination for Chinese tourists, followed by Hungary and then Poland (Figure 8). However, in each of CEE economies these visits constitute less than 3.5% of all nights spent by non-residents. Furthermore, annual expenditure of China residents is relatively low both in nominal terms as well as a share of GDP (Figure 10). Admittedly the tourist traffic is not uniform and is concentrated in largest cities (Prague, Budapest, Warsaw, Wroclaw and Cracow), which means that disruptions could be more of a problem for local firms from certain sectors rather than for whole economies. However, seasonal patterns suggest also that most of the tourist flow is observed in 2Q and 3Q when weather conditions are more favorable. This means that virus-related disruptions in international visits in 1Q could imply smaller than proportional shortfall in revenues from tourism. Even in Hungary, where annual spending by Chinese visitors is higher than in the rest of the region, the cost related to lower traffic in 1Q will likely be lower than 0.1% of GDP. All in all we think the impact of the lost tourist traffic on CEE economies will be small especially as compared to potential risks related to supply chain disruptions or risks related with slowdown in Germany.

Figure 8. Czech Republic is the most popular destination for Chinese tourists…



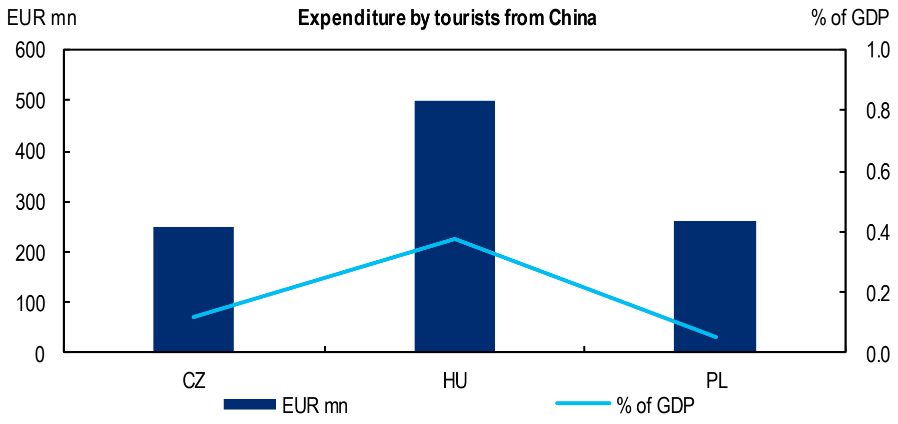
Source: Eurostat, Citi Handlowy Research

Figure 9. … but this tourist traffic constitutes a small share of all visits of foreign tourists



Source: Eurostat, Citi Handlowy Research

Figure 10. Annual expenditure by tourists from China is relatively low in Central Europe



Source: Citi Handlowy Research estimates, national statistical offices

Conclusions

At this stage, assuming no major disruptions to CEE-Germany-China supply chains, the COVID-19 outbreak may have slightly negative impact on growth outlook in the region. We would estimate the growth cost at around 0.2% points in 2020 with the biggest downward revisions probably in 2Q and 3Q. The impact on 1Q economic activity in CEE would be probably small as this would be too early for external demand shocks to translate into exports from the region, while the impact on tourism would be limited from total economy point of view.

However, the above estimates do not include the most important and the most uncertain part of the shock. We would be much more worried about growth outlook if the COVID-19 outbreak led to disruptions in supply chains. The exact growth shock related to this would be hard to estimate given the potentially non-linear impact on activity. However, based on the available data it seems the most exposed industries would include 'computer, electronic products', 'electrical equipment' as well as 'textiles' industries. All CE3 economies could be affected, though Czech Republic and Hungary appear to have somewhat higher exposure to these industries.

Finally, we believe potential disruptions in imports of intermediate and consumer goods from China may pose upside risks to inflation outlook in the CEE by partly reversing the disinflationary impacts of China's integration into the global trade. Although supply-side inflationary shocks – such as substitute by more expensive products or price hikes due to scarcity - may be partly offset by a weaker European growth cycle, inflationary impacts may dominate amidst strong domestic consumption in the CEE economies. This factor may be hard to quantify for central banks in the region, posing upside risks to inflation outlook. Monetary policy reaction may be mixed as Hungarian and Polish central banks typically looking through external shocks even if core price indicators are impacted.

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