

An Analysis of Intra-Industry Trade with Some Selected European Union Countries in the Turkish Manufacturing Industry

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Abstract

This study aims to analyse intra-industry trade in the manufacturing industry sector with the EU countries, where Turkey has the most trade. The period of the study is 2000-2020. The countries examined are Germany, France, Netherlands, Italy, Spain, Poland, Belgium-Luxembourg, Sweden, Romania, Bulgaria, Greece, the Czech Republic, Portugal, Austria, Ireland, Denmark, and the UK. In the analysis, the Grubel Lloyd index was used, which is one of the widely applied static measurement methods in the literature. The study discusses intra-industry trade of manufacturing industry products according to the 3rd revision of the Standard International Trade Classification. According to the analysis results, when Turkey's foreign trade is evaluated on a sectoral basis, it has been observed that high intra-industry trade is realized in product groups with low added value. Another result obtained is that intra-industry trade with the UK, Germany, France, Poland, Bulgaria and Romania reached high values.

Keywords: Intra-industry Trade, Manufacturing Industry, Grubel Lloyd Index

JEL: B17, F0, F5, F11, F14

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Introduction

Traditional foreign trade theories explain inter-industry trade between developed and developing countries, whereas new foreign trade theories tend to explain intra-industry trade between developed countries. While factor endowment theory is concerned with inter-industry trade in agricultural products, raw materials, and labour-intensive industrial goods, new foreign trade theories are concerned with explaining intra-industry trade in capital and technology-based industrial goods. Intra-industry trade is a concept that emerged in the 1960s as a result of research into the effects of economic mergers such as the European Economic Community on foreign trade. The simultaneous export and import of similar goods produced by Grubel Lloyd in the same industrial area is referred to as intra-industry trade. It is also referred to as intra-industry foreign trade, two-way trade, horizontal trade, mutual gravity, two-way trade in similar products, and trade overlap in intra-industry trade literature. With the increasing importance of intra-industry trade in developed countries, the number of studies has increased on how the trade structure of developing countries evolves in the face of these developments.

According to the figures for the year 2020, Turkey realized 73 billion dollars (33.4% share) of its total imports of 219 billion dollars from the EU. In 2020, the ratio of exports to imports in trade with the EU was at the level of 95.4% (TURKSTAT). This study aims to examine intra-industry trade in the manufacturing industry since attempts have been made to draft development plans for the manufacturing industry in Turkey. The countries examined are Germany, France, Netherlands, Italy, Spain, Poland, Belgium-Luxembourg, Sweden, Romania, Bulgaria, Greece, the Czech Republic, Portugal, Austria, Ireland, Denmark, and the UK. The study covers the 2000-2020 period. In this context, the study primarily includes a literature review and a description of the method used to measure intra-industry trade. Then, the analysis of intra-industry trade in selected EU countries and Turkey in the manufacturing industry is presented in tables. The study is terminated with policy recommendations and evaluations as a result of the findings.

Literature review

The critical feature of the study put forward by Schöler (1995) is that it is the first example of Turkey regarding intra-industry trade. In the study presents a comparison of Turkey and Spain's intra industry trade. Turkey's intra-industry trade has increased over the years, yet this study drew attention to the bigger increase in Spain's intra-industry trade rate. The study concludes that this difference between the two countries is due to the inadequate industrialization of Turkey. In addition, in the periods under examination, it is observed that Spain's intra-industry trade level with European Community countries is high, while Turkey's intra-industry trade value with the European Community is at a level that approximates other countries. As a result, it is assumed that participation in economic integration significantly affects intra-industry trade.

In the study of foreign trade between Turkey and EU countries by Erk and Tekgül (2000), the intra-industry trade ratios of countries at the level of SITC Rev.3 3-digit product group in 1993-1998 period are analysed using the Grubel Lloyd Index Calculation method. The study finds that Turkey's average intra-industry trade with Greece and Portugal is higher than with other member countries. In the study, this situation is explained by the geographical structure of the countries, the products they export, and their similarity in terms of income.

In his study, Gönel (2001) analyses Turkey's foreign trade with the EU and Central Asian Turkic Republics, covering the years 1992-1997, with the Index Calculation method in groups of two-digit commodity trade. It is observed that Turkey's intra-industry trade with the EU has increased as of the periods discussed. It is concluded that trade with the Central Asian Turkic Republics has an increasing trend but has a lower share than EU countries.

In the study conducted by Küçükahmetoğlu (2002), the foreign trade data of Turkey, non-EU-EU and World countries in the 1989-1998 period are analysed by the Index Calculation method within the SITC Rev.3 main product groups 0-8. When all three country groups are examined in the study, it is noteworthy that intra-industry trade is more common in standard technology products. While intra-industry trade with EU countries has increased, an increase is observed in the intra-industry trade of products belonging to other sectors, excluding world countries and industrial products. As of the period under consideration, intra industry trade has been following an increasing trend. This is because the increase in per capita income of the countries and the growing industrialization in connection with economic integration increased the intra-industry trade volume.

In the study conducted by Erlat and Erlat (2003) on Turkey, foreign trade data belonging to the product groups at SITC Rev.3 3-digit level based on the years 1969-1999 are analysed using the Index Calculation method (Grubel Lloyd index). In Turkey, it is concluded that intra-industry trade belonging to more labour-intensive sectors is higher, and although intra-industry trade is on an increasing course before and after 1980, trade still takes place between industries rather than within the industry. Considering the post-1990 data of R&D intensive sectors, an increase is observed in G-L indices and marginal intra-industry trade values.

In Şimşek (2008) the foreign trade data of Turkey between the OECD countries and the product groups of Turkey at SITC Rev.3 3-digit level between 1992 and 2003 are analysed with the Index Calculation method using various indices. The highest intra-industry trade rate is observed in products requiring standard technology. In the study where intra-industry trade is calculated horizontally and vertically separately, while SITC5-8 intra-industry trade in Turkey's manufacturing industry products is at high values, it is concluded that Turkey's intra-industry trade consists of low-quality vertically differentiated goods.

In his study Emirhan (2005) addresses the topic of Turkey's foreign trade with the EU and selected countries, the data belonging to the product groups at SITC Rev.3 3-digit level between 1989 and 2002 are analysed by applying panel data method. The study shows that the rate of intra-industry trade of Turkey with EU countries is higher than in other countries. It is noteworthy that the rate of intra-industry trade with EU member countries

has an increasing trend over the years. It is also stated that the determinants of horizontal and vertical intra-industry trade are different. It is concluded that while industry-based variables affect horizontal intra-industry trade, country-based variables are more effective on vertical intra-industry trade and more limited on horizontal intra-industry trade.

In the study conducted by Kaya and Atış (2007), the foreign trade data of Turkey's EU and Selected Countries and SITC Rev. 3 5-digit product groups in the 1990-2005 period are analysed with the Index Calculation method. The study concluded that the intra-industry trade rate is low, and Turkey's foreign trade has an inter-industry feature in chemical industry products. In addition, the trade structure in some product groups is said to tend to be an intra-industry trade structure. It is noted that the inter-industry character of Turkey's chemical industry trade is due to foreign dependency in consumption in the sector.

Yergin (2011) analyses the foreign trade data of SITC Rev. 3 Level 1 product groups between Turkey and EU15 countries for the years 1990-2008 using the Index Calculation method. It is observed in the study that being a member of the customs union increases intra-industry trade between countries. In SITC 5-8 grouped industrial goods, steady and significant increases are observed in both foreign trade volume and intra-industry trade rates. When all of the 15 EU countries in those years are evaluated, the "capture paradigm" is observed in other industrial products, except for those belonging to the "5-Chemical Industry and Related Industrial Products" group.

In the study conducted by Şentürk (2014), foreign trade data of Turkey and selected countries and the world for the 1990-2003 and 1995-2013 periods are analysed using SITC 3 digits and SITC 5-8 main product groups using the index calculation and panel data methods. In the study, it is generally stated that intra-industry trade in the sectors has increased. As for the year 1990, the intra-industry trade rate in the manufacturing industry sector with Turkey's trade partner countries tends to increase.

In his study Diken (2015) applies the Grubel-Lloyd index to the foreign trade data of Turkey with EU 15 countries to SITC Rev.3 level 1 product groups in the 2004-2014 period. The results of the study reveal that intra-industry trade rates between EU15 countries and Turkey are high. Among the EU15 countries, the Netherlands, Portugal, Denmark, France and Belgium take place in the ranking of countries with the highest intra-industry trade. The group of goods with the highest intra-industry trade rate is "Machinery and Transport Equipment" (SITC-7), while the group of goods with the lowest intra-industry trade rate is "Chemical Industry and Related Industrial Products Not Elsewhere Specified" (SITC-5).

In the study of Gürel and Yalçın (2018), the foreign trade data of the BSEC member countries of Turkey and the SITC Rev.3 Level 1 product groups between 1992 and 2017 are analysed with the Index Calculation method. In the study, Turkey and the BSEC countries with the highest average intra-industry trade rates are respectively. Countries with the lowest intra-industry trade rate were Romania, Bulgaria, Greece from the EU member states and Armenia, Albania, and Azerbaijan among the others. Countries with a high intra-industry trade rate are also EU members, implying that membership in the customs

union has a positive effect on intra-industry trade. The low rate of intra-industry trade is attributed to countries' political characteristics, management styles and policies.

Bakan and Selci (2019) analysed the level of intra-industry trade of the automotive sector in the SITC Rev.3 classification with five EU member countries selected in the period between 2008 and 2017, with the Grubel-Lloyd index. As a result of the study, the countries with intensive intra-industry trade are Germany, France, and Spain. The countries with low intra-industry trade value are the UK and the Czech Republic. When Turkey and five EU member countries and the automotive sector are evaluated in general, it is concluded that intra-industry trade has a medium value in all.

The method of analysis

IIT's product definitions were determined using the United Nations Statistical Grouping (UNSD), and the Turkish Statistical Institute (TURKSTAT) provided export and import values for the SITC 5-8 product groups at the SITC Rev.3 and 1 aggregation levels. Data from Belgium and Luxembourg are combined and included in the analysis based on TURKSTAT data. The Standard Grubel-Lloyd index, which is the most commonly used analysis method in the literature based on the index method, was preferred in IIT analysis in the study.

$$IIT = 1 - \left[\frac{|X_i - M_i|}{(X_i + M_i)} \right] \quad (1)$$

In the relevant equation, i represents the product or industry, X_i represents the product or industry's export, and M_i describes the product or industry's import. The IIT index has a value between 0 and 1, and the percentage value can also be expressed as $0 \leq IIT \leq 100$.

If $IIT = 0$, there is no intra-industry trade in the commodity group. Only exports or imports are considered in that commodity group, and the trade is inter-industry.

$IIT = 1$ indicates that the commodity group's export and import values are close to each other and that there is full intra-industry trade.

If the IIT is greater than 0.50, it is assumed that intra-industry trade is high; if the IIT is less than 0.50, it is assumed that intra-industry trade is low. These evaluations are used to create the tables used in the study.

The analysis of countries according to product groups and the results

Selected EU countries with a significant share in Turkey's foreign trade in the manufacturing industry sector are Germany, France, Netherlands, Italy, Spain, Poland, Belgium-Luxembourg, Romania, Bulgaria and the UK. The study discusses intra-industry trade of manufacturing industry products according to the 3rd revision of the Standard International Trade Classification. SITC Rev. 3 Manufacturing industry SITC 5-8 main product groups according to product classification; SITC 5-Chemical industry products not elsewhere specified, SITC 6-Manufactured goods classified chiefly by material, SITC 7-Machinery and transport equipment, SITC 8-Miscellaneous manufactured articles.

Analysis of Turkey's intra-industry trade with Germany

It can be seen that trade between Turkey and Germany is inter-industry within the scope of SITC 5-Chemical industry products not otherwise specified.

SITC 6 – When the foreign trade of manufactured goods classified primarily by material is examined, it is notable that the goods subject to trade between Germany and Turkey are very similar to one another, and intra-industry trade is valued highly.

SITC 7 – In-industry trade in machinery and transportation equipment has increased over the years, and its high intra-industry trade rates indicate trade in similar products.

SITC 8 – It is possible to say that the trade of miscellaneous manufactured articles products was inter-industry. During the time period under consideration, the trade was mostly in the form of intra-industry trade.

When evaluated in general, Turkey's trade with Germany is inter-industry due to the high import figures in the SITC 5-Chemistry industry products group, which is not specified elsewhere. It is seen that SITC 6- Manufactured goods classified chiefly by material and SITC 7-Machinery and transportation equipment group have high values in intra-industry trade. In the SITC 8-Miscellaneous manufactured articles group, it is concluded that there is moderate intra-industry trade.

Analysis of Turkey's intra-industry trade with France

SITC 5 – Since the import of the Chemical Industry Products group, which is not elsewhere specified, is at a very high level compared to its exports, Turkey's trade with France is interindustry.

SITC 6 – Intra-industry trade rates are at high levels in the periods examined for manufactured goods classified chiefly by material. In 2020, the highest intra-industry trade value was reached with 99%. For this reason, it is possible to claim that the products of this product group are of great importance in intra-industry trade.

It is noteworthy that in SITC 7-Machinery and transport equipment product group, intra-industry trade has displayed a significant increase in parallel with the increase in exports since 2002. When the figures in recent years are evaluated, it is observed that high levels of intra-industry trade have been realized.

SITC 8 – Moderate levels of intra-industry trade have been seen in the miscellaneous manufactured articles group.

When evaluated in general, Turkey's trade with France is inter-industry in SITC 5 - Chemical industry products group not elsewhere specified.

SITC 6 – Manufactured goods classified chiefly by material and SITC 7-Machinery and transport equipment group have high values in intra-industry trade. In the SITC 8-Miscellaneous manufactured articles group, it is concluded that there is a moderate level of intra-industry trade.

Analysis of Turkey's intra-industry trade with the Netherlands

SITC 5 – It is observed that intra-industry trade rates are low since imports are higher than their exports in the chemical industry products group not elsewhere specified. Although it has been increasing in recent years, the trade in question is inter-industry.

SITC 6 – Intra-industry trade value is high in manufactured goods classified primarily by material. While there was 100% intra-industry trade in 2002, there has been a decrease in intra-industry trade as Turkey's exports have reached high levels in recent years.

When the data of SITC 7-Machinery and transport equipment group is analysed, it is noteworthy that the group is subject to high rates of intra-industry trade. Although intra-industry trade rates have decreased due to an increase in exports exceeding imports, there is intra-industry trade in this product group.

SITC 8 – It is observed that trade is inter-industry, as Turkey is bigger exporter in the miscellaneous manufactured articles group.

In general, it is seen that the trade between Turkey and the Netherlands belonging to the SITC 5-Chemical industry products not elsewhere specified and SITC 8-Miscellaneous manufactured articles is inter-industry. It is concluded that manufactured goods classified chiefly by material and SITC 7-Machinery and transport equipment group, divided into major classes, have high intra-industry trade rates. It is possible to say that Turkey has a comparative advantage in its trade with the Netherlands, as it is an exporter in product groups other than SITC 5-Chemical industry not elsewhere specified.

Analysis of Turkey's intra-industry trade with Italy

SITC 5 – Due to the high levels of imports in the chemical industry products group, not elsewhere specified, the size of the trade is interindustry.

SITC 6 – Due to the close proximity of import and export values, intra-industry trade rates in manufactured goods classified primarily by material are high. It is understood that the said product group has great importance in intra-industry trade.

In the period under review, trade figures in the SITC 7-Machinery and transport group show high levels of intra-industry trade. The product group in question continues to maintain its importance in intra-industry trade over the years.

SITC 8 – While Turkey is bigger exporter in the miscellaneous manufactured articles group, the trade size has ceased to be inter-industry with the significant increase in its imports in 2018, and 85% has been realized as intra-industry trade. In 2020, this ratio reached the highest level of 96%.

Except for SITC 5-chemical industry products not otherwise specified, SITC 6-Manufactured goods classified primarily by material, SITC 7-Machinery and transport equipment, and SITC 8-Miscellaneous manufactured articles, Turkey's trade with Italy has high intra-industry trade values. It is also concluded that the SITC 7-Machinery and transport equipment group is of great importance in intra-industry trade.

Analysis of Turkey's intra-industry trade with Spain

SITC 5 – There is inter-industry trade in the group of chemical industry products, not elsewhere specified. It can be seen that Turkey is more of an importer in the aforementioned product group.

SITC 6 – The proximity of export and import ramps draws attention to the manufactured goods classified primarily by material, so intra-industry trade rates are high in this product group.

When the data of SITC 7-Machinery and transport equipment product group are examined, there is intra-industry trade exists. Especially in recent years, reaching high values in intra-industry trade shows that the importance of this product group is increasing.

SITC 8 – In the miscellaneous manufactured articles group, there is inter-industry trade as Turkey is mainly in an exporter position.

When the trade of Turkey with Spain is evaluated in general, SITC 5 - Chemical industry products not elsewhere specified and SITC 8-Miscellaneous manufactured articles group is inter-industry. It has been established that the SITC 6-Classified into main classes, manufactured goods classified primarily by material, and SITC 7-Machinery and transport equipment product group have a high rate of intra-industry trade.

Analysis of Turkey's intra-industry trade with Poland

SITC 5 – When foreign trade data of chemical industry products not otherwise specified are analysed, an average of 70% intra-industry trade is found.

SITC 6-With the exception of the 40% level in 2001, manufactured goods classified primarily by material has high intra-industry trade values in other years, reaching the highest rate of 96 percent in 2013.

SITC 7-The import figures for machinery and transportation equipment are quite high. With the increase in exports over the years, fluctuations have occurred in the intra-industry trade rates. Looking at recent years, it is seen that this product group has an essential role in intra-industry trade.

SITC 8 – When analysing the data of the miscellaneous manufactured articles group, it is noteworthy that intra-industry trade rates fluctuate. Still, given that Turkey is generally an exporter in this product group, the dimension of trade is between industries.

When evaluated in general, it is seen that Turkey's trade with Poland is mainly in the form of intra-industry trade. There is inter-industry trade only in SITC 8 - the miscellaneous group of manufactured articles group. It has been found that intra-industry trade is prevalent in the product groups SITC 5-Chemical industry products not otherwise specified, SITC 6-Manufactured goods classified primarily by material, and SITC 7-Machinery and transport equipment.

Analysis of Turkey's intra-industry trade with Belgium-Luxembourg

To begin with, it should be noted that the two countries were taken together because they were trade partners in previous years and their data were comparable. Since the data

of the two countries were analysed together until 2002, a common evaluation is made in our study. Data for 2002 could not be reached.

SITC 5 – There is inter-industry trade in the chemical industry products group not elsewhere specified. Turkey imports are much more, which reduces intra-industry trade rates.

SITC 6 – When manufactured goods classified primarily by material are examined, it is seen that they reached the full level of intra-industry trade in 2017 at a rate of 100 percent. Although this rate has decreased in recent years, it is generally subject to intra-industry trade, and it is interpreted to be of great importance.

SITC 7 – In the machinery and transport equipment group, 100% of full intra-industry trade was realized in 2010. Although there was a decrease in this rate due to the increase in exports in the following years, the said product group is subject to intra-industry trade.

When the data of the SITC 8 - Miscellaneous manufactured articles group are analysed, it is established that the intra-industry trade rates are low, and there is inter-industry trade because Turkey is in the position of an exporter.

As a result, Turkey's foreign trade with Belgium-Luxembourg is inter-industry in the SITC 5-Chemical Industry Products and SITC 8-Miscellaneous manufactured articles group. However, there is significant intra-industry trade in SITC 6-Manufactured goods classified primarily by material and SITC 7-Machinery and transport equipment group.

Analysis of Turkey's intra-industry trade with Romania

SITC 5 – In the chemical industry products group, not elsewhere specified, inter-industry trade as the import figures in 2000-2006 were much higher. As a result of the further increase in exports since 2006, intra-industry trade rates reached high values. By 2014, full intra-industry trade took place, and this product group is generally subject to intra-industry trade.

SITC 6 – When data on manufactured goods classified primarily by material are examined, intra-industry trade rates are deemed high due to close import and export figures. When the recent years are considered, it is notable that there has been a decrease in intra-industry trade rates due to Turkey's significant increase in export figures, as shown in the table.

In the SITC 7 – Machinery and transport equipment group, 100% of full intra-industry trade took place in 2017. In 2020, this rate was at the level of 95%, and when evaluated generally, it is found that the product group in question has high rates in intra-industry trade.

SITC 8 – As Turkey is more exporter in the miscellaneous manufactured articles group. It has been observed that it has low rates in intra-industry trade and that trade is of an inter-industry nature.

Turkey's trade with Romania is inter-industry in SITC 8 - the miscellaneous manufactured articles group. However, there is a high rate of intra-industry trade in SITC 5-Chemical

industry products not otherwise specified, SITC 6-Manufactured goods classified primarily by material, and SITC 7 (Machinery and transport equipment product groups).

Analysis of Turkey's intra-industry trade with Bulgaria

SITC 5 (Chemical industry products) group has such high intra-industry trade values that 100% of intra-industry trade is uncertain in 2013 and 2015.

SITC 6 (Industry trade rates in manufactured goods classified primarily by material) which have been steadily increasing over the years, reached the full intra-industry trade level of 100 percent in 2014. The product group, which has high values in general, has an important share in the intra-industry trade.

SITC 7 – In the machinery and transport equipment group, while there was inter-industry trade because exports were far greater than imports from 2001 to 2009, it was realized as intra-industry trade due to an increase in imports in the following years. In 2015, it reached its highest value with 90%.

SITC 8 – Turkey is mostly the exporting country in the miscellaneous manufactured articles group. Generally speaking, there is inter-industry trade.

When Turkey's foreign trade with Bulgaria is examined, it can be seen that, with the exception of SITC 8-Miscellaneous manufactured articles, there is a high intra-industry trade in SITC 5 (Chemical industry products not otherwise specified), SITC 6 (Manufactured goods classified primarily by material), and SITC 7 (Machinery and transport equipment) groups.

Analysis of Turkey's intra-industry trade with the United Kingdom

Given that the UK discarded its EU membership on January 31, 2020, there will be no problem for the UK to take part in the analysis. The UK ranks second after Germany among the countries to which Turkey exports the most in 2020 and ranks tenth among the countries with which it imports the most (TURKSTAT). In addition, the UK and Turkey signed a free trade agreement that will enter into effect on January 1, 2021.

Trade belonging to SITC 5 (Chemical industry products not elsewhere specified) has an inter-industry dimension due to the high import rates. However, it is worth noting that during the studied period, there was an increase in intra-industry trade rates with an increase in exports and a decrease in imports, while intra-industry trade has been called into question in recent years.

Until 2017, SITC 6 (Trade in manufactured goods classified primarily by material) was intra-industry. It is cross-industry in nature since exports have increased much more since 2017.

In SITC 7 (Machinery and transport equipment) group, almost full intra-industry trade was realized, reaching a level of 99% in 2004. As the lowest intra-industry trade rate is 70%, it is assumed that the product group in question has a great importance with regard to intra-industry trade.

In SITC 8 (Miscellaneous manufactured articles) group, since Turkey is mostly the exporting country, intra-industry trade rates are at low levels. For this reason, there is inter-industry trade in this product group.

When Turkey's overall foreign trade with the UK is examined, there is inter-industry trade in SITC 5 (Chemical industry products not otherwise specified) and SITC 8 (Miscellaneous manufactured articles). However, there is an issue related to intra-industry trade in SITC 6-Manufactured goods classified primarily by material and SITC 7 (Machinery and transport equipment group). Especially in the SITC 7 (Machinery and transport equipment group), there is a high rate of intra-industry trade.

Conclusion

Based on the study's findings, a product-country comparison in the manufacturing industry reveals that in SITC 5 (Chemical industry products not otherwise specified) Bulgaria, Poland, and Romania have the highest level of intra-industry trade. Germany, France, the Netherlands, Italy, Spain, Poland, Belgium-Luxembourg, Romania, Bulgaria, and the United Kingdom have the highest level of intra-industry trade in SITC 6 (Manufactured goods classified primarily by material). In SITC 7 (Machinery and transport equipment), Germany, France, Netherlands, Italy, Spain, Poland, Belgium-Luxembourg, Romania, Bulgaria and the UK have the highest level of intra-industry trade. France and Italy have the highest level of intra-industry trade in SITC 8 (Miscellaneous manufactured articles).

The product groups with the highest intra-industry trade values are classified as SITC 6 (Major classes and manufactured goods classified primarily by material), and SITC 7 (Machinery and transport equipment). It is worth noting that intra-industry trade in the SITC 5 (Chemical industry products) and SITC 8 (Miscellaneous manufactured articles) groups has been growing in recent years. Another finding is that intra-industry trade with the United Kingdom, Germany, France, Poland, Bulgaria and Romania reached high levels. Furthermore, it was found that intra-industry trade took place in all major product groups (SITC 5-8) in the manufacturing industry in the trade with Bulgaria.

When Turkey's foreign trade is evaluated on a sectoral basis, it is found that there is high intra-industry trade in product groups with low added value. Turkey, like other developing countries, should attach importance to high-tech goods and encourage exports in these goods. It is noteworthy that developed countries export more technology-based products in the manufacturing industry sector than in other sectors. Increasing technological developments contribute to the country's economy, as they will increase production and competition in all sectors. In terms of technology transfer, the manufacturing industry is thought to be quite effective at the moment. As a result, it is critical that policies that promote production in Turkey's manufacturing industry sector should be implemented.

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