The Analysis of Relationship between Turkey and Italy Foreign Trade within Intra-Industry Trade Theory Scope

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Abstract

The factor endowment theory, which was proposed to remedy the deficiencies of the theory of comparative advantages that is accepted as the base of international trade theories, had started to be inadequate in explaining the causes in the international trade. Therefore, new theories for international trade were proposed since 1960s, and one of those theories –the intra-industry trade theory made significant impacts. The aim of this study is to show if the intra-industry trade between Turkey and European Union exists between Turkey and Italy in specific, or not. Italy-Turkey foreign trade data for the period between 1993 and 2014 will be analyzed and it will be measured using Grubel-Lloyd index if the trade between the two countries is inter-industry or intra-industry. The result to be obtained will enable devising a policy suggestion in regards to the future pathway of the foreign trade between the two countries.

Keywords: Foreign Trade, Intra-Industry Trade, Inter- Industry Trade.

Introduction

Traditional international trade theories explaining the trade of qualitatively different goods between countries have been insufficient in explaining the trade of goods whose volume increased in parallel with the developments in world trade belongs to the same industries. Intra-industry trade (iit) which means the realization of the export and import of similar goods has gained importance with the modern trade theories taking into account the character of labor and technological developments. The causes of countries' intra-industry trade performing are as following: categorical consolidation, border and coastal trade, differences in production time, cogeneration and combined consumption, entrepot trade and re-export trade, the impact of multinational companies, economies of scale and product differentiation resulting from monopolistic competition. Which of these reasons are used by countries to open up intra-industry trade varies depending on their features such as factor endowments, geographical location, seasonal specialties and factor prices.

The aim of this study is to analyze the structure of realized foreign trade between Turkey and Italy which has an intensive volume of foreign trade in the EU member countries and to show changes over time. For this purpose, the level of intra-industry trade between Turkey and Italy was calculated based on Grubel-Lloyd index that is generally accepted in the literature and it was calculated by using TSI's (Turkey Statistical Institute) data which is 3 digits according to third revision of Standard International Trade Classification (SITC) and in the range of 1993-2014. In addition, the actual trade share in the total trade of the industries in two countries is also calculated due to the idea that it could be beneficial for the interpretation of intra-industry trade level.

2. The Development of Intra-IndustryTrade

International trade theories must be tested using the foreign trade data in order to determine compliance with trade between countries (Karluk, 2002:109).

The fundamental theories of international trade which are Smith's theory of absolute advantage, Ricardo's comparative advantage model and Heckscher-Ohlin theories had maintained their importance until the 1970s. However, these theories are usually appropriate for intra-industry trade explaining trade between advanced industrial and underdeveloped agrarian countries (Yüksel and Sarıdoğan, 2011:199).According to intra-industry trade, foreign trade of products having dissimilar nature can be made based on comparative advantage or disadvantage (Küçükahmetoğlu, 2002:35). Leontief (1954) tested Heckscher-Ohlin theory with the 1947 US data in his study and he reached the conclusion that USA that did not overlap with the theory had imported capital-intensive products and had exported labor-intensive products. Although Leontief's study has mostly been criticized methodologically, the study showed that Heckscher-Ohlin theory was found to be appropriate in explaining trade between capital-rich countries with labor-rich ones or inter-industry trade. In parallel with these developments, the new theories and empirical studies developed to explain different aspects of the growing trade between countries with 1960s have led to the emergence of intra-industry trade concept (Altay and Şen, 2009:128).

The foreign trade realizing as both import and export the products and product groups of the same industry in a country is called as intra-industry trade. Intra-industry trade that economies of scale and product differentiation are affective in is seen between industrialized countries which have similar factor endowments and technologies (Seyidoğlu, 2009:112). Significant contributions have been realized in emergence and testing of intra-industry trade by Verdoorn (1960), Balassa (1963) and Grubel (1967). Studies had been done on diversity of choice and economies of scale by Dixit and Stiglitz (1977); on open economy general equilibrium models by Krugman (1979) and Lancaste (1980); on factor endowment differences by Falvey (1981) have contributed to the development of intra-industry trade (Aydin, 2008: 884).

Intra-industry trade was affected by the product differentiation and hence the types of them also require the consideration for the calculation of intra-industry trade: two types of product differentiation which are vertical and horizontal, are mentioned in the literature. Vertical product differentiation is showing differences in terms of quality depending on the factor density of goods. Horizontal product differentiation is being or showing different in terms of factors which are not based on quality such as design, packaging, color, smell and etc (Yılmaz, 2010:243). Although intra-industry trade usually expresses the trade between similar countries in terms of the level of development, considering the vertical and horizontal product differentiation; vertical intra-industry trade is occurred between developing and developed countries while horizontal intra-industry trade is realized among the developed countries. However, the weight of vertical intra-industry trade in trade even between developed countries supports the argument that vertical intra-industry trade is more important than horizontal one (Şimsek, 2005:44).

In case of intra-industry trade, the earnings obtained as a result of trade realizing between countries will be held at a higher level compared to the inter-industry trade. Because, product differentiation and developments in the economy of scale will provide a positive exogeneity on the production by causing lower costs. Thus, intra-industry trade will provide the opportunity to benefit from the enlarged market for economic actors and the total earnings will increase (Krugman and Obstfeld, 1997:140).

3. Literature Review

The studies on this subject are usually intended to determine the level of intra-industry trade in foreign trade that occurred between the EU member countries and Turkey within the customs union and economic developments. Some studies examining the level of intra-industry trade in foreign trade between Turkey and other countries and country groups are described in this section. Kösekahyaoğlu (2001) examined Turkey's intra-industry trade realized with12 EU countries in the period of 1975-1990 and he reached the conclusion that while SITC 2-digit industrial goods of intra-industry trade was 12% in 1975, it raised to 33% in 1990. It was seen in the study that Turkey's intra-industry trade with Greece and Portugal which have similar factor endowments with Turkey was higher than other EU countries. Çepni and Köse (2003), by using the SITC 2-digit foreign trade statistics and the corrected Grubel-Lloyd indices, found that there was an increasing in the share of intra-industry trade in Turkey's foreign trade during the 1988-1998 period and compared to other countries, intra-industry trade between the EU countries and Turkey was higher than others.

Deviren (2004) used the Grubel-Lloyd index in his study, has determined that intra-industry trade between the EU countries and Turkey had remained below 0.50 index value for the 1993-2003 years and hence the foreign trade between EU countries and Turkey showed the structure of the inter-industry trade. In his work, Bilici (2007) examined the intra-industry trade between Turkey and the European Union for the period of 1980-2005; calculated the standard Grubel-Lloyd index by using the 3-digit trade data classified according to the SITC classification. It has been observed that the share of intra-industry trade in total foreign trade of Turkey has increased over the years.

Başkol (2009) analyzed the share of intra-industry trade in Turkey's foreign trade by using the Grubel-Lloyd index between 1969 and 2009 with foreign trade data at the SITC 3-digit level. In the application part of the study, the index value is also calculated as 2 digits and the larger index values have been reached because of the calculation in product groups aggregated at high level according to the 3-digit index. Whilst the intra-industry trade is in the foreground in the processed goods, machinery and transportation vehicles sectors, its share in the classes of chemicals and various manufactured goods is low. Altay and Şen (2009) calculated, only for industrial products, the performance of Turkey's intra-industry trade with 15 EU member countries between the years of 1995-2007 by using the Grubel-Lloyd index at SITC 2-digit level. According to the results, Turkey conducts intensive intra-industry trade with 4 in 13 labor-intensive industries; 3 in 9 capital-intensive industries; 2 in 7 easily imitated research-faceted industries; 2 in 9 hardly imitated research-faceted industries within the selected EU member countries.

Çalışkan (2010) measured the share of intra-industry trade with the EU and world in Turkey's trade between 1990 and 2007. As a result of measurements; it is found, according to Grubel-Lloyd index at the level of 3 digits, that the ratio of intra-industry trade in Turkey-EU trade had reached 41% level in 2007. Yurttançıkmaz (2013), by using the Grubel-Lloyd index, studied the structure of intra-industry trade between Turkey and 27 EU member countries at SITC 1-digit level for the period of 1995-2009. When the results are evaluated in general, while intra-industry trade ratio have rose in many products, its rates have declined for livestock and foodstuffs; raw materials and mineral fuels, excluding fuel; oils and related substances in the period under review.

The effects of customs union on foreign trade between Turkey and 15 EU member countries for the period of 1990-2008 have been examined at SITC 1-digit level using Brulhart's (1995) marginal intra-industry trade index and the Grubel-Lloyd intra-industry trade by Yergin et al. (2014). For agricultural and raw products, marginal intra-industry trade was found higher than intra-industry trade ratio. On the other hand, in the industrial goods, there was no significant change in the rate of marginal intra-industry trade and intra-industry trade. Can and Mercan (2014) calculated the development of the level of Turkey's intra-industry trade in the high-tech product groups with Israel between the years 2000-2012 by using the Grubel-Lloyd index at SITC 3-digit level. The degree of intra-industry trade partnership of 38 product groups in the high-tech industry was calculated as points and Israel was classified for Turkey as high level partner of intra-industry trade in 7 product groups while it is poor level partner of intra-industry trade in 16 product groups.

4. The Calculation of theIntra-Industry Levels in Turkey and ItalyForeignTrade

The euro-based foreign trade data taken from TSI data system and classified according to SITC Rev. 3 at the 3-digit level for the years of 1993-2013 is used in the calculation of the intra-industry trade levels of foreign trade realized between Turkey and Italy. Grubel and Lloyd index which has frequently been used in the literature was used for the calculation of intra-industry trade level in foreign trade between two countries. According to the Grubel and Lloyd (1975) index, the level of intra-industry trade is calculated in two steps: 1) the value of inter-industry trade is removed from the total trade conducted by the country 2) calculating the ratio of the result of first step in the total trade conducted by the country [intra-industry trade = (total trade of the country – inter industry trade) / total trade]. Grubel and Lloyd index can also be calculated by the following two formulas.

$$IIT_{GL}^{iJ} = \frac{\left[\left(X_{iJ} + M_{iJ}\right) - \left|X_{iJ} - M_{iJ}\right|\right]}{\left(X_{iJ} + M_{iJ}\right)}$$

$$IIT_{GL}^{iJ} = 1 - \frac{\left|X_{iJ} - M_{iJ}\right|}{\left(X_{iJ} + M_{iJ}\right)}$$

The explanations of the notations used in the formulas are as follows:

IIT_{GL}^{iJ} = the percentage share of intra-industry trade in the product group of "j" of country "i", in total trade realized for the product "j"

X_{iJ} = the export realized in the industry of product "j"

M_{iJ} = the import realized in the industry of product "j"

For product, product group or industry of "j" in country "i": If there is not the realization of trade or there is only export or import, Grubel Lloyd Index takes the value of "0"; If the actual value of exports and imports is equal to each other, Grubel Lloyd Index takes the value of "1". If the index value is closer to "1", it means an increased share of intra-industry trade in total trade but if it is closer to "0", then it means that the share of intra-industry trade in total trade decreases. To this end, the intra-industry trade levels of Italy-Turkey foreign trade was calculated by using Grubel Lloyd Index and the reached index values were reported as percentages.

According to the SITC classification used in the calculation of intra-industry trade levels, the determination of the share of the industries in total import and export is useful in interpreting the calculated intra-industry trade results (Çalışkan, 2010: 16). For this purpose, the share of the industries that are subject to trade between Turkey and Italy in total exports and imports are projected in Figure 1 and 2 based on certain years.

As seen in Figure 1, the most significant proportional increase in exports during the period was realized machinery and transportation vehicles; and manufactured goods classified chiefly by material had proportionally decreased between 2000 and 2006 but it became closer, through an increase in the later years, to the share of the machinery and transportation vehicles in the total exports. A proportional reduction in the industries of food and live animals; crude materials, inedible except fuels with mineral fuels, lubricants and related materials has been realized in the period. There have not been significant proportional changes in the period for following industries: beverages and tobacco, Animal and vegetable oils, fats and waxes, chemicals and related products, n.e.s, miscellaneous manufactured articles.

When proportional trend of imports by goods groups examined; an increase in mineral fuels, lubricants and related materials; an decrease in the manufactured goods classified chiefly by material with machinery and transportation equipments were observed and there was no significant change in other product groups. As Turkey's exports to Italy, machinery and transportation vehicles with manufactured goods classified chiefly by material also constitute a significant share of imports (more than half of foreign trade volume).

Underlying 259 different product codes between Turkey and Italy were calculated on an annual basis as 3-digit for the years of 1993-2014. The calculated index values belonging to the product codes are presented in Table 1 by means based on certain years fewer than 10 different definitions that are appropriate to SITC. If the values in definitions are higher than the average of 1993-2014, it is shown by upward green arrow; if they are lower than the average of 1993-2014, it is shown by downward red arrow and in case of taking a close value; it is shown by the yellow arrow.

0- The level of intra-industry trade in Food and live animals has usually remained low during the period. The average level of intra-industry trade has exceeded 50% at only 4 product groups (017-prepared or preserved meat, n.e.s.,061- sugars, molasses and honey, 062-sugar confectionery, 098-edible products and preparations n.e.s.) in the intra-industry trade level of calculated 34 product groups in this industry.

1- The level of intra-industry trade in the beverages and tobacco industry has fluctuated and it was realized at low levels in the last decade. The average level of intra-industry trade of all four product groups calculated in this industry has remained below 50%.

2- In the industry of crude materials, inedible, except fuels significant change in the level of intra-industry trade has not been seen and it remained at low levels throughout the period. The average level of intra-industry trade has exceeded 50% at only 2 product groups (266-synthetic fibres suitable for spinning, 268-wool (incl wool tops), other animal hair)in the intra-industry trade level of calculated 36 product groups in this industry.

3- The level of intra-industry trade in mineral fuels, lubricants and related materials has been on a declining trend during the period and has lower values. The average level of intra-industry trade has exceeded 50% at only 1 product groups (334-petroleum products, refined) in the intra-industry trade level of calculated 11 product groups in this industry.

4- The level of intra-industry trade in the animal and vegetable fats and oils, waxes industry has fluctuated and it has low values throughout the period. The average level of intra-industry trade of all four product groups calculated in this industry has remained below 50%.
5- When excluding the crisis years after 2000, the intra-industry trade level in chemical and related products, n.e.s. tended to increase. The average level of intra-industry trade has exceeded 50% at only 3 product groups (511-hydrocarbons, nes, and their derivates, 522-chemical elements, inorganic oxides, etc, 562-fertilizers excl. those of group 272) in the intra-industry trade level of calculated 33 product groups in this industry. While the level of intra-industry trade in this industry has exceeded 50% in 6 product groups at beginning of the period (1994), this figure has increased to 10 in 2014 (end of term).
6- manufactured goods classified chiefly by material, the level of intra-industry trade has been in an upward trend during the period except the global crisis year. The average level of intra-industry trade has exceeded 50% for 20 product groups (621-materials of rubber, 634-veneers, plywood, particle board etc, 651-textile yarn, 652-cotton fabrics, woven, excl. spec. fabr., 653-fabrics, woven, of man-made textile, 654-other textile fabrics, woven, 656- tulles, lace, embroidery, ribbonsetc.) , 661-lime, cementand construction materials, 662-clay and refractory construction mtrls, 664-glass, 665- glassware, 666-pottery, 667-pearls, preciousand semi-prec. stones, 673- flat-rolledprod, of iron etc, not clad, 676- iron and steelbars, rods, angles, etc., 679-tubes, pipes, fittings, of iron or steel, 682-copper., 684-aluminium., 697- household equipment of basemetal, n.e.s., 699-manufactures of base metal, n.e.s.) in the intra-industry trade level of calculated 52 product groups in this industry.
7- When excluding the crisis year, the intra-industry trade level in the products of machinery and transportation vehicles has been on an upward trend since the beginning of the period. The average level of intra-industry trade has exceeded 50% for 6 product groups (723-civil engineering equipment,773- electricity distributing equipment, n.e.s, 775-household type equipment, n.e.s., 784-motor vehicle parts andaccessor. n.e.s., 785-motorcycles and cycles, invalid carriages, 793-ships, boats and floating structures) in the intra-industry trade level of calculated 50 product groups in this industry. While the level of intra-industry trade in this industry has exceeded 50% for 1 product group at beginning of the period (1994), this figure has increased to 11 in 2014 (end of term).
8- The level of intra-industry trade in miscellaneous manufactured articles has been in a rising trend after 1998. The average level of intra-industry trade has exceeded 50% for 8 product groups(812-sanitary, plumbing and heating fixtures, 831- travel goods,handbags and sim.containers, 841- mens or boys clothing, not knitted etc, 842-womens or girls clothing, not knitted, 846- clothing accessories of textile fabrics, 848-headgear, non-textile clothing access., 891-arms and ammunition, 897-jewellery, goldsmiths wares, etc.) in the intra-industry trade level of calculated 31 product groups in this industry.
9- The level of intra-industry trade of the product group that are not classified items in SITC has shown an increasing trend after 2005.The average level of intra-industry trade of all four product groups calculated in this industry has remained below 50%.

Except 2010 crisis year, the average level of intra-industry trade calculated in Turkey-Italy foreign trade tends to increase as of years. Whilst the average intra-industry trade levels in 1993 was 15%, it increased to 25% in 2009 which is the last year before the global crisis and it has not been seen a significant decline in the intervening years. In the post-crisis period, the average intra-industry trade levels have started to rise again and it reached the 29% level in 2014.The industries providing the highest level of contribution to the average intra-industry trade level are 5-6-7-8 industries constituting the major portion of the foreign trade volume of Turkey-Italy (the level of intra-industry trade of the product groups within this industry group is presented as an attachment at the end of the study).While this industry group is classified as industrial products, the intra-industry trade level of industry group that are composed of 1-2-3-4 primary products took place in the lower level.

Customs union agreement which is signed between Turkey and the EU in 1996 has been effective in increasing the level of intra-industry trade in foreign trade between Turkey and Italy, especially in industrial goods. Because customs duties and quantitative restrictions on trade in industrial goods between the EU and Turkey has been removed; increasing Turkey's exports to Italy in automotive, textile, iron and steel sectors has been effective in reducing the foreign trade deficit in this sector and in increasing the level of intra-industry trade.

In the period after the Customs Union, although it is reached the conclusion that overall level of intra-industry trade in industrial products has increased, the average level of intra-industry trade by years could not rise above 50% and the level of intra-industry trade between Turkey and Italy has not been realized at a sufficient level. In order to develop the foreign trade between Turkey and Italy, Turkey needs to move away from its complementary position through producing high value-added technology products.

5. Conclusion

Intra-industry trade remains important in measuring the development of today's transnational trade. Intra-industry trade structure should be improved by accurate analysis of trade policy to increase the prosperity and development of the country via earnings from foreign trade. If the country's foreign trade is mainly in the inter-industry trade structure that have more comparative advantages, a convergence to the intra-industry trade structure providing access to more goods for consumer, in which the lower cost for manufactures should be targeted.

In the study, the level of intra-industry trade in foreign trade between Turkey and Italy was calculated for the years 1993-2014 by using Grubel Lloyd Index and it has been found that intra-industry is mostly high in the following product groups: the processed goods are mainly divided into classes, various manufactured goods and machinery and transportation vehicles. Calculations have shown in general that except for the crisis years, the level of intra-industry has been on an upward trend in the industrial products that have significant share in foreign trade volume between the two countries with also the effect of the customs union but it could not reach the desired level. The determination of the industries that have lower level of intra-industry trade as sub-sectors, and by raising the level of intra-industry trade in these industries, will be effective to be stable foreign trade of Turkey-Italy with industry-oriented foreign trade policies.

Due to an excessive contribution of industrial products to intra-industry trade compared to the primary products, increased production that is as a result of increasing the R & D expenditure for the production of high-tech industrial products and the incentives to be given to the production of differentiated goods will allow the increase of intra-industry trade level between the two countries. Raising the levels of intra-industry trade in Turkey's trade with Italy will also contribute to rise in the levels of intra-industry trade between Turkey and the EU and foreign trade gain will increase through increased competitiveness of the country.

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Figure 1:Turkey -Italy Export Analysis by Commodity Group

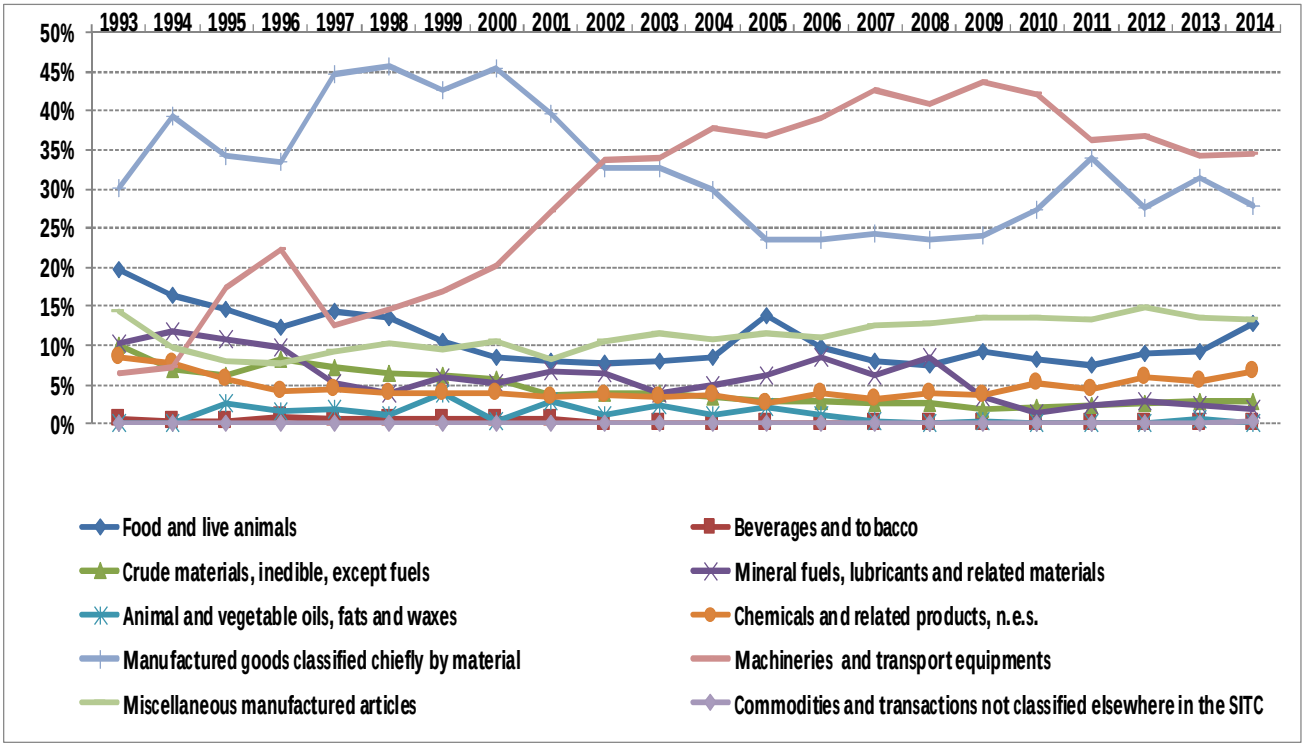

Figure 2:Turkey -Italy Import Analysis by Commodity Group

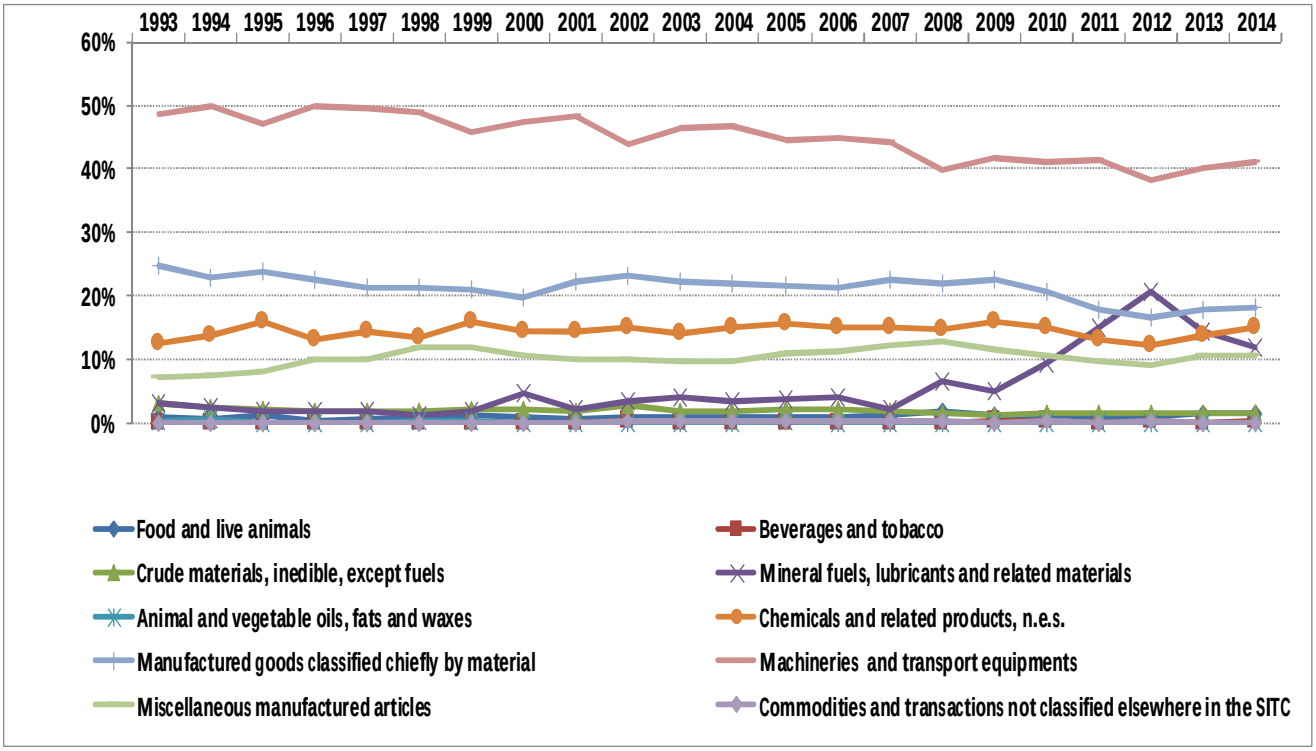

Table 1: TurkeyItalyForeignTrade 1993-2014 IIT Levels

Description	1993	1995	2000	2005	2010	2011	2012	2013	2014	1993-2014
0-Food and live animals	⇩ 8.01	⇩ 9.12	⇧ 19.50	⇩ 8.50	⇨ 12.05	⇩ 11.50	⇨ 13.31	⇩ 11.00	⇧ 16.15	12.37
1- Beverages and tobacco	⇩ 0.00	⇩ 0.51	⇧ 24.67	⇧ 26.47	⇨ 8.93	⇩ 6.35	⇩ 1.48	⇩ 1.98	⇩ 4.27	15.50
2-Crude materials, inedible, except fuels	⇩ 14.16	⇨ 17.70	⇧ 21.23	⇩ 16.02	⇨ 17.77	⇧ 20.92	⇨ 17.93	⇨ 16.81	⇩ 16.16	17.16
3-Mineral fuels, lubricants and related materials	⇧ 20.71	⇨ 9.28	⇨ 9.19	⇨ 8.42	⇩ 1.46	⇩ 1.62	⇩ 1.94	⇩ 2.17	⇩ 3.85	9.04
4-Animal and vegetable oils, fats and waxes	⇨ 15.89	⇨ 11.71	⇧ 24.92	⇩ 6.99	⇩ 1.67	⇨ 11.53	⇨ 14.22	⇧ 26.38	⇧ 25.68	13.24
5-Chemicals and related products, n.e.s.	⇩ 18.54	⇩ 17.77	⇩ 12.86	⇨ 22.04	⇩ 15.31	⇧ 30.15	⇧ 29.81	⇧ 26.57	⇧ 31.91	20.69
6-Manufactured goods classified chiefly by material	⇩ 26.32	⇨ 36.03	⇨ 34.45	⇧ 41.97	⇩ 21.72	⇧ 43.60	⇧ 41.31	⇧ 42.75	⇧ 48.56	37.56
7-Machineries and transport eq	⇩ 7.57	⇩ 12.78	⇨ 20.88	⇧ 25.98	⇨ 17.97	⇧ 26.71	⇧ 23.37	⇧ 26.22	⇧ 28.90	22.15
8-Miscellaneous manufactured	⇩ 21.96	⇩ 19.07	⇨ 26.41	⇨ 29.70	⇨ 29.44	⇨ 28.16	⇨ 32.77	⇨ 31.70	⇧ 39.89	27.49
9-Commodities and transactions not classified	⇩ 0.00	⇩ 0.00	⇩ 0.00	⇩ 1.18	⇧ 20.87	⇨ 17.54	⇨ 18.79	⇧ 23.64	⇧ 31.14	9.12
0-9 average value	15.88	18.48	22.41	24.04	17.90	26.15	25.38	25.50	29.64	22.56

Source: Retrievedfrom TUİK

Attachment 1:Chemicalandrelatedproducts, n.e.s IIT Levels

	1993	1995	2000	2005	2010	2011	2012	2013	2014	1993-2014
511 hydrocarbons, nes, and their derivates	✓ 60.21	✓ 59.61	! 33.09	✓ 61.63	✗ 21.54	✓ 56.15	✗ 22.87	✗ 12.44	! 34.60	57.86
512 alcohols,phenols etc and their derivates	✗ 0.00	✓ 56.59	✗ 19.42	! 34.30	✗ 0.00	! 48.37	✓ 80.14	✓ 73.81	✗ 0.02	34.41
513 carboxylic acids etc and their derivates	! 30.40	✗ 14.95	! 34.55	✗ 0.95	✗ 18.75	✗ 12.01	! 28.34	! 37.77	✓ 51.44	24.05
514 nitrogen function compounds	! 27.80	✗ 21.12	✗ 12.89	✗ 8.27	✗ 0.00	✓ 82.08	✓ 79.06	✓ 70.71	✓ 59.01	31.38
515 organo-inorganic compounds, etc.	✗ 0.00	✗ 0.00	✗ 2.49	✗ 1.39	✗ 2.15	✗ 0.02	✗ 1.22	✗ 5.44	✗ 4.53	2.35
516 other organic chemicals	✗ 15.57	! 28.41	✗ 18.71	! 48.99	✓ 60.13	! 41.58	! 43.84	! 44.93	! 41.87	31.85
522 chemical elements, inorganic oxides, etc	✗ 23.12	! 40.05	✓ 91.56	! 47.78	✗ 0.00	! 45.36	! 41.94	! 34.16	! 35.64	61.51
523 metallic salts and peroxysalts	✓ 75.09	✓ 94.30	✗ 9.38	✓ 64.61	! 43.42	! 40.37	! 37.62	! 39.21	! 45.30	41.50
524 other inorganic chemicals of inorg acids	✓ 98.89	✓ 69.75	✗ 0.02	! 46.28	! 30.76	! 28.82	! 46.92	✓ 60.66	! 39.19	30.17
525 radio-active and associated materials	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✓ 71.63	✗ 23.75	✗ 0.68	✓ 78.37	10.00
531 synthetic dyes and colour lakes	✗ 0.42	✗ 1.78	✗ 1.14	✗ 13.15	✗ 12.10	✗ 17.39	✗ 20.61	✗ 21.88	✗ 18.59	7.99
532 dyeing and tanning extr;synth.tann.mtrls	✗ 24.19	! 45.61	! 43.11	! 34.92	! 44.95	✓ 51.95	! 43.67	! 42.60	✓ 55.91	35.04
533 pigments,paints,varnishes and rel.mtrls	✗ 4.59	✗ 0.70	✗ 4.22	✗ 6.49	✗ 0.00	✗ 5.92	✗ 5.99	✗ 7.24	✗ 8.87	5.53
541 med.and pharm.products(excl medicaments)	✗ 7.38	✗ 3.92	✗ 10.27	✗ 11.99	! 26.20	✗ 6.63	✗ 6.45	✗ 11.16	✗ 4.90	8.19
542 medicaments(incl veterinary medicaments)	✗ 4.08	✗ 0.60	✗ 1.91	✗ 0.09	✗ 0.00	✗ 0.84	✗ 0.47	✗ 0.30	✗ 1.19	0.97
551 essent. oils, perfume and flavour matrl.	✗ 0.00	✗ 0.10	✗ 7.55	✗ 1.05	✗ 0.00	✗ 4.63	✗ 2.57	✗ 2.54	✗ 2.02	2.86
553 perfumery, cosmetics,toilet preparations	✗ 0.04	✗ 0.02	✗ 1.21	✗ 6.11	! 31.74	✗ 21.86	✗ 15.18	✗ 17.19	✗ 16.16	11.71
554 soap, cleans. and polishing preparations	✗ 5.11	✗ 2.63	✗ 0.54	✗ 4.62	✗ 4.31	✗ 22.05	! 32.59	! 34.19	! 35.86	8.07
562 fertilizers (excl those of group 272)	✓ 67.33	✓ 66.79	✗ 0.00	✓ 79.11	✗ 0.00	✓ 75.15	✓ 80.01	✗ 10.77	✓ 76.11	55.41
571 polymers of ethylene	✓ 69.00	✗ 8.76	✗ 14.59	! 35.39	! 41.63	! 42.11	✓ 54.23	! 45.07	! 42.91	36.11
572 polymers of styrene	✗ 0.00	✗ 0.00	✗ 1.73	✗ 1.09	✗ 0.00	✗ 1.88	✗ 0.00	✗ 1.07	✗ 2.32	0.70
573 polymers of halogenated olefins	✓ 62.56	✗ 22.57	✗ 7.83	✗ 0.39	✗ 2.02	✗ 2.87	✗ 0.25	✗ 1.41	✗ 1.37	7.41
574 polyethers,polycarbonates,polyesters etc	✗ 21.95	✗ 16.92	✗ 22.87	! 41.40	! 45.64	! 43.49	! 37.70	! 32.43	✓ 59.34	35.00
575 other plastics, in primary forms	✗ 4.00	✗ 4.11	✗ 7.48	✗ 15.72	✗ 0.00	✗ 13.97	✗ 12.57	✗ 15.36	✗ 14.95	12.19
579 waste, parings and scrap, of plastics	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✓ 63.94	✓ 85.07	! 49.74	✓ 87.02	20.35
581 tubes, pipes and hoses	✗ 3.42	✗ 0.02	! 42.75	✓ 64.89	✓ 56.03	✓ 67.81	✓ 68.65	✓ 89.80	✓ 93.48	42.16
582 plates, sheets, film, foil and strip	✗ 3.64	✗ 1.24	! 26.06	! 41.06	✓ 50.80	✓ 58.47	✓ 52.20	✓ 64.14	✓ 74.34	32.41
583 monofilament,rod,sticks,profile shapes	✗ 0.00	✗ 0.38	✗ 0.00	! 34.50	✗ 0.00	✓ 59.53	! 47.84	! 39.58	✓ 54.54	19.82
591 disinfectants, insecticides, etc.	✗ 0.00	✗ 0.00	✗ 0.52	✗ 0.99	✗ 0.19	✗ 0.61	✗ 0.60	✗ 1.64	✗ 0.61	1.59
592 starches, inulin, gluten, etc.	✗ 1.24	✗ 20.26	✗ 1.02	✗ 13.06	✗ 6.48	✗ 2.68	✗ 7.32	✗ 4.05	✗ 5.95	7.49
593 explosives and pyrotechnic products	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.14	0.01
597 prep.addit.for min.oils; lubric prep etc	✗ 0.09	✗ 0.73	✗ 5.97	✗ 2.85	✗ 0.00	✗ 1.92	✗ 1.32	✗ 0.83	✗ 1.48	3.21
598 miscellaneous chemi	✗ 1.65	✗ 4.46	✗ 1.44	✗ 4.29	✗ 6.25	✗ 2.85	✗ 2.88	✗ 3.98	✗ 4.85	3.35

Attachment 2:Manufacturedgoodsclassifiedchieflybymaterial IIT Levels

611 leather	✗	1.08	✗	3.48	✗	18.00	✗	11.80	✗	0.00	✗	13.90	!	25.60	!	28.33	✓	59.59	15.47
612 manufactures of leather, n.e.s.	✗	0.25	✗	5.18	✗	2.63	✗	15.30	✗	2.22	✗	7.31	✗	14.93	✗	7.57	✗	19.20	8.13
613 furskins, tanned or dressed	✗	0.66	!	27.07	✗	2.28	✗	16.97	✗	0.00	✗	24.42	✗	24.04	✓	61.45	✓	60.69	26.82
621 materials of rubber	!	36.46	✓	53.20	✓	64.06	✓	66.52	✓	79.12	✓	86.16	✓	91.44	✓	85.85	✓	90.50	68.19
625 rubber tyres,interchang.tyre threads etc	!	47.34	!	44.07	✓	56.90	!	44.63	✗	0.00	!	49.68	✓	64.29	✓	72.21	✓	71.63	47.67
629 articles of rubber, n.e.s.	✗	4.26	✗	21.81	!	39.02	✗	18.37	✗	0.00	!	37.89	!	36.81	!	47.08	✓	61.98	31.03
633 cork manufactures	✗	0.00	✗	0.00	✗	0.00	✗	0.00	✗	0.00	✗	0.00	✗	2.07	✗	0.53	!	38.66	2.12
634 veneers, plywood, particle board etc	✗	8.15	✓	99.90	!	31.19	✓	55.03	✓	68.06	!	46.43	!	43.25	!	30.48	✓	61.72	65.35
635 wood manufactures, n.e.s.	✗	5.46	✗	2.82	!	26.11	✗	22.60	✗	0.00	✗	16.25	✗	15.58	✗	12.57	✗	17.22	26.71
641 paper and paperboard	✗	12.29	✓	50.42	✗	2.07	✗	1.77	✗	11.27	✗	20.66	✗	6.86	✗	6.70	✗	5.99	11.74
642 articles of paper, pulp, paperboard	✗	5.97	✗	3.67	✗	10.86	✓	53.59	!	42.00	!	46.80	!	37.80	!	40.95	!	46.54	35.93
651 textile yarn	✓	82.84	✓	73.98	✓	70.50	✓	86.51	✗	0.00	✓	76.59	✓	85.68	✓	77.05	✓	68.52	77.89
652 cotton fabrics, woven, excl. spec. fabr.	!	34.21	!	36.39	✓	80.78	✓	87.99	✓	87.07	✓	85.43	✓	89.00	✓	82.77	✓	78.13	75.76
653 fabrics,woven, of man-made textile mtrls	✓	66.21	✓	83.52	✓	83.32	✓	92.09	✓	94.82	✓	99.63	✓	87.39	✓	83.21	✓	94.13	83.28
654 other textile fabrics, woven	!	25.37	✓	55.86	!	30.02	✗	13.18	✗	0.00	✗	13.58	✗	11.88	✗	11.02	✗	10.45	21.58
655 knitted or crocheted fabrics etc	✓	86.28	✓	64.20	✓	53.06	!	37.92	!	31.24	!	32.80	✗	21.76	✗	17.34	✗	17.44	45.07
656 tulles, lace, embroidery, ribbons etc	✓	52.66	✓	81.25	✓	58.95	✓	74.02	✗	0.00	✓	87.35	✓	79.53	✓	78.17	✓	76.66	68.41
657 special yarns, spec. textile fabrics etc	!	42.24	!	45.25	✗	19.59	!	36.21	✗	0.00	!	41.88	!	34.47	!	36.47	!	46.14	32.19
658 made-up articles of textile mtrls, n.e.s	!	49.67	✓	53.69	✗	19.19	✗	7.87	✗	12.04	✗	13.81	✗	12.15	✗	11.37	✗	11.40	17.66
659 floor coverings, etc.	✗	15.74	✗	16.19	!	26.69	✗	9.32	✓	90.94	✓	85.58	✓	76.61	✓	67.57	✓	58.56	39.08
661 lime, cement and construction materials	✓	66.77	✓	65.84	✓	91.38	!	28.76	!	41.39	✓	58.87	✓	73.61	✓	89.80	✓	99.27	51.06
662 clay and refractory construction mtrls	✗	16.26	!	27.98	✓	55.38	✓	94.92	✗	0.00	!	26.31	!	41.05	✓	52.49	!	42.76	49.55
663 mineral manufactures, n.e.s.	✗	0.80	✗	1.96	✗	7.69	✗	13.36	✗	0.00	✗	19.45	!	31.30	!	39.79	!	45.74	12.54
664 glass	✓	87.06	✓	80.89	✓	77.03	✓	93.87	✓	97.97	✓	92.62	✓	89.46	✓	98.10	✓	66.44	84.42
665 glassware	✓	79.01	✓	72.80	✓	67.84	✓	81.37	✗	0.00	✓	74.79	✓	80.82	✓	73.48	✓	79.77	66.76
666 pottery	✓	72.01	✓	73.66	✓	86.67	!	47.68	✗	20.71	!	36.91	!	27.73	!	25.60	!	31.54	50.49
667 pearls, precious and semi-prec. stones	✗	0.00	✗	0.99	✗	5.82	✗	3.46	✗	0.00	✗	0.44	✗	2.37	✗	4.81	✗	7.67	15.73
671 pig iron, sponge iron, etc; ferro-alloys	✓	98.91	✓	67.09	!	25.47	✓	96.29	✗	10.09	✗	7.39	✗	9.70	✗	8.73	✗	11.66	40.26
672 ingots and oth prim.forms, semi-fin.prod	✗	0.00	✗	7.19	✓	58.59	✓	62.33	✓	92.76	✓	67.93	✓	76.14	✓	69.78	✓	89.00	47.25
673 flat-rolled prod, of iron etc, not clad	✗	8.39	✓	82.66	✗	12.85	✓	64.01	✗	0.00	✓	58.57	✓	73.06	✓	76.32	✓	76.31	55.11
674 flat-rolled products of iron etc, clad	✗	0.00	✗	0.00	✗	22.59	!	48.79	✗	0.00	!	44.58	✗	19.73	✗	21.18	✗	5.60	19.24
675 flat-rolled products of alloy steel	✗	0.05	✗	0.00	✗	0.53	✓	54.84	✗	0.00	✗	1.60	✗	2.13	✗	1.71	!	31.20	8.25
676 iron and steel bars, rods, angles, etc.	✗	0.02	✓	50.67	✓	65.54	✓	73.24	✓	88.73	✓	99.54	✓	57.73	✓	72.55	✓	86.41	60.05
677 rails and railway track material	✗	0.00	✗	0.00	✗	0.00	✗	0.44	✗	0.02	✗	11.71	✗	1.48	✗	2.20	✗	4.53	4.64
678 wire of iron or steel	✗	9.94	✗	18.88	✗	9.49	!	28.53	✗	0.00	!	42.66	✗	7.77	!	34.29	✓	81.64	23.30
679 tubes, pipes, fittings, of iron or steel	✓	67.19	✓	86.00	✓	99.64	✓	56.71	✗	0.00	✓	73.32	!	42.94	!	36.99	✓	49.98	68.74
681 silver and platinum group metals	✗	0.00	✗	0.00	✗	9.86	✗	0.00	✗	0.00	✓	84.88	✗	0.00	✓	96.52	✓	76.40	19.78
682 copper	✓	53.08	!	45.91	✓	62.06	✓	81.06	!	34.34	!	35.56	!	44.45	!	40.34	!	44.25	54.29
683 nickel	✗	0.00	✗	0.00	✗	0.45	✗	5.73	✗	0.00	✗	0.00	✗	0.11	✗	0.00	✗	20.23	1.74
684 aluminium	✓	58.77	✓	92.91	✓	68.08	✓	71.26	✗	0.00	✓	53.10	✓	73.42	✓	86.29	✓	84.79	74.05
685 lead	✗	0.00	✗	0.00	✗	0.08	!	30.69	✗	0.00	✗	15.33	✓	51.87	✓	89.86	!	46.13	21.90
686 zinc	✗	0.00	✗	0.00	✗	0.00	✗	0.00	✗	4.12	✓	88.63	✓	76.42	✗	2.86	!	29.01	13.56
687 tin	✗	2.39	✗	0.00	✗	0.00	✗	0.00	✗	0.00	✗	3.91	✗	0.00	✗	0.00	✗	0.00	0.30
689 miscellaneous non-ferrous base metals	✗	0.00	!	35.00	✗	0.00	✓	95.10	✗	0.00	✓	72.75	✓	92.20	✓	52.11	✓	73.55	35.31
691 metal structures and parts of structures	✗	5.38	✗	2.15	✓	54.09	!	29.05	✗	0.00	!	38.00	!	36.73	!	31.03	!	41.81	27.19
692 metal containers for storage or transp.	✗	0.25	✗	0.66	!	30.24	✓	61.38	!	32.34	!	37.92	!	36.67	✗	22.96	✓	63.03	36.48
693 wire products and fencing grills	✓	64.68	✓	99.70	!	27.99	!	33.59	✗	20.84	✗	21.97	✗	19.63	!	29.48	!	27.16	38.65
694 nails, screws, nuts, bolts, rivets etc	✗	0.53	✗	2.29	✗	14.39	✗	19.83	✗	0.00	✗	24.84	!	34.56	!	39.02	!	40.82	17.75
695 tools for use in the hand or in machines	✗	9.89	✗	16.41	✗	7.32	✗	9.47	✗	9.36	✗	9.61	✗	8.80	✗	13.02	✗	14.79	12.64
696 cutlery	✗	0.00	✗	0.44	✗	2.44	✗	18.63	✗	6.77	✗	19.22	✗	16.26	✗	7.04	✗	17.77	8.67
697 household equipment of base metal,n.e.s.	✓	74.64	✓	66.08	✓	67.01	✓	72.90	✓	92.90	✓	94.28	✓	99.56	✓	82.81	✓	80.18	77.86
699 manufactures of base metal, n.e.s.	✗	15.55	✓	53.65	✓	65.67	✓	53.50	✓	58.10	✓	64.28	✓	59.46	✓	63.11	✓	60.52	55.33

Attachment3:Machineriesand transport equipments IIT Levels

	1993	1995	2000	2005	2010	2011	2012	2013	2014	1993-2014
711 vapour generating boilers, aux.plant etc	✗ 0.00	✗ 0.00	✓ 60.08	✓ 63.19	✓ 86.06	✓ 74.15	✗ 8.85	✗ 3.37	? 32.76	24.89
712 vapour turbines	✗ 0.00	✗ 0.00	✗ 3.00	✗ 0.45	✗ 0.00	? 38.97	✗ 0.27	✗ 0.00	✗ 0.01	2.06
713 internal combustion piston engines	✗ 1.73	✗ 8.85	✗ 12.41	? 49.66	✗ 0.00	? 31.69	? 29.62	? 30.98	? 43.76	32.05
714 reaction engines, gas turbines n.e.s	✗ 7.80	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.00	✗ 0.25	✗ 0.79	✗ 0.30	10.93
716 rotating electric plant	✗ 11.93	? 33.32	✗ 16.25	✗ 23.99	✗ 0.00	✗ 13.48	✗ 11.84	✗ 13.34	✗ 13.97	18.23
718 other power generating machinery	✗ 0.01	✗ 5.81	✗ 1.07	✗ 21.30	✗ 0.00	✗ 18.78	? 35.83	✗ 6.27	✗ 4.30	8.99
721 agricultural machinery, excl. tractors	✗ 2.63	✗ 5.16	✗ 2.56	✗ 9.53	✗ 0.00	? 32.50	? 30.70	? 35.38	? 41.97	13.75
722 tractors,excl tractors for semi-trailers	✗ 0.00	✗ 0.33	✗ 0.19	✗ 5.58	✗ 0.00	? 25.72	✓ 66.43	✓ 90.63	✓ 89.27	24.80
723 civil engineering equipment	✗ 16.96	? 44.74	✓ 75.68	✓ 56.00	✗ 0.00	✓ 73.22	? 34.60	? 38.85	✓ 51.76	55.04
724 textile and leather machinery, n.e.s.	✗ 0.23	✗ 1.20	✗ 1.72	✗ 1.90	✗ 0.00	✗ 8.10	✗ 6.17	✗ 8.29	✗ 8.08	3.71
725 paper and pulp mill machinery	✗ 0.72	✗ 0.00	✗ 6.06	✗ 0.44	✗ 0.00	✗ 2.88	✗ 1.03	✗ 2.31	✗ 0.95	3.95
726 printing and bookbinding machinery	✗ 0.00	✗ 0.17	✗ 3.22	✗ 3.00	✗ 0.00	✗ 1.10	✗ 1.98	✗ 1.92	✗ 1.23	1.78
727 food processing machines (excl domestic)	✗ 5.65	✗ 11.78	✗ 9.64	✗ 22.99	✗ 0.00	? 31.42	✗ 13.41	✗ 6.55	✗ 8.00	17.48
728 other specialized machinery	✗ 0.56	✗ 1.04	✗ 2.54	✗ 7.38	✗ 0.00	✗ 4.62	✗ 7.71	✗ 7.53	✗ 8.98	4.10
731 machine-tools for removing metal etc	✗ 0.54	✗ 0.00	✗ 4.21	✓ 64.75	✗ 5.81	✗ 5.47	✗ 2.95	✗ 3.02	✗ 5.33	8.41
733 machine-tools for working metal	✗ 0.00	✗ 6.90	? 32.02	✗ 17.42	✗ 0.00	✗ 10.10	✗ 2.81	✗ 6.61	✗ 9.86	15.47
735 parts and access. of group 731 and 733	✗ 0.44	✗ 0.32	✗ 4.83	✗ 6.26	✗ 0.00	✗ 12.33	✗ 11.67	✗ 10.35	✗ 10.31	8.16
737 metalworking machinery, n.e.s.	✗ 5.01	✗ 2.43	✗ 2.38	✗ 4.35	✗ 0.00	✗ 1.73	✗ 7.86	✗ 11.92	✗ 15.93	10.97
741 heating and cooling equipment	✗ 0.04	✗ 18.07	✗ 22.61	✗ 22.11	✗ 0.00	✗ 15.45	✗ 14.18	✗ 9.96	✗ 17.19	17.94
742 pumps for liquids, liquid elevators	✗ 9.06	✗ 5.04	✗ 5.82	✗ 7.06	✗ 0.00	✗ 7.38	✗ 7.74	✗ 5.75	? 25.28	7.98
743 pumps, n.e.s; fans; centrifuges, etc.	✗ 11.41	✗ 4.35	✗ 12.18	✗ 11.73	✗ 0.00	? 25.27	? 29.29	? 29.96	✗ 23.86	16.32
744 mechanical handling equipment	✗ 0.96	✗ 3.44	✗ 6.59	✗ 3.69	✗ 3.12	✗ 2.63	✗ 2.26	✗ 4.00	✗ 6.12	4.67
745 non-electrical machinery, tools, etc.	✗ 0.81	✗ 2.69	✗ 5.37	✗ 3.37	✗ 0.00	✗ 16.44	✗ 15.05	✗ 9.50	✗ 13.09	6.48
746 ball or roller bearings	✗ 21.09	✓ 50.48	? 29.69	? 37.92	? 43.07	? 43.87	? 39.02	? 43.79	? 27.94	41.34
747 taps,cocks,valves etc,for pipes,vats etc	✗ 0.25	✗ 1.56	✗ 8.03	✗ 13.66	✗ 15.69	✗ 12.88	✗ 7.92	✗ 7.30	✗ 11.98	12.79
748 transmission shafts, bearing houses etc	✗ 1.44	✗ 12.40	? 48.89	✗ 24.74	? 34.59	? 43.51	✓ 53.54	? 47.58	? 42.83	33.77
749 non-electric machinery parts and access.	✗ 3.73	✗ 1.89	✗ 7.67	? 49.87	✓ 61.70	? 43.08	? 28.17	✓ 52.22	? 44.00	26.47
751 office machines	✗ 8.09	✗ 8.63	✗ 11.24	? 46.51	✗ 16.87	✗ 10.13	✗ 1.29	✗ 9.98	✗ 1.55	23.08
752 adp machines and units thereof	✗ 1.45	✗ 0.11	✗ 5.96	✗ 3.78	✗ 0.00	✗ 2.00	✗ 11.59	✗ 7.77	? 41.22	8.64
759 office and adp machine parts and access.	✗ 0.00	✗ 0.26	✗ 5.41	✗ 0.46	✗ 14.15	✗ 5.67	✗ 4.65	✗ 14.76	✗ 8.25	4.89
761 television receivers	✗ 10.00	✗ 18.01	✗ 3.98	✗ 0.96	✗ 1.71	✗ 1.85	✗ 1.99	✗ 3.68	✗ 4.30	8.89
762 radio-broadcast receivers	✗ 0.00	✗ 0.00	✗ 0.03	✗ 0.49	✗ 0.00	✗ 0.34	✗ 0.17	✗ 1.27	✗ 1.86	2.74
763 sound or video recorders or reproducers	? 35.69	✗ 0.00	✗ 2.44	✗ 21.65	✗ 0.00	✗ 8.37	✗ 1.64	✓ 52.29	✓ 51.34	26.42
764 telecommunications equipment	✗ 2.27	✗ 1.07	✗ 0.53	✗ 9.65	✗ 0.00	✗ 6.06	✗ 11.90	✗ 12.28	✗ 13.80	6.56
771 electric power machinery, n.e.s.	✓ 52.22	✓ 61.93	✓ 71.52	✗ 11.70	✗ 0.00	? 38.76	✓ 54.49	? 34.27	? 39.41	40.13
772 switches, resistors, printed curuits etc	✗ 2.24	✗ 5.01	? 42.55	✓ 78.48	? 45.80	✓ 56.11	? 30.10	✗ 17.94	✗ 21.05	40.08
773 electricity distributing equipment,n.e.s	✗ 12.42	✓ 93.96	✓ 76.60	✓ 74.88	✓ 85.67	✓ 94.06	✓ 93.00	✓ 87.90	✓ 88.73	75.54
774 electro-medical and radiological app.	✗ 2.08	✗ 0.00	✗ 0.96	✗ 1.25	✗ 0.40	✗ 1.63	✗ 5.23	✗ 6.43	✗ 8.42	3.15
775 household type equipment, n.e.s	✗ 21.30	✗ 8.54	? 33.34	✓ 73.08	✓ 58.41	✓ 60.52	✓ 52.05	✓ 50.86	? 39.37	49.03
776 transistors, valves, tubes, etc.	✗ 0.12	✗ 0.17	✗ 0.10	✗ 0.83	? 44.61	✗ 2.30	✗ 1.52	✗ 3.32	? 30.98	5.06
778 electrical machinery and apparatus,n.e.s	✗ 2.02	✗ 11.31	✗ 16.90	? 32.94	✓ 51.67	? 44.65	? 48.46	? 44.41	✓ 51.26	30.07
781 passenger motor vehicles, except buses	✗ 0.00	✗ 10.14	✓ 91.15	✗ 18.25	? 33.69	? 33.57	? 33.77	? 33.37	✗ 15.42	28.71
782 lorries, special motor vehicles, n.e.s	✗ 0.56	✗ 24.08	✓ 74.33	? 33.16	✗ 0.00	✓ 53.59	✓ 68.17	✓ 68.59	✓ 84.53	29.64
783 road motor vehicles, n.e.s.	? 45.05	✗ 13.41	✓ 60.13	? 38.03	? 37.74	✗ 15.68	✗ 1.07	✗ 0.09	✗ 3.02	24.84
784 motor vehicle parts and accessor. n.e.s.	✗ 7.54	✗ 12.15	? 36.50	✓ 61.45	✓ 63.54	✓ 59.17	✓ 68.34	✓ 69.27	✓ 69.12	50.35
785 motorcycles and cycles,invalid carriages	✗ 12.73	✓ 58.77	✗ 14.65	✓ 99.57	✓ 68.37	✓ 87.08	✓ 69.36	✓ 57.37	✓ 70.59	63.51
786 not motorized trailers, etc; containers	✗ 4.31	✗ 8.22	? 38.33	? 30.59	✓ 57.74	? 46.27	? 38.60	✓ 90.13	✓ 68.66	41.20
791 railway vehicles and associated equipm.	✗ 0.00	✗ 0.00	✗ 1.37	✗ 1.25	✗ 0.19	✗ 1.00	✗ 4.95	✗ 17.52	✗ 18.97	13.79
792 aircraft and assoc. equipm., spacecraft	✗ 0.00	✗ 0.00	✗ 3.74	? 41.71	? 43.69	✓ 82.04	? 46.28	✓ 52.49	✓ 88.68	40.98
793 ships, boats and floating structures	✓ 55.18	✓ 81.10	✓ 67.34	✓ 85.87	✗ 24.15	? 27.81	? 48.65	✓ 87.02	✓ 65.61	57.81

Attachment 4: MiscellaneousmanufacturedarticlesIITLevels

811 prefabricated buildings	!	40.55	✗	21.61	!	42.75	✓	60.97	✓	64.26	✓	67.57	✓	74.62	✓	89.34	✓	96.42	54.12
812 sanitary,plumbing and heating fixtures	!	38.10	✗	21.48	✗	10.68	✗	23.57	✗	18.77	✗	12.82	✗	14.03	✗	12.99	✗	19.82	19.39
813 lighting fixtures and fittings, n.e.s	✗	1.02	✗	1.98	✗	20.51	!	31.03	✓	63.01	✓	54.53	✓	54.46	!	44.68	✓	50.77	25.48
821 furniture and parts thereof, bedding etc	✓	68.58	✓	98.47	!	40.60	✗	12.25	✓	64.18	✓	68.85	✓	76.55	✓	87.18	✓	89.86	62.49
831 travel goods,handbags and sim.containers	!	39.77	!	37.72	!	43.68	✓	53.21	!	42.67	!	44.25	!	47.40	✓	61.17	✓	64.69	53.50
841 mens or boys clothing, not knitted etc	✓	69.34	✓	77.66	✓	92.24	!	47.33	!	40.57	!	41.10	!	40.98	!	45.95	✓	50.15	63.64
842 womens or girls clothing, not knitted	✗	5.58	✗	5.03	!	48.94	✗	8.21	✗	6.01	✗	8.07	✗	9.22	✗	13.21	✗	14.44	17.72
843 mens or boys clothing, knitted etc	✗	10.87	✗	4.35	!	31.44	✗	13.81	✗	17.27	✗	19.91	✗	19.30	✗	24.73	!	30.60	20.54
844 womens or girls clothing, knitted etc	!	27.26	✗	19.94	✓	51.45	✗	16.76	✗	16.93	✗	17.49	✗	19.28	✗	22.70	✗	24.89	28.88
845 articles of apparel, of textile fabrics	✓	61.58	✗	18.92	✓	60.70	✓	71.83	✓	88.46	✓	90.37	✓	93.84	✓	73.20	✓	74.08	64.74
846 clothing accessories of textile fabrics	✗	13.72	✗	22.39	✓	85.68	✓	92.97	✓	56.18	✓	55.56	✓	58.64	✓	75.18	✓	75.18	68.78
848 headgear, non-textile clothing access.	!	39.05	!	25.80	✗	4.30	✗	12.30	!	25.47	✗	23.45	!	25.28	!	27.38	!	25.86	19.05
851 footwear	✗	0.00	✗	0.00	✗	18.28	✓	61.94	✗	17.08	✗	3.27	✓	63.22	✓	58.08	✓	99.78	31.31
871 optical instruments and apparatus	✗	0.09	✗	1.15	✗	5.35	✗	7.40	✗	18.69	✗	13.98	✗	17.58	✗	20.55	✗	24.51	9.36
872 medical instruments and appliances	✗	0.91	✗	0.60	✗	8.58	✗	18.18	!	32.74	✗	22.22	!	27.14	!	36.54	!	45.18	19.17
873 meters and counters, n.e.s.	✗	0.15	✗	0.82	✗	3.39	✗	10.34	✗	6.32	✗	7.45	✗	10.47	✗	8.86	✗	14.92	5.74
874 measuring, checking, controlling instrum	✗	2.39	✗	0.00	✗	9.79	✗	2.53	✗	7.40	✗	0.00	✗	3.19	✗	0.86	✗	4.88	3.23
881 photographic apparatus and equipment	✗	0.00	✗	0.00	✗	0.41	✗	0.85	✗	6.58	✗	8.78	✗	8.30	✗	11.00	✗	18.62	4.06
882 photographic and cinematograph. supplies	✗	0.00	✗	0.00	✗	0.62	✗	0.02	✗	0.13	✗	0.00	✗	0.09	✗	3.47	✗	0.00	1.10
883 cinematographic film, exposed and devel.	✗	1.35	✗	5.70	✗	3.86	✗	1.19	✗	1.81	✗	1.42	✗	3.72	✗	3.73	✗	3.74	3.26
884 optical goods, n.e.s.	✗	0.32	✗	0.84	✗	0.32	✗	2.74	✓	50.69	✓	55.90	✓	54.92	!	38.38	✓	51.36	16.51
885 watches and clocks	✗	22.45	✗	23.13	✗	20.57	✓	82.91	!	41.57	!	34.97	!	31.07	✓	56.15	✓	72.25	52.68
891 arms and ammunition	✗	0.20	✗	0.29	✗	2.81	✗	7.08	✗	16.63	✗	16.96	✗	21.85	✗	18.69	✗	21.02	8.23
892 printed matter	✗	4.55	✗	2.34	✗	19.07	!	34.19	!	39.88	!	36.79	!	43.67	✓	50.99	✓	60.31	25.39
893 articles, n.e.s, of plastics	✗	1.12	✗	1.31	✗	13.01	✗	6.51	✗	19.62	✗	20.43	✗	20.02	✗	8.23	✗	24.45	12.67
894 baby carriages;toys,games,sporting goods	!	28.94	✗	12.42	!	25.53	!	32.43	✗	14.57	✗	12.60	✗	10.92	✗	11.66	✗	7.61	21.39
895 office and stationery supplies, n.e.s.	✗	0.00	✗	0.00	✓	71.28	✗	22.56	✗	8.21	✗	0.00	✗	2.13	✗	2.40	✗	13.66	9.66
896 works of art;collectors pieces;antiques	✓	57.38	✓	98.07	✓	66.33	✓	71.94	!	38.97	!	37.16	!	48.90	!	29.18	!	32.39	53.77
897 jewellery, goldsmiths wares, etc	✓	51.10	✓	55.76	✗	2.17	✗	1.94	✗	11.08	✗	8.71	✗	16.24	✗	17.37	✗	18.51	21.31
898 musical instruments, records, tapes	✗	1.68	✗	14.63	✗	9.21	✗	20.42	✗	14.76	✗	17.57	✗	15.60	✗	12.46	✗	17.05	13.50