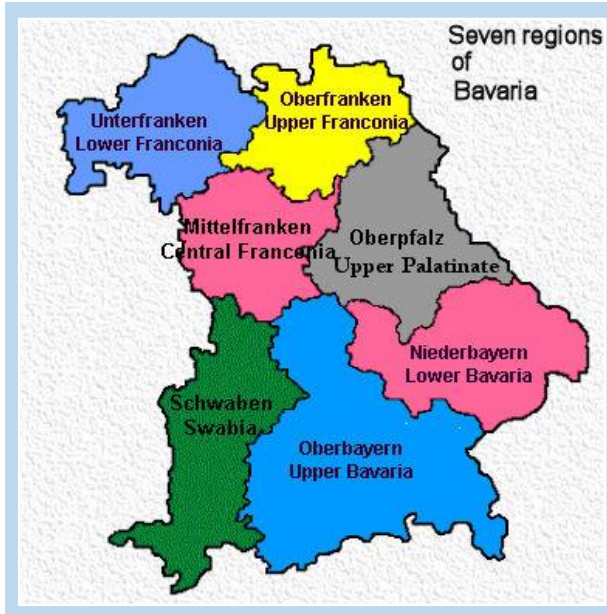


Bavaria (Germany)

October 2021

1. Introduction



The Free State of Bavaria (Freistaat Bayern), which comprises the entire southeast part of Germany, is geographically the largest of the country's 16 states, with a surface area of 70 552 km². It is also Germany's second most populated federal state, behind Nordrhein-Westfalen. Bavaria accounted for approximately 16% of the national population in 2020. Its 13.14 million inhabitants have a gross domestic product (GDP) per capita of EUR 46 498 as at 2020. It shares borders with Austria and the Czech Republic as well as with four other federal states, namely, Baden-Württemberg, Hesse, Thuringia and Saxony.

Bavaria is divided into seven administrative regions: Oberfranken, Mittelfranken, Unterfranken, Bayerisch Schwaben with Allgäu, Oberpfalz, Oberbayer, and Niederbayern. In 2020, the GDP of Bavaria was EUR 610.22 billion, accounting for 18.31% of the national GDP. With Munich as its capital city, Bavaria is one of the most advanced economic regions in Europe, and is home to global players like Adidas, BMW and Allianz.

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Table 1: General information on Bavaria

General Information	
Minister-President	Markus Söder
Capital	Munich
Population (2020)	13 140 183
Surface area	70 552 km ²
GDP (2020)	EUR 610.22 billion
GDP per capita (2020)	EUR 46 498.00
Exports (2020)	EUR 168.28 billion
Imports (2020)	EUR 180.17 billion

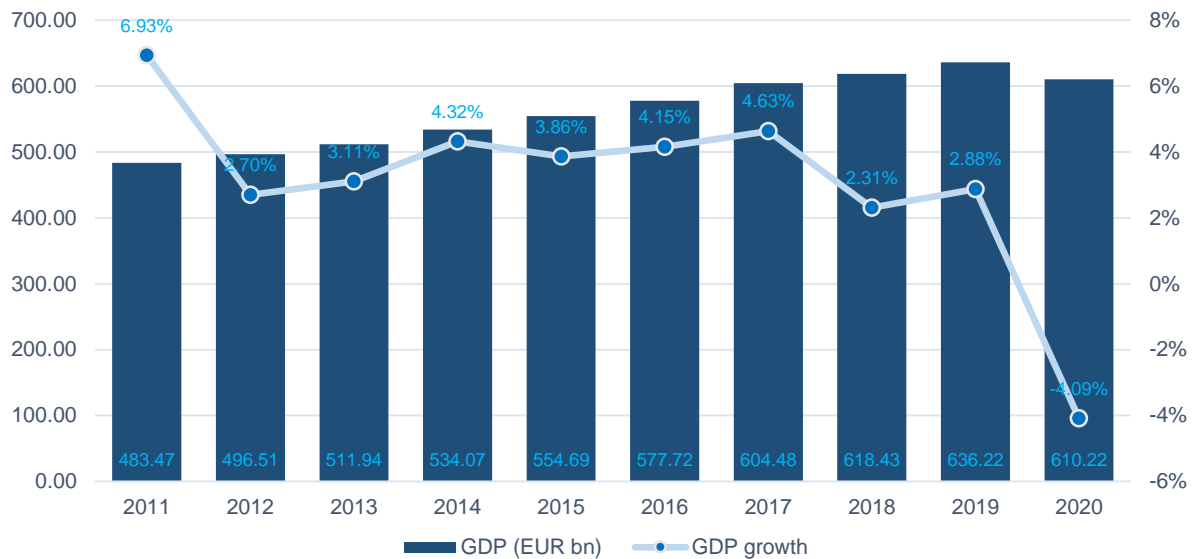
Source: Eurostat (2021); Invest in Bavaria (2021); Federal Statistical Office of Germany (2021); CEIC (2021)

2. Economic Overview

Bavaria has a highly diversified and industrialised economy in Europe. As one of the most attractive industrial locations in Europe, Bavaria boasts with a strong manufacturing sector, is a leading Information and Communications Technology (ICT) hub and is home to a competitive automotive industry. The State's GDP of EUR 610.22 billion in 2020 ranks higher than the outputs of 22 of the 28 member states of the European Union (Invest in Bavaria, 2021).

After years of positive growth, Bavaria's GDP decreased from EUR 636.22 billion in 2019 to EUR 610.22 billion in 2020. As shown in Figure 1, growth in real GDP declined by approximately -4% in 2020. On average, this had been increasing at a rate of 3% between 2011 and 2020.

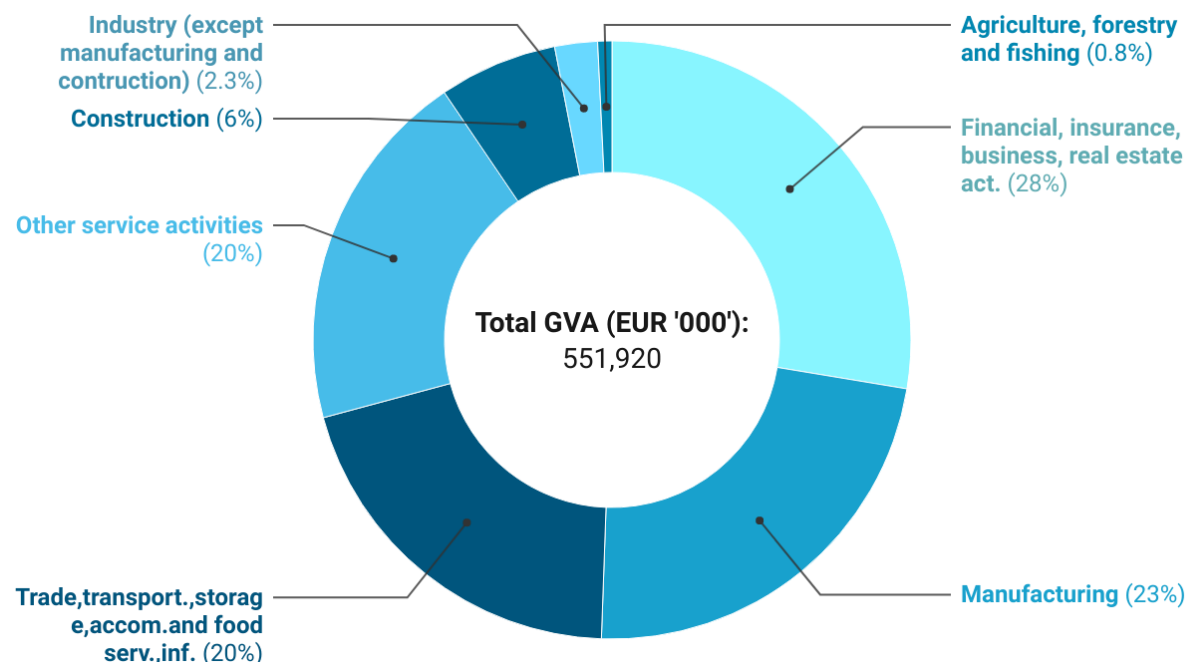
Figure 1: Bavaria's GDP and economic growth, 2011-2020



Source: Federal Statistical Office of Germany (2021)

As shown in Figure 2, financial, insurance, business and real estate sector (28%) was Bavaria's top performing sector in terms of contribution to gross value added (GVA) in 2020. Manufacturing (23%) and Trade, transportation, storage, accommodation, and food services, as well as Information technology (20%) followed in second and third positions, respectively.

Figure 2: GVA by industry, 2020



Source: Federal Statistical Office of Germany (2021)

Highlights of Bavaria's key industries are provided below:

Aerospace: The structural situation in the aerospace sector in Bavaria forms the ideal starting point for players in the sector. Bavaria is home to many important system companies in the sector and is the location of large numbers of innovative companies in the supplier industry and technical services. Recently, for instance, the *Bavarian Strategy on Aeronautics 2030* was developed in order to assert and strengthen Bavaria's top position as one of the leading aerospace locations worldwide. Annually around EUR 7 billion in revenues are generated in Bavaria's manufacturing aerospace sector. Overall, more than 60,000 employees are working in around 550 companies in Bavaria, including airlines and airports. World leading OEMs such as Airbus Defence and Space, Airbus Helicopters Germany, and MTU Aero Engines are headquartered in Bavaria. There are 150 satellite navigation companies in Bavaria alone.

Mechanical Engineering: Mechanical engineering is concentrated mainly in the administrative regions of Swabia, Lower Franconia and Upper Bavaria, and focuses on drive technology, general aerospace technology, power systems (engines and turbines), pumps, and compressors.

Automotive Sector: Bavaria's automotive industry generates the highest revenue among all sectors. Active members of Bavaria's automotive sector include manufacturers such as BMW, Audi and MAN (commercial vehicles), as well as over 1,100 companies including well-known suppliers such as Bosch Rexroth AG, Brose, Continental, Dräxlmaier Group, Schaeffler, Webasto and ZF Sachs. This sector employs around 186,000 people and has an annual turnover of around €10bn.

Renewable Energy / Solar / Photovoltaic: Bavaria is a pioneer in renewable energy technology. Solar, wind and other renewable carriers already account for 8% of the annual energy consumption, nearly double that of Germany (4.6%). Nearly 60% of the German power supply from waterpower is generated in Bavaria; 60% of geothermal and 50% of solar energy. A third of all solar collectors and a fourth of all heat pumps in Germany are installed in Bavaria. More than 50,000 of those facilities were subsidised by the state's promotional program, which was instated years before the market incentive program by the German federal government.

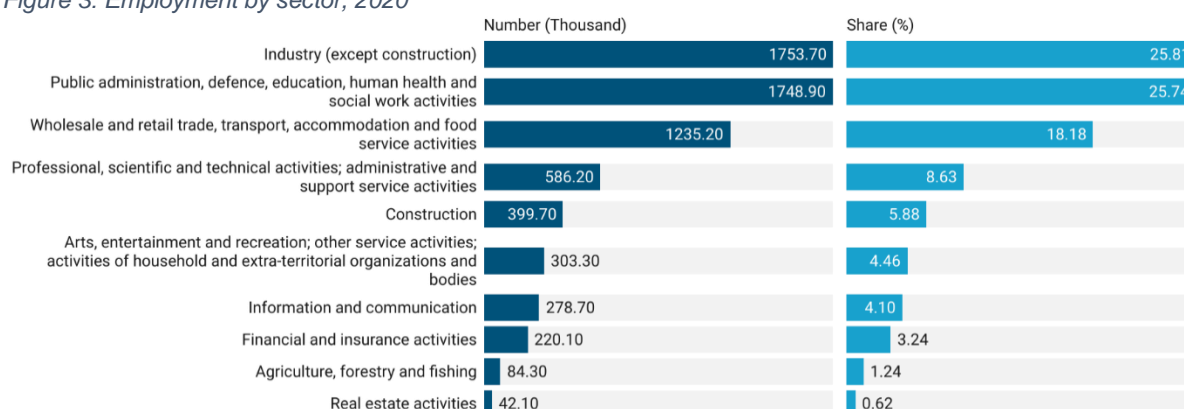
Nanotechnology: Bavaria's nanotechnology scene is home to around 325 players (industry, associations, institutions, and research and development). Bavaria has established an outstanding research landscape in which research is conducted into nanotechnology solutions for areas such as chemistry, the environment, health and construction.

Photonics: Bavaria produces over 50% of the country's lighting technology, information technology and communications technology, and around 25% in medical technology and life sciences. The sector covers laser technology, optical production and optical design, as well as optical measuring and sensor technology, lighting, and optical information and communications technology. Photonics is also very significant in the field of bio photonics/life science.

Environmental technology: Bavaria is home to over 2 000 predominantly small and medium-sized businesses in the environmental technology sector, accounting for around 20% of national companies. These companies supply environmental technology products both nationally and internationally and provide the full range of sector-relevant services, such as project planning and development or plant construction.

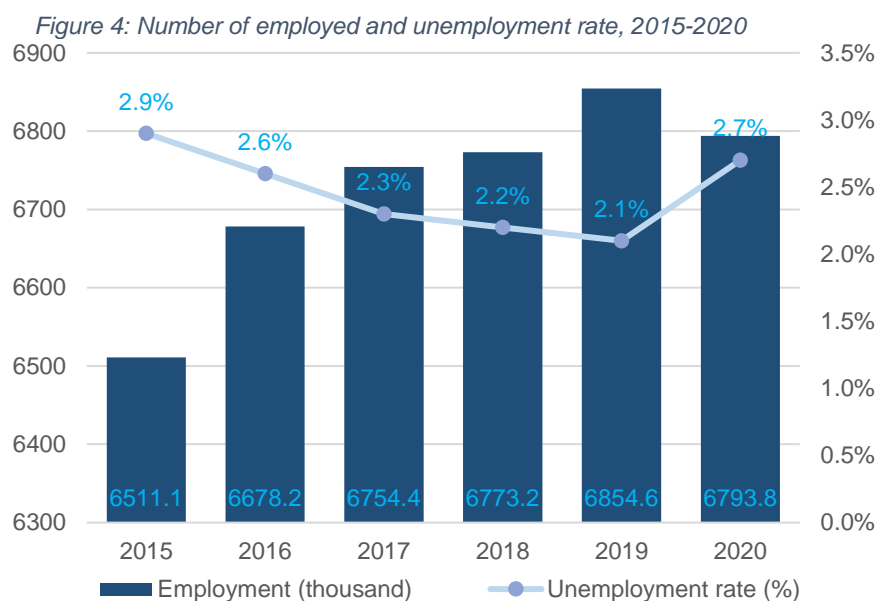
Figure 3 shows the sectoral contribution to employment in 2020. In general, most people are employed in the services sector. In 2020, industry accounted for about 25.81%, followed by public administration, defence, education, health and social work (25.74%) and trade, transport, accommodation and food service (18.18%).

Figure 3: Employment by sector, 2020



Source: Eurostat (2021)

Bavaria recorded a steady decline in the rate of unemployment between 2015 and 2019. As shown in Figure 4, the state's unemployment rate decline from 2.9% in 2015 to 2.1% in 2019. However, the unemployment rate increased to 2.7% in 2020, which can be attributed to the impact of the coronavirus pandemic. The number of employed individuals declined from 6.85 million in 2019 to 6.7 million 2020.

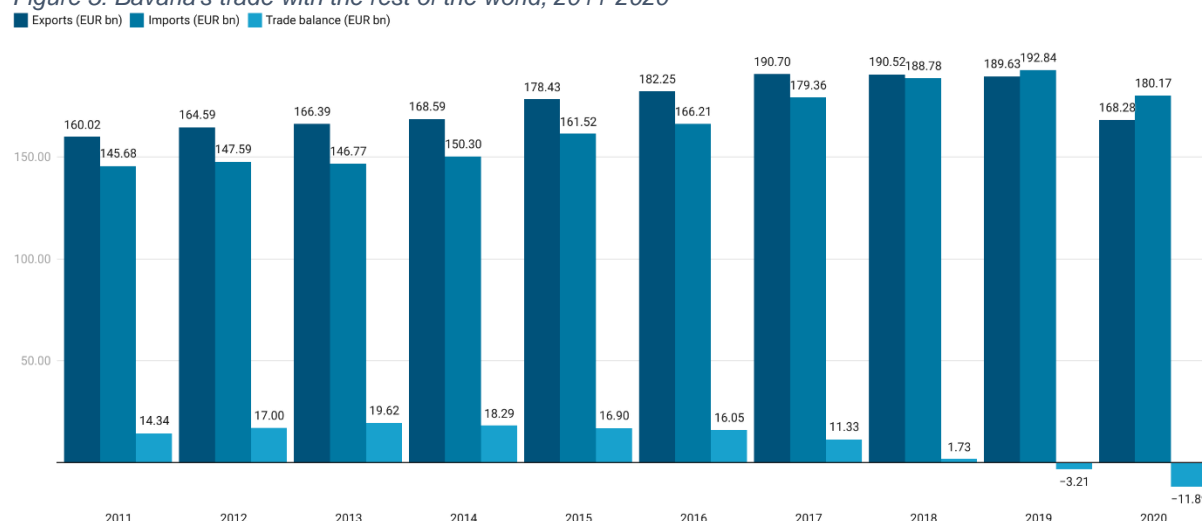


Source: Eurostat (2021)

3. Trade

Bavaria is the third largest exporter in Germany, accounting for approximately 14% of the country's total exports in 2020. During the same period, it accounted for about 18% of total imports by Germany (which makes it the second largest importer among Germany's 16 federal states). As can be seen in Figure 5, Bavaria was a net exporter between 2011 and 2018. The state, however, imported more than it exported in 2019 and 2020. In 2020, it had a trade deficit of EUR -11.89 billion. Motor cars and motor caravans; machinery for electricity production; and chassis, engines and other parts for motor vehicles were among Bavaria's top exports in 2020.

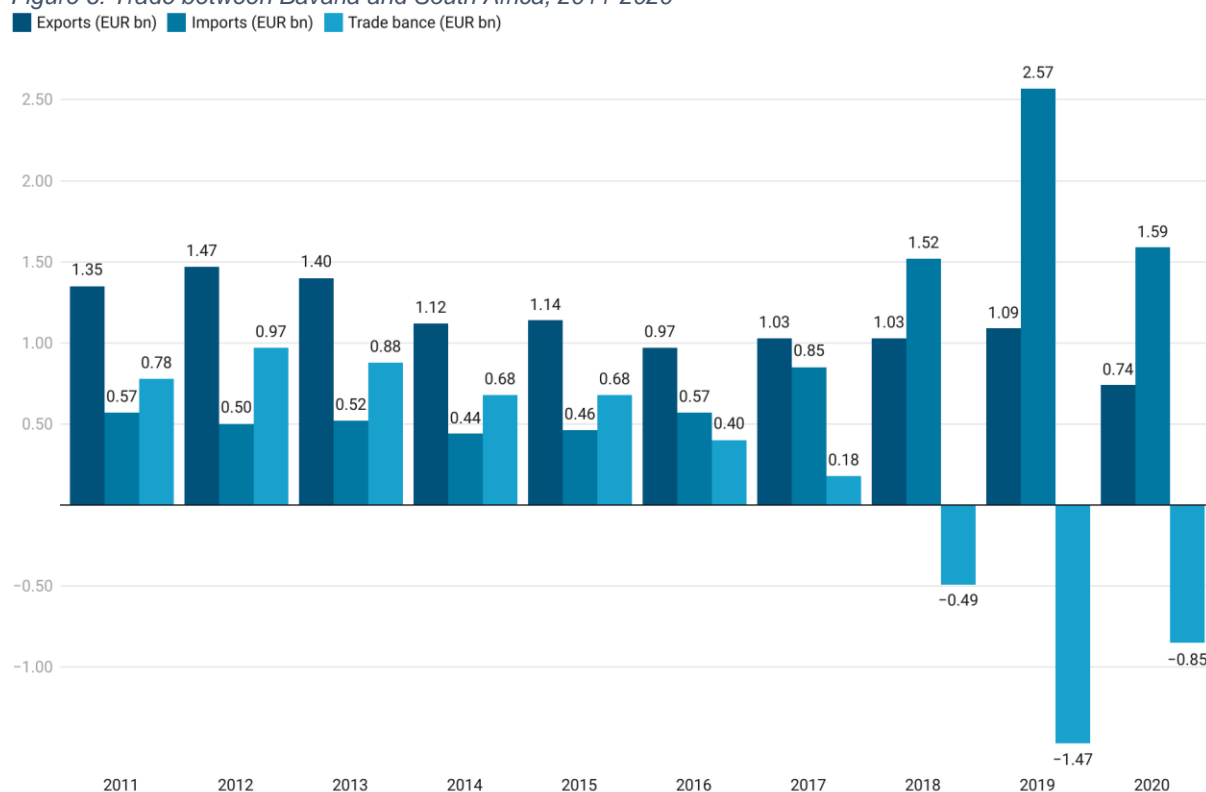
Figure 5: Bavaria's trade with the rest of the world, 2011-2020



Source: Federal Statistical Office of Germany (2021)

Until 2017, Bavaria's exports to South Africa exceeded its imports from the southern African country. In 2020, it exported EUR 738.38 million worth of goods to South Africa. Passenger cars and chassis, engines and other motor vehicles parts were among Bavaria's the leading exported products to South Africa. Over the same period, South Africa exported goods amounting to EUR 1.59 billion to the German federal state. From 2019 to 2020, Bavaria's exports to South Africa declined by 33%, whereas imports decreased by 38%. This resulted in a reduction in the trade deficit from EUR -1.47 billion to EUR -0.85 million.

Figure 6: Trade between Bavaria and South Africa, 2011-2020

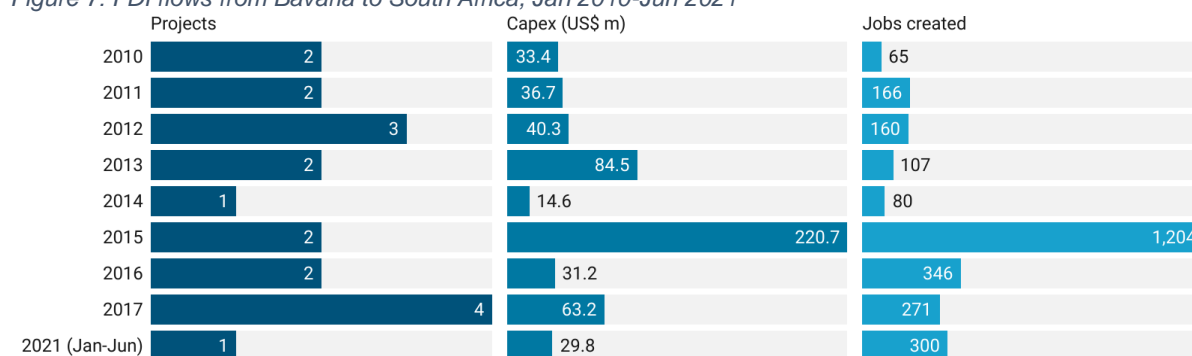


Source: Federal Statistical Office of Germany (2021)

4. Investment

This section examines foreign direct investment (FDI) trends by all companies from Bavaria investing in South Africa, and vice versa, between January 2010 and June 2021. During the period under consideration, a total of 19 FDI projects originated from Bavaria to South Africa. These projects brought about a capital investment of US\$554.4 million and created 2 699 jobs. The highest number of projects was recorded in 2017, whereas the largest capex and the highest number of jobs were realised in 2015.

Figure 7: FDI flows from Bavaria to South Africa, Jan 2010-Jun 2021

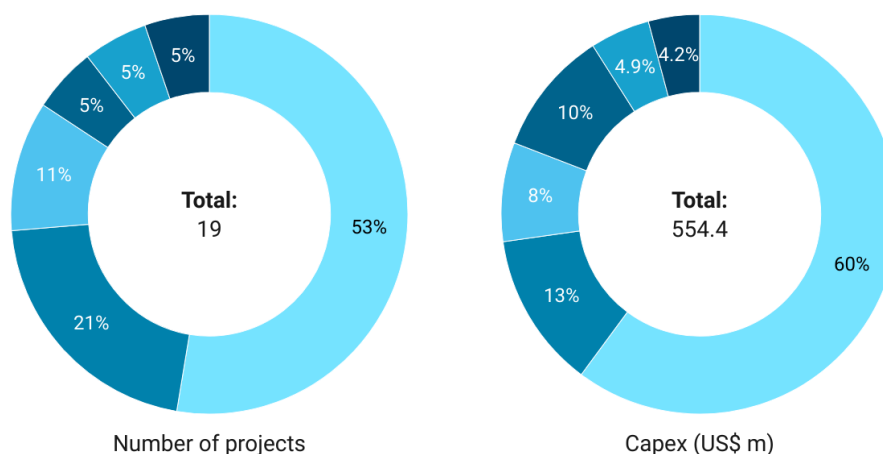


Source: FDI Intelligence (2021)

Gauteng was the top destination in South Africa for inward FDI from Bavaria between January 2010 and June 2021. The province accounted for 53% of projects and three-fifths of capex during this period, followed by Eastern Cape with 21% of projects and 13% of capex.

Figure 8: FDI flows from Bavaria to South Africa: by province, Jan 2010-Jun 2021

Gauteng Eastern Cape Not Specified KwaZulu-Natal Free State Western Cape



Source: FDI Intelligence (2021)

As shown in Figure 9, chemicals; automotive OEM; renewable energy; and software and IT services were the top sectors in terms of both the number of projects and capex. The automotive industry accounted for over two-fifths of capex. Moreover, approximately 68% of capex and 37% of projects pertained to manufacturing.

Figure 9: FDI flows from Bavaria to South Africa: by sector, Jan 2010-Jun 2021

	Number of projects	% share of projects	Capex (US\$ m)	% share of capex
Chemicals	5	26.3	155.6	28.1
Automotive OEM	4	21.1	250	45.1
Renewable energy	2	10.5	46.2	8.3
Software & IT services	2	10.5	44.4	8
Automotive components	1	5.3	8.2	1.5
Business services	1	5.3	21.6	3.9
Financial services	1	5.3	10.8	1.9
Industrial equipment	1	5.3	2.9	0.5
Textiles	1	5.3	4.2	0.8
Transportation & Warehousing	1	5.3	10.5	1.9

Source: FDI Intelligence (2021)

BMW and Linde were the leading companies, accounting for 48% and 28% of capex respectively. Moreover, both companies were responsible for 26% of FDI projects as can be seen from Table 2. BMW also created more half of jobs during the period under review.

Table 2: Companies from Bavaria investing in South Africa, Jan 2010-Jun 2021

Parent company	Number of projects	Capex (US\$ m)	Jobs created
Bayerische Motoren Werke (BMW)	5	265	1428
Linde	5	156	586
Adidas	1	4	51
Allianz Group	1	11	97
Brose	1	8	130
Dachser	1	11	14
Erich Netzsch Holding	1	3	17
Gehrlicher Solar	1	23	30
IBC Solar	1	23	30
Munich Fair (Messe Muenchen International)	1	22	16
Nagarro	1	30	300
Total	19	554	2699

Source: FDI Intelligence (2021)

Three companies from South Africa invested in Bavaria between January 2010 and June 2021. These companies invested in 3 projects with an investment value of US\$56 million. Furthermore, 95 jobs were estimated to have been created from these projects.

Table 3: FDI flows from South Africa to Bavaria, Jan 2010-Jun 2021

Month	Projects	Capex	Jobs created	Sector	Business activity	Company
Dec 2019	1	1	10	Software & IT services	Sales, Marketing & Support	myResilience
Dec 2018	1	2	11	Software & IT services	Sales, Marketing & Support	Entersekt
Oct 2017	1	54	74	Transportation & Warehousing	Logistics, Distribution & Transportation	Imperial
Total	3	56	95			

Source: FDI Intelligence (2021)

Available data indicates that only one company (IBC Solar) from Bavaria invested in the Western Cape during the period under consideration. This investment project, which was in the renewable energy sector, brought in a capex of US\$23.1 million and created 30 jobs as shown in Table 4.

Table 4: Companies from Bavaria investing in Western Cape between January 2010 and June 2021

Month	No. of projects	Capex (US\$ m)	Jobs created	Company	Sector	Business activity
Jan, 2017	1	23.1	30	IBC Solar	Renewable energy	Sales, Marketing & Support

Source: FDI Intelligence (2021)

As shown in Table 5, one onward FDI project was recorded from the Western Cape to Bavaria between January 2010 and June 2021. The capital expenditure involved in this project was US\$1.5 million. The project also led to the ceation of 11 jobs in the destination state.

Table 5: Companies from Western Cape investing in Bavaria between January 2010 and June 2021

Month	No. of projects	Capex (US\$ m)	Jobs created	Company	Sector	Business activity
Dec, 2018	1	1.5	11	Entersekt	Software & IT services	Sales, Marketing & Support

Source: FDI Intelligence (2021)

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