

# **“UPGRADED SUPPORT TOOL FOR INTEGRATION OF SMEs IN EUROPEAN AND GLOBAL VALUE CHAINS”**

## **REPORT 3**

### **GERMAN INFRASTRUCTURE SECTOR, METAL PRODUCTION AND AUTOMOTIVE SECTOR AND AGRICULTURE (FOOD PROCESSING) SECTOR**



**Co-funded by  
the European Union**

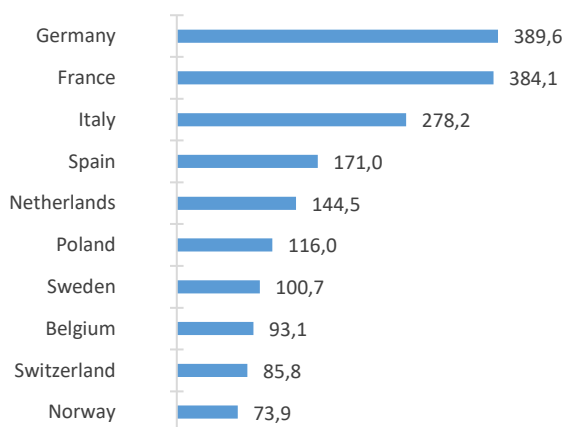
## Construction industry

Inflation has created visible problems in the last few years and is the problem number one of the German economy. High inflationary pressures caused, firstly, by the KOVID crisis from 2020, and then by the Ukrainian war, fueled the energy and food crisis throughout the world. On the other hand, long-standing problems in the production sector, combined with the previously described problem of high inflation, caused the current state of stagflation in which the German economy finds itself, that is, an anemic state of the production sector with elements of high inflationary pressures.

The economic crisis that the most developed economy of the Euro zone is going through has been felt in recent years in the construction sector of this country, for which 2023 represents another developmentally weak year. Analogous to the overall GDP decline of 0.3% in the previous year, investments in the construction sector fell by 2.7%, which is already the third consecutive year with a decline in this indicator.

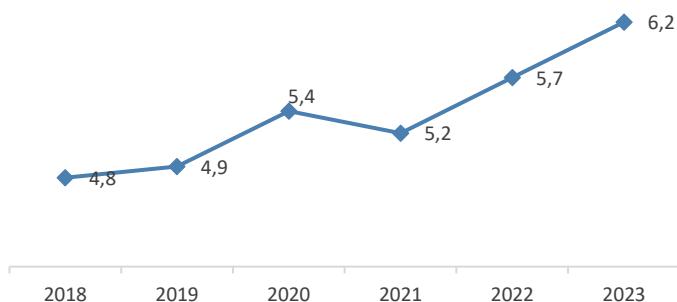
Nevertheless, although a decline was recorded, Germany is still the leading economy of the Euro zone in terms of the size of the total income created in the construction industry with around 390 billion Euros and which is about 1.5% more compared to France, which is the second largest economy of the economic bloc by most economic indicators. If we look at the share of the German construction industry in the GDP of the country since 2018, a clearly observed growing trend is primarily the cause of the faster and greater growth of the construction sector than the current growth of the country's entire economy. Since 2018, this indicator has increased by about 1.5 percentage points and in 2023 it will be 6.2%. In the observed trend, the only decrease in the value of this indicator occurred during 2021, which represented the year of remediation of the economic damage recorded during the corona virus pandemic in 2020.

### Total revenues of the construction sector in 2022, in billions of Euros, by country



*Note Graph: Germany, France, Italy, Spain, Holland, Poland, Sweden, Belgium, Switzerland, Norway*  
*Source: Statista Research Department.*

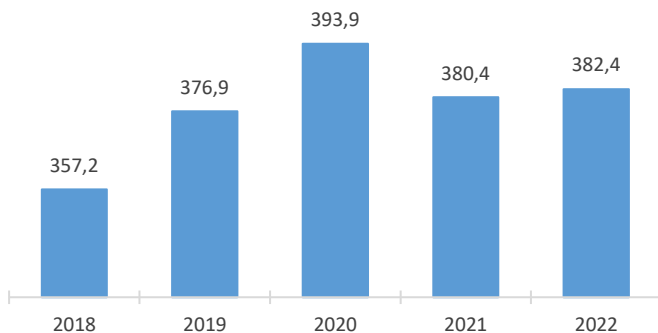
### Share of the created GDP value of the construction sector in the total GDP of Germany, in %



Source: Federal Statistical Office of Germany.

The recessionary state of the economy in 2023 was also felt in the labor market, so the average employment in the construction sector of this country is almost identical in the last five years, with minimal inter-annual changes (growth of 0.5% in 2023). According to data from the Federal Statistical Office of Germany, the number of employees in this sector is practically unchanged and amounts to 2.6 million as of 2019, and it can be said that the level of employment remained at the pre-pandemic level. On the other hand, the total number of companies in the construction sector has not yet recovered from the crisis at the beginning of the third decade and is about 3% lower than at the beginning of this period.

### The total number of companies in the construction sector of Germany in the last five years, in 000



Source: Statista Research Department.

The previous year, 2022, was a year in which the supply and demand relationships of global supply chains were significantly disrupted both when it comes to the prices of raw materials and raw materials for the construction industry, but also when it comes to the prices of final products. Nevertheless, stabilization was established in 2023, so the prices of construction products increased primarily due to high inflation, but not due to reduced supply on the global market. Economists assume that, due to still high inflationary pressures, material prices will continue to rise, but that growth in 2024 will be significantly lower and will amount to around 1%, compared to 7.9% in 2023.

Germany is one of the most developed countries in the world when it comes to market research, so the economists of domestic institutes estimated that 68% of companies in the construction sector see energy and raw material prices as a major problem in business this year. The energy situation, although stabilized, is still an insurmountable obstacle and a brake on exiting the state of technical recession and later progressive rates of economic development of the country, which cannot be overcome in the short term, so this is one of the objective consequences for the economy. A major problem for the German construction sector is the lack of qualified labor, demand for construction services and high labor costs.

In this connection, the salary policy, which continuously improved until 2020, only to start a process of sudden deterioration from then on. Namely, as yields, capitalization and liquidity decreased, so did the salaries of employees in this sector, which, together with rising living costs, significantly reduced the personal income of employees, so the pressure on the German government to influence the regulatory measures to improve the situation on this market.

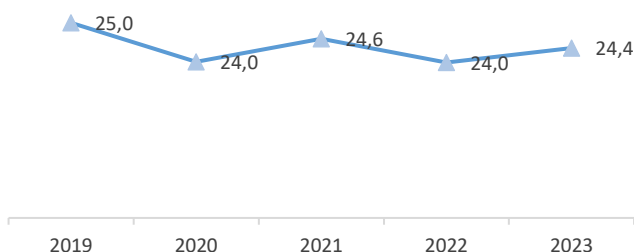
When it comes to the structure of the construction sector and projections for 2024, much better projections are related to civil engineering, which is expected to grow by 2.5% in 2024, while high-rise construction will decline by 3.5%. For the first time since 2008 and the time of the World Economic Crisis, turbulence on the labor market is expected, i.e. a decrease in both the number of employees working in this sector and a decrease in the number of companies registered for the realization of construction activities.

### **Metal production**

According to the data of the German Statistical Office, the total number of employees working in the manufacturing sector (industry) in 2023 was 7.5 million, which is about 0.2% more than in 2022 and at the level of the five-year average and which accounts for about 16% of total employment in Germany.

The total created gross added value of VAT for the industrial sector in Germany reached EUR 917 billion in 2023, which is about 25% of the total GDP at the national level. Compared to the previous year, 2022, a growth of 9% was recorded. Germany is the largest producer of steel in the European Union, while on the global market it is in the top 10 largest producing countries among China, Russia, USA, South Korea, Turkey, Brazil, Iran, India, etc.

### The share of the created GDP value of the industry sector in the total GDP of Germany, in %

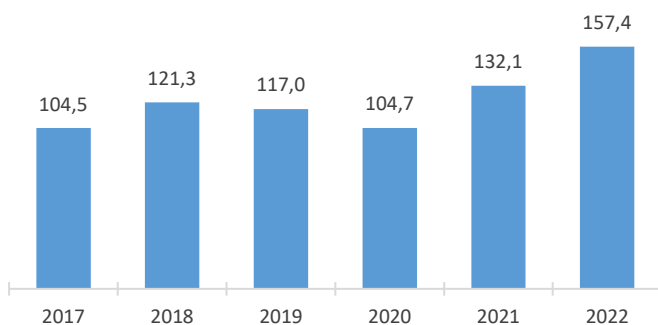


Source: Federal Statistical Office of Germany.

With the appearance of competition from Chinese companies engaged in the production, processing and production of final metal products, the competitiveness of the German metal sector has become threatened. Several economic factors have slowed down the metal industry, first and foremost is the state-sponsored Chinese competition, which has succeeded in outdoing European companies by offering cheaper but environmentally dirtier products. Government subsidies to Chinese companies have led to significant overcapacity and oversupply in the global market, weighing on the prices of industrial metals, particularly steel and aluminum. It is for this reason that the European Union is stimulating Germany's industrial transformation towards green technologies, especially in the automotive industry, which to a lesser extent probably slowed down economic activity in Germany in recent years.

The total income from the production of base metals in Germany in 2022 reached 157 billion Euros, which is about 19% more than in the previous year, but also a significantly higher level of income than at the beginning of the observed period and in 2017. From the graph, a certain degree of volatility of this indicator can be seen during the pandemic year 2020, and if this year were excluded from the analysis, it can be said that in the last six years there is an increasing trend of total income from base metals in Germany. Additionally, in the observed five-year period, the average annual growth rate of income from base metals in this country is growing by about 22%.

### Total revenues from the production of base metals in 2022 in Germany, in billions of Euros



Source: Statista Research Department.

If we evaluate the production of the metal sector based on the gross margin, it can be concluded that the production of metals in Germany is declining considering that the gross margin has decreased from 4.4% in 2017 to around 3% in 2022. In regular surveys conducted by the Association of Employers of the Metal and Electrical Industry of Germany several times a year, around 34% stated in 2023 that their profit margins are in the 0-2% range and that around 15% of them are preparing for an annual loss of profit. These results of the conducted survey influenced the monthly indicator of business sentiment in Germany to decline during the previous year.

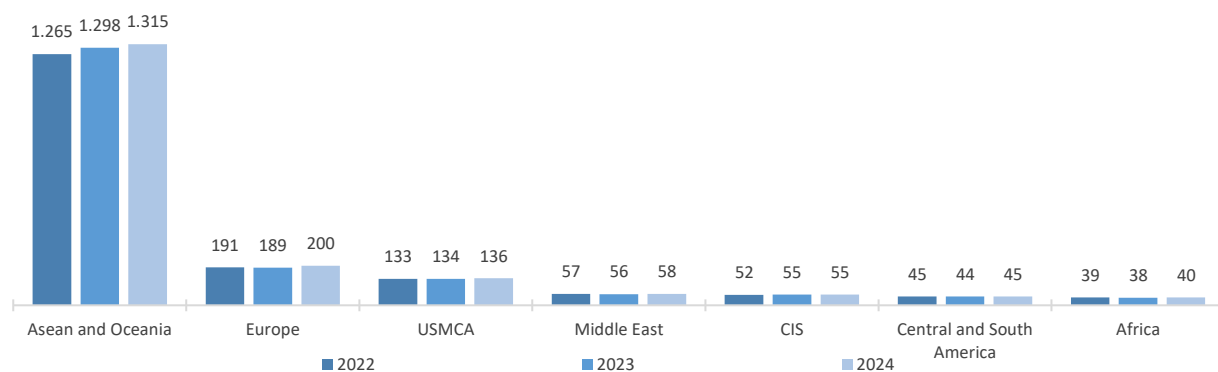
According to COFACE data, the required time for payment in the metal sector has decreased from two months in 2019 to one month in 2023, which is below the average of the German economy. Furthermore, as many as 77% of companies in 2023 reported late payments. These data indicate the liquidity problem faced by companies from the metal sector primarily due to numerous global challenges that burden this sector, bearing in mind that numerous factors are not under the direct control of the companies (rising prices of materials and raw materials).

The metal sector is at the heart of the EU's strategy to achieve climate neutrality. Most of the negative effects resulting from carbon emissions come from this industry, which will comply with the so-called "green" standards, in the long term, to clearly position itself on the global market as a more economically efficient and ecologically sustainable production than that from other parts of the world. The metal industry in Germany is extremely important, bearing in mind that the automotive industry is a generator of economic and technological development in Germany, and that the metal sector is the most important link in the vertical supply chain.

As a special component of the metal sector, the production of iron and steel can be singled out, whose turnover has been growing by an average of about 4% per year since 2019, primarily due to the high price of these metals on the world market, which is associated with the growth in demand for these metals. The current level of turnover of this industry has reached 50.6 billion Euros, and economists estimate that this indicator will decline in the coming years, given that the negative effects of external factors have influenced the growth of trade volatility, trade tensions, but also the need to transfer increased costs to customers, as the last link in the supply chain. There is another reason for this projection. Namely, compliance with environmental regulations enables producers to switch to the so-called "light" production where heavy metals such as iron and steel are replaced by lighter metals such as aluminum, which for now has a complete conversion of application in the automotive and aerospace industries.

The largest demand for finished steel products on the global market comes from Asia and Oceania, from continents that annually demand about 1.3 billion metric tons of these products. These are the expected results of the analysis, bearing in mind that this region belongs to China, which annually demands about 60% of these products. In second place is Europe, whose demand is estimated at around 200 million metric tons, in third place is North America with 135 million metric tons, etc. Considering the largest metal producers in the world, it is clear that supply and demand are entirely created by China, that is, the Asian continent (India, Iran, South Korea and many others).

### Demand for finished steel products in the global market for 2022, 2023 and projections for 2024, in millions of metric tons



Source: Statista Research Department.

Note: USMCA - USA, Mexico and Canada; CIS – Commonwealth of Independent States.

Note Graph: Asia and Oceania, Europe, UMSCA, THE Middle East, CIS, Central and South America, Africa

The main problems faced by companies from the metal sector in Germany can be singled out: challenging business conditions of an external nature; increase in commodity prices; lack of qualified labor force; political risks etc.

### Automotive industry

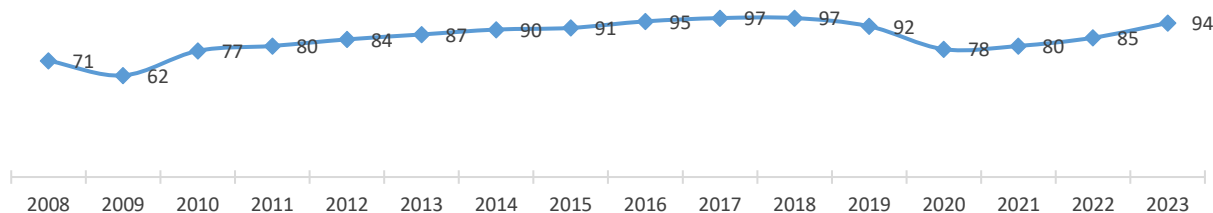
The automotive sector in Germany represents the driver of the economic development of the European Union and one of the most important sectors when it comes to direct influence on the global GDP. Due to its importance, number of jobs, generated business income, new technologies in the production process, but also due to its diversity, this sector represents one of the largest and vertically longest supply chains in the world market.

Germany is the largest car manufacturer in Europe, which until the crisis of 2020 produced about 6 million passenger motor vehicles per year with the most developed network of suppliers worldwide. As a market of 80 million inhabitants, the demand for the products of this industry is high even on the domestic market, while more than 70% of the annual production is intended for placement abroad. The German auto industry is in the center of attention of EU economic policy makers who see this industry as sustainable and more environmentally efficient and who view Germany as the driver of all economic, environmental and technological changes.

The auto industry of Germany directly employs more than 830 thousand workers and affects the created value of the country's GDP by about 5%. The structure of the employees is mainly made up of engineers and highly qualified personnel, considering that production phases with a higher degree of added value are realized on the domestic market, while others have been moved to less developed countries. Germany is a country that annually allocates around 50 billion Euros for investments in research and development, innovation, digitization and other modern technologies, which is a necessary condition for the long-term strategy of the world market leader to be maintained.

On the world market, the global production of motor vehicles is increasing, and compared to the period of 15 years ago, the level of production is higher by about 20 million vehicles. However, the fact that this industry does not suffer from crisis situations best reflects the period of the World Economic Crisis and the beginning of the third decade of this century, when a significant drop in production was recorded and it can be said that the recovery from the pandemic is still ongoing.

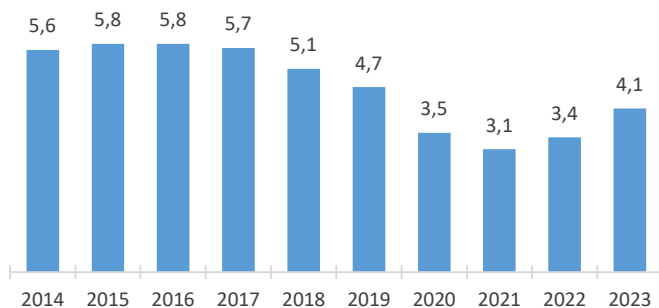
### Global production of all motor vehicles (including trucks), in millions of units



Source: Statista Research Department.

When it comes exclusively to commercial motor vehicles<sup>1</sup>, the total size of the world market is about 25 million vehicles, which means that Germany, as one of the largest market players, accounts for about 17% of world production. It should be noted that in this category of vehicles, the leading place is occupied by North America with 13.3 million vehicles produced, while Asia and Oceania are in third place. The graph clearly shows the crisis period around 2020, so it can be concluded that the recovery process, from the long-standing crisis in the market of microchips and regulatory frameworks still in progress, that is, that the level of production from before the pandemic has not yet been reached. Volkswagen is a global brand aimed at the middle-income population and the production of this vehicle brand is by far the largest in the most developed economy of the Euro zone, while Mercedes-Benz and BMW can be classified as more luxurious brands.

### Total production of passenger cars in Germany, in millions of units



Source: Statista Research Department.

<sup>1</sup> All motor vehicles intended for the commercial transport of goods and passengers, in addition to light commercial vehicles that are heavy under 3.5 tons.



A topic that has gained particular importance in recent years is electric cars and the growth of production and sales of these types of cars around the world. According to data from the Federal Motor Transport Administration (KBA), the market share of electric cars in the country has increased, but is still relatively small. Ten years ago, they accounted for 0.02% of the total number of cars on the road, while today that figure is 2.1%. This means that every 50th car is a purely electric vehicle.

Economists estimate that Europe will go through a kind of crisis of mass acceptance of electric cars, that is, that the process will not be simple, but long and slow, and that at the same time China will implement the whole process significantly faster. The explanation can be found in the stimulus policy of the EU Government and the Government of China. While on the one hand, the EU is forced to budget savings and rational consumption, China has significantly greater financial opportunities, which will enable it to penetrate the electric car market. Also, experts believe that Germany is behind Tesla and some Chinese manufacturers. According to the estimate of the relevant Ministry of Germany, by 2030, around 15 million electric vehicles are expected to be on the roads throughout the country.

## **Agriculture**

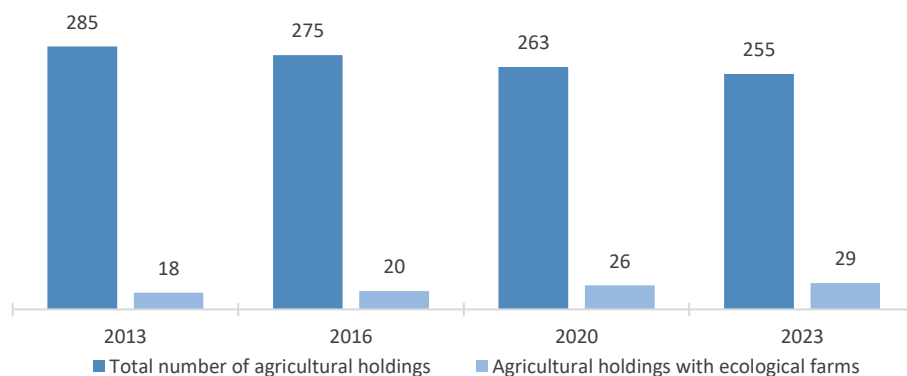
Germany is the country with the longest tradition in organic agriculture, and today this branch of agriculture is one of the largest markets in the world, although it has lower growth rates than other countries such as Great Britain. The country's long-standing aspiration to change consumer awareness of changing habits and greater consumer awareness of health care has put Germany one step ahead of the competition today. Germany's agricultural sector comprises a variety of structures ranging from highly specialized farms to family farms in mountain areas. Over 57% of the area is agricultural land, and 30% is covered by forests. Milk, cereals, as well as vegetables and horticultural products are the most important sectors in terms of production value. German agriculture is market-oriented, and certain sectors are more export-oriented than others. Predominantly rural regions cover 39% and middle regions 50% of the country's territory.

The key characteristics of the retail market are consolidation, market saturation, strong competition and low prices. Germany is an attractive and profitable location in the heart of the EU. Although many consumers are price sensitive, the market also offers many affluent consumers who follow the concept of value for money. These consumers are looking for superior quality products and are willing to pay higher prices. Germany still has some of the lowest food prices in Europe, with German citizens spending only around 14% of their income on food and drink. Low food prices are the result of high competition from discounters and the retail segment of food products. A characteristic of developed countries is that a smaller percentage of the consumer basket is spent on existential needs such as basic necessities such as food, and a larger percentage on other parts of the consumer basket that make life more fulfilling so called secondary needs.

According to the data of the Federal Statistical Office of Germany, the total number of agricultural holdings in Germany in the period 2013-2023 changed significantly in terms of the structure of the farms themselves, their number in this period is in decline, while the number of those engaged in the so-called organic farms increased from 18 to 29 thousand. On the other hand, the total number of

farms in this period decreased by 30,000, so the share of farms with organic farms is now on the rise and amounts to 11.3% (against 6.3% ten years earlier).

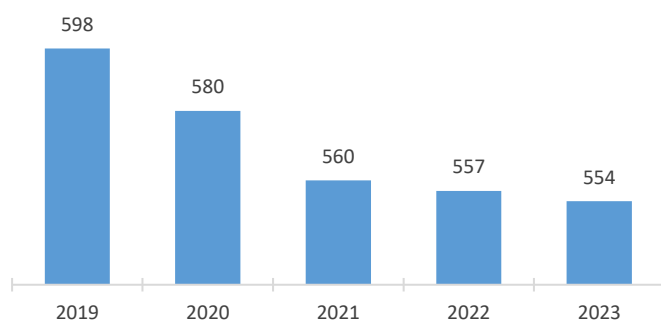
#### The total number of agricultural holdings and the number of those with ecological farms, in 000



*Note Graph: Total number of agricultural properties, Agricultural properties with eco farms*  
*Source: Federal Statistical Office of Germany.*

The number of employees working on agricultural farms throughout Germany in 2023 reached 554 thousand, which is 44 thousand less than in 2013. In this period, the structure of the economy, which is under the influence of the globalization process, has changed significantly, and the share of the service sector in the total created GDP is increasing, while the share of agriculture is decreasing, which is a general trend in developed economies. Simply put, developed economies focus on areas with a higher degree of added value, while less importance is given to sectors such as agriculture. If we look at the total number of households and the total number of employees, one household in Germany in 2023 will employ an average of 2.2 workers.

#### Number of employees in the agriculture, forestry and fishing sector of Germany, in 000

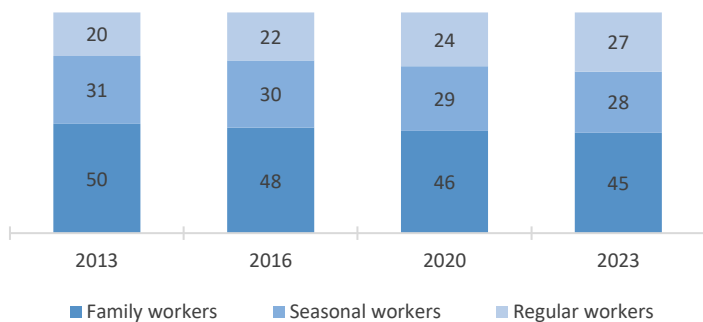


*Source: Federal Statistical Office of Germany.*

The structure of agricultural farms is such that for the last 10 years, the share of family workers in the total number of agricultural workers has decreased, which is a consequence of the trend of decreasing the number of farms as well as the number of workers engaged in agricultural work. On the other hand, the number of permanently engaged workforce has increased significantly, that is, over the

time, farms have felt the need for greater engagement of external collaborators. The number of seasonal workers remained at a relatively stable level, that is, it does not show significant oscillations.

**Structure of agricultural workers, in %**

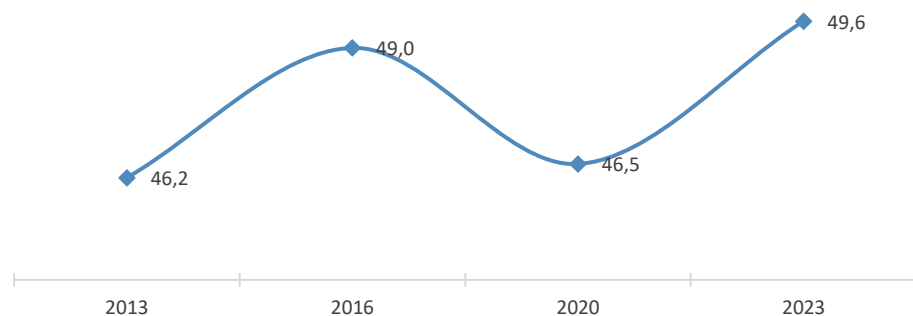


Source: Federal Statistical Office of Germany.

Note: Family workers, Regular workers, Seasonal workers

Therefore, the total value of agricultural production in 2023 was 49.6 billion euros, which is at the average level of the last 10 years. Although the trend is slightly increasing, this increase in the value of production in 2023 was mostly achieved due to more modern technologies used in the production process, which have certainly changed in the last 10 years, but probably not to a significant extent. This is supported by the fact that the productivity of households increased in this period, that is, one household created an average of 194,000 Euros in agricultural production, compared to 162,000 euros ten years earlier. This data is the best confirmation of how consolidated production is in the most developed economy of the Euro zone.

**Total production of agricultural holdings, in billions of Euros**



Source: Federal Statistical Office of Germany.

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Title: Upgraded support tool for integration of SMEs in European and Global Value Chains, Report 3 – German infrastructure sector, metal production and automotive sector and agriculture (food processing) sector

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