

CECIMO ECONOMIC AND STATISTICAL

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cecimo
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Introduction

While still on the path to recovery, the European and global machine tool (MT) sector growth in 2022 was marked by several challenges. These included the Russia-Ukraine war, new closures in China due to the COVID-19 pandemic, and high inflationary pressures, among others. The rise in energy and food prices contributed to global inflationary pressures, negatively impacting consumer confidence and increasing business costs. European economies and companies were particularly affected due to their significant dependence on Russian fossil fuels, while supply-side issues caused problems in production processes, especially in the first half of the year.

Despite all challenges, global MT production reached 79.2 billion euros in 2022, reflecting an annual increase in production of 11.9%. In the same year, MT production in CECIMO countries recorded a growth of 12.8%, reaching 25.3 billion euros. This enabled CECIMO to maintain its share of 32% of global MT production.

- ⇒ The first quarter of the year witnessed an increase in orders and an improved business climate, with capacity utilisation levels surpassing historical averages. As a result of the robust growth in MT demand, CECIMO's total orders index reached record levels. However, following the outbreak of the war in Ukraine, business sentiment and expectations slightly deteriorated in March.
- ⇒ The second quarter was characterised by less favourable business climate indicators, with European countries expected to be particularly affected by the challenges stemming from the war in Ukraine. Intense inflationary pressures driven primarily by energy and food prices, coupled with uncertainty about the war and potential recession scenarios, adversely impacted both business and consumer confidence. However, despite the uncertain situation, CECIMO MT producers remained optimistic about MT production, supported by new orders and significant order backlogs.
- ⇒ The third quarter witnessed a further deterioration of business climate indicators, leading to less optimistic expectations among CECIMO's MT Builders, who are typically surveyed every quarter. However, strong order books from the previous period helped to maintain capacity utilisation levels above the average.
- ⇒ While some positive developments were noted in Q4 2022, such as reduced risks of gas shortages in Europe, the business climate in Europe and globally continued to deteriorate. Despite some progress in easing inflationary pressures, concerns about monetary tightening in Europe and globally have increased, posing risks that could negatively impact companies' financing options, investment levels and MT demand in 2023.

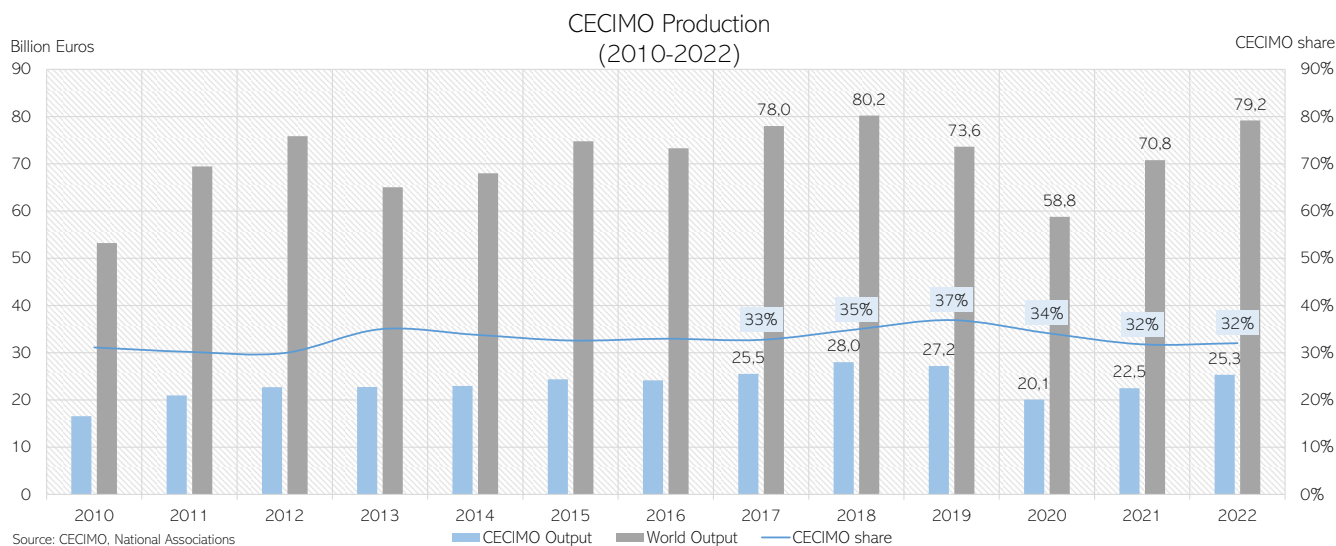
On an annual basis, the average CECIMO's total orders index experienced a 27% decrease in 2020, followed by a significant 61% increase in 2021, and a further 11% improvement in 2022. It is important to note, however, that all figures in this report are in nominal terms and do not take into account the impact of inflation.

In terms of trade figures, CECIMO's total MT exports in 2022 increased by approximately 12% compared to the levels seen in 2021. The United States emerged as the main export destination for CECIMO countries with a 23.6% share, closely followed by China with a 21.2% share. On the other hand, CECIMO's total MT imports surged by 29.6% in 2022 from the levels recorded in 2021, indicating robust growth in MT consumption in Europe. Japan maintained its position as the main supplying market for the CECIMO countries, accounting for 28.8%, followed by China, accounting for 18.9%. Notably, the CECIMO region maintained a positive trade balance throughout the year, resulting in a surplus of approximately 6.7 billion euros in 2022.

CECIMO Production 2022

CECIMO's MT production continued to grow, recovering from a significant decline in 2020. While 2021 was still characterised by supply-side disruptions, high order levels, and improved demand, this trend led to sustained growth throughout 2022. As shown in the chart below, CECIMO's MT output increased by approximately 13% in 2022, reaching 25.3 billion euros. Despite this substantial growth, the level still remained below the levels observed in both 2018 and 2019. It is important to note that the figures below are in nominal terms.

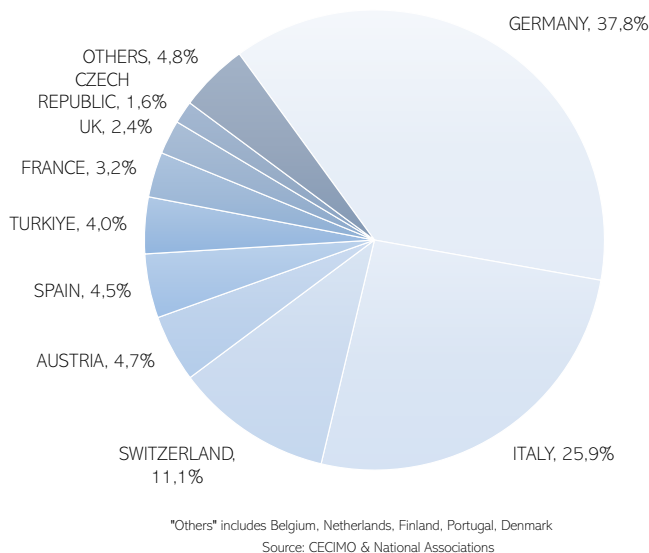
When discussing global MT production, it is important to note that we have slightly revised historical world production levels, based on CECIMO's Global MT Report (May 2023) and the latest inputs received from national associations in September 2023. The most recent data for 2022 indicates that following an almost 12% growth, the world's MT production reached 79.2 billion euros, marking an approximately 8% higher compared with the levels observed in 2019. As shown in the graph below, CECIMO maintained its share of the global MT market, accounting for around 32% in both 2021 and 2022.



Among the CECIMO countries, production has increased in almost all countries, although the recovery differs from country to country: Denmark (+33.3%), Turkiye (+29.3%), Switzerland (+29.0%), the UK (+20.4%), Spain (+15.8%), Italy (+15.3%), the Netherlands (+12.7%), Belgium (+11.4%), Portugal (+10.6%), Germany (+8.0%), the Czech Republic (+7.0%), Austria (+3.4%) and Sweden (+0.5%). Only France (-0.8%) and Finland (-12.8%) recorded a decrease in production levels.

With a share of 37.8%, Germany remains the largest CECIMO MT producer, closely followed by Italy (25.9%) and Switzerland (11.1%). As in previous years, these three countries represent over three-quarters of CECIMO's production.

CECIMO MT Production shares 2022



Global MT Production & Market share 2022

Looking at global MT production, as demonstrated in the table below, the most substantial growth in MT production in 2022 was observed in India (+35.3%) and Canada (+32.7%). Due to European countries registering a slightly lower annual growth rate compared to China, it is evident that, for the first time, Chinese levels of MT production exceeded those of CECIMO's countries. Among the other major producers, it is worth noting the growth in MT production in Japan (+12%), South Korea (+6.7%) and the Taiwan region (+22.1%). In contrast, production fell in the United States (-15.1%).

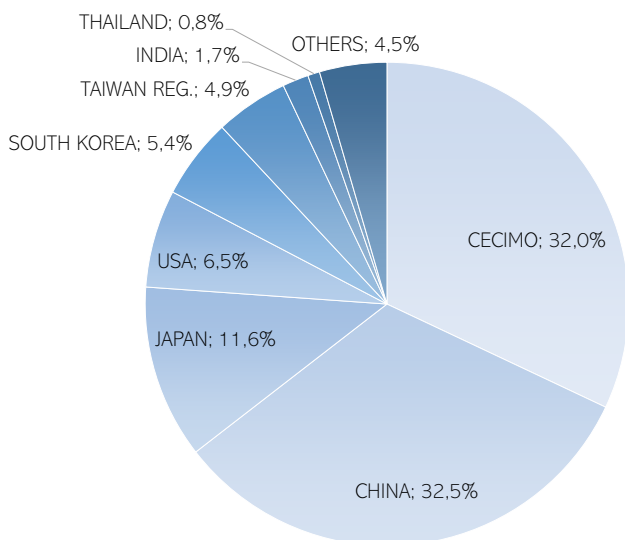
The share of CECIMO countries remained stable at 32%. The Chinese share increased from 31% to 32.5%, primarily due to lower production growth in South Korea and a decline in the United States. Japan maintained its position as the third major producer, holding approximately an 11.6% share in global MT production.

Annual MT Production (Million Euros)

Country/Region:	2019	2020	2021	2022	2022/2021
CECIMO	27.169,0	20.083,2	22.476,8	25.345,4	12,8%
China	17.347,0	16.949,7	21.814,5	25.736,0	18,0%
Japan	10.782,8	7.464,2	8.208,4	9.190,1	12,0%
US	5.931,7	5.074,7	6.096,4	5.178,2	-15,1%
South Korea	4.123,8	3.106,9	3.996,8	4.264,0	6,7%
Taiwan region	3.529,7	2.509,1	3.176,6	3.878,4	22,1%
Brazil	322,0	257,9	301,6	315,6	4,6%
India	1.045,0	584,0	1.024,3	1.385,5	35,3%
Canada	393,0	372,1	485,4	644,3	32,7%
Russia	560,5	521,9	602,5	602,5	0,0%
Thailand	511,2	318,3	570,4	631,1	10,6%
Singapore	507,8	407,0	522,0	488,6	-6,4%
Poland	288,9	236,0	255,3	299,8	17,4%
Other	1.124,0	901,5	1.226,3	1.223,6	-0,2%
World	73.636,4	58.786,5	70.757,2	79.183,1	11,9%

Source: CECIMO, National Associations

Global MI Market share 2022



Source: CECIMO, National Associations

Although slightly below China, the CECIMO countries retained a strong market share, representing around 32% of the world's share.

Behind China and the CECIMO countries, Japan tops the list (11.6%), followed by the United States (6.5%), South Korea (5.4%), the Taiwan region (4.9%), India (1.7%) and Thailand (0.8%).

Together with CECIMO, these countries account for approximately 95% of global MT production.

CECIMO8 Domestic & Foreign Orders

CECIMO8 Domestic Orders

Following a robust 85% increase in 2021, the CECIMO8 Domestic Orders Index (annual average) saw a further improvement, recording a 9% increase in 2022. Although at a slower pace, this increase led to the record-high level of the CECIMO8 domestic orders, with the index reaching 122 points on average.

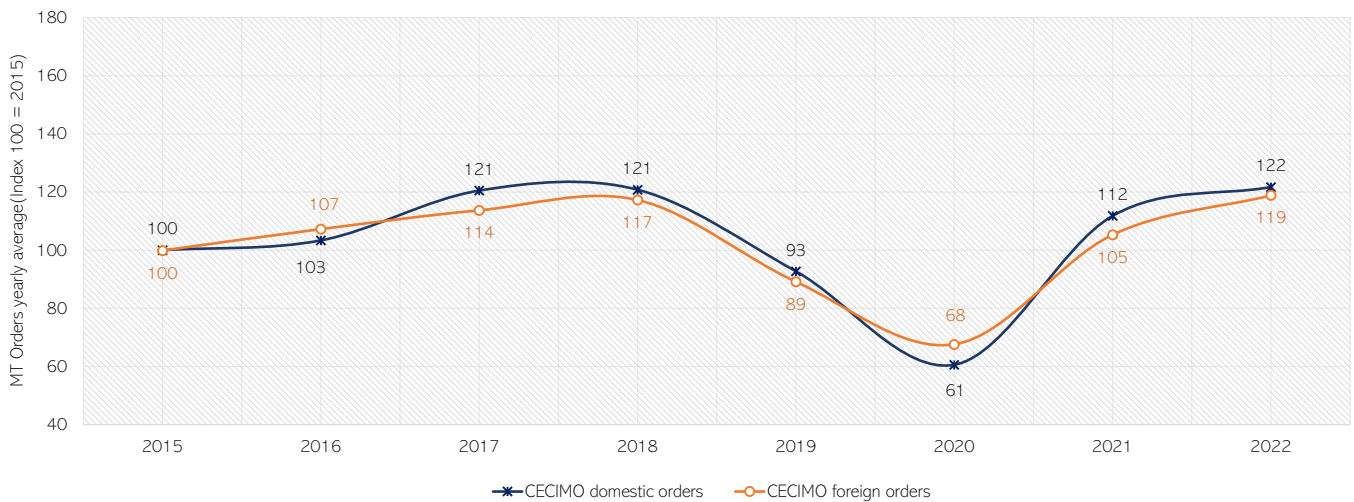
An increase in domestic orders was noted in Germany, Austria, France, Switzerland, and the UK. Among these countries, the most significant annual growth was observed in Switzerland, where domestic orders were over 40% higher compared to the previous year. Furthermore, a robust recovery was seen in Germany (+19%), Austria (+22%), and the UK. On the other hand, domestic orders experienced an annual decrease in Spain (-2%), Italy (-13%), and the Czech Republic (-7%).

CECIMO8 Foreign Orders

The CECIMO8 Foreign Orders Index (annual average) rebounded by 13% from the levels in 2021. While this index growth slightly exceeded the growth of the index in the domestic market, it is important to note that the recovery of CECIMO8 MT orders from foreign markets was marginally slower in 2021. Nevertheless, it is worth highlighting that both indexes in 2022 surpassed the levels seen before the pandemic, indicating a strong recovery in demand in both domestic and foreign markets.

As illustrated in the graph below, the foreign orders index rose from 105 points in 2021 to 119 points in 2022. The most substantial increase in the index was observed in Austria (+23%), Germany (+17%), and Spain (+14%). Italy (+10%), Switzerland (+8%), the Czech Republic (+4%), and France (+1%) experienced slower growth in foreign orders. Only the United Kingdom recorded a decline in foreign orders (-9%) annually in 2022.

CECIMO8 Domestic & Foreign Orders (2015-2022)



Source: CECIMO & National Associations

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

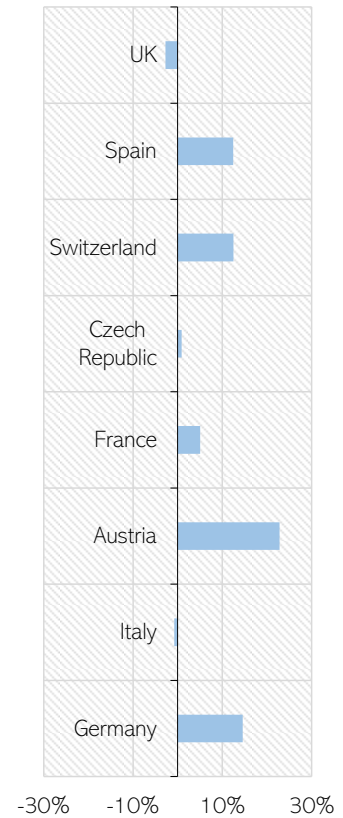
CECIMO8 Total Orders

As shown in the graph below, the CECIMO8 Total Orders Index (annual average) showed a remarkable improvement in 2021, growing by 61%, surpassing the level reached in 2019. A further improvement is seen in 2022, with the Index set to grow by around 11%, reaching 117 points. It is noteworthy that at this level, the CECIMO8 total orders nearly reached its peak in 2018, reflecting both a catch-up effect and stable demand for machine tools from European MT Producers.

As illustrated in the chart on the right, the most significant growth in the total orders index in 2022 occurred in Austria (+23%). Strong recoveries were also recorded in Germany (+15%), Switzerland (+13%) and Spain (+12%). France and the Czech Republic experienced a slight improvement compared to the previous year. In the United Kingdom, the total new orders index fell in 2022 compared with the previous year (-3%), due to a significant fall in foreign orders. In Italy, due to lower performance in domestic demand, total orders were down by 1% compared to the index level in the preceding year (2021).

Though not indicated in the charts, it is crucial to highlight that the CECIMO8 Shipments Index (annual average) also displayed further improvement, increasing from 88 index points in 2021 to 97 points in 2022. This corresponds to an 11% increase compared to the 2021 level. While the index continued its recovery in 2022, it remained below the levels seen in 2018 and 2019. However, thanks to an improvement in the supply chain situation and the availability of various materials and components, it is expected that shipments will recover further next year.

CECIMO8 Total Orders Index 2022/2021



CECIMO8 Total Orders (2015-2022)



Source: CECIMO & National Associations

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

CECIMO8 vs Competitors Total Orders

Compared to 2021, when the Total orders index increased significantly across all major producing regions, 2022 saw more moderate improvements or stable levels.

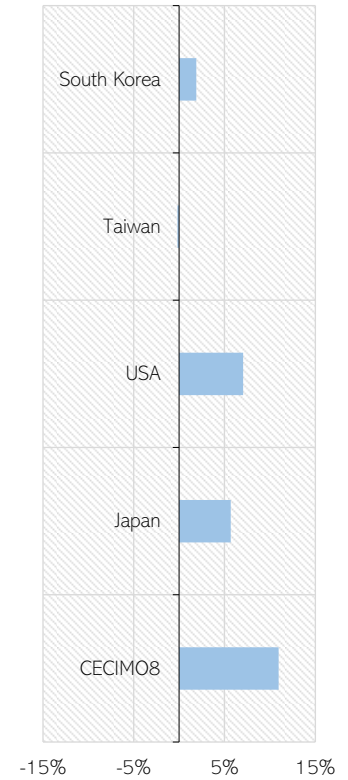
As illustrated in the chart below, while similar patterns can be noticed in the total orders levels for certain countries, the CECIMO8 countries recorded the strongest annual growth rate. Importantly, it is worth noting that all figures are shown in nominal terms. Therefore, different inflationary pressures among regions would have had a more or less significant impact on real values.

Additionally, it is crucial to highlight that the United States recorded its highest level compared to 2015, reaching a new record level. With most regions experiencing levels above the pre-pandemic period, this reflects a very stable level of global MT demand in 2022.

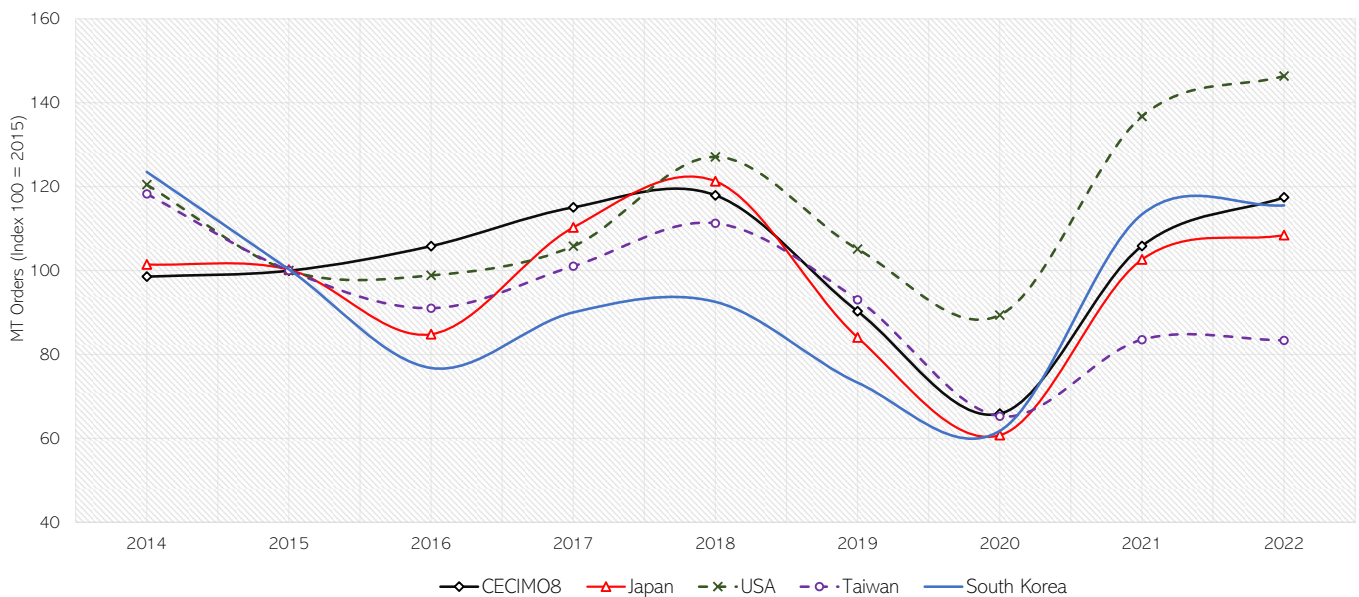
As shown in the chart on the right, the largest increase in total orders occurred in the CECIMO8 region, where the total orders index rose by 11% to 117 points in 2022.

Japan's total orders index, following a strong recovery in 2021, further improved in 2022 (+6%). After a sharp decline in 2019 and 2020, the Taiwan region rebounded by 28% in 2021 and maintained the same level in 2022, still remaining below the 2019 level. South Korea's total MT orders experienced only a slight recovery in 2022 (+2%) compared to the index level in 2021.

Total Orders Index 2022/2021



CECIMO8 vs Competitors Total Orders (2015-2022)

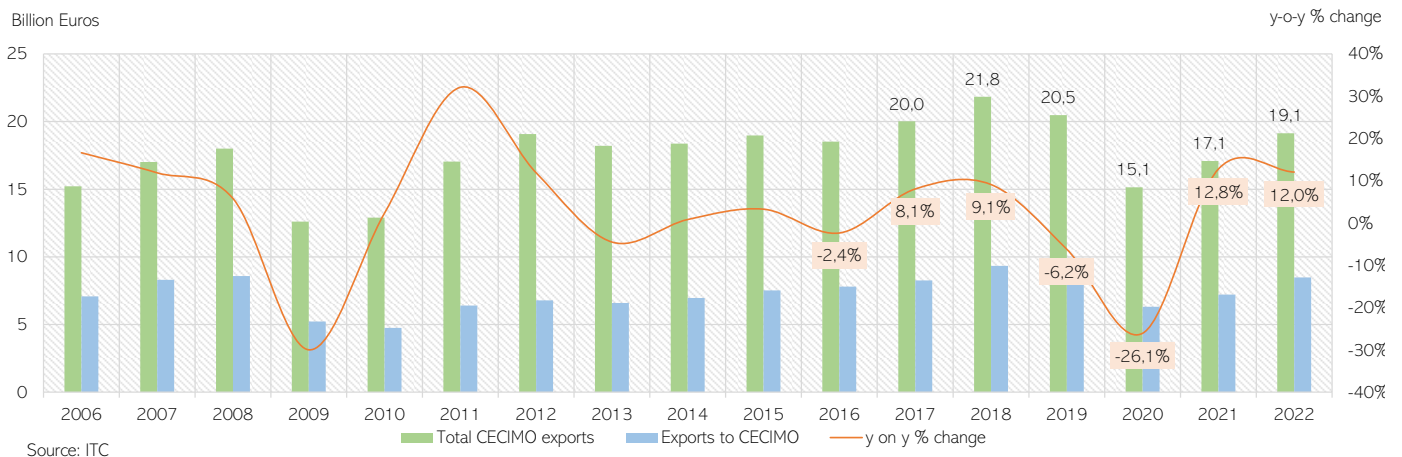


Source: CECIMO & National Associations

CECIMO MT Exports & Growth Rates

Following a growth of 12.8% in 2021, in line with the improvement in domestic and foreign demand, CECIMO's MT exports continued to grow in 2022. As illustrated in the chart below, CECIMO's total MT exports increased by approximately 12% in 2022, reaching 19.1 billion euros. However, it is important to note that the graph indicates that the level of exports has not yet reached the 2019 level.

CECIMO Total MT Exports & Growth Rates
(2006-2022)



The annual figures also show that exports between CECIMO countries recorded a higher recovery (+17.6%) compared to the level of exports outside CECIMO countries (+8.0%). It is important to note that the same trend was observed last year, indicating a slightly stronger demand on European MT market in 2022 compared to the rest of the world.

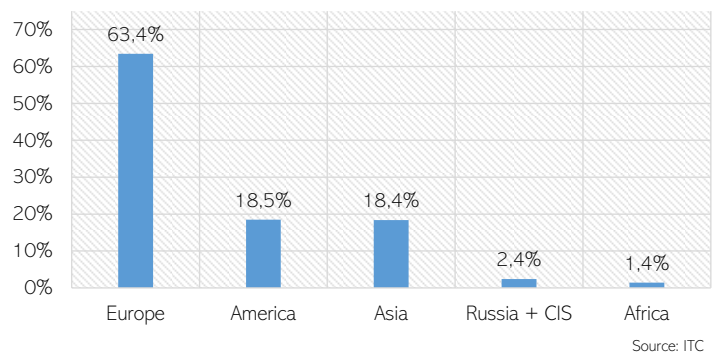
Billion Euros	2016	2017	2018	2019	2020	2021	2022
Total exports	18,5	20,0	21,8	20,5	15,1	17,1	19,1
y on y % change	-2,4%	8,1%	9,1%	-6,2%	-26,1%	12,8%	12,0%
Exports to CECIMO	7,8	8,3	9,3	8,7	6,3	7,2	8,5
%change	3,6%	5,9%	13,0%	-6,5%	-27,6%	14,2%	17,6%
Exports outside CECIMO	10,7	11,8	12,5	11,8	8,8	9,9	10,7
%change	-6,2%	9,6%	6,4%	-6,0%	-24,9%	11,7%	8,0%

Source: ITC

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 (63%). This is a reflection and confirmation of the historically robust MT trade between European/CECIMO countries.

The largest export market in 2022 was the Americas region, with a share of 18.5%, closely followed by Asia (18.4%). It is important to highlight that export growth to the Americas region was much higher (+19%) on an annual basis compared to exports to the Asia region (+2%).

CECIMO Total MT Exports by regions in 2022



Source: ITC

CECIMO MT Main Export Markets 2022

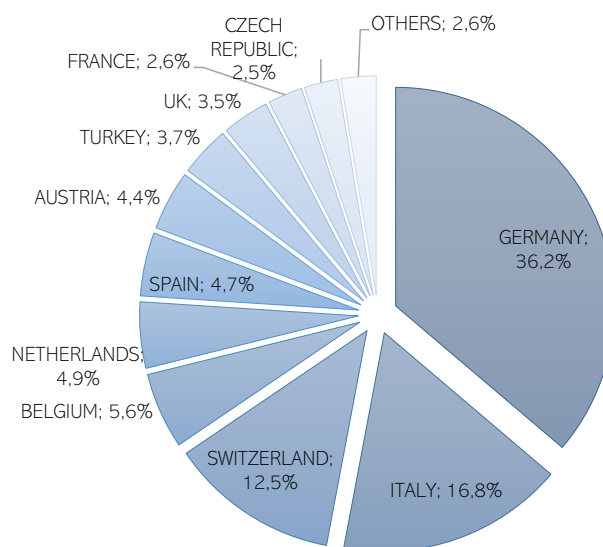
According to data from the International Trade Centre (ITC), the United States and China remained the main markets for European MT producers. With a robust growth in export flows to the US (+22.6%) and a slight decline in exports to China (-1.3%), the US claimed the top spot as the primary export destination in 2022.

Among the main non-CECIMO destinations for MT, strong export growth was also observed in trade with Poland (+13.4%), Mexico (+16.4%), Hungary (+25.5%), Canada (+14.9%) and Japan (+25.2%). Exports to India saw a more modest increase (+4.6%).

Among other important markets, CECIMO MT exports fell, as expected, in Russia (-40.3%) as a result of the war with Ukraine and the sanctions imposed. A decline in exports was also recorded towards Brazil and China, as indicated in the table below.

⇒ 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 2022



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

Among CECIMO countries in 2022, based on data received from national associations, the three main exporters were, as usual, Germany, with a share of 36.2%, followed by Italy, with a share of 16.8%, and Switzerland, with a share of 12.5%. Historically, these three countries account for about two-thirds of CECIMO's total exports.

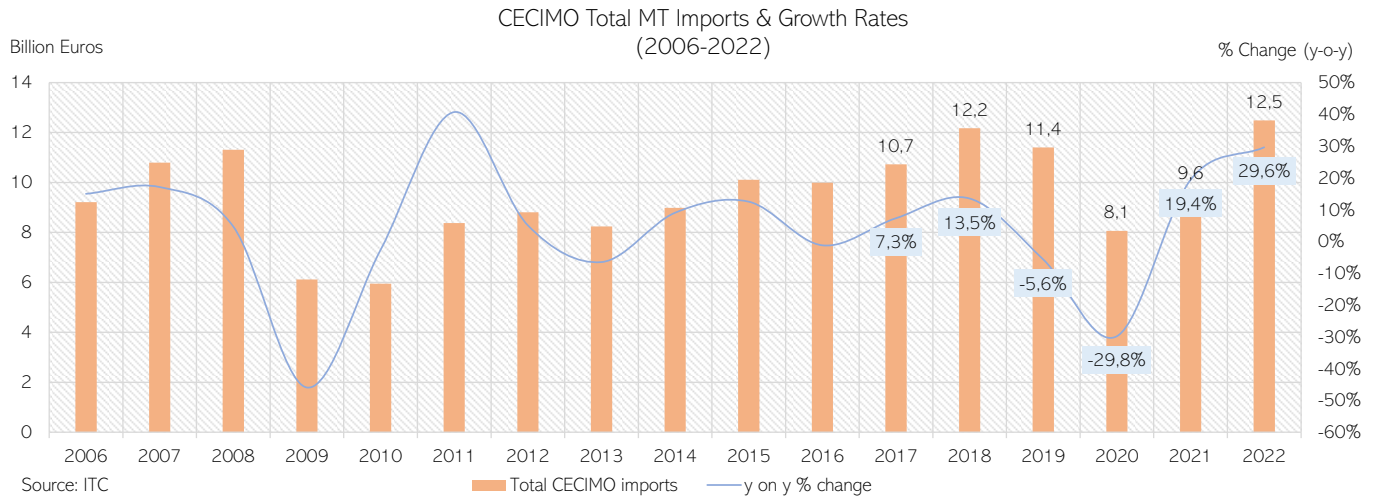
CECIMO Main MT-Purchasing Countries 2022/2021

EUR Million	2021	2021 Share	2022	2022 Share	%change
United States of America	2.046	20,7%	2.510	23,6%	22,6%
China	2.285	23,2%	2.255	21,2%	-1,3%
Poland	720	7,3%	817	7,7%	13,4%
Mexico	382	3,9%	444	4,2%	16,4%
India	365	3,7%	382	3,6%	4,6%
Hungary	289	2,9%	363	3,4%	25,5%
Russia	511	5,2%	305	2,9%	-40,3%
Canada	220	2,2%	253	2,4%	14,9%
Japan	198	2,0%	248	2,3%	25,2%
Brazil	230	2,3%	193	1,8%	-16,0%
Total CECIMO Exports	17.082,4		19.140,5		12,0%
Exports to CECIMO	7.215,2	42,2%	8.484,1	44,3%	17,6%
Exports outside CECIMO	9.867,1	57,8%	10.656,3	55,7%	8,0%

Source: ITC

CECIMO MT Imports & Growth Rates

The robust growth of MT consumption in European countries in 2022 was further confirmed by a strong increase in MT imports into the CECIMO region. As illustrated in the chart below, total MT imports to CECIMO countries surged by 29.6% from the levels seen in 2021. Examining the values, total MT imports into CECIMO countries reached a record high of 12.5 billion euros in 2022.



Looking at the table below, annual figures show that imports from non-CECIMO countries again grew at a higher rate (40.0%) than imports from CECIMO countries (22.1%).

Billion Euros	2016	2017	2018	2019	2020	2021	2022
Total CECIMO imports	10,0	10,7	12,2	11,4	8,1	9,6	12,5
y on y % change	-1,2%	7,3%	13,5%	-5,6%	-29,8%	19,4%	29,6%
Intra-CECIMO imports	6,2	6,5	7,4	7,0	4,9	5,6	6,8
y on y % change	0,2%	4,3%	13,6%	-4,9%	-29,9%	13,7%	22,1%
Outside CECIMO	3,8	4,2	4,8	4,4	3,2	4,1	5,7
y on y % change	-3,4%	12,5%	13,4%	-6,7%	-28,3%	28,2%	40,0%

Source: ITC



CECIMO MT Main Supplying Markets 2022

According to ITC data, Japan remained CECIMO's largest supply market for machine tools, a trend consistent with previous years. Additionally, as indicated in the table below, Japan increased its share from 27.4% in 2021 to 28.8%, attributed to a robust annual growth of 47.4%.

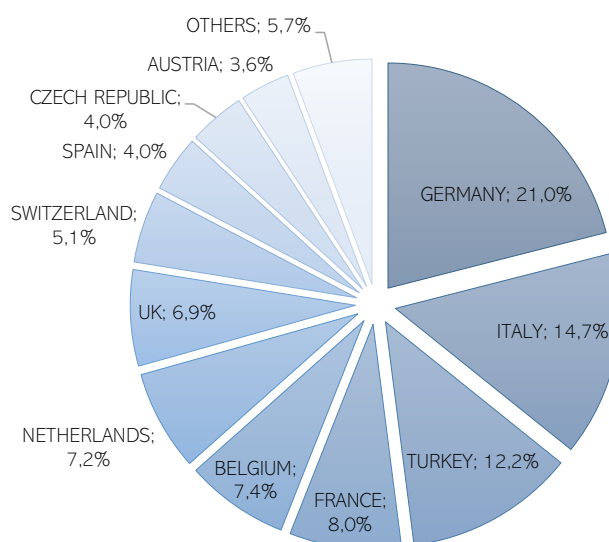
⇒ Following Japan, the largest supplying markets for CECIMO countries were China (18.9%), Taiwan (18.3%), South Korea (12.1%), and the US (9.1%).

As shown in the table below, all the main supplying markets recorded an increase in exports to the CECIMO countries.

⇒ Comparing the major CECIMO supplying markets, the most significant increase in MT imports was recorded from Singapore (+115.6%), Thailand (+49.2%), Taiwan (+49.0%), and Japan (+47.4%).

As shown in the table below, imports from CECIMO countries grew more slowly in 2022 (+22.1%) than imports from non-CECIMO countries (+40.0%). As a result, the share of imports from CECIMO countries decreases from 57.7% in 2021 to 54.3% in 2022.

Main CECIMO Importers 2022



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

Among CECIMO countries in 2022, based on data received from national associations, the countries with the largest share of MT imports were Germany (21.0%), followed by Italy (14.7%), Turkiye (12.2%), France (8.0%) and Belgium (+7.4%).

CECIMO Main MT-Supplying Markets 2022/2021 (million Euros)

EUR Million	2021	2021 Share	2022	2022 Share	%change
Japan	1.116	27,4%	1.645	28,8%	47,4%
China	779	19,1%	1.076	18,9%	38,1%
Taiwan	700	17,2%	1.043	18,3%	49,0%
South Korea	496	12,2%	691	12,1%	39,3%
United States	422	10,3%	517	9,1%	22,6%
Poland	123	3,0%	153	2,7%	24,5%
Thailand	98	2,4%	146	2,6%	49,2%
Slovakia	51	1,2%	57	1,0%	11,8%
Singapore	22	0,5%	47	0,8%	115,6%
India	27	0,7%	33	0,6%	20,0%
Total CECIMO Imports	9.629,0		12.483,2		29,6%
Total from CECIMO countries	5.551,9	57,7%	6.776,2	54,3%	22,1%
Total from non-CECIMO	4.077,1	42,3%	5.707,0	45,7%	40,0%

Source: ITC

Highlights



About CECIMO

Founded in 1951, CECIMO is the European Association of Manufacturing Technologies. With a primary focus on machine tools and additive manufacturing technologies, we bring together 15 national associations, which represent approximately 1500 industrial enterprises in Europe (EU + UK+ EFTA + Türkiye), over 80% of which are SMEs. CECIMO covers 97% of the total machine tool production in Europe and about 1/3 worldwide. It accounts for approximately 150,000 employees and a turnover of around 25.3 billion euros in 2022.

CECIMO countries

The European Association of 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, Türkiye and the United Kingdom.





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Credits: CECIMO - European Association of Manufacturing Technologies

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