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EXPORT OF POLISH MACHINERY INDUSTRY TO TÜRKIYE 2015-2021

CASE STUDY OF FAN FACTORY

ABSTRACT

The article examines the dynamics of Polish machinery exports to Türkiye between 2015 and 2021, using Complex Interdependence Theory as the analytical framework. It highlights the historical, political, and economic context of Polish-Turkish relations, emphasising the role of non-state actors, trade institutions, and market mechanisms in shaping bilateral trade. Special attention is given to the case study of Fabryka Wentylatorów FAWENT S.A., a Polish industrial fan manufacturer, whose long-standing engagement with Turkish power plants and mines illustrates how industrial cooperation develops beyond traditional political or military concerns. The study demonstrates that despite geopolitical uncertainties and economic fluctuations, trade between Poland and Türkiye has shown resilience and potential for growth. The complementary industrial structures of both countries – particularly in the machinery, automotive, and energy sectors – facilitate mutual benefits and future opportunities for deepening cooperation. Findings confirm that Polish exports, driven by competitiveness and adaptability, are an important component of strengthening interdependence and expanding economic diplomacy in the Middle East region.

Keywords: Polish exports, Türkiye, machinery industry, economic diplomacy, Complex Interdependence Theory, industrial cooperation, bilateral trade, international business, power industry

INTRODUCTION

A few years ago, Poland celebrated the 600th anniversary of the establishment of foreign relations with Türkiye. The Polish-Lithuanian Commonwealth was an important trading partner, a neighbour, and a transit country for the Ottoman Empire. Throughout history, mutual relations were generally peaceful. The only exception being the Polish-Ottoman war that took place in the seventeenth century. Diplomatic contacts in the fifteenth and sixteenth century were peaceful. Moreover, Türkiye has never recognised the partitions of Poland, and its authorities provided support to Polish emigrants during World War II. They were also helpful when the state-owned Polish Bank was exporting its reserves of gold and the Polish Embassy in Ankara was very active during this time. As pointed out by the Ministries of Foreign Affairs of both countries, they have had strong political ties and close commercial and cultural relationships for nearly 600 years.

To analyse the export of Polish machinery to the Turkish market between 2015 and 2021 will be used Complex Interdependence Theory, which highlights multiple channels of interaction (state and non-state actors), absence of hierarchy among issues, and reduced military force. Developed by Robert Keohane and Joseph Nye, this theory challenges the traditional realist view of international relations by emphasising the growing significance of economic, political, and societal connections between states. According to this framework, international relations are no longer dominated solely by military and security concerns, but rather shaped by multiple channels of interaction – including governmental, non-governmental, and transnational actors.¹ In the context of Polish-Turkish trade relations, these principles are particularly relevant. The exchange of machinery and industrial goods is shaped not only by state-level decisions but also by non-state actors such as private firms, trade organisations, and EU institutions. Moreover, the economic relationship between the two countries continues to develop regardless of broader geopolitical dynamics, reflecting the low salience of military power in this domain.² By applying this theoretical framework, the study highlights how economic diplomacy and institutional cooperation have facilitated sustained trade flows, demonstrating how complex interdependence structures modern international economic relations beyond traditional power politics.

Türkiye remains one of Poland's main trading partners in the Middle East and Asia. The country, alongside Canada, Brazil, Algeria, and Kazakhstan was recognised as a prospective direction for Polish exports. In 2013, The Ministry of Economy has allocated 15 million PLN to carry out promotional activities in these countries. Such investment gave the opportunity to many Polish entrepreneurs to participate in subsidised fairs and economic missions in Türkiye.³

¹ R.O. Keohane, J.S. Nye, *Power and Interdependence: World Politics in Transition*, Boston 1977, pp. 24-25.

² Ibid., p. 29.

³ "Turcja głównym partnerem handlowym Polski na Bliskim Wschodzie," *Forbes*, at <http://www.forbes.pl/turcja-glownym-partnerem-handlowym-polski-na-bliskim-wschodzie,artykuly,166126,1,1.html>, 20 August 2025.

TURKISH MARKET

The Turkish economy is characterised by a high current account deficit that is largely financed by most movable assets portfolio. In other words, it is financed with the money that comes from foreign investors, who can withdraw at any time and move to another country. In the first months of 2016, Türkiye attracted almost 16 billion dollars of foreign capital, of which a little over 2 billion was a foreign direct investment.⁴ The official data from the country's Trade Ministry and Central Bank shows that Türkiye attracted 4.6 billion dollars in foreign direct investment between January and November 2020. The investments came mostly from European investors – from Italy, the Netherlands, the Great Britain, etc.⁵ The country is heavily dependent on the foreign investments, which at times can take a toll on the Turkish economy's stability.

Political risk has always been inscribed in its economy. Concerns of the country's steadiness remain large due to geopolitical risks and the current account deficit. Türkiye's economy is still very sensitive to global economic turmoil and was exposed to a rapid capital outflow during several periods of economic slowdown. In 2015, the current account deficit decreased from 7.9% to 4.5% of GDP. The drop in the deficit, however, was due to declining imports and not because of an increase of capital inflow. At the same time a threat to the security of citizens in border regions and later in large cities and holiday resorts have had a negative impact on tourism, investor confidence and, consequently, was an obstacle to economic growth.⁶ As of April 2021, the value of Türkiye's GDP was 794.5 billion dollars, which was the world's 20th-largest nominal GDP, and 11th-largest GDP when adjusted by Purchasing Power Parity (PPP).⁷ In May 2021 Türkiye's current account deficit narrowed to 1.1 billion dollars. In comparison, the deficit in June 2020 was 3.1 billion dollars. A smaller deficit was achieved thanks to eased movement restrictions in other countries, that were imposed in 2020 because of the Covid-19 pandemic. More people were able to visit Türkiye which supported its' tourism sector. In the same month, the goods trade deficit narrowed by 46.6% compared to previous year and exports outpaced the merchandise imports.⁸

⁴ Poland-Turkey, *Lira najtańsza w historii, wyprzedaż na giełdzie w Stambule*, at <http://www.polandturkey.com/gospodarka/item/945-lira-najtansza-w-historii-wyprzedaz-na-gieldzie-w-stambule>, 20 August 2025.

⁵ Z. Cetinkaya, "Turkey Attracts \$4.6B foreign Investment in Jan-Nov," *Anadolu Agency*, 11 February 2021, at <https://www.aa.com.tr/en/economy/turkey-attracts-46b-foreign-investment-in-jan-nov/2141321>, 20 August 2025.

⁶ Read more: "FDI in Tourism: The Development Dimension," United Nations, New York–Geneva 2007, at https://unctad.org/system/files/official-document/iteiia20075_en.pdf, 20 August 2025.

⁷ *World Economic Outlook Database: April 2021*, at <https://www.imf.org/en/Publications/WEO/weo-database/2021/April/weo-report?c=186,&s=NGDPD,PPPGDP,NGDPDPC,PPPPC,&sy=2010&ey=2021&ssm=0&scsm=1&scs=0&ssd=1&ssc=0&sic=0&sort=country&ds=.&br=1>, 20 August 2025.

⁸ "Turkey – Current Account," *FocusEconomics*, at <https://www.focus-economics.com/country-indicator/turkey/current-account>, 20 August 2025.

In 2020, industrial production in Türkiye accounted for 27.8% of the country's GDP.⁹ Employment in this sector was reported at 25.32% of the total working population.¹⁰ The most important industrial sectors were textile, automobile, machinery, food processing, refining, ceramic, furniture, and mining. In recent years, the country has reallocated industrial production to new sectors such as manufacturing automobiles, home appliances, machinery, and equipment. Since Türkiye has its own raw material base, for example cotton crop, the country has developed production of a wide range of textiles and clothing. Textile industry accounts for approx. 4.8 % of Turkish GDP and employs approx. one million people (constituting 7% of registered employees in the social security system and 65% of the registered employment).¹¹

Türkiye has rich mineral deposits, which include boron (2/3 of the world's resources), marble (40% of the world's reserves), copper (20% of global reserves) as well as pumice and boro. Due to the increasing demand for energy, the production has been doubled. New power plants based on coal has been built as well as a hydroelectric power plant. The country's construction sector is rapidly developing, and it is the world's leader in terms of production value. Turkish companies operate both in the country, as well as on foreign markets. The main construction services include general construction, construction of airports, industrial complexes – refineries, hydroelectric power plant, pipelines, roads, etc.¹²

Services sector is the largest in the country – in 2020 it accounted for 54.64% of the GDP¹³ and it employed 55.91% of the total workforce.¹⁴ The main segments were: trade, tourism, transport, telecommunications, and banking. Tourism is one of the leading sectors of the economy, providing a high budget revenue. In the last decade the number of tourists visiting Türkiye has doubled.

Information about the introduction of three-month state of emergency declared in Türkiye on the 20th of July 2016, stunned financial markets. President Recep Tayyip Erdoğan said: *The purpose of the declaration of the state of emergency is, in fact, to be able to take the most efficient steps in order to remove this threat as soon as possible, which*

⁹ Statista, *Turkey: Share of economic sectors in gross domestic product (GDP) from 2010 to 2020* at <https://www.statista.com/statistics/255494/share-of-economic-sectors-in-the-gross-domestic-product-in-turkey/>, 20 August 2025.

¹⁰ World Bank, *Employment in industry (% of total employment) (modelled ILO estimate) – Turkey* at <https://data.worldbank.org/indicator/SL.IND.EMPL.ZS?locations=TR>, 20 August 2025.

¹¹ P.Y. Dilek, "How Has the Turkish Textile and Clothing Industry Contributed to the Turkish Economy?," in *Defining Circularity of Textile Industry in Turkey*, İstanbul 2020, pp. 11-28.

¹² Polska Agencja Rozwoju Przedsiębiorczości, *Przewodnik rynkowy dla przedsiębiorców Turcja*, Warszawa 2008, p. 17, at <https://www.parp.gov.pl/storage/publications/pdf/4368h76m57turcjanrt.pdf>, 7 September 2025.

¹³ Statista, *Turkey: Share of Economic Sectors in Gross Domestic Product (GDP) from 2010 to 2020*, at <https://www.statista.com/statistics/255494/share-of-economic-sectors-in-the-gross-domestic-product-in-turkey/>, 23 August 2025.

¹⁴ Trading Economics, *Turkey – Employment in Services (% Of Total Employment)*, at <https://tradingeconomics.com/turkey/employment-in-services-percent-of-total-employment-wb-data.html>, 20 August 2025.

is a threat to democracy, to the rule of law and to the rights and freedoms of the citizens in our country.¹⁵ At the same time, President of the Istanbul Chamber of Commerce (Istanbul Ticaret Odası) İbrahim Çağlar on the 4th of August, expressed the opinion that the Turkish economy was not affected by the failed coup attempt that took place on the 15th of July 2016.¹⁶ Standard & Poor's credit rating agency lowered the rating of Türkiye to BB, with a negative outlook on the future, due to the coming period of heightened uncertainty.¹⁷ S&P writes in the note justifying the lowering of the rating that the situation in Türkiye after the attack leads to a further weakening of the democratic mechanism of checks and balances, i.e. mutual control and balancing of state institutions.¹⁸ In July 2016 lira starts to become the cheapest in the history. The exchange rate for one dollar reached the most critical level of 3.09 TRY. In the following years, a decrease was also visible in the value of the lira. The lowest value of the lira was recorded in 2021 (the exchange rate for one dollar reached 8.8 TRY).¹⁹ Fitch Ratings has revised the Outlook on Türkiye's Long-Term Issuer Default Ratings (IDRs) to Negative from Stable and affirmed the IDRs at 'BB-'.²⁰ The rating is mentioning a *depletion of foreign exchange reserves, weak monetary policy credibility, negative real interest rates, and a sizeable current account deficit partly fuelled by a strong credit stimulus, have exacerbated external financing risks. Political pressures, the limited independence of the Central Bank of the Republic of Türkiye (CBRT), and a track record of being slow to respond to events, increase the risk that policy is tightened insufficiently, contributing to further external imbalances, market instability, and a more disorderly adjustment.*²¹ The sell-off also affected the stock exchange in Istanbul. The main index, which groups the 100 biggest companies, quickly lost approx. 3.8 %.²² The now former Minister of Customs and Trade, Bülent Tüfenkçi, said that due to the unsuccessful attempt of military coup the Turkish economy has lost about 300 billion lira (90 billion euros). It was the equivalent of the cost of the destruction that happened on the night of the coup – such an amount of money was spent on

¹⁵ I. Sariyuce, A. Dewan, "Turkey Declares Three-Month State of Emergency," *CNN World*, 20 July 2016, at <https://edition.cnn.com/2016/07/20/europe/turkey-failed-coup-attempt/index.html>, 23 August 2025.

¹⁶ F. Özkara, "FETÖ küresel düzene tehdit," *Milliyet*, 4 August 2016, at <http://www.milliyet.com.tr/feto-kuresel-duzene-tehdit-ekonomi-2289171/>, 20 August 2025.

¹⁷ "Standard & Poor's tnie rating Turcji. Rekordowy spadek kursu liry," *Businessinsider*, 20 July 2016, at <https://businessinsider.com.pl/finanse/makroekonomia/standard-and-poors-obniza-rating-turcji-do-poziomu-bb/kzklzch>, 20 August 2025.

¹⁸ Ibid.

¹⁹ Trading Economics, *Turkish Lira*, at <https://tradingeconomics.com/turkey/currency>, 20 August 2025.

²⁰ Fitch Revises Outlook on Turkey to Negative; Affirms at 'BB-', at <https://www.fitchratings.com/research/sovereigns/fitch-revises-outlook-on-turkey-to-negative-affirms-at-bb-21-08-2020>, 20 August 2025.

²¹ Ibid.

²² Trading Economics, *Turkish Lira*...

military aircraft, helicopters, weapons, bombs, buildings. As the minister said, it was possible that the account was not final.²³

In 2020, during the COVID-19 pandemic, Türkiye opted for an 'Economic Stability Shield' package, which significantly weakened the lira. To support the economy, it was necessary to cut the key interest rates and invest around 33 billion dollars to tackle the pandemic. The central bank has purchased some of the government's debt, which made it possible to spend the money on providing support to the country's citizens.²⁴

The liberalisation of the Turkish economy started in the early eighties. The aim was to open the Turkish market to the international trade, attract foreign investment and reduce the role of the state enterprises in total production. A major impact on economic transformations, particularly in external exchange had the EEC / EU preferential trade policy that reduced customs duties and introduced other changes in the mutual trade turnover.

In 2005 the European Union and Türkiye started the Accession negotiations. Türkiye is also the recipient of various assistance programs under the Instrument for Pre-Accession Assistance (IPA). The EU has provided Türkiye with more than 10 billion euros from 2002 to 2020.²⁵ There has been a significant progress in the energy sector since then. Twenty newly established companies – regional energy distributors – took over the relevant assets. The energy law amendment increased the incentives for the use of renewable energy sources. It has also adopted a framework law on energy efficiency.

As a part of the Customs Union between Türkiye and the EU, the tariff barriers for industrial products and processed agricultural products were abolished, though certain customs restrictions were upheld. Products manufactured in the EU and Türkiye could benefit from preferential treatment. Türkiye was also obliged to standardise their customs tariffs with the Community's tariffs, adjust its trade policies to the Community's legislation, as well as adapt new laws in the fields of intellectual property protection and the Community's competition laws.²⁶

The Global Competitiveness Report, published in 2019, assesses the competitiveness of 141 economies in 12 categories, providing insight into the level of productivity and prosperity of each country. In this ranking Türkiye was ranked 61st, with a score of 62.1.²⁷ In the earlier edition of the report that was published in 2017, the country was

²³ "Darbenin faturası 300 Miliar TL," *bigpara*, 1 August 2016, at <http://www.hurriyet.com.tr/darbenin-faturasi-300-milyar-tl-40177940>, 20 August 2025.

²⁴ Ministerstwo Rozwoju, Pracy i Technologii, *Turcja. Informacja o stosunkach gospodarczych z Polską*, at <https://share.google/uSVtBq1H3moyvkrk8>, 20 August 2025.

²⁵ "Use of Funding under the Pre-Accession Instrument for Turkey," *European Parliament*, Priority question for written answer P-001572/2020 to the Commission, Rule 138, at https://www.europarl.europa.eu/doceo/document/P-9-2020-001572_EN.html, 12 August 2025.

²⁶ Polska Agencja Rozwoju Przedsiębiorczości, *Przewodnik...*, p. 14.

²⁷ K. Schwab, *The Global Competitiveness Report 2019*, World Economic Forum, Geneva 2019, p. 13, at https://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.p, 16 September 2025.

ranked at 55th, which means that Türkiye has faced some challenges while trying to improve its competitiveness.²⁸

Back in 2016, Türkiye, as well as other European countries, found itself in critical condition as it was faced with Brexit and geopolitical crises that was spilling over into the region. Nevertheless, the region which includes the EU28, Iceland, Norway, Switzerland, the Balkans, and Türkiye still performed above the global average in terms of competitiveness.²⁹

Even before the attempted coup in July 2016, Türkiye fell four places down, to number 55. Nonetheless, it is important to remember the unstable geopolitical situation in neighbouring countries at that time as well as the migration issue – in that year, the number of Syrian refugees living in Türkiye accounted for 56% of all registered Syrian refugees and yet the country has proven economically resistant. Turkish strengths included infrastructure, though it did achieve a lower score in 2016, as well as its macroeconomic environment, which rose 14 places up to 54th. Moreover, the country was able to reduce its debt and budget deficit after the fall in oil prices. The country has also made some progress in higher education, training, and growing recruitment rates in secondary and tertiary education. In this fields Türkiye was ranked 50th.

Nevertheless, in 2016 the country still needed to improve its quality of education and invest in on-the-job training to build a highly skilled workforce. Weaknesses in the education and employment market were also visible – the country was ranked 126th in those fields. It revealed the instability of the labour market that needed to be addressed through structural reforms. It was also necessary to improve the country's domestic competition as well as create a more dynamic business environment in the future and invest in developing a sound innovation ecosystem so Türkiye could move up the global value chain. To achieve that, some changes needed to be implemented, such as the improvement of business complexity and the raise of workforce qualifications. It was also important to make public institutions more efficient and transparent.³⁰

As the 2019 report shows, some improvements were made. For example, the country advanced quite a bit in the labour market. Changes have been made especially in the fields of hiring foreign workers, the participation of women in the workforce and workers' rights. Although the quality of skills of the workforce is still lacking compared to other countries, it is now accumulating more human capital and acquiring relatively more modern skills. Türkiye also advanced on ICT adoption as the diffusion of the internet across the country was expanded as well as broad-band technologies were fixed. Nevertheless, there are still aspects that need improvement, such as macro-economic environment that has faced a significant deterioration in recent years. This decline was driven mostly by growing inflation but also the decline in product market efficiency

²⁸ K. Schwab, *The Global Competitiveness Report 2016-2017*, World Economic Forum, Geneva, 2016, p. 7, at https://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf, 16 September 2025.

²⁹ OECD Economic Surveys: Turkey: Overview, at <http://www.oecd.org/eco/surveys/turkey-2016-OECD-economicsurvey-overview.pdf>, 20 August 2025.

³⁰ K. Schwab, *The Global Competitiveness Report 2016-2017...*, p. 46.

and lower performance on non-tariff barriers. High inflation will be one of the key challenges for Türkiye in the upcoming years.³¹

In June 2021, Turkish exports increased by 46.9% compared to the same month of 2020 and were worth 19.8 billion dollars. The country's imports were worth 22.6 billion dollars – its value increased by 38.7% compared to June 2020. In May 2021, there was a noticeable increase in the country's year-by-year import from several countries, such as China (2.85 billion USD), Russia (2.3 billion USD), Germany (1.9 billion USD), USA (1.25 billion USD) and Italy (1.1 billion USD).³² In May 2021, an increase in imports of a few products was noted, such as Mineral fuels, mineral oils and other (1.67 billion USD), Iron and steel (1.42 billion USD), as well as Vehicles other than railway or tramway (757 million USD).³³

*In 2020, Türkiye was the sixth largest partner for EU exports of goods (3.6 %) and also the sixth largest partner for EU imports of goods (3.6 %).*³⁴ European countries that were Türkiye's largest import and export partners in 2020 were Germany, Italy, and France. Poland was the eighth largest import and the seventh largest export partner from the EU – its' imports from Türkiye were worth 2.5 billion dollars and the exports were worth 2.2 billion dollars.³⁵

Because of the bureaucratic barriers, as well as legal and linguistic conditions, Turkish market is seen as difficult and demanding. However, the ease of doing business and selling products in the country is gradually improving, due to the growing number of foreign investments and the adaption of the EU's standards and regulations. It is reflected in many, international rankings, made by renowned think tanks, such as the World Bank, and in the accelerated inflow of foreign investment.

When analysing the possibility of entering the Turkish market, it is important to take into consideration a few market entry strategies, in particular intermediaries or representatives in the country, or establishing the subsidiaries or a branch. Best form of entry for small and medium companies is to work with a local representative or distributor which has a network of dealers and after-sales service points. However, before establishing a relationship with Turkish partners, it is necessary to verify the potential representative/distributor. Foreign entrepreneurs should maintain direct contact with its customers, e.g., through regular meetings, which is an important marketing tool in Türkiye. Similarly, taking care of the relationship between foreign entrepreneur and the distributors can increase the quality of co-operation.³⁶

³¹ K. Schwab, *The Global Competitiveness Report 2019...*, p. 36.

³² Türkiye İstatistik Kurumu, *Dış Ticaret İstatistikleri, Haziran 2021*, 30 July 2021, at <https://data.tuik.gov.tr/Bulten/Index?p=Foreign-Trade-Statistics-June-2021-37418>, 20 August 2025.

³³ The Observatory of Economic Complexity, *Turkey*, at <https://oec.world/en/profile/country/tur>, 20 August 2025.

³⁴ Eurostat, *Turkey-EU International Trade in Goods Statistics*, at https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Turkey-EU_-_international_trade_in_goods_statistics, 20 August 2025.

³⁵ Ibid., SWAID, *Handel zagraniczny*, at http://swaid.stat.gov.pl/HandelZagraniczny_dashboards/Raporty_konstruowane/RAP_SWAID_HZ_3_5.aspx, 20 August 2025.

³⁶ Polska Agencja Rozwoju Przedsiębiorczości, *Przewodnik...*, p. 25.

At the beginning of 2003, two legal acts in the field of public procurement entered into force – Act No. 4734 of 4 January 2002 about Public Procurement and the Act No. 4735 of 5 January 2002 about Contracts vs. Procurement (Sources of Law No. 24648 dated 01.22.2002 r.), which refer to the Community directives and CJEU case law on this matter. Since then, the procurement rules were amended on several occasions.³⁷

The main legal instrument in the customs order of Türkiye is Customs Act No. 4458 of 22 October 1999. The provisions of this law define the Turkish customs territory (excluding duty-free zones) and regulate such issues as rules of customs clearance, customs procedures related to the temporary importation, customs warehouses, processing or processing under customs control and the rights and obligations of entities submitting goods for customs procedures. The final decision on the admittance of goods into the territory of Türkiye is in the hands of the customs official, who interprets Turkish import regulations. Customs clearance usually takes 1 to 3 days, depending on the type of goods.³⁸

POLISH EXPORT

Many Polish companies that operate in the aerospace, automotive and machine sectors are located in the Subcarpathian Voivodeship. A region that plunged into economic collapse after the political transformation is now driven by modern industry and became the Aviation Valley in the country. Almost one third of local exporters want to explore the Middle Eastern market. Companies of the Lesser Poland Voivodeship are also interested in the expansion to the non-European markets. In 2014, this region's exports were worth 7.8 billion EUR and it was the 6th biggest exporter among all of Poland's voivodeships. In the same year, the list of 25 major destinations of Lesser Poland's exporters included the U.S.A., China, India, Brazil, as well as Türkiye. Surveys conducted among Lesser Poland entrepreneurs in the Cracow PRE meeting, showed that 80% of them wanted to export their goods to non-European countries, especially to North America and the Middle East.³⁹

Export of Polish goods is still growing. At the end of 2020 its value reached almost 240 billion EUR.⁴⁰ Between January and May 2021, exports increased by 22.9% compared to the first half of 2020 and its value was 112.8 billion EUR.⁴¹ Poland's accession

³⁷ Ibid., p. 41.

³⁸ Ibid., p. 47-48.

³⁹ "Program Rozwoju Eksportu," *Rzeczpospolita*, 3 October 2016, at <http://www.rp.pl/Program-Rozwoju-Eksportu/310039880-Coraz-wiecej-polskich-firm-chce-zwiekszac-sprzedaz-za-granica.html#ap-1>, 20 August 2025.

⁴⁰ The data from: *Eksport/import według sekcji CN/SITC/PKWiu/BEC i grup krajów*, at http://swaid.stat.gov.pl/HandelZagraniczny_dashboards/Raporty_predefiniowane/RAP_SWAID_HZ_3_12.aspx, 21 August 2025.

⁴¹ Ibid.

to the European Union was one of the major factors that advanced the country's exports and attracted foreign companies.

In recent years, the situation of Polish exporters has looked rather promising. The results of a 'Trade Confidence Survey' that was carried out by TNS for HSBC and conducted among Polish exporters confirms this. In the first half of 2015, Polish exporters were satisfied with how their business were going. The sentiment index of Polish companies was 110 points, and in the second half of the same year it grew to 116 points. Experts from investment bank HSBC Poland and the think-tank Oxford Economics predicted that, despite the stagnation in foreign trade in the world, Polish exports will increase in the coming years at a rate of 5-6% per year (calculated in US dollars). The growth rate of Polish exports will be faster than in the developed economies (e.g., Germany and France approx. 3%, United Kingdom approx. 4.5%).⁴² According to Oxford Economics forecasts, Asia was to be the most promising market for Polish exporters. In the near future, exports to the countries from this region may grow even at double-digit rates, e.g., 13.6% to Bangladesh (annually), 13.4% to Vietnam and 12.3% to Malaysia. Piotr Winnicki, director of the Department of Trade Finance and Factoring HSBC Bank Poland ARE, said:

*In the long term, the development of trade with Asia and other regions of the world should change the structure of Polish foreign trade and push it in the direction of greater diversification, and more dynamic growth as well.*⁴³

Oxford Economics analysts estimate that the share of Poland's three major European trading partners – Germany, France, and Britain – will decrease to 32% by the end of 2030.⁴⁴ If these forecasts will come true, Poland will come closer in terms of the value of exports to the leading European economies.

Poland was one of the biggest beneficiaries of the COVID-19 pandemic. Its share in world exports in 2020 increased by 0.14 points compared to the previous year. The collapse of foreign trade between March and May 2020 was quite shallow when compared to other countries. It also improved faster because in June a slight growth was already visible.⁴⁵ When it comes to Polish export, the commodity diversification is greater when compared to most EU countries, which positively affected the country's foreign trade during the pandemic.⁴⁶

⁴² Ibid.

⁴³ J. Sierakowska, *Eksport jest i pozostanie polskim priorytetem*, *Obserwator Finansowy*, 29 December 2015, at <https://www.obserwatorfinansowy.pl/tematyka/makroekonomia/eksport-jest-i-pozostanie-polskim-priorytetem/>, 20 August 2025.

⁴⁴ Ibid.

⁴⁵ UNCTAD Stats, at <https://unctadstat.unctad.org/EN/>, 25 August 2021.

⁴⁶ Ł. Ambroziak, "Pandemia umocniła pozycję Polski w światowym eksporcie," *Obserwator Finansowy*, 23 August 2021, at <https://www.obserwatorfinansowy.pl/tematyka/makroekonomia/trendy-gospodarcze/pandemia-umocnila-pozycje-polski-w-swiatowym-eksporcie/>, 20 August 2025.

POLISH EXPORT TO TÜRKIYE

Although Poland and Türkiye are divided by cultural and language differences, Polish-Turkish relations are doing well, also in the business sphere. There is a chance that the political turmoil that has erupted in recent years will not have a negative effect on it. In 2020, Türkiye was the 22nd most important recipients of Polish goods. Polish exports to Türkiye reached almost 2.6 billion dollars, thus recording an increase of 18.7%. This can be seen as a good sign after two years of significant drops – in 2018, the value of Polish exports to Türkiye fell by 14.1% and in 2019 by 22.1%. The decline in trade was mostly related to reduced absorptive power of the consumer market caused by over 24% inflation and weaker purchasing power of the Turkish lira. The current upward trend, despite the omnipresent pandemic restrictions in 2020, is a sign that the Polish exports to Türkiye are on its' way to become stable again.⁴⁷

Top products imported from Poland to Türkiye are auto parts and cars, accessories for motor vehicles, internal combustion piston engines with compression ignition and beef.⁴⁸ The largest share in Polish exports to Türkiye belonged to machinery and mechanical devices (893.5 million dollars), vehicles, aircraft and vessels (420.4 million dollars) as well as base metals and articles thereof (315.3 million dollars).⁴⁹ The value of trade exchange between Poland and Türkiye in 2016 was 5.6 billion EUR and in 2018 it grew to 6.3 billion EUR. However, in later years the worth of trade exchange started to decline. At the beginning of the last decade, Polish exports to Türkiye exceeded imports from that country. Yet, from 2017, the value of Turkish products began to exceed Polish exports. In 2019, Polish exports accounted for 939.40 million EUR (13% decrease compared to 2018) and the import of Turkish products accounted for 3 910.9 million EUR (2% increase compared to the previous year).⁵⁰

Nevertheless, Türkiye remains of the most important trading partners from Asia and the Middle East for Poland. Both countries have similar structure and the same commodity groups, since their industry sector are at a similar level of development. The most developed sectors in Poland are automotive industry and dominate textile industry.

Türkiye presents a lot of opportunities for polish companies. Almost 82.5 million people live in The Republic of Türkiye. The country has a very youthful population as 43.31% of the Turkish society is between 25 and 54 years old.⁵¹ That means around half

⁴⁷ A. Adamczyk, "Eksport do Turcji – na co zwrócić uwagę?," *Współpraca Gospodarcza*, no. 5 (205) (2021), at http://gazeta-msp.pl/?id=pokaz_artykul&indeks_artykulu=5063, 20 August 2025.

⁴⁸ Serwis Rzeczypospolitej Polskiej, *Turcja – informator ekonomiczny*, at <https://www.gov.pl/web/turcja/informator-ekonomiczny>, 20 August 2025.

⁴⁹ 3 Cargo, *Polski eksport do Turcji notuje wzrost*, at <https://www.3cargo.com/polski-eksport-do-turcji-notuje-wzrost/>, 20 August 2025.

⁵⁰ Ministerstwo Rozwoju, Pracy i Technologii, *Turcja. Informacja o stosunkach gospodarczych z Polską*, p. 3.

⁵¹ "Turkey: People and Society," *Central Intelligence Agency*, at <https://www.cia.gov/the-world-factbook/countries/turkey/#people-and-society>, 6 October 2025.

of the country's population is of working age. Moreover, entering the country's market gives the possibility to Polish entrepreneurs to enter Central Asian markets. In addition, Polish products often have a lower price compared to their Western counterparts, which puts them in a favourable position.

Acquiring contractors in Türkiye would perhaps be easier if the country was a member of the European Union (some of the advantages would be free movement of people, goods, services, etc., as well as customs union), especially since the state has been aspiring to be part of the EU since 1963.⁵² However, possible accession after the failed coup attempt in 2016 seems unlikely.

Türkiye's economy is quite stable. President Erdogan sends a rather positive and reassuring signal to investors and trade partners of Türkiye. Therefore, exports of Polish products should not encounter serious obstacles. Currently, exports are led by products from engineering and electrical engineering sector, as well as construction sector. In addition, Polish companies also export iron and steel waste and scrap, tractors, combustion engines, harvesting machines, car parts and accessories, passenger cars, new pneumatic rubber tires, cleaning agents, television receiving equipment; monitors, video projectors, filtering devices, centrifuges, dryers to Türkiye.⁵³ Naturally, the range of products that enter the Turkish market is more widespread, but the goods mentioned above are the largest in terms of volume and value.⁵⁴

So far Türkiye have sent to Poland more goods than Poland to Türkiye. Although Poland was not even in the top ten of the main recipients of Turkish goods in the recent years, the cooperation between countries is constantly growing. The cooperation of these two countries has a lot of potential. It is predicted that bilateral trade will continue to grow a rapid pace. So far, Poland exported to Türkiye mainly cars and their parts, electromechanical products, copper and copper products, perfumery, plastics, and rubber products as well as paper. Türkiye exported to Poland mainly vehicles and parts, industrial machinery equipment, machinery and electrical equipment, plastics and articles of iron and steel. Despite the distance and cultural differences, these two countries have a lot in common, especially when it comes to production structure and types of exported and imported goods. Türkiye has consistently supported its exporters, which has had a positive impact on the economic growth of the country.⁵⁵

⁵² "Trade and Economic Security: Turkey," *European Commission*, at <https://ec.europa.eu/trade/policy/countries-and-regions/countries/turkey/>, 6 October 2025.

⁵³ Wspieramy eksport, *Turcja: Analiza Międzynarodowa. Informacja o stosunkach gospodarczych z Polską*, at <https://share.google/NBGEvJ2KAY8RQ2XuW>, 6 October 2025.

⁵⁴ Instytut Wolności, *Potencjał polsko-tureckich relacji to 10 mld euro rocznie*, at <https://instytutwolnosci.pl/potencjal-polsko-tureckich-relacji-to-10-mld-euro-rocznie/>, 16 September 2025.

⁵⁵ P. Grądzki, "Jak układa się nasza współpraca z Turcją?," *Sea. Blog – transport morski, lotniczy, spedycja*, 15 June 2015, at <https://www.seaoo.com/blog/uklada-sie-wspolpraca-turcja/>, 16 September 2025.

MACHINERY INDUSTRY COMPANIES

One of the Polish companies that exports goods to Türkiye is a fan factory *Fabryka Wentylatorów FAWENT*. The company was established as an air conditioning equipment enterprise (pol. *Urządzenia Klimatyzacyjne*) Silesian Auxiliary Productions Factory in Chelm Wielki in 1951 and in that time the first industrial fan was manufactured. Between the 1950s and the 1960s the company had a status of a state-owned establishment under the name *Wytwórnia Urządzeń Wentylacyjnych ventilation equipment manufactory*. The company was transformed to a private enterprise in 1995, a joint stock company under the name *Fabryka Wentylatorów "FAWENT" S.A.* It specialises in manufacturing large heavy-duty industrial fans, both centrifugal and axial, mostly intended for power industry but also for mining, chemical, wood, cement, and food industries.⁵⁶ The President and General Director of the company was Józef Kramarczyk (currently Andrzej Brzenk).

The company's Design and Research Offices are responsible for elaboration of the documentation of the structures of their fans, on the licenses of the leading fan supplier that come from Germany and Great Britain. Respected institutions and scientific societies such as Instytut Techniki Ciepłej in Łódź, Instytut Spawalnictwa in Gliwice, Instytut Odlewnictwa, Politechnika Śląska, carry out their tests and experiments. A rich machine park and a constant improvement on process engineering allows them to provide high-quality products. In January 1998 *Fawent* received ISO-9001 certificate which has been maintained until now. The possession of SLV certificate (DIN EN ISO 1834-2) guarantees that the welding works is of best quality. All their products are CE marked. Moreover, the fans are characterised by the innovative technical solution providing the flow reversion (forcing the air into the pit shaft) by automatic adjustment of the impeller blades – turning by ca. 180° with a simultaneous reversal of the motor rotation direction.⁵⁷

During 60 years of professional activity, the company has become the leading supplier of modern industrial fans, recognised, and esteemed for the high-quality products, both in Poland and abroad. The largest axial variable pitch fan in *Fawent's* history was designed, manufactured, delivered, and assembled in 2014 for Institute of Aviation in Warsaw. The fan was commissioned in January 2015 (the impeller diameter of this fan was 7.000mm, while the drive motor power is 5.600 kW).⁵⁸ *Fawent* was the first company in Poland who manufactured axial variable pitch fans for *Zakład Górniczy JANINA*, the Polish coal mining industry in 2012. However, *Fawent* has provided the power industry with many of similar applications.

The company has manufactured tens of thousands of industrial fans through its long period of activities. Their fans are installed in power plants, thermal-power plants and in several different plants in Poland and many European countries (e.g., Germany,

⁵⁶ Fawent, *Historia firmy*, at <http://www.fawent.pl/index.php?page=historia>, 16 September 2025.

⁵⁷ Fawent, *Osiągnięcia*, at <http://www.fawent.pl/index.php?page=osiagniecia>, 10 September 2025.

⁵⁸ Fawent, *Historia firmy*...

Great Britain, Spain, Bulgaria, France, Czech Republic, Slovakia, and former countries of Yugoslavia and Soviet Union), as well as Asian and African countries (India, China, Türkiye, Egypt). *Fawent* has references for industrial fans with drive motor power from few kW to ca. 7 MW, which have been applied in power and thermal industry as well as in steel, mining, chemical, cement, wood, and food industries. The company has references for modernisations and overhauls of centrifugal fans (single or double inlet) as well as of axial fans (one or double stage). It has a rich experience in the design and manufacture of fans intended for FGD or de-NO_x installations.⁵⁹

The procedure of building a new power station or mine starts from the investment. After finding an investor, whom can create a project and visualisation with a big corporation it is possible to freely choose suitable device, the main contractor, and subcontractors (such as *Fawent*). The company can choose to open a tender. Sometimes those companies instead of doing it by their own, find a trade marketing office.

In the past, *Megadex* was responsible for taking part in a tender for *Fawent*. This company was linked to *Elektrim SA Energy* in 1999. The company has over fifty years of experience in the energy and construction sectors in Poland and other countries. *Megadex* is a leading supplier of power units, boilers, pro-ecological installations. The company maintains exports at the level of 30 – 40% of their sales.⁶⁰ The company has experience in the construction of ready-made energy and industrial facilities located all over the world, e.g., in Greece, Türkiye, Bulgaria, China and many other countries.⁶¹

Nowadays, tenders are organised individually by trade marketing offices. The company is also responsible for carrying out the market research. For the Middle Eastern market, they mostly use local enterprises from the region which is easier and more effective. The intermediaries that participate in negotiations are mainly Turkish trading companies such as *7E Enerji*, which collect orders from EU companies and then participate in the tender. Offers and instructions, written in English, also are presented by intermediaries. Orders and establishing technical matters take place without third parties. The current trend is rigorous tendering lowered to the level of costs. This is happening because a lot of companies participate in the negotiations. The company had enormous amounts of competitive market to deal with, which caused them to reduce prices, so they would be able to sell their products. Another difficulty is the tight procurement market. Between 2014-2015 the country experienced a bull market and, in that time, *Fawent* sold a lot of fans and services to Türkiye.

A leading contractor in installations, desulfurisation, and isolation, *Fawent* is a medium-sized company that employs 200 people, that produce parts for newly created installations directly or for already existing ones. The rules change, individual components

⁵⁹ *Fawent*, *Referencje*, at <http://www.fawent.pl/index.php?page=referencje>, 10 September 2025.

⁶⁰ Marcin, "Grupa Energetyczna Elektrim," *Energia*, no. 26, dodatek reklamowy do *Rzeczpospolitej*, no. 61 (2021), at <http://geoland.pl/dodatek/energia-xxvi/grupa-energetyczna-elektrim/>, 10 September 2025.

⁶¹ *Elektrim*, *O firmie*, at <http://www.elektrim.pl/>, 10 September 2025.

can age. It must be replaced periodically, therefore it is necessary to modernise them. Companies often prefer to outsource the making of components to other firms over building something new. Fawent can make a construction or modernisation of the entire block. Beside production, Fawent provides assembly supervision, crew training after installation, and the servicing of the devices. Production unit depend on request. The weight of fans depends on the intended use – it starts from 200 kg to 100 t. Prices are diversified and depend on the type of a product. Transport of orders is carried out primarily by tracks. Turkish customers organise the transportation on their own. They take the fans directly from Loco Fawent,⁶² since customs regulations and customs clearance documents are a big obstacle for foreign companies. In 2017 the company implemented an innovative project that was co-financed by the European Regional Development Fund, regarding new series of large size axial two-stage fans with hydraulic angle adjustment of rotor blades.⁶³

Professional power industry's recipients are mainly power stations and mines. The most common fans bought by such institutions are axial or centrifugal industrial fans, especially the primary air type, induced draft, or recirculation. Since the 70s the main recipients of Fawent products are Turkish cities, plants, and companies such as: Yatağan, Yeniköy, Kemerköy, Kardemir, Çatalağzı, Soma, Seyitömer.

Yatağan Thermal Power Plant is a coal-fired power station located in Yatağan, Muğla in western Türkiye. This thermal power plant has a power of 650 MW. The plant is expected to produce 4.095 million kWh per year.⁶⁴ The owner of it is *Aydem Enerji*, which was established 40 years ago to produce electricity from domestic and renewable sources.⁶⁵ The company uses hydroelectric, wind, solar, geothermal, lignite and garbage gas, potential of Türkiye, to generate electricity. Benefitting from its experienced personnel and domestic resources, *Aydem Enerji* prepares its own feasibility reports and undertakes the design, construction, installation, and operation of its own plants.⁶⁶ It produces energy from hydroelectric, wind, geothermal and biogas resources.

Yeniköy-Kemerköy Electricity Generation and Trade Inc. is an important economic actor located in the Aegean region with a total of 1050 MW installed power. It provides approximately 5% of Türkiye's energy demand; *Yeniköy Thermal Power Plant* has 2 units with a total of 420 MW and *Kemerköy Thermal Power Plant* has 3 units with a total of 630 MW. In addition to the power plant which is operated in accordance

⁶² Loco – commercial formulation used in Poland and neighbouring countries (e.g., Germany), indicating that the seller seems to give the goods to carrier provided by the buyer at the agreed place – usually the warehouse seller. In incoterms 2010 a close equivalent of the formulation Loco is EXW (ang. Ex Works – from the company).

⁶³ Fawent, *Our Offer*, at <https://www.fawent.eu/index.php?page=oferta>, 17 September 2025.

⁶⁴ Bereket Enerji, *Yatağan Termik Santrali*, at <http://www.bereketenerji.com.tr/yatagan-termik-santrali.html>, 17 September 2025.

⁶⁵ Aydem Enerji, *Hakkımızda*, at <https://www.aydemenerji.com.tr/bilgi/7/hakkimizda>, 17 September 2025.

⁶⁶ Ibid.

with technical and environmental standards, there is the *Yeniköy Lignite Mining Enterprise* providing coal which is composed of various coal mines.⁶⁷

Kardemir, is a Turkish steel producer. The name of the company is a combination of *Karabük Demir Çelik Fabrikaları*, which means *Karabük Iron and Steel Works*. Its main plant is in Karabük in the Black Sea region of Türkiye. Construction of the complex started in 1937 and was finished after 2 years. In the past, it has functioned as a state-owned company for decades, however, it was privatised in 1995.⁶⁸ Kardemir is the first integrated iron and steel factory in Türkiye.⁶⁹ Kardemir provides the basic input to the construction, mining, transport, and industry sectors in the country.⁷⁰

Çatalağzı, is a power plant that belongs to the largest electric power company in Türkiye – Electricity Generation Company *Elektrik Üretim A.Ş.* Eren Enerji Power Plant (Çatalağzı/Zonguldak).⁷¹ 7E Enerji has regularly purchased Axial Fans from Fawent S.A. as well as fans and service provided by Fawent. They purchased 4 motor power fans 750 kW for Çatalağzı Power Plant Project in Zonguldak, which were delivered in November 2012 and March 2013.⁷²

Soma Kömür İşletmeleri A.Ş. (Soma Mining Inc.) is a lignite mine in Soma – one of the most important mines in Türkiye. It supplies energy to the nearby power plant. The production of raw materials increased there several times in the last 20 years. Now, it produces approx. 3 % of all energy all over the country, and it is projected that its role in the coming years will increase. This is the intent of the government in Ankara, which supports a huge corporation named *Soma Group* that also have interests in other industries and services.⁷³

Seyitömer Elektrik Üretim A.Ş. power station is a 600-megawatt (MW) coal-fired power plant in Kütahya province, Türkiye.⁷⁴ It was opened between 1973 and 1989. In the beginning of 2013 the Privatization Authority sold the operating rights of the plant for 2.25 billion USD to the Turkish company Çelikler Insaat. The *Seyitömer Thermal Power Plant* is connected to the 27 km Eskişehir-Balıkesir railway line in the north-western region of Türkiye which creates intense electricity demand

⁶⁷ Yeniköy-Kemerköy, *About us*, at <http://www.ykenerji.com.tr/en/corporate/about-us>, 7 August 2025.

⁶⁸ Kardemir, *Tarihçe*, at <https://www.kardemir.com/Yonetim.aspx?Sec=Sirket&b=3&Ani=&Lng=pl-PL&W=4>, 7 August 2025.

⁶⁹ Kardemir, Şirket Profili, at <https://www.kardemir.com/Yonetim.aspx?Sec=Sirket&b=4&Ani=&Lng=tr-TR&W=5>, 7 August 2025.

⁷⁰ Ibid.

⁷¹ Eren Holding, *History*, at <http://www.erenholding.com.tr/en/eren-group/history>, 7 August 2025.

⁷² *E7 Enerji*, at <http://www.e7enerji.com/tr/index.html>, 7 August 2025.

⁷³ Company's website doesn't work after the Explosion in 2014, any information can be found e.g., at <https://web.archive.org/web/20140708115613/http://www.tilaga.com.tr/kurumsal.html>, 27 August 2025.

⁷⁴ "Kütahya Seyitömer Termik Santrali'ndeki olaylar," *TimeTurk*, 22 April 2014, at <http://www.timeturk.com.tr/2014/04/21/kutahya-seyitomer-termik-santrali-ndeki-olaylar.html>, 27 August 2025; Seyitömer Power Station, at http://www.sourcewatch.org/index.php/Seyit%C3%B6mer_power_station, 27 August 2025.

in terms of industry and settlement. Each of their power plants has an annual production capacity of 975 million kWh and the total annual production capacity of the four units is 3.9 billion kWh. The energy produced is I-II and IV units of 380 kV output. The III. unit is supplied to the interconnected system with 154 kV output. Steel coal reserves are more than 200 million tons in the minefields of Seyitömer Lignite. The kiln burned at the plant has an average calorific value of 1700 Cal / kg, which corresponds to the normal production of the plant, consuming approximately 6,000,000 tons of coal per year.⁷⁵

Competitors for Fawent are mainly German companies, but also several factories in Poland. One of those companies is *HYDAC sp. z o.o.*. It is located in Mikołów and is a subsidiary of the German company *HYDAC TECHNOLOGY*, a world leader in the field of hydraulics. *Hydac* mostly manufactures different components and assemblies. Its offer also includes design, installation, commissioning, hydraulic and lubrication, control electronics, control systems, care hydraulic oils, other media work as well as service specialist equipment.⁷⁶ *Hydac* is a wide range of maintenance services prolonging system life, lubrication and hydraulic systems, electrohydraulic controls, and systems regulation. The company based on modern simulation methods helps to optimise processes and minimise operating costs. It offers technical consulting, systems maintenance, commissioning, and modernisation of the hydraulic and lubricating oil service.⁷⁷

Zakład Maszyn Elektrycznych EMIT S.A. in Żychlin is the oldest electrical machinery plant in Poland⁷⁸ and is one of the biggest factories that produces three-phase electrical machinery. *EMIT* is part of *Cantoni Group*, which is formed by domestic manufacturers of motors and electrical equipment and export sales office – *Cantoni Motor*. The company is designing and manufacturing electric motors in almost all industrial sectors, such as marine, chemical, oil and gas, energy, and construction. It is one of the leading producers in Poland of three-phase electrical machinery of low and high voltage, medium and high power. *EMIT* has 100 years of experience in designing, manufacturing, service and operation of electric motors and generators. It is one of the main suppliers of drives for companies in the fuel and energy, chemical, paper, shipbuilding, mining, and electrical engineering industry. Some of its products are exported to foreign markets, where it competes with the products of the largest companies in the world. The primary objective is to offer customers with specific technical solutions, quality assurance and proper service of electric drives. Products are made based on the quality assurance system ISO 9001 by Polish standards PN, international IEC, European EN and American NEMA / CSA. Upon request, the company can

⁷⁵ Çelikler Holding, Çelikler Seyitömer Termik Santrali, at http://celiklerholding.net/yatirimlarimiz_16/celikler-seyitomer-termik-santrali, 27 August 2025.

⁷⁶ Hydrac, at <http://www.hydrac.com.pl/>, 27 August 2025.

⁷⁷ Hydrac, *Hydrac in Poland [Hydrac w Polsce]*, at <http://www.hydrac.com/pl-pl/hydrac-w-polsce.html>, 27 August 2025.

⁷⁸ The company was established as Polskie Zakłady Elektryczne Brown-Boveri S.A. in 1921.

also create products which comply the indicated standards and regulations or unusual products for individual orders.⁷⁹

Rafako, the country's largest producer of power and industrial boilers, and environmental protection equipment, is a company in a 49.9% subsidiary of *Elektrim S.A.* It designs and manufactures a wide range of boilers fired with lignite, coal, oil, gas, or a combination of these fuels, including fluidised bed boilers and heat recovery boilers. The company also offers installation of flue gas desulphurisation built completely by various methods. Another area of *Rafako's* activity is diagnostics, repair and modernisation of boilers and bunkers. Since 1999, the company has been producing steel structures, air channels and exhaust gases. The company is a leading European exporter of pressure boilers.⁸⁰

FPM S.A. Mikołów specialises in the production of machinery and equipment for both Polish and foreign customers such as: electric power plants, heat, and power plants. FPM's clients are also companies that generate electric power for their own needs, e.g., steel mills, coal mines, sugar factories, breweries, cement mills and chemical works. It is a part of private investment company *TDJ S.A.*⁸¹

The fan is just a component, an equipment accompanying the boiler. The company is too small for production of those constructions. That's why these kinds of parts are manufactured in other major companies such as *Rafako, Mitsubishi, Bilfinger SE*⁸², *Amec, Foster Wheeler* 2014. AMEC and Foster Wheeler combined to create a new force in global engineering, project delivery, asset support, power equipment and consultancy, trading on the London and New York Stock Exchanges in the Oil Equipment and Services sector.⁸³

Fawent had a stand on Energetic fair in Istanbul, 19. ICCI – *Uluslararası Enerji ve Çevre Fuarı ve Konferansı* – *International Energy and Environment Fair and Conference* 24-26 April 2013. For 2 days Tomasz Jaronicki did a service at this fair where one hundred other countries have participated as well.

SUMMARY

Economic growth prospects for Türkiye are more optimistic than for most developing economies. The strength of the Turkish economy is in its size and diversity, and growth prospects relative to other large emerging markets are robust. The Turkish economy also has some problems due to a large current account deficit and geopolitical risk. Marek Nowakowski, president of the Polish-Turkish Chamber of Commerce said: *The value of Polish-Turkish trade is still growing. The structure of exports and imports is similar.*

⁷⁹ Cantoni Group, *Emit*, at <http://www.cantonigroup.com/pl/motors/emit/>, 27 August 2025.

⁸⁰ Marcin, "Grupa Energetyczna Elektrim..."

⁸¹ FPM S.A., at <http://www.fpm.com.pl/portal/pub/view/0xbe49e0>, 27 August 2025.

⁸² *Bilfinger*, at <http://www.bilfinger.com/en/>, 27 September 2025.

⁸³ *AMECFT*, at <http://www.amecfw.com/>, 27 September 2025.

*Sold products complement each other and are often related to similar industries.*⁸⁴ Poland's exports – primarily mechanical and electrical machinery – underscore the role of non-state actors and transnational networks, such as private firms and trade offices, which are central to Complex Interdependence Theory's emphasis on multiple channels of interaction.⁸⁵ Polish companies frequently establish trade marketing offices in Türkiye to engage more effectively in tenders, while logistical practices like Loco delivery agreements show how market mechanisms function beyond direct state control. Competitive pressures, including the need to lower prices due to rival firms, further illustrate how market dynamics and institutional practices shape trade more than traditional political or military strategies. For example, firms like Fawent S.A. supply industrial fans to Turkish power stations and mines – transactions driven by industry demand and specialisation rather than foreign policy. Recent discussions between Polish and Turkish leaders have highlighted a shared commitment to expanding economic and political cooperation. With bilateral trade surpassing €12 billion in 2024 and potential reaching up to €35 billion, both economies benefit from complementary sectors rather than direct competition. According to the Polish-Turkish Chamber of Commerce, deeper collaboration in areas like mutual investment, improved transport links, and scientific research could further strengthen ties.⁸⁶

These developments align with Complex Interdependence Theory, which emphasises multiple channels of interaction – beyond just state actors – and a shift from military to economic and institutional cooperation. Poland and Türkiye's growing partnership reflects a broader interdependence shaped by shared interests, market forces, and transnational collaboration.

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⁸⁴ A. Fedoruk, "Polsko-turecka współpraca gospodarcza. Co z Polski trafia nad Bosfor?," *Onet*, at <http://onet.tv/b/biznes/eksport-z-polski-do-turcji-polsko-turecka-wspolpraca-gospodarcza/fbsz4e>, 27 September 2025.

⁸⁵ R.O. Keohane, J.S. Nye, *Power and Interdependence...*, p. 25.

⁸⁶ Polsko-Turecka Izba Gospodarcza, *Strategiczny wymiar polsko-tureckiej współpracy*, 13 March 2025, at <https://www.ptcoc.eu/pl/wazne-informacje/strategiczny-wymiar-polsko-tureckiej-wspolpracy>, 27 September 2025.

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