

CECIMO ECONOMIC AND STATISTICAL

# ANNUAL REPORT

## 2021



**cecimo**

European Association of the Machine Tool Industries  
and related Manufacturing Technologies

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## Introduction

Following the strong impact of the COVID-19 pandemic in 2020, the European Machine Tool (MT) Industry has showed its path of growth and recovery in 2021. However, as in other European sectors, the recovery has been slowed by supply constraints and most industry indicators have not reached their pre-pandemic levels. A robust rebound in demand has resulted in higher input prices in already disrupted supply chains. Shortages of materials and components have delayed the recovery in key European and global sectors such as automotive, resulting in lower than expected MT consumption levels, particularly in Europe.

Looking at annual figures, while global MT production recovered by around 20%, from 60.3 in 2020 to around 72.4 billion Euros in 2021, CECIMO MT production recovered by 11.4% in 2021 to 22.6 billion Euros. Although with a slower growth rate, CECIMO retained the leading position on the global MT market, with around 31% share at the end of 2021, closely followed by China.

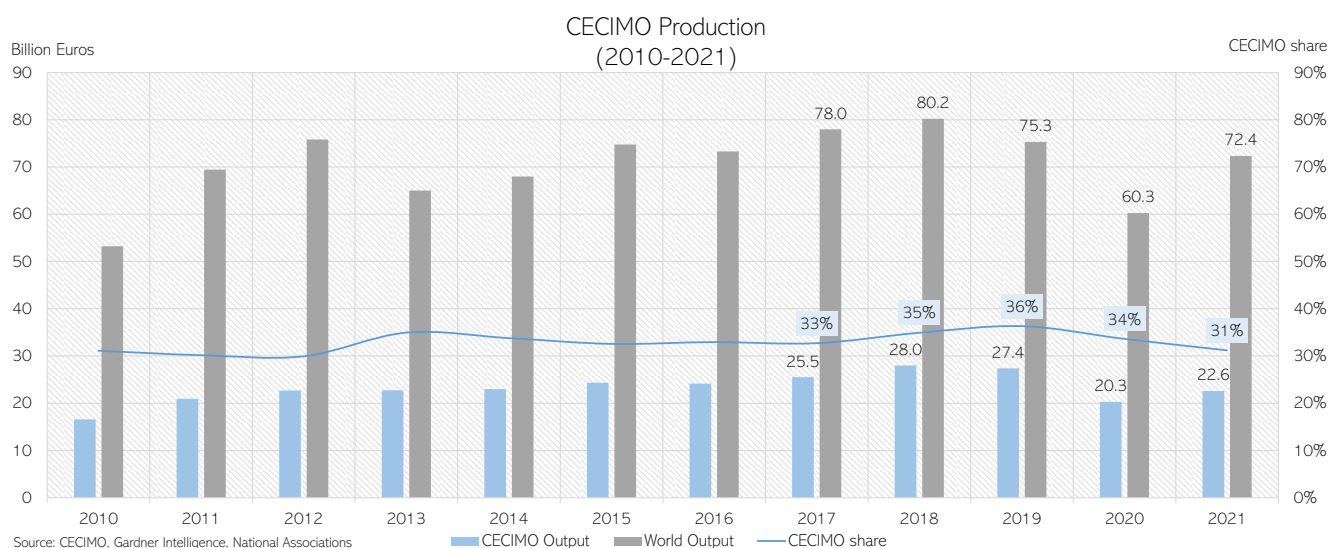
- ⇒ First quarter of the year brings orders growth and improved business climate while the capacity utilization levels reached their pre-pandemic levels. At 85.7 points, this level of capacity utilisation was higher than the average rate between 2011 and 2019 (83.6), and the highest since the second quarter of 2019. Also, the Industrial Production Index for the European Union (27 countries) was back to its pre-crisis level.
- ⇒ The positive business climate led to a further improvement in the European manufacturing sector in the second quarter. CECIMO's total orders were 119% higher than in the second quarter of 2021. The recovery in European manufacturing was also evident through the level of industrial production index, which showed a further recovery, and EU production spare capacity fell to only 5% in this quarter.
- ⇒ Although the supply chain issues and risk of new COVID-19 variants impacted growth, new orders in the third quarter showed a marked improvement compared with the same period of the previous year. CECIMO's total orders were 70% higher than in the third quarter of 2020. While the capacity utilization in the European Union recorded small decline in this period, it still averaged close to the average levels between 2011 and 2019 (83.6).
- ⇒ New positive trends in the recovery of the European MT sector and European manufacturing as a whole were recorded in last quarter of 2021. The EU industrial production index reached high 106.2 points during the final period of 2021. Although supply-side issues appeared to be easing, inflationary pressures and higher energy prices continued to strongly influence inputs and production costs over the last quarter of 2021. CECIMO's total orders were up 17% from the previous quarter, and 44% higher than in the fourth quarter of 2020. It is important to highlight that the level of Q4 2021 orders, reached a level close to 2018 levels - a strong signal of recovery in the European MT orders books. Moreover, in last period of 2021, the EU's spare production capacity reached a negative level of -2%, for the first time since the second quarter of 2018.
- ⇒ On an annual basis, the average CECIMO's total orders index, after a decrease of 27% in 2020, increased by 61% in 2021.

Comparing the trade figures on an annual basis, CECIMO total MT exports in 2021 increased by around 14% compared with 2020 levels. China was the largest export destination for CECIMO countries with a share of 23.2%, followed by the United States with a share of 20.7%. Regarding imports, CECIMO total MT imports increased +13.7% in 2021 from 2020 levels. Japan remained the main supplying market of the CECIMO countries with a share of 27.4%, followed by China with a share of 19.1%. The CECIMO region registered a positive trade balance for all quarters, with a positive result of about 7.5 billion euros in 2021.

## CECIMO Production 2021

As the chart below shows, the COVID-19 pandemic has significantly impacted MT production in 2020. As a result, the CECIMO MT output level dropped by -26.3% in 2020, the lowest total output level since 2010. While the situation improved in 2021, supply-side issues and COVID-19 lockdown measures around the world have weighed on industrial production growth. This was particularly notable in the recovery of certain European industries such as automotive, one of MT's main purchasing sectors. However, as European, and global demand for MT was on the road to recovery, CECIMO MT output increased by about 11.4% to 22.6 billion euros.

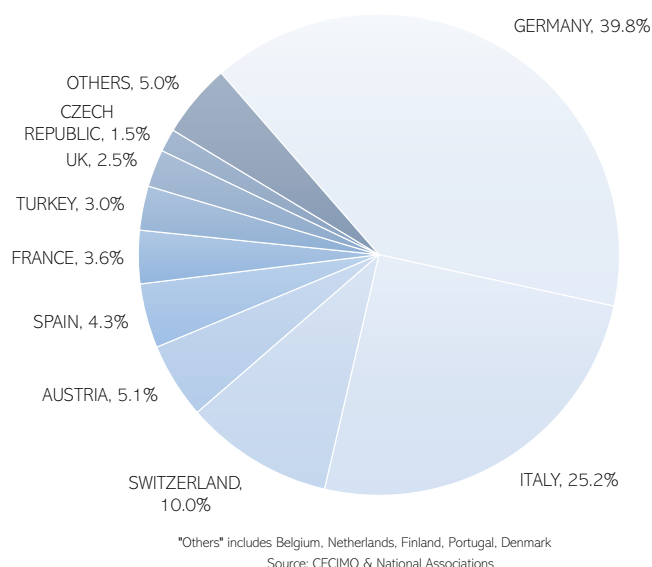
Global MT production bounced back a little faster, and after a 20.0% decline in 2020, the level of production increased by 20.1% in 2021. However, although the level of world MT production reached 72.4 billion, the level was still about 4% lower than in 2019. Despite weaker growth, with a production of 22.6 billion, CECIMO maintained its leading position in the global MT market, with a share of about 31% at the end of 2021.



Among the CECIMO countries, production has increased in almost all countries, although the recovery differs from country to country: Netherlands (+42.2%), Turkey (+31.6%), Portugal (+30.8), Sweden (+23.2%), Austria (+21.9%), Italy (+21.7%), Belgium (+20.9%), France (+18.0%), Switzerland (+15.0%), Finland (+14.7%), Spain (+12.4%), Denmark (+11.4%), the UK (+5.8%), and Germany (+1.8%). Only the Czech Republic recorded a minor decrease of 2.0%.

With a share of 39.8%, Germany remains the largest CECIMO MT producer, closely followed by Italy (25.2%) and Switzerland (10.0%). As in previous years, these three countries represent over three-quarters of CECIMO's production.

CECIMO MT Production shares 2021



## Global MT Production & Market share 2021

If we look at global MT production, as shown in the table below, all regions of the world experienced a recovery in 2021, following the high impact of the COVID-19 pandemic and related challenges. While European countries and Japan registered moderate growth of 11.4% and 10.6% retrospectively, production growth was more robust in Thailand (102%), Singapore (46%), India (45%), the US (39%) and China (29%). The slowest recovery was recorded in Brazil (0.2%).

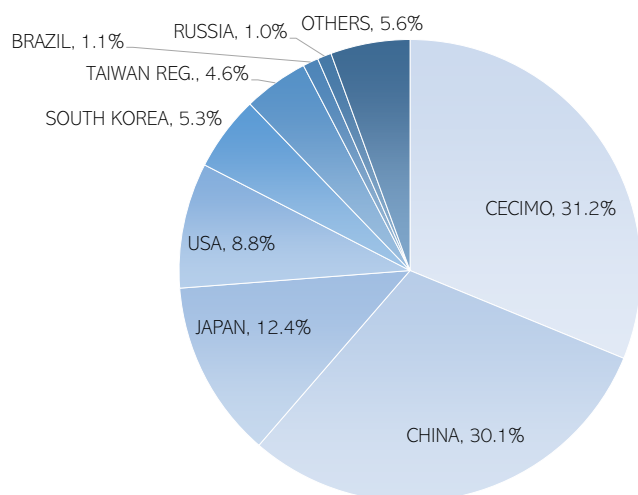
As a result of these differences in growth rates between countries, the world shares have changed compared to the previous year. Looking at five major producers, the share of the CECIMO countries, South Korea and Japan fell compared to the year before, while the share of China and the United States increased.

Annual MT Production (Million Euros)

Country/Region:	2018	2019	2020	2021	2021/2020
CECIMO	28014.4	27365.1	20262.9	22577.3	11.4%
China	19864.5	17347.0	16949.7	21814.5	28.7%
Japan	12416.9	11731.0	8132.6	8995.9	10.6%
USA	5266.7	5086.9	4565.8	6349.0	39.1%
South Korea	4358.8	4123.3	3476.6	3804.9	9.4%
Taiwan Reg.	3984.8	3529.6	2509.1	3294.2	31.3%
Brazil	1187.8	1445.5	785.8	787.3	0.2%
India	1176.9	1044.9	627.2	910.4	45.1%
Canada	549.5	599.7	475.6	567.2	19.3%
Russia	521.6	573.5	574.3	713.0	24.1%
Thailand	596.8	506.2	278.0	562.7	102.4%
Singapore	595.1	484.9	356.2	519.3	45.8%
Poland	283.7	236.7	226.9	248.3	9.4%
Other	1390.9	1238.9	1029.2	1213.9	17.9%
World	80208.3	75313.3	60250.1	72357.8	20.1%

Source: CECIMO, Gardner Intelligence

Global MT Market share 2021



Source: CECIMO, Gardner Intelligence

Although at a lower level, the CECIMO countries retained the largest market share, representing around 31% of the world share.

Behind the CECIMO countries, China tops the list (30%), followed by Japan (12%), the United States (9%), South Korea (5%) and the Taiwan Region (4%).

Together with CECIMO, these countries account for more than 90% of global MT production.



# CECIMO8 Domestic & Foreign Orders

## CECIMO8 Domestic Orders

Following a 35% decline in 2020, the CECIMO8 Domestic Orders Index (annual average) recorded a strong 85% increase in 2021, reflecting a very strong recovery in domestic demand. This reflects the growth of the CECIMO8 domestic orders index from 61 points in 2020 to 112 points in 2021. It is important to highlight, as shown in the chart below, that CECIMO's domestic orders have reached 2019 levels.

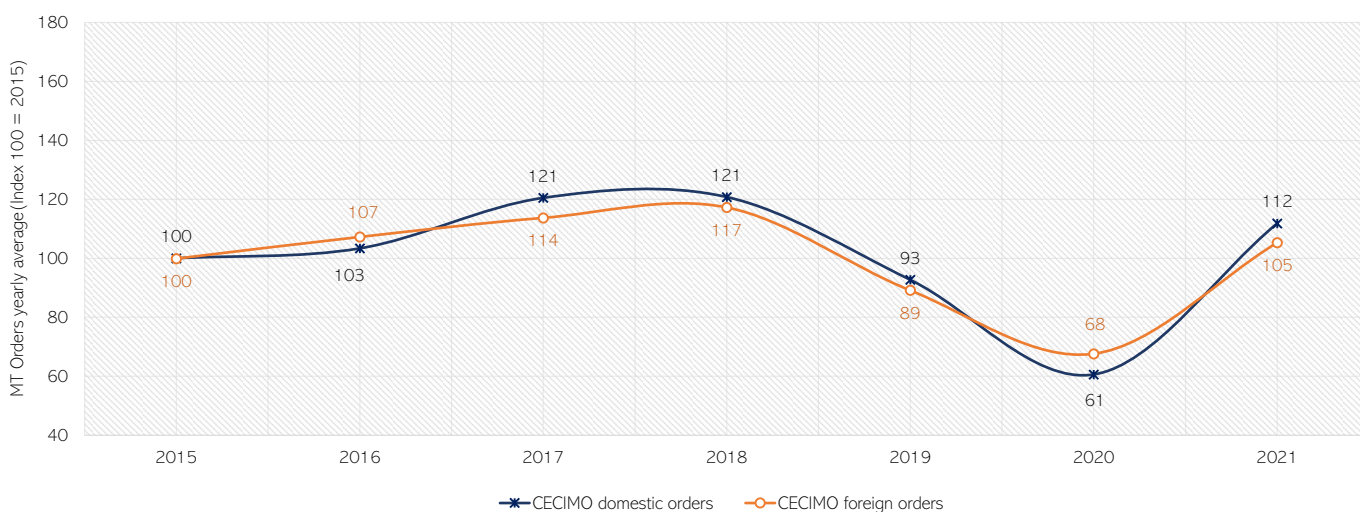
An increase was recorded in almost all CECIMO8 countries, with the exception of the Czech Republic, which recorded a decrease of around 4% in 2021 from the 2020 level. Among the other countries, after a significant decrease in 2020, the strongest growth was in France where domestic orders were more than 10 times higher compared to the previous year. A strong recovery also took place in Italy (168%), Austria (108%), Spain (59%), Germany (52%), Switzerland (+45%) and the UK (+33%).

## CECIMO8 Foreign Orders

The CECIMO8 Foreign Orders Index (annual average) follows domestic market trends and has also recovered in 2021, up 56% from 2020 levels. While this increase is lower than the index on the domestic market, it is important to note that the CECIMO8 MT orders from foreign markets were less affected by the COVID-19 pandemic in 2020.

As shown in the graph below, the foreign orders index increased from 68 points in 2020 to 105 points in 2021. The strongest increase in the index was registered in France (+166%), the United Kingdom (+71%), Spain (+71%), Germany (+62%) Switzerland (+58%) and Italy (+45%). Austria (28%) and the Czech Republic (23%) registered slower but nonetheless significant growth. It is worth noting that Austria recorded one of the smallest declines in foreign orders last year.

CECIMO8 Domestic & Foreign Orders (2015-2021)



Source: CECIMO & National Associations

CECIMO8 includes: Austria, UK, Germany, France, Italy, Czech Republic, Switzerland and Spain

## CECIMO8 Total Orders

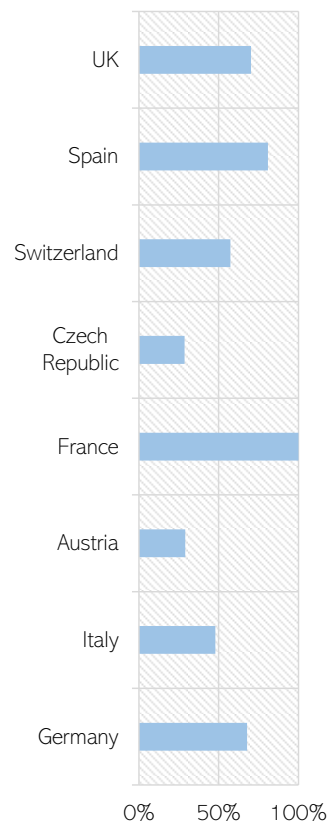
As shown in the chart below, the CECIMO8 Total Orders Index (annual average) reached a very low level in 2020 due to COVID-19 pandemic and other disruptions affecting global and European industries. However, 2021 has brought an improvement in the global business situation and renewed demand for MT. Thanks to the growth in domestic and foreign orders, the CECIMO8 Total Orders Index reached 106 points.

Although this level is still below its peak in 2018, it reflects a strong recovery and an increase of 61% from the previous year.

As shown in the chart to the right, the largest growth in the total orders index in 2021 occurred in France (after French companies were the worst affected by the crisis in 2020 among the CECIMO countries). As a result, French total MT orders index increased 255% over 2020. A strong recovery was also recorded in Spain (81%), the United Kingdom (70%), Germany (68%), Switzerland (57%) and Italy (48%). Austria and the Czech Republic experienced a slower but nevertheless significant growth rate of 29% in total orders compared to the previous year.

Although not shown on the charts, it is important to highlight that the CECIMO8 Shipments Index (annual average) also showed a rebound and the index increased from 80 index points in 2020 to 87 points in 2021. This corresponds to an increase of 9% compared to the 2020 level. While the index recovered in 2021, it was still below 2018 and 2019 levels. However, thanks to the recovery in the total orders, the shipment index is expected to recover further in 2022.

CECIMO8 Total Orders Index 2021/2020



CECIMO8 Total Orders (2015-2021)



Source: CECIMO & National Associations

CECIMO8 includes: Austria, UK, Germany, France, Italy, Czech Republic, Switzerland and Spain

## CECIMO8 vs Competitors Total Orders

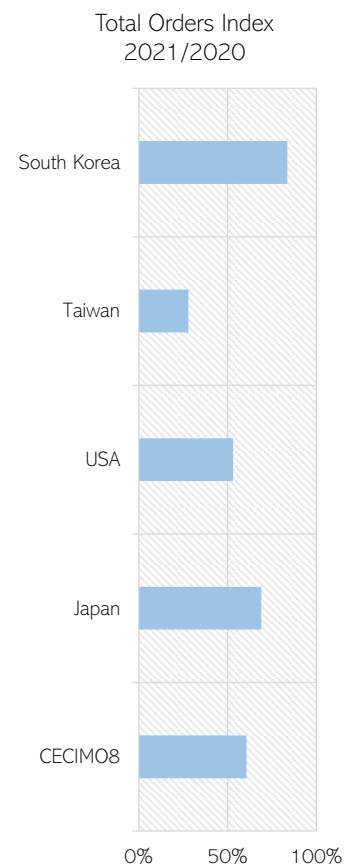
By analysing MT orders figures around the world following the downturn in 2019 and the significant impact of the pandemic on the global MT market in 2020, the total orders index (annual average) increased in all regions in 2021.

As shown in the chart below, similar patterns of recovery can be noticed in the total orders level between the CECIMO8 countries, Japan, the United States, Taiwan, and South Korea. Please note that the United States line is the average of the United States' domestic orders.

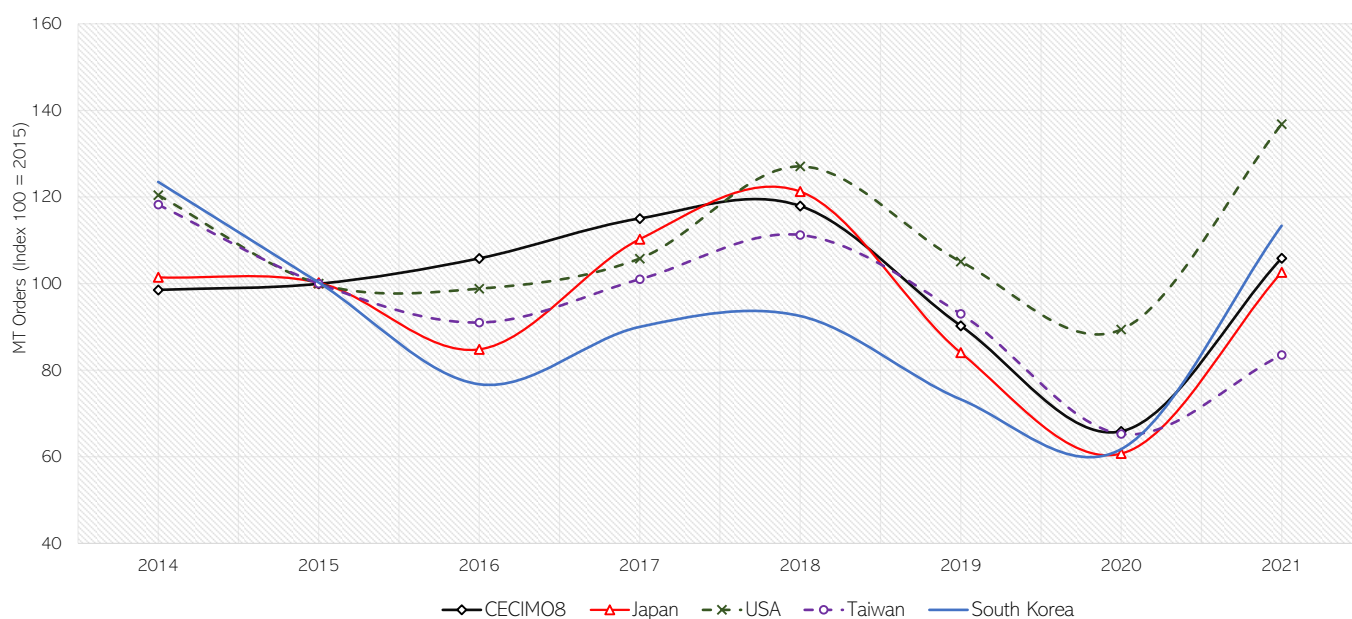
Also, it is important to highlight that all regions except Taiwan reached the 2019 level. This is of course a good indicator of recovery in various industry sectors around the world, resulting in higher MT global demand. Thanks to a significant US government stimulus plan, US MT orders reached a record high level in 2021.

As shown in the chart to the right, the largest increase in total orders occurred in the South Korean region, where the total orders index increased 84% to 113 points in 2021. The total orders index for Japan, after a decline in 2019 and 2020, recovered strongly in 2021 to a level of 103 points with an increase of 69%.

The US total orders index reached an all-time high, reaching 137 points in 2021, up 53% from 2020. After a sharp decline in 2019 and 2020, the Taiwan region recovered more moderately in 2021 and a 28% increase was not enough to reach the 2019 level.



CECIMO8 vs Competitors Total Orders (2015-2021)



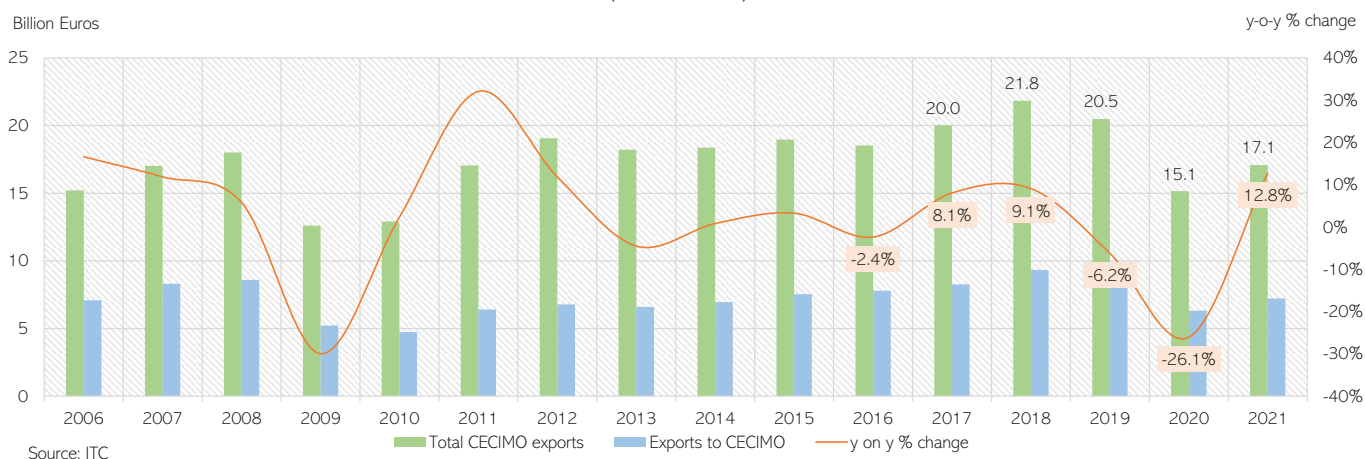
Source: CECIMO & National Associations



## CECIMO MT Exports & Growth Rates

After declining in 2019 and 2020, as with production and other indicators, CECIMO's MT exports also shows recovery in 2021. After a decrease of around 26% in 2020, CECIMO's total MT exports increased by 12.8% in 2021 to reach 17.1 billion euros. Although this increase was significant, as shown in the graph below the level of exports was still about 16.5% below 2019 level.

CECIMO Total MT Exports & Growth Rates  
(2006-2021)



The annual figures also show that exports between CECIMO countries recorded a higher recovery (+14.2%) compared to the level of exports outside CECIMO countries (+11.7%). It is important to note that the same trend was observed last year as exports to CECIMO countries fell more than exports outside CECIMO.

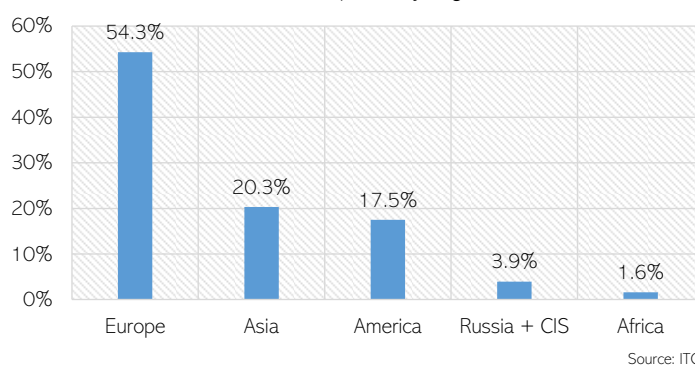
Billion Euros	2015	2016	2017	2018	2019	2020	2021
Total exports	19.0	18.5	20.0	21.8	20.5	15.1	17.1
y on y % change	3.3%	-2.4%	8.1%	9.1%	-6.2%	-26.1%	12.8%
Exports to CECIMO	7.5	7.8	8.3	9.3	8.7	6.3	7.2
%change	8.2%	3.6%	5.9%	13.0%	-6.5%	-27.6%	14.2%
Exports outside CECIMO	11.4	10.7	11.8	12.5	11.8	8.8	9.9
%change	0.3%	-6.2%	9.6%	6.4%	-6.0%	-24.9%	11.7%

If we look at the shares of CECIMO exports by region (chart on the right), we see an important share of total CECIMO exports to Europe (54.3%).

This is a reflection and confirmation of the historically robust MT trade between European/CECIMO countries.

The second largest export market is Asia, with a share of 20.3% in 2021, closely followed by the Americas, with a share of about 17.5% in 2021.

CECIMO Total MT Exports by regions in 2021



## CECIMO MT Main Export Markets 2021

According to data from the International Trade Center (ITC), China and US remain the two major export markets of the CECIMO countries in 2021.

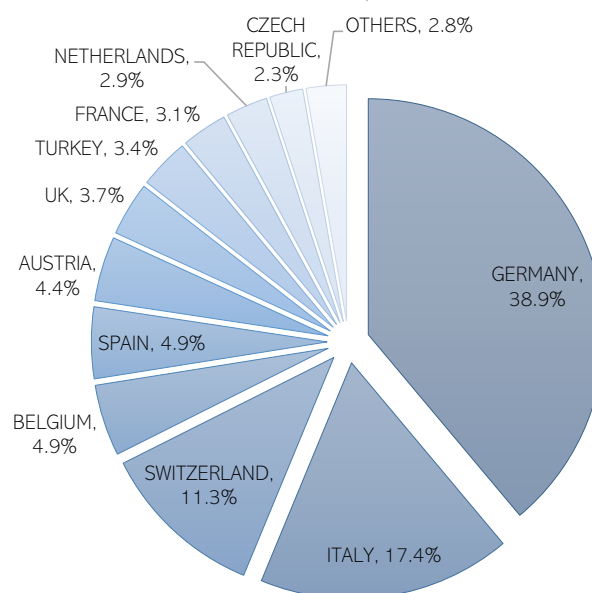
With a higher growth in export flows to China (+23.2%), compared to a growth to the US (+7.1%), China was the number one destination for the European machine tool builders in 2021. In 2020, the US was in the lead, but historically, China was the main export destination for CECIMO countries.

In 2021, considering main MT purchasing countries (outside CECIMO), strong export growth took place in trade with Brazil (127.4%), Mexico (28.5%), Hungary (23.8%), India (21.0%), and China (20.8%).

CECIMO's MT exports expanded more modestly to Canada, the United States and Poland. As can be seen in the table below, CECIMO exports fell slightly to two countries: Russia and Japan.

⇒ Due to the strong rebound in exports in some countries, there is a noticeable shift in the share of total exports among CECIMO's main export destinations.

Main CECIMO Exporters 2021



Source: CECIMO, National Associations: "Others" include Sweden, Finland, Denmark, Portugal.

Among CECIMO countries in 2021, on the basis of data received from national associations, the three main exporters in 2021 were Germany, with a share of 38.9%, followed by Italy, with a share of 17.4% and Switzerland, with a share of 11.3%. These three countries account for around two thirds of CECIMO's total exports.

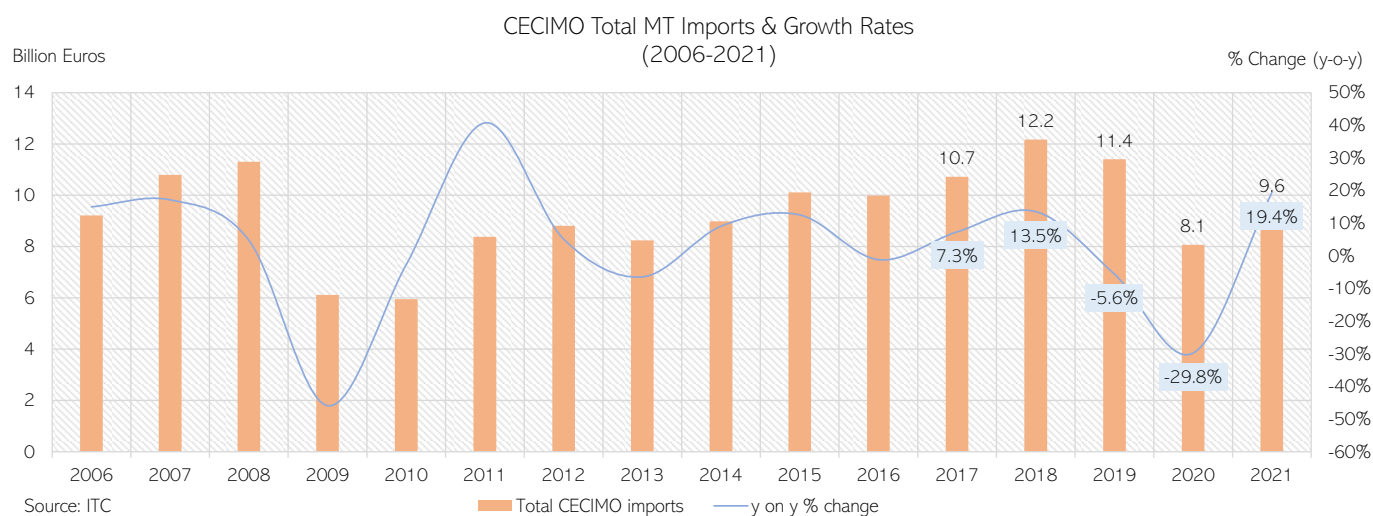
CECIMO Main MT-Purchasing Countries 2021/2020 (million Euros)

EUR Million	2020	2020 Share	2021	2021 Share	%change
China	1,892	21.4%	2,285	23.2%	20.8%
United States of America	1,912	21.6%	2,046	20.7%	7.1%
Poland	677	7.7%	720	7.3%	6.4%
Russia	521	5.9%	511	5.2%	-1.8%
Mexico	297	3.4%	382	3.9%	28.5%
India	302	3.4%	365	3.7%	21.0%
Hungary	234	2.6%	289	2.9%	23.8%
Brazil	101	1.1%	230	2.3%	127.4%
Canada	204	2.3%	220	2.2%	8.0%
Japan	211	2.4%	198	2.0%	-6.1%
Total CECIMO Exports	15,147.7		17,082.4		12.8%
Exports to CECIMO	6,315.9	41.7%	7,215.2	42.2%	14.2%
Exports outside CECIMO	8,831.8	58.3%	9,867.1	57.8%	11.7%

Source: ITC

## CECIMO MT Imports & Growth Rates

The recovery of MT consumption in European countries had a positive impact on MT imports into CECIMO countries in 2021. As shown in the chart below, total MT imports to CECIMO countries increased by 19.4% in 2021 from 2020 levels. If we look at the values below, total MT imports into CECIMO countries in 2021 recorded a level of 9.6 billion euros. It should be noted that by comparing the previous year's CECIMO total trade data, imports recovered better than exports.



Looking at the table below, annual figures show that imports from non-CECIMO countries grew at a higher rate (28.2%) than imports from CECIMO countries (13.7%).

Billion Euros	2015	2016	2017	2018	2019	2020	2021
Total CECIMO imports	10.1	10.0	10.7	12.2	11.4	8.1	9.6
y on y % change	12.5%	-1.2%	7.3%	13.5%	-5.6%	-29.8%	19.4%
Intra-CECIMO imports	6.2	6.2	6.5	7.4	7.0	4.9	5.6
y on y % change	10.7%	0.2%	4.3%	13.6%	-4.9%	-29.9%	13.7%
Outside CECIMO	3.9	3.8	4.2	4.8	4.4	3.2	4.1
y on y % change	15.7%	-3.4%	12.5%	13.4%	-6.7%	-28.3%	28.2%

Source: ITC

## CECIMO MT Main Supplying Markets 2021

ITC data show that Japan was, like in previous years, CECIMO's largest supply market for machine tools (outside CECIMO countries) with a share of 27.4% in 2021. After Japan, China (19.1%), the Taiwan region (17.2%), South Korea (12.2%), and the US (10.3%) accounts for the highest shares of CECIMO MT's imports.

Among the countries, as shown in the table below, all major supplying markets registered an increase in exports to the CECIMO countries. Comparing the top five markets, the strongest increase in CECIMO MT imports occurred in trade with South Korea, China and Taiwan region.

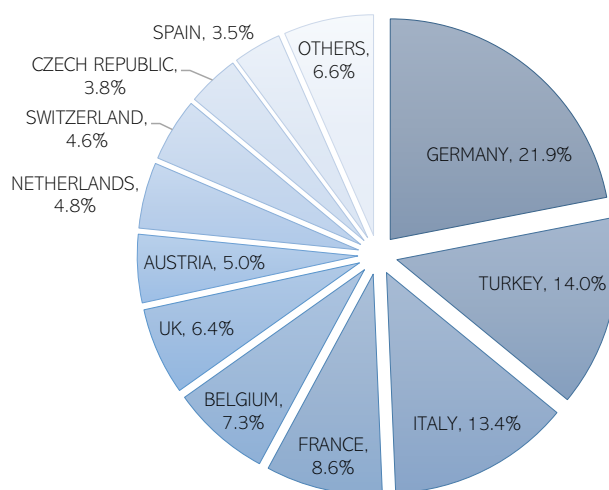
MT imports from the United States and Japan also increased, albeit more slowly.

With a stronger increase in MT imports from China, Taiwan region and South Korea, Japan's share in total CECIMO imports fell to 27.4% in 2021.

On the other hand, South Korea, China and Taiwan region increased their share in total CECIMO MT imports.

⇒ China remained the second largest supply market with a 19.1% share, followed by Taiwan (17.2%), South Korea (12.2%) and the United States (10.3%).

Main CECIMO Importers 2021



Source: CECIMO, National Associations; "Others" include Sweden, Finland, Denmark, Portugal

Among CECIMO countries in 2021, based on data received from national associations, the countries with the largest share of MT imports in 2021 were Germany (21.9%), followed by Turkey (14.0%), Italy (13.4%) and France (8.6%).

CECIMO Main MT-Supplying Markets 2021/2020 (million Euros)

EUR Million	2020	2020 Share	2021	2021 Share	%change
Japan	992	31.2%	1,116	27.4%	12.5%
China	560	17.6%	779	19.1%	39.2%
Taiwan Region	524	16.5%	700	17.2%	33.6%
South Korea	311	9.8%	496	12.2%	59.5%
United States	358	11.2%	422	10.3%	17.9%
Poland	98	3.1%	123	3.0%	25.7%
Thailand	62	2.0%	98	2.4%	56.8%
Slovakia	49	1.5%	51	1.2%	4.5%
Luxembourg	15	0.5%	30	0.7%	96.0%
India	18	0.6%	27	0.7%	49.9%
Total CECIMO Imports	8,065.4		9,629.0		19.4%
Total from CECIMO countries	4,884.1	60.6%	5,551.9	57.7%	13.7%
Total from non-CECIMO	3,181.2	39.4%	4,077.1	42.3%	28.2%

Source: ITC

## Highlights



## About CECIMO

Founded in 1951, CECIMO is the European Association representing the common interests of the machine tool industries and related manufacturing technologies globally and at European level. We bring together 15 national associations of machine tool builders, which represent approximately 1500 industrial enterprises in Europe (EU + UK+ EFTA + Turkey), over 80% of which are SMEs. CECIMO covers 98% of total European machine tool production and approximately 31% worldwide in 2021. CECIMO play a major role on the international market by promoting the EMO exhibition since 1951, the leading trade fair for metalworking technology.

## CECIMO countries

The European Association of the Machine Tool Industries and related Manufacturing Technologies brings together 15 national associations of machine tool builders from the following countries: Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland, Turkey and the United Kingdom.







# cecimo

European Association of the Machine Tool Industries  
and related Manufacturing Technologies



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