European Container Trade, 2020, Q3

Examination of container trade in 2020 (Q1-3)

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Three Quarters, 2020

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Background

This article examines the pattern of containerised trade in the first nine months of 2020, using EU (COMEXT) trade data in conjunction with methodologies to estimate the quantity of tonnes moved by container. See [4]. The database covers EU trade with non-EU countries, and this article focuses on Central Europe, i.e. trade to and from eight Member States:

- Belgium
- Netherlands,
- Luxembourg,
- France
- Germany
- Italy
- Austria, and
- Czech Republic

(Switzerland is not covered by EU trade data.)

At the time of writing, November 2020, data for the first nine months of 2020 has just been released by Eurostat, making it possible to examine in some detail the ongoing impacts of the Corona Crisis on the sector. Most economic analyses which have been circulated so far focus on trade impacts in terms of value (Euros), so here the aim is to look at the impacts in terms of tonnages, by comparing monthly data for 2020 against the equivalent periods in previous years, and with port throughput data obtained from the main containing ports serving the region.

Method

Eurostat trade data records whether trade tonnages are containerised or not, but as set out in previous articles, there are significant inconsistencies in terms of coverage per Member State, so a detailed set of containerisation factors were calculated to solve this data gap. This method has been used throughout this article. See [3] and [4]. Note that the quantities being analysed are measured in containerised tonnes.

Results

Monthly data covering the period January 2018 to September 2020 is shown below, by direction. In each case the flows cover trade between the eight central European countries and non-EU trade partners.

Containerised Tonnes

*Table 1: Central Europe: Containerised **Export** Tonnes (000s)*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2018	9,855	9,700	10,378	9,627	9,975	10,141	10,179	9,597	9,661	11,147	9,848	9,031	119,137
2019	9,788	9,687	10,431	10,290	10,408	9,195	10,569	9,602	10,269	11,212	9,929	9,369	120,749
2020	9,889	10,221	10,149	9,511	8,491	9,434	10,426	9,100	9,743				86,963
INDEX	100.7	105.4	97.5	95.5	83.3	97.6	100.5	94.8	97.8				

*Table 2: Central Europe: Containerised **Import** Tonnes (000s)*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2018	9,670	8,948	9,157	8,965	9,818	9,325	9,593	9,086	8,099	9,837	8,781	7,740	109,020
2019	10,129	9,236	9,002	10,374	10,169	8,847	10,064	8,797	8,677	9,082	8,574	7,924	110,876
2020	10,117	8,531	8,746	9,442	8,380	8,349	8,496	7,630	7,889				77,581
INDEX	102.2	93.8	96.3	97.6	83.9	91.9	86.4	85.3	94.0				

*Table 3: Central Europe: Containerised **TOTAL** Tonnes (000s)*

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
2018	19,525	18,648	19,536	18,592	19,792	19,466	19,771	18,684	17,760	20,984	18,629	16,771	228,157
2019	19,918	18,923	19,433	20,664	20,577	18,042	20,633	18,399	18,946	20,294	18,503	17,293	231,625
2020	20,006	18,752	18,895	18,953	16,871	17,784	18,922	16,730	17,631				164,544
INDEX	101.4	99.8	97.0	96.6	83.6	94.8	93.7	90.2	96.1				

Within this geographical segment, the trade volumes are consistently in the region of 9-10 million containerised tonnes per month per direction, and therefore 19-20 million containerised tonnes per month for both directions together.

In 2020, the year appears to have started positively in January. However in February the first signs of the COVID crisis start to become visible in the import direction. Volumes remained fairly stable, and below trend until April 2020, and then there was a substantial drop in both imports and exports in May 2020. In June 2020, the first signs of recovery can be seen, with the monthly indices rising to around 95% of their normal levels, and staying close to this figure throughout the third quarter.

The same results are shown as index values for the first nine months of 2020. See Figure 1. The 2020 monthly values are compared to the average of the same month in the previous two years and given an index value. An index value of 100 would show that the 2020 value is the same as the average for the previous two years.

Figure 1: Monthly Container Trade Indices, 2020

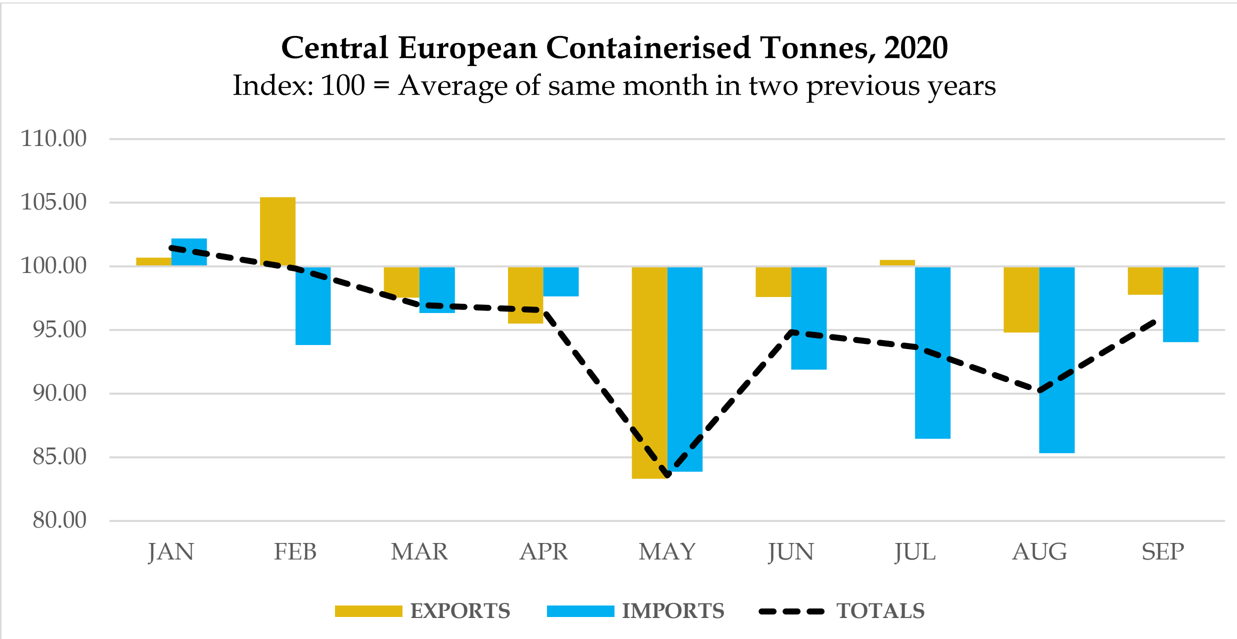

Figure 1 shows both the import and export directions (from the perspective of the eight Central European countries reporting the data), and the index for total trade is shown as a dotted line.

Starting from January 2020, volumes were close to their trend levels (=100), but then in February there was a noticeable drop in European imports. As the COVID crisis intensified in Europe in March and April 2020 there was a corresponding drop in exports, resulting in a 5% decrease overall. By May 2020, with the economic crisis spreading further, the largest fall occurred. According to the trade statistics for this segment, trade volumes in tonnes fell by over 15% compared to the expected value for May, and the effect was seen for both imports and exports. By June, however, volumes had returned to the "new normal", approximately 6% lower than the expected average. The cumulative figure for EU exports is currently 3% lower than its expected value, whereas EU imports are 7.6% down. Compared to the average for the same period in the previous two years, **total cumulative containerised trade for EU container trade (imports and exports) is down by 5.2%.**

Containerised tonnes per product group

Using the trade statistics, the same EU containerised traffics can be broken down into product groups. For this analysis, the six main NST/R product groups for imports and exports have been used. As before, the index values show the relative volume of traffic in 2020 compared to the average for the same month across the previous two years (2018 and 2019). A figure below 100 indicates that traffic volumes were lower than would have been expected under normal economic conditions. Results can be seen across the different commodity groups in Table 4 and Table 5. The commodities are ranked in descending order of volume, and the half year containerised tonnes are shown in the right hand column. As before the market segment under examination covers containerised cargo traded between Central Europe and non-EU countries.

Index values lower than 85 (-15%) are highlighted in red.

*Table 4: Central European Containerised **Imports**, 2020 Index Values vs 2018/19*

NST/R	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TONNES (000s) 2020 YTD
Manufactures	111.4	99.7	98.4	103.0	88.4	97.6	91.4	94.8	112.3	34,275
Chemicals	93.7	104.9	96.4	95.9	79.8	96.4	78.5	77.8	71.7	13,782
Foodstuffs	94.5	99.2	106.1	96.6	93.6	99.2	93.8	85.5	93.5	9,902
Agri Products	95.6	91.7	101.4	92.2	84.1	102.9	101.3	91.2	93.4	7,507
Building Materials	91.6	72.1	87.8	94.0	73.7	79.4	92.2	68.4	69.2	4,668
Metal Products	91.9	82.9	80.5	74.2	51.5	77.4	66.6	72.1	54.6	3,206
OTHERS	109.7	63.9	77.6	105.7	86.6	43.1	58.2	69.0	105.8	4,241

*Table 5: Central European Containerised **Exports**, 2020 Index Values vs. 2018/19*

NST/R	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TONNES(000s) 2020 YTD
Manufactures	92.6	100.9	97.9	79.9	76.0	93.3	91.5	88.8	113.2	20,934
Chemicals	97.9	93.3	92.2	101.5	78.6	90.5	91.2	88.0	76.4	18,151
Foodstuffs	98.9	100.1	97.0	106.0	89.5	97.0	100.0	92.1	96.7	17,915
Agri Products	134.7	154.1	112.2	125.8	126.5	131.1	152.0	149.1	128.1	15,744
Building Materials	89.5	92.0	92.1	59.3	51.8	77.5	83.1	72.1	92.5	4,276
Metal Products	91.2	99.1	92.6	87.3	75.0	71.5	84.7	85.1	69.9	3,621
OTHERS	95.2	105.6	95.5	88.6	69.3	113.6	98.7	75.3	71.9	6,322

Imports of **manufactured goods** constitute the largest individual trade flow, and so far, volumes have remained close to their benchmark (100) level for eight of the nine months, the main exception being in May 2020, when volumes were 12% down. It therefore appears that the relative strength of this sector has played a large role in limiting the negative effect of the crisis. Exports of manufactured goods have seen a greater negative impact than imports, with the index falling to 76 (-24%) in May 2020, although the volumes are somewhat lower than in the import direction. Trade in **chemicals** was declined more (relatively) than manufactured goods, and the sector has remained low especially in the import direction during the third quarter.

Imports and exports of **food products** and **agricultural goods** have been relatively strong in both directions, with food products staying close to their benchmark level, and agricultural products consistently registering gains in 2020 in the export direction. Within the category of agricultural products, much of the export cargoes are forest products, pulp and paper. Exported foodstuffs include animal feed, meat and dairy products, and beer.

Moving into the industrial (rather than consumer) oriented sectors such as trade in building materials (and other crude minerals), and metal products, the negative impacts of the crisis are more visible. Exports of **building materials** were more than 15% lower than the benchmark for five of the nine months and at certain points coming close to 50% of their normal value. Imports of **metal products** were also severely affected with volumes at least 15% lower for eight of the six months, no doubt reflecting disruption in both European and overseas industrial production.

Containerised tonnes per region

The same dataset was analysed to look at the pattern of containerised trade with various world regions.
Table 6 and
Table 7 show the index values for 2020 compared to the average of the previous two years. Index values lower than 85 (-15%) are highlighted in red.

*Table 6: Central European Containerised **Imports**, 2020 Index Values vs 2018/19*

REGION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TONNES(000s) 2020 YTD
North Africa	128.1	124.2	120.3	99.6	78.5	99.3	95.4	100.7	102.8	1,915.9
Other Africa	106.1	109.6	121.4	64.1	119.1	100.3	90.9	90.8	68.2	7,225.1
Middle East	72.2	73.7	99.9	112.6	67.8	137.4	73.6	78.4	119.1	3,796.3
Central Asia	68.5	90.5	124.0	106.4	63.0	75.8	84.6	82.2	70.8	771.2
East Asia	104.6	95.5	88.6	91.9	82.1	91.4	92.5	89.5	101.3	39,568.4
N America	127.4	96.8	107.6	141.7	83.1	67.9	75.5	73.7	78.4	11,882.3
C&S America	80.8	91.1	89.7	93.0	77.9	97.8	75.7	83.7	87.4	9,475.6
Oceania	87.2	32.9	87.0	62.3	84.0	105.6	85.6	50.9	172.5	1,029.5
Other	80.2	83.9	87.9	96.3	78.2	93.4	90.9	86.0	96.1	1,916.9

Starting from European imports from East Asia, as this is the largest single cargo flow, it can be seen that the year began with an increase of 5% in January, but then with the start of the pandemic affecting Chinese exports (and therefore European imports) there was a sequence of three months up to April 2020 with 5 to 10% decrease in trade volume. As the impact spread the largest impact was then recorded in May 2020 with an 18% decrease in volume, recovering somewhat in June, and staying close to 90% of its normal level up to August, finally reaching 101% in September. Conversely, imports from North America were strong in the first quarter, but they have remained under the 85% level from May until September.

On the export side, volumes have remained stronger relative to 2019. January, February and July 2020 were all higher than the same months of 2019, and the rates of decrease in the other months have been less marked.

*Table 7: Central European Containerised **Exports**, 2020 Index Values vs 2018/19*

REGION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TONNES(000s) 2020 YTD
North Africa	99.0	104.4	96.4	80.9	76.7	87.0	92.5	85.7	83.6	4,478.7
Other Africa	100.7	110.1	94.4	91.7	75.5	110.8	88.6	92.5	87.6	7,589.8
Middle East	93.9	107.7	91.7	96.8	91.4	97.0	95.6	88.8	84.7	8,229.0
Central Asia	86.2	70.3	82.9	46.5	57.7	102.5	123.4	88.5	69.0	1,191.2
East Asia	108.8	103.2	91.5	104.1	95.7	105.3	115.2	111.8	111.6	36,698.9
N America	95.7	110.0	109.5	96.2	73.3	84.9	89.5	85.2	98.4	18,367.6
C&S America	88.8	112.0	99.5	83.4	64.6	95.5	91.0	72.5	83.6	7,005.9
Oceania	108.3	103.2	122.8	91.8	85.2	91.5	86.7	83.5	72.8	2,744.0
Other	69.7	71.1	76.6	60.7	75.4	61.1	69.7	67.9	101.9	658.0

One of the most noticeable results on the export side has been that EU exports to East Asia have exceeded 2018 and 2019 levels for seven of the first nine months, with relatively high volumes seen in the third quarter of 2020, meaning that the volume is net positive for the year to date. Other regions are lower than previous years, with the largest net decreases in the Americas.

More detailed analysis of the data shows that the most important trade flow explaining the increase in Central European exports to the Far East is from the NST commodity '05.1', which is paper, pulp and wood. Most of the trade is from Germany and Belgium to China. Other key exports which have grown in 2020 are machinery, food products and metal products. The traffic growth does not appear to be a data spike, related to the COVID crisis, but a continuation of a growth trend that had already been established.

2020 First Three Quarters, Port Traffics

From the above data it suggests that within this geographical region of eight Central European countries that although the year started on a positive note in terms of trade in containerised goods, it began recording negative changes in February 2020, building up to a significant drop in May 2020, followed by a partial recovery between June and September.

Overall, applying this trade-related methodology for identifying containerised trade flows, we measure 5.2% decrease in containerised tonnes cumulatively for the first three quarters of the year with most of the impact happening in the second quarter. The reason that the recorded decrease (compared to the average of same period in 2018 and 2019) is apparently less severe than might have been expected in the (extreme) circumstances is that key sectors i.e. manufactured goods traded with East Asia have remained quite close to their normal levels for most of the year, compensating for larger impacts in other geographical and product sectors. Moreover, exports from Central Europe to China have continued to grow in 2020.

Currently it is not possible to use the trade data, and the existing methodology to predict flows through specific ports, but the total volumes can be compared with recorded results from a number of the larger ports serving this central hinterland region. **Table 8** shows the 2019 container volumes for the largest ports serving the hinterland region represented by the eight selected Central European countries. Port traffic volumes are measured in total TEU: loaded and empty, shortsea and deep sea, import, export and transhipment as recorded by Eurostat in 2019. This table is used to select the largest ports.

Table 8: Container traffic through main container ports (NL, BE, DE, IT,FR)

Port		Total TEU 2019
Rotterdam	**NL**	13,492,837
Antwerp	**BE**	11,676,076
Hamburg	**DE**	9,281,987
Bremerhaven	**DE**	4,849,676
Gioia Tauro	**IT**	4,154,239
Le Havre	**FR**	2,762,743
Genoa	**IT**	2,326,173
La Spezia	**IT**	1,478,883
Marseille	**FR**	1,454,530
TOTAL 9 Ports		51,477,144

Source: Eurostat.

According to the latest reports from these ports, the following outcomes have been recorded:

Rotterdam (NL)
Half year results: 2020 half year container throughput (in tonnes) was down 3.3% compared to the same period in 2019, and 7% down in TEU.

Nine month results: The volume of containers handled in Rotterdam up to and including Q3 2020 fell by 2.1% in tonnes compared to the same period in 2019, and by 4.7% in TEU.

Antwerp (NL)
Half year results: 2020 half year throughput in containerised tonnes was down 0.3% compared to the same period in 2019, and up 0.4% in TEU.
Nine month results: Throughput for the first nine months of 2020 was down 0.2% in container TEU, and down 1% in containerised tonnes.

Hamburg (DE)
Half year results: Based on figures published by HHLA, 2020 half year container throughput (in TEU) was 12.4 percent down at 4.1 million TEU. Eurogate figures for Hamburg show a decrease of 11.5% to 960,000 TEU.
Nine month results: Based on figures published by HHLA[1], container throughput for the first nine months (in TEU) was 11.2 percent down at 5.1 million TEU.

Bremen/Bremerhaven (DE)
Half year results: 2020 half year container throughput (in tonnes) was down 1.7% to 26.4 million containerised tonnes, compared to the same period in 2019, and down 4.8% in TEU at 2.36 million TEU. (Eurogate Wilhelmshaven figures were down 38.5% to 222,000 TEU)
Nine month results: Container throughput for the first nine months of 2020 are down 5.6% to 3.528 million TEU.

Gioia Tauro (IT)
Half year results: 2020 half year container traffic was up 17% in TEU (comparing the Assoporti figure for the first half 2020 with half of the annual figure for 2019. The Assoporti figure for 2019 is 2.5 M TEU, whereas Eurostat recorded 4.1 M TEU over the same period).
Nine month results: Not yet available for third quarter.

Le Havre (FR)
Half year results: 2020 half year container traffic was down 27%, to 1.1 M TEU (10 million containerised tonnes).
Nine month results: Figures for (note) the first *eight* months of 2020 show a decrease of 28% in tonnage to 13.72 million containerised tonnes, and a 25% decrease in the number of containers to 1.4 million TEU.

[1] HHLA operates the largest container terminals in Hamburg. These figures also include volumes for HHLA terminals in Odessa(UA) and Tallinn (EE).

Genoa (IT)
Half year results: 2020 half year container traffic was down 8.3% in tonnes at 11.8 million tonnes, and 10.5% down in TEU at 1.213 million TEU.
Nine month results: results for the first nine months of 2020, show that Genoa's container traffic was down 7.7% in tonnes, at 17.6 million tonnes, and down 10% in TEU at 1.819 million TEU.

La Spezia (IT)
Half year results: 2020 half year container traffic was down by 22% in TEU (comparing the Assoporti figure for first half 2020 with half of the annual figure for 2019).
Nine month results: Not yet available for third quarter.

Marseille (FR)
Half year results: 2020 half year container traffic decreased by 15.7% at 1.108 million containerised tonnes, compared to the same period 2019, and by 16.3% in TEU, to 621,253 TEU.
Nine month results: Not yet available for third quarter.

Applying these 2020 impacts to the throughputs for the nine ports, implies that in total the decrease in TEU volume is close to (-)1.3 million TEU or 5.4% decrease overall for the half year.

Measured changes in containerised trade for the first six months of 2020 (See

Table 3) and in port handling can then be compared. See below.

Table 9: Comparison of trade data and port data, first three quarters 2020

Item	Quantity	Comment
Trade Data		
2019 Three Quarters	175.5 million tonnes	(Estimated from COMEXT)
2020 Three Quarters	164.5 million tonnes	
2020/2019 Change	-11.0 million tonnes	
2020/2019 % Change	-6.3%	
Port Data		
2019 Three Quarters	37.4 million TEU	(Eurostat Basis)
2020 Three Quarters	35.1 million TEU	
2020/2019 Change	-2.3 million TEU	
2020/2019 % Change	-6.1%	

Both of the available data sources suggest that the net impact on container trade for Central Europe over the first nine months of 2020 is between -6% and -6.5%. Both sources are approximately in agreement.

Conclusions

The aim of this article has been to investigate the impact of Corona Crisis on container traffic within Central Europe (eight countries: Belgium, Netherlands, Luxembourg, France, Germany, Italy, Austria, and Czech Republic).

Using a combination of data from port authorities and from trade statistics, and applying our model of containerisation rates, we conclude that the net impact on container volume is in the region of -6% to -6.5%. The largest impact was in May 2020, and so far it appears that volumes have been recovering in the third quarter.

One of the main reasons that the impact was limited to single-digit levels was that containerised import trade from East Asia remained close to 2019 levels, especially for consumer products, and exports to East Asia have actually exceeded previous years. Trade in food products for all world regions was also relatively unaffected by the negative effects of the crisis. However, the overall picture was quite mixed with larger impacts on industrial commodities, and different timings for the peak impact for different world regions.

The performance of the largest ports serving the region was also quite mixed, reflecting the findings from the trade data, that there was not “an impact” but rather a succession (or domino effect) of impacts which coalesced and reached peak magnitude in Q2. In some cases the impact was exaggerated by local issues such as strikes in France at the beginning of the year, when volumes were still at normal levels. These localised patterns may have helped ports such as Antwerp to maintain 2019 throughput levels.

Looking ahead, it seems that the sector is cautiously optimistic, and the analysis carried out here supports that view, and even with sudden increases being reported during November, with some spill-over traffic due to congestion in the largest UK container ports, it is still quite probable that full year 2020 volumes will be lower than 2019. Based on half-year results we are anticipating reductions of about 10 million tonnes of containerised trade and 2.5 million TEU in terms of port handling. We will continue to monitor trade and report our findings.

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