



# **TURKISH PLASTICS INDUSTRY FOLLOW-UP REPORT**

**2019 / 9**

**PREFACE**

The plastic industry is one of the most important actors of the Turkish economy. Today, the contribution of the plastics industry to the country's economy is gradually increasing with the total production exceeding 9 million tons, and 35 billion dollars' worth of turnover, the approaching direct exports of 5 billion dollars and the annual growth over GDP growth rate the last 10 years.

Our industry, with its production capacity, has reached the second place in Europe and the sixth place in the world. As PAGEV, we continue to lead the industry successfully in the framework of the "Unifying Power" mission of the Turkish Plastics Industry.

We also know that having the right and reliable data and information is the most important part of the solution when we sign the indispensability of Plastics in our lives and sign our work to tackle our industrial problems with concrete steps based on scientific evidence. In this direction we constantly investigate, collect new data, compile and report them. We present our reports that we believe are important for the development of our industry and our booklets containing important information to the plastics industry representatives, stakeholders and public institutions.

As PAGEV, we prepared a report set that will contribute to the industry in a serious way in the face of our long and dedicated researches. With our reports, we made booklets with the comments of our expert reporters about the point where the Turkish Plastics Industry is in the right and reliable light, common problems and what should be the search for concrete solutions. We believe that our reports and information set will benefit all our stakeholders, especially our members, and will guide the plastics world. At the same time, we are pleased that our public institutions have reached the most up-to-date and accurate information about the plastics industry.

On the other hand, with our sector reports in English, we think that our colleagues will be able to share the potential of our country's plastics industry with the most up-to-date business partners in the global marketplace.

Hereby, presenting our current reports and information files relating with our industry, we would like to thank all our colleagues who have contributed to this day's achievement of our industry, who has taken a position as a locomotive mission in the development of our country.

**Best regards,**  
**Yavuz EROĞLU**  
**PAGEV President**

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**EXECUTIVE SUMMARY**

Turkey's economy contracted by 2.4% in the first quarter of 2019 and 1.5% in the second quarter, As a result of the strong contraction in domestic demand, the increase in industrial production slowed down and brought the growth down. The decline in industrial capacity utilization had a negative impact on private sector investments.

OECD predicted that the Turkish economy will shrink by 2.6% in 2019, contraction estimated by the World Bank is a level of 1%.

Developments show that the world and the Turkish economy will live a brilliant year in 2017. It is expected that the old risk elements will continue in the economy and the new ones will be added to these. It is therefore estimated that the uncertainty to be raised will often lead to the use of risqué escape and a cautious Source, and that the question of not growing in the world economy will continue.

The plastics product production which was 7 million 87 thousand tons and 35 billion 717 million dollars in the nine months of 2018, decreased to 6 million 699 thousand tons and 8 billion 932 million dollars in the peer period of 2019, decreasing by 5% on amount and 8% on value base basis.

It is estimated that the production of plastic end products will decrease by 2% on amount and 8% on value basis at the end of 2019 compared to 2018 decreasing to 8.9 million tons and 31.5 billion dollars.

In the last 5 years period, covering 2014-2018, an average of 892 million dollars of machinery and equipment investment has been realized in plastics industry.

The decline in the plastics industry in 9 months of 2019 is expected to continue in the fourth quarter of the year.

## **1. ECONOMIC SITUATION**

### **1.1. WORLD ECONOMY**

- The news that the US and China will resume negotiations in October and two countries' statements to ease the tensions alleviated trade war tension in September. Trade negotiations are set to resume on October 10-11 in Washington.
- At its meeting ended on September 18, Fed cut the policy rate by 25 basis points to 1.75-2.00%.
- Data releases regarding the third quarter of 2019 in US gave mixed signals about economic activity.
- At its September meeting, ECB cut the interest rate on the deposit facility by 10 basis points to -0.50%.
- Euro Area economy grew by 0.2% in the second quarter of 2019 compared to the previous quarter.
- The momentum loss in economic activity in China has prompted policy makers to take new measures.
- Having increased sharply after the attacks on Saudi Arabia's oil production facilities, oil prices declined in the following days due to the news that Saudi Arabia could completely compensate the losses within 2-3 weeks.
- OECD revised its global economic growth forecast for 2019 by 0.3 points to 2.9%, while Fitch announced its global growth forecast as 2.6% in 2019.
- In the current conjuncture, where risks related to the global economy are increasing, the expectation that leading central banks will tend to follow policies to support the economy is strengthened.

### **1.2. TURKISH ECONOMY**

In this period, the main developments that affect and are expected to affect the Turkish economy and therefore the plastics industry are;

- Turkey's economy contracted by 2.4% in the first quarter of 2019 and 1.5% in the second quarter,
- As a result of the strong contraction in domestic demand, the increase in industrial production slowed down and brought the growth down. The decline in industrial capacity utilization had a negative impact on private sector investments.

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- In addition to the decline in the industrial sector in the second half of the year, the rise in inflation and interest rates, the depreciation of TL adversely affected the financial structure of the industry and these adversities spread to all other sectors.
- In June period, unemployment rate increased by 2.8 points yoy to 13%. Seasonally adjusted unemployment rate was 13.9%.
- Industrial production contracted by 1.2% yoy in July. Having realized below the threshold for 17 months, manufacturing PMI came in at 50 in September, pointing out that the slowdown in the sector ended.
- In September, monthly CPI inflation came in at 0.99%. Annual CPI inflation declined to 9.26% in the same period.
- In the monetary policy meeting held on September 12th, CBRT lowered the policy rate (one-week repo auction rate) by 325 bps to 16.50%.
- In the nine months of 2019, total exports were 126 billion dollars, imports were 148 billion dollars, foreign trade deficit was 22 billion dollars and the ratio of exports to imports was 85%.
- OECD predicted that the Turkish economy will shrink by 2.6% in 2019, contraction estimated by the World Bank is a level of 1%.
- Developments show that the world and the Turkish economy will live a brilliant year in 2017. It is expected that the old risk elements will continue in the economy and the new ones will be added to these. It is therefore estimated that the uncertainty to be raised will often lead to the use of risqué escape and a cautious Source, and that the question of not growing in the world economy will continue.

Sources: T. İş Bank and Akbank Economic Publications, Central Bank and TURKSTAT Statistics

		2016	2017	2018	2019	Period
<b>GDP</b>	Billion \$	857	851	784	347	January - June
<b>Growth Rate</b>	%	2.9	7.4	2.6	-2.6/ -1.5	Q1:& Q2
<b>Inflation</b>	%	8.53	11.92	20.30	9.26	September
<b>Unemployment</b>	%	12.0	10.7	12.8	13.9	June
<b>Exports</b>	Billion \$	142,6	157	169	126	September
<b>Imports</b>	Billion \$	198,6	234	223	148	September
<b>Foreign Trade Balance</b>	Billion \$	-56,0	- 77	-56	22	September
<b>Exports/Imports</b>	%	72	67	75	85	September
<b>USD / TL</b>	TL	2.9207	3.7916	5.3199	5.6465	September
<b>EURO / TL</b>	TL	3.1867	4.5530	6.0815	6,.1558	September

**Table 1: Turkey's Main Economic Indicators**

Sources: T. İş Bank and Akbank Economic Publications, Central Bank and TURKSTAT Statistics

## **2. PLASTICS END PRODUCTS INDUSTRY**

### **2.1. PRODUCTION**

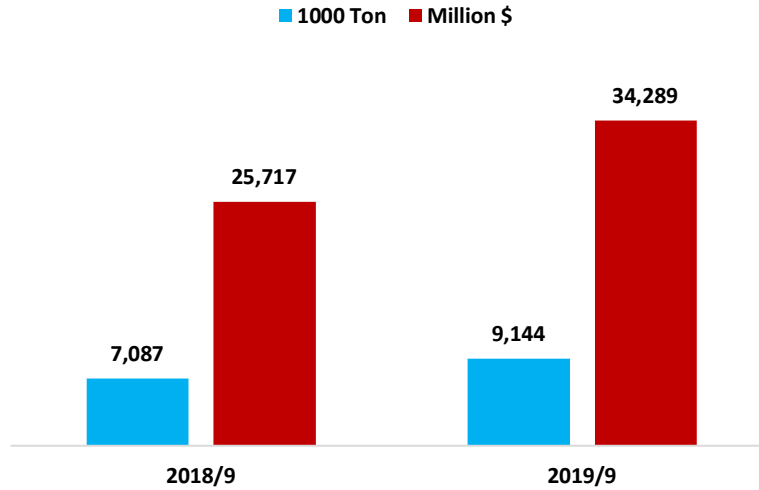
The plastics product production which was 7 million 87 thousand tons and 35 billion 717 million dollars in the nine months of 2018, decreased to 6 million 699 thousand tons and 8 billion 932 million dollars in the peer period of 2019, decreasing by 5% on amount and 8% on value base basis.

	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
<b>1000 Ton</b>	7,087	9,144	6,699	8,932	-5	-2
<b>Million \$</b>	25,717	34,289	23,636	31,515	-8	-8

**Table 2: Peer Period Comparison of Plastics End Products Production**

Source: TURKSTAT and ITC Trade Statistics

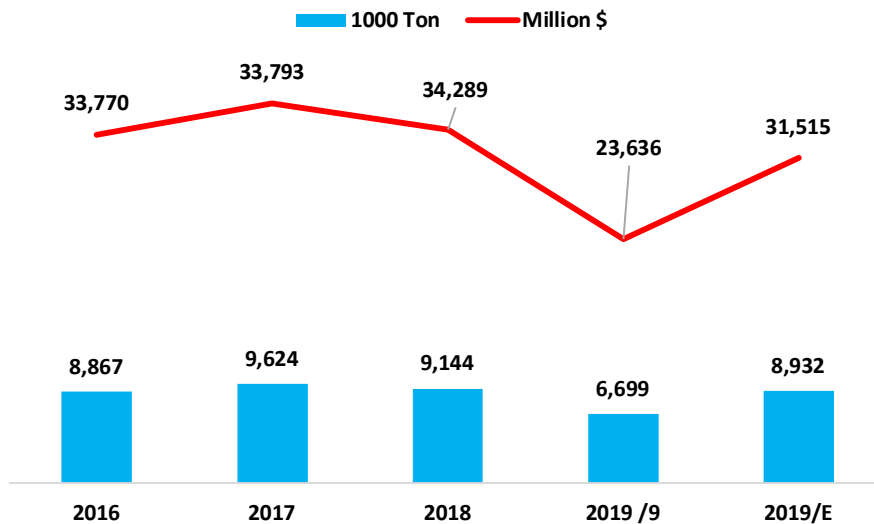
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**Graphic 1: Peer Period Comparison of Plastics End Product Production**

Source: TURKSTAT and ITC Trade Statistics

It is estimated that the production of plastic end products will decrease by 2% on amount and 8% on value basis at the end of 2019 compared to 2018 decreasing to 8.9 million tons and 31.5 billion dollars.



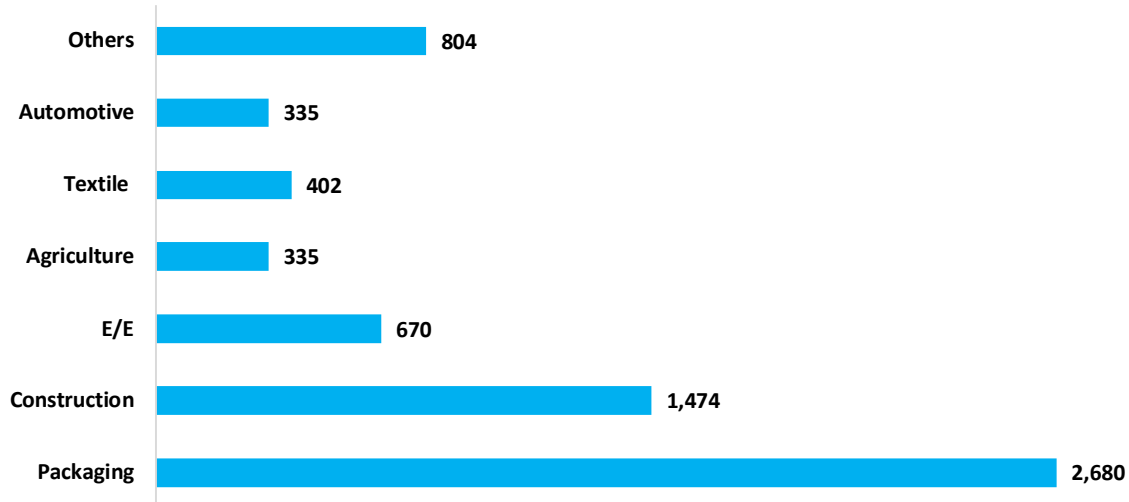
**Graphic 2: Plastics End Product Production**

Source: TURKSTAT and ITC Trade Statistics

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In the 9 months of 2019, plastic packaging materials led the way with approximately 2 million 680 thousand tons in total production of 6 million 700 thousand tons, followed by plastic building and construction materials with 1 million 474 thousand tons

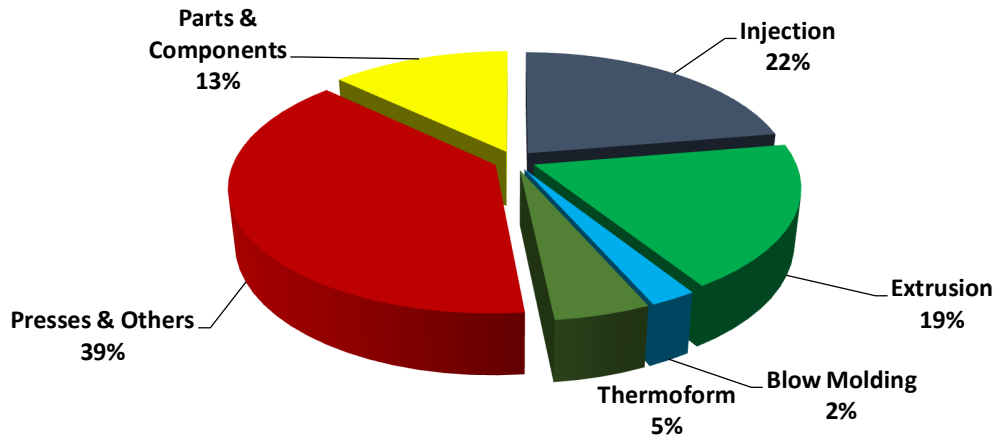


**Graphic 3: Plastics End Product Production by Subsectors – (1000 Ton) 2019/9**

Source: TURKSTAT and ITC Trade Statistics

## **2.2. MACHINERY INVESTMENTS**

In the last 5 years period, covering 2014-2018, an average of 892 million dollars of machinery and equipment investment has been realized in plastics industry, 37% of total investment is made by presses and other machines, 22% by injection, 18% by extrusion, 4% by thermoform, 2% blow molding and 17% were parts and accessories.



**Graphic 4: Breakdown of Machinery Investment in Plastics Industry (2014 – 2018)**

Source: TURKSTAT and ITC Trade Statistics

The decline in the plastics manufacturing industry has also adversely affected the plastics processing machinery sector, which supplies machinery and equipment to this sector. Thus, In the 9 months of 2019, in the plastics processing machinery sector, production decreased by 18%, imports by 39%, exports by 1% and domestic sales by 34% compared to peer period of 2018.

If the same trend continues in the last 3 months of the year, it is estimated that production will decrease by 18%, imports by 39% exports by 20% and domestic sales by 31% compared to 2018 at the end of 2019.

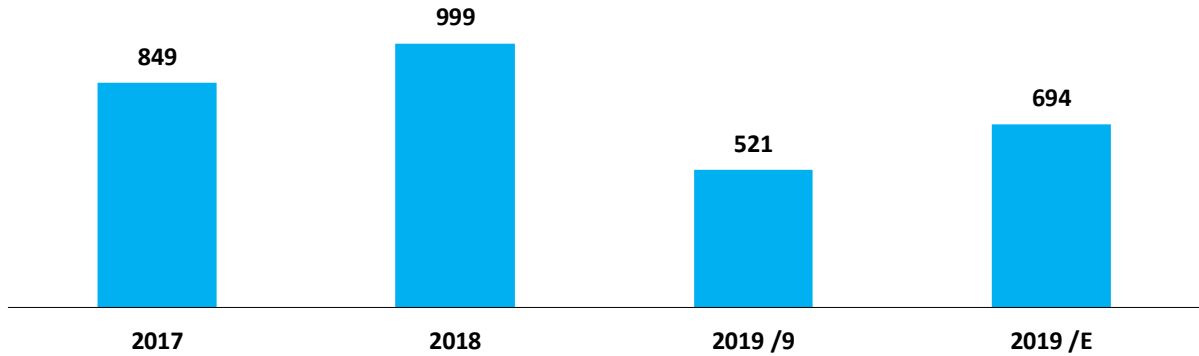
	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
<b>Production</b>	459	612	377	503	-18	-18
<b>Imports</b>	474	629	290	387	-39	-39
<b>Exports</b>	148	242	146	195	-1	-20
<b>Domestic Sales</b>	785	999	521	694	-34	-31

**Table 3: Peer Period Comparison of Supply and Demand Equilibrium in the Plastics Processing Machinery Industry**

Source: TURKSTAT and ITC Trade Statistics

Machinery investments in the plastics industry amounted to 521 million dollars the nine months of 2019 decreasing by 34% with respect to the peer period of 2018. With the same trend, it is estimated that the machinery and equipment investment of the industry will be 694 million dollars at the end of 2019, decreasing by 31% compared to 2018.

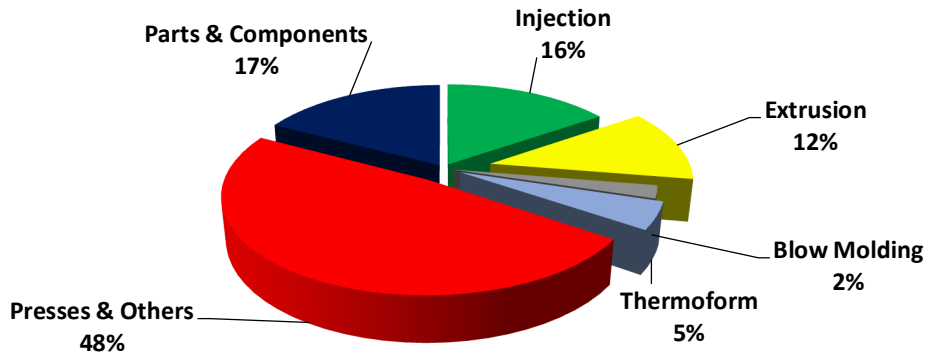
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**Graphic 5: Machinery and Components Investment of Plastics Industry (Million \$)**

Source: TURKSTAT and ITC Trade Statistics

In the nine months of 2019, 22% of the total investments of 521 million dollars was made by injection molding, 19% by extrusion, 39% by presses and other machines and 13% by parts and components. Blow molding machines and thermoforming accounted for 2% and 5% of the total investment, respectively.



**Graphic 6: Breakdown of Machinery Investment in Plastics Industry (2019/9)**

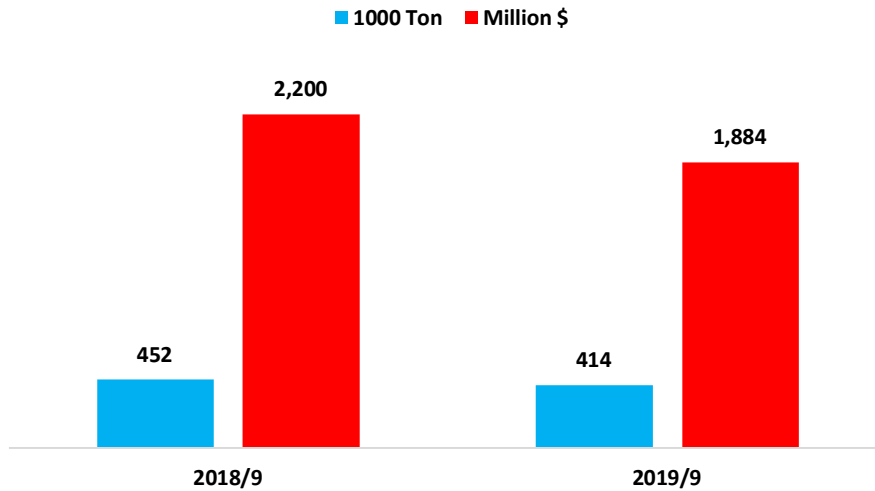
Source: TURKSTAT and ITC Trade Statistics

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## 2.3. FOREIGN TRADE

### 2.3.1. IMPORTS

In the nine months of 2019, 414 thousand tons of plastic end products worth of 1 billion 884 million dollars were imported. Imports of plastic end products decreased by 8% in terms of amount and 14% in terms of value, compared to the peer period of 2018 .



**Graphic 7: Peer Period comparison of Plastics End Product Imports**

Source: TURKSTAT and ITC Trade Statistics

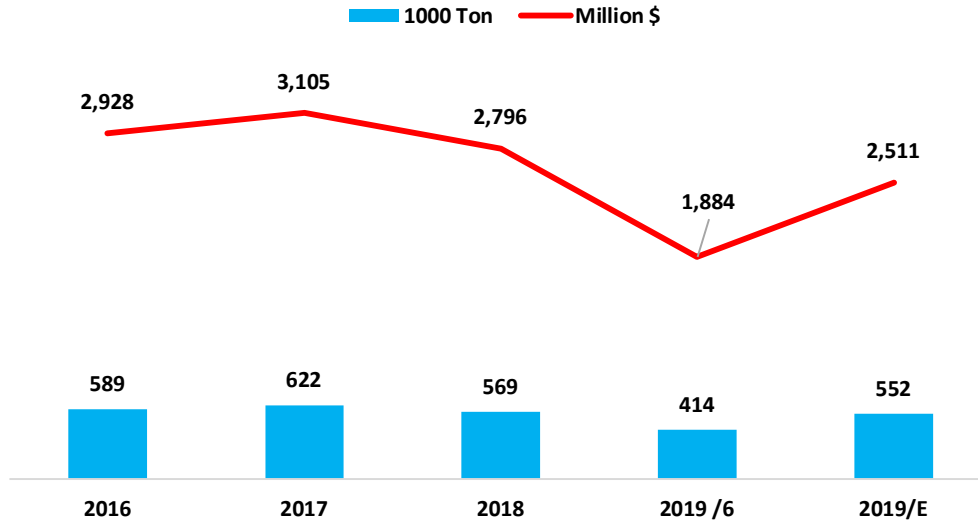
With the same trend, it is estimated that the total imports of plastic end products will reach 552 thousand tons and 2 billion 511 million dollars at the end of 2019, decreasing by 3% on amount and 10% on value basis compared to 2018.

	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
1000 Ton	452	569	414	552	-8	-3
Million \$	2,200	2,796	1,884	2,511	-14	-10

**Table 4: Peer Period comparison of Plastics End Products Imports**

Source: TURKSTAT and ITC Trade Statistics

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**Graphic 8: Plastics End Products Imports**

Source: Turk Stat & ITC Trade Statistics

In the 9 months of 2019, the highest imports by amount and value basis were realized in the product group of 3920 GTIP (other plates, sheets, pellets, foils and slides from plastic). The imports of this group accounted for 46% on amount and 30% on value basis of total imports.

HS CODE	PLASTIC PRODUCTS DEFINITIONS	1000 Ton	% Share Ton	Million \$	% Share \$
3916	Monofilament, bar, profiles from plastic-cross section over 1mm	7	2	33	2
3917	Tubes, pipes, hoses from plastic; gasket, elbow, union etc.	22	5	172	9
3918	Floor coverings from plastic – incl. wall and ceiling coverings	14	3	43	2
3919	adhesive plate, sheet, strip, slide, etc. from plastic; flat	41	10	212	11
3920	Other plate, sheet, pellicles and slides from plastic	189	46	569	30
3921	Other plates, sheets, pellicles, foils and slides from plastic	44	11	167	9
3922	Bathtub, shower, sink, bidet, water-closet pan and hardware from plastic	2	0	13	1
3923	Plastic products for moving furniture, tap, cap, capsule	44	11	201	11
3924	Table, kitchen and other household furniture, toiletry form plastic	5	1	28	1
3925	Construction materials from plastic	4	1	19	1
3926	Other goods from plastic	42	10	428	23
	<b>TOTAL</b>	<b>414</b>	<b>100</b>	<b>1,884</b>	<b>100</b>

**Table 5: Plastics End Products Imports by HS Codes (2019/9)**

Source: Turk Stat & ITC Trade Statistics

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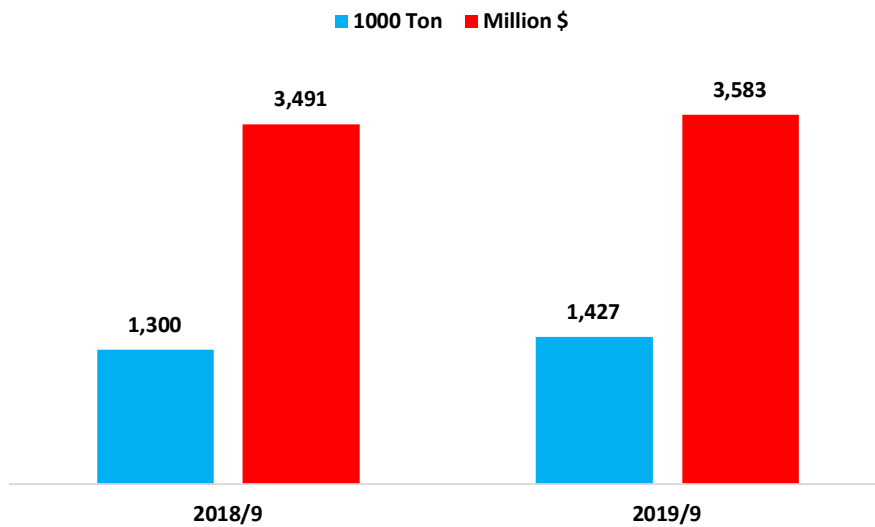
### 2.3.2. EXPORTS

In the nine months of 2019, 1 million 427 thousand tons and 3 billion 583 million dollars of plastic end products were exported. Exports increased by 109% on amount and 3% on value basis with respect to the peer period of 2018.

	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
<b>1000 Ton</b>	1,300	1,864	1,427	1,903	10	2
<b>Million \$</b>	3,491	4,823	3,583	4,777	3	-1

**Table 6: Peer Period comparison of Plastic End Products Exports**

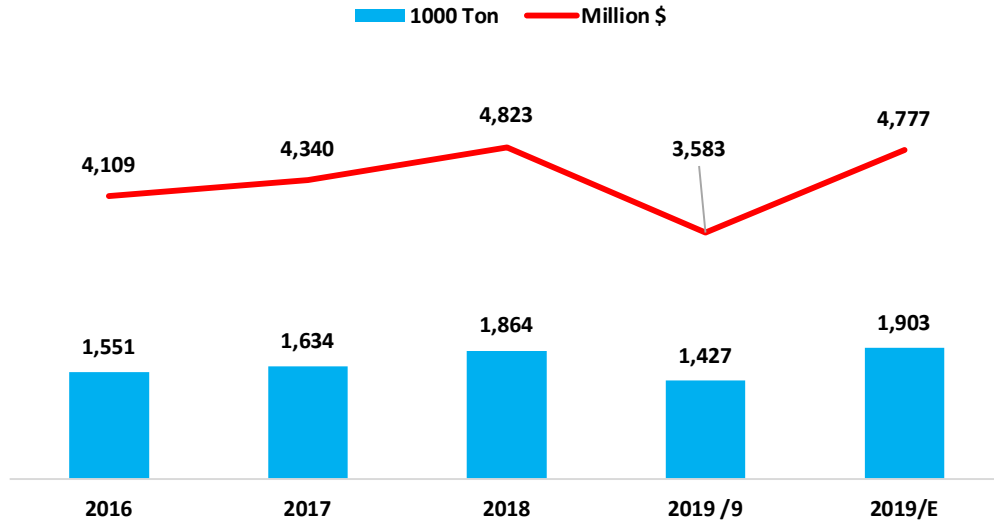
Source: TURKSTAT and ITC Trade Statistics



**Graphic 9: Peer Period comparison of Plastic End Products Exports**

Source: TURKSTAT and ITC Trade Statistics

With the same trend, it is expected that exports of plastic end products will increase to 1 million 903 thousand tons and 4 billion 777 million dollars by the end of the year, increasing by 2% on amount and decreasing by 1% on value basis with respect to 2018.



**Graphic 10: Plastics End Product Exports**

Source: TURKSTAT and ITC Trade Statistics

In the 9 months of 2019, the largest exports in terms of quantity and value were 3920 HS group (other plates, sheets, pellets and slides from plastic) and 3923 HS group (plastics products, containers, caps, capsules for goods transport packaging). The total exports of plastic products of these groups are 47% in amount and 44% in value basis.

HS CODE	PLASTIC PRODUCTS DEFINITIONS	1000 Tons	% Share TONS	Million \$	% Share \$
3916	Monofilament, bar, profiles from plastic-cross section over 1mm	135	9	219	6
3917	Tubes, pipes, hoses from plastic; gasket, elbow, union etc.	185	13	431	12
3918	Floor coverings from plastic – incl. wall and ceiling coverings	12	1	21	1
3919	adhesive plate, sheet, strip, slide, etc. from plastic; flat	16	1	76	2
3920	Other plate, sheet, pellicles and slides from plastic	339	24	817	23
3921	Other plates, sheets, pellicles, foils and slides from plastic	126	9	332	9
3922	Bathtub, shower, sink, bidet, water-closet pan and hardware from plastic	23	2	83	2
3923	Plastic products for moving furniture, tap, cap, capsule	322	23	765	21
3924	Table, kitchen and other household furniture, toiletry form plastic	124	9	330	9
3925	Construction materials from plastic	76	5	188	5
3926	Other goods from plastic	70	5	321	9
	<b>TOTAL</b>	<b>1,427</b>	<b>100</b>	<b>3,583</b>	<b>100</b>

**Table 7: Exports of Plastics End Products by HS Codes (2019/9)**

Source: Turk Stat & ITC Trade Statistics

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### 2.3.4 IMPORTS AND EXPORTS BY COUNTRIES

Turkey is importing plastics end products from over 100 countries while exporting to more than 200 countries each year.

In the 9 months of 2019, imports from 10 countries accounted for 65% of total imports on amount and 72% on value basis.

In this period, Germany became the country with the highest rate of import of plastic products with a share of 14% on amount and 18% on value basis in total imports of plastic end products, while China became the second largest import market with a share of 25% on amount and 18% on value basis. Apart from Germany and China, Italy, France and South Korea are the countries where Turkey imports the largest amount of plastic end products.

In the 9 months of 2019, exports to 10 countries accounted for 49% on amount and 46% on value basis of total exports of plastics end products. In this period, Iraq, Germany, UK, Israel and Romania formed Turkey's biggest export markets for plastic end products.

Imports					Exports				
Countries	1000 Ton	Million \$	Ton- %	\$ - %	Countries	1000 Ton	Million \$	Ton- %	\$ - %
Germany	57	347	14	18	Iraq	186	335	13	9
China	105	339	25	18	Germany	68	238	5	7
Italy	32	165	8	9	UK	84	204	6	6
France	18	119	4	6	Israel	87	182	6	5
S. Korea	19	100	5	5	Romania	52	126	4	4
USA	7	91	2	5	USA	47	125	3	3
UK	9	62	2	3	France	41	125	3	3
Belgium	11	50	3	3	Italy	43	108	3	3
Japan	3	46	1	2	Spain	43	101	3	3
Spain	7	45	2	2	Libya	43	90	3	3
<b>10 Total</b>	<b>269</b>	<b>1,364</b>	<b>65</b>	<b>72</b>	<b>10 Total</b>	<b>695</b>	<b>1,634</b>	<b>49</b>	<b>46</b>
<b>Others</b>	<b>146</b>	<b>520</b>	<b>35</b>	<b>28</b>	<b>Others</b>	<b>732</b>	<b>1,949</b>	<b>51</b>	<b>54</b>
<b>TOTAL</b>	<b>414</b>	<b>1,884</b>	<b>100</b>	<b>100</b>	<b>TOTAL</b>	<b>1,427</b>	<b>3,583</b>	<b>100</b>	<b>100</b>

**Table 8: Plastic End Products Imports and Exports by Countries (2019/9)**

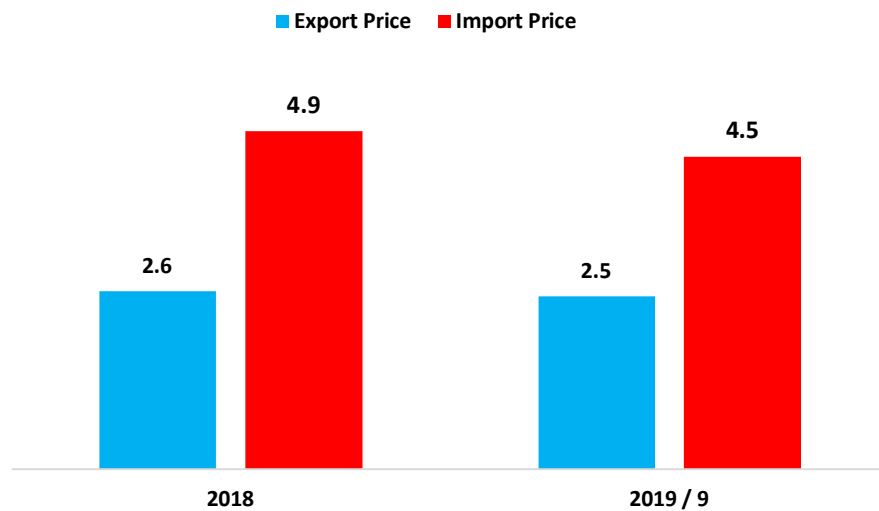
Source: TURKSTAT and ITC Trade Statistics

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### 2.3.5. IMPORT AND EXPORT PRICES

Unit import prices for plastic end products are always above the unit export prices in Turkey.



**Graphic 11: Average Unit Foreign Trade Prices for Plastics End Products ( \$/Kg)**

Source: Turk Stat & ITC Trade Statistics

In the nine months of 2019, the average import prices of plastic end products were \$ 4.5/ Kg and the average export prices were \$ 2.5 /Kg. In this period, average import price declined 7.5% and the average export price declined 3% with respect to 2018.

HS CODE	PLASTIC PRODUCTS DEFINITIONS	2018	2019/9	% Increase	2018	2019/9	% Increase
3916	Monofilament, bar, profiles from plastic-cross section over 1mm	4.5	4.4	-1.8	1.7	1.6	-3.6
3917	Tubes, pipes, hoses from plastic; gasket, elbow, union etc.	8.3	7.9	-4.8	2.6	2.3	-10.7
3918	Floor coverings from plastic – incl. wall and ceiling coverings	2.7	3.2	15.4	2.0	1.8	-11.9
3919	adhesive plate, sheet, strip, slide, etc. from plastic; flat	5.6	5.1	-8.4	5.0	4.9	-2.0
3920	Other plate, sheet, pellicles and slides from plastic	3.4	3.0	-12.3	2.5	2.4	-5.0
3921	Other plates, sheets, pellicles, foils and slides from plastic	4.1	3.8	-7.2	2.8	2.6	-6.0
3922	Bathtub, shower, sink, bidet, water-closet pan and hardware from plastic	6.9	6.7	-3.1	4.0	3.7	-6.6
3923	Plastic products for moving furniture, tap, cap, capsule	4.7	4.6	-3.7	2.5	2.4	-4.5

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3924	Table, kitchen and other household furniture, toiletry form plastic	6.8	6.1	-10.7	2.7	2.7	-3.1
3925	Construction materials from plastic	4.4	5.4	23.9	2.6	2.5	-6.5
3926	Other goods from plastic	9.9	10.1	1.8	3.0	4.6	51.9
	<b>AVERAGE</b>	<b>4.9</b>	<b>4.5</b>	<b>-7.5</b>	<b>2.6</b>	<b>2.5</b>	<b>-3.0</b>

**Table 9: Average Unit Foreign Trade Prices for Plastics End Products (\$/Kg)**

Source: Turk Stat & ITC Trade Statistics

### 2.3.6. FOREIGN TRADE SURPLUS

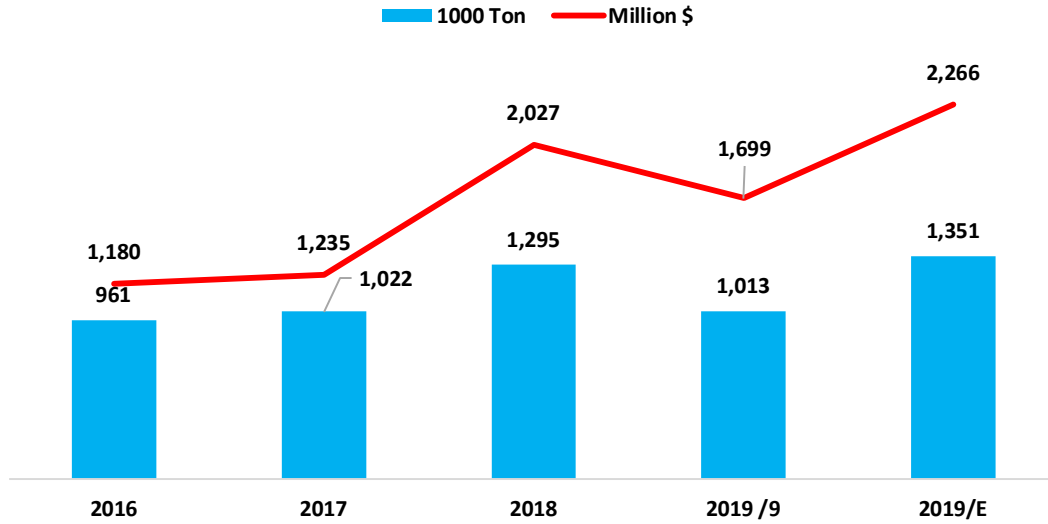
Turkey always gives foreign trade surplus in plastic end products foreign trade. In the nine months of 2019, 1 million 13 thousand tons and 1 billion 699 million dollars of foreign trade surplus were obtained, increasing by 19% on amount and 32% on value basis with respect to the peer period of 2018.

	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
<b>1000 Ton</b>	<b>848</b>	<b>1,295</b>	<b>1,013</b>	<b>1,351</b>	<b>19</b>	<b>4</b>
<b>Million \$</b>	<b>1,291</b>	<b>2027</b>	<b>1,699</b>	<b>2,266</b>	<b>32</b>	<b>12</b>

**Table 10: Peer Period Comparison of Foreign Trade Equilibrium in Plastics Processing Machines**

Source: Turk Stat & ITC Trade Statistics

If the same trend continues, the foreign trade surplus of plastic products is expected to increase by 4% on amount and 12% on value basis in 2019, compared to 2018 and to be realized as 1 million 351 thousand tons and 2 billion 266 million dollars.



**Graphic 12: Foreign Trade Surplus of Plastics End Products**

Source: Turk Stat & ITC Trade Statistics

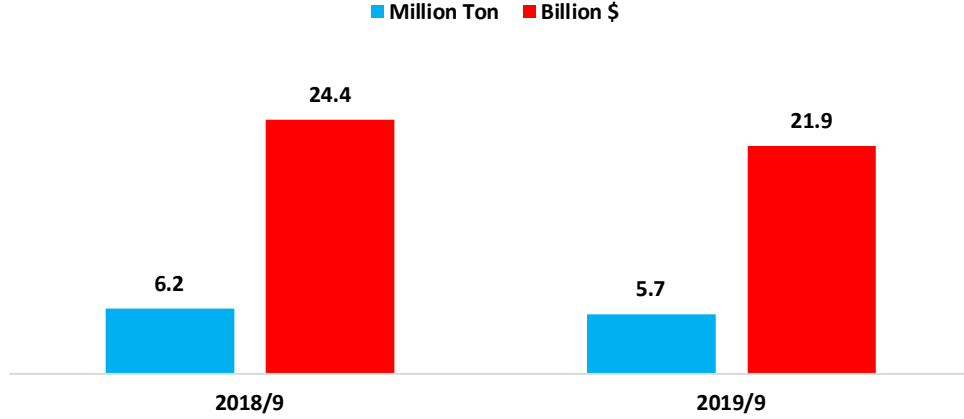
#### 2.4. DOMESTIC CONSUMPTION

In the 9 months of 2019, domestic consumption of 5 million 686 thousand tons and 21 billion 937 million dollars was realized in the plastic end products industry, decreasing by 9% on amount and 10% on value basis compared to the peer period of 2018.

	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
<b>1000 Ton</b>	6,239	7,849	5,686	7,581	-9	-3
<b>Million \$</b>	24,426	32,262	21,937	29,249	-10	-9

**Table 11: Peer Period Comparison of Domestic Consumption for Plastics End Products**

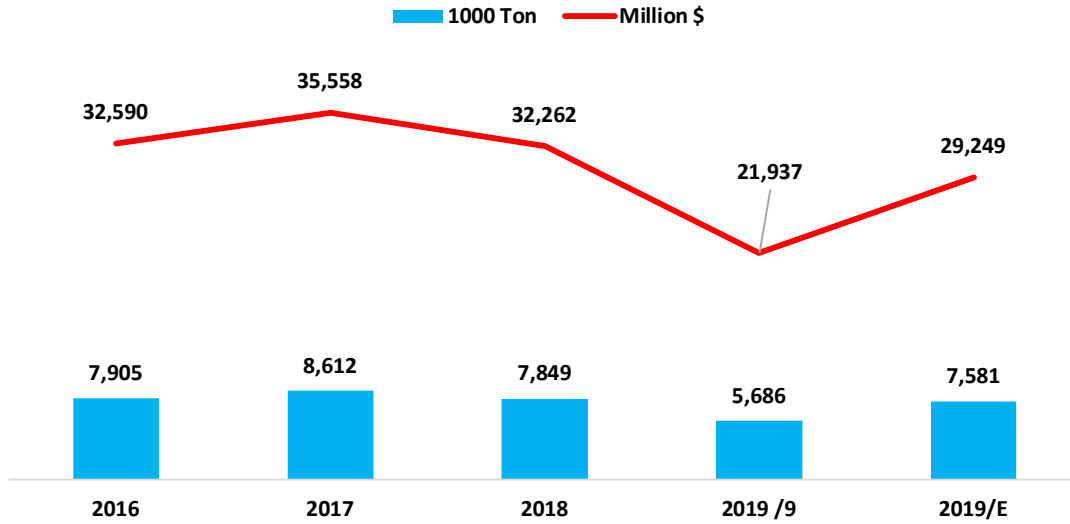
Source: TURKSTAT and ITC Trade Statistics



**Graphic 13: Peer Period Comparison of Domestic Consumption for Plastics End Products**

Source: TURKSTAT and ITC Trade Statistics

If the same trend continues, the domestic consumption of plastic end products is expected to decrease by 3% on amount and 9% on value basis in 2019 compared to 2018 and to reach to 7 million 581 thousand tons and 29 billion 249 million dollars at the end of the year.



**Graphic 14: Plastics End Products Domestic Consumption**

Source: Turk Stat & ITC Trade Statistics

In the 9 months of 2019, approximately 2,8 million tons of total domestic consumption has been exported indirectly by the exporting industries channels such as automotive, packaging, The intellectual property rights of this report belong to PAGEV and cannot be quoted even partly, without being shown as a source.

construction and electronics as finished and semi-finished products. The remaining 2.75 million tons were consumed directly by the consumer.

## **2.5. SUPPLY AND DEMAND AND 2019 EXPECTATIONS**

The share of exports in production in the 9 months of 2019 was 21% **on amount basis** in the plastic end products industry and the share of imports in domestic consumption was 7%.

At the end of 2019, in the plastic product sector, with an optimistic view and **on amount basis**; production is estimated to be 8.9 million ton decreasing by 2%, imports to be 552 thousand tons decreasing by 3% exports to realize as 1.9 million tons Increasing by 2% and domestic sales to be 7.6 million tons decreasing by 3% compared to 2018. According to this estimate, the foreign trade surplus to be 1.3 million tons increasing by 4% in the sector.

	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
<b>Production</b>	7,087	9,144	6,699	8,932	-5	-2
<b>Imports</b>	452	569	414	552	-8	-3
<b>Exports</b>	1,300	1,864	1,427	1,903	10	2
<b>Domestic Consumption</b>	6,239	7,849	5,686	7,581	-9	-3
<b>Foreign Trade Surplus</b>	848	1,295	1,013	1,351	19	4
<b>Exports/Production (%)</b>	18	20	21	21		
<b>Imports / Domestic Consumption (%)</b>	7	7	7	7		

**Table: 12 Supply and Demand in Plastics End Products Industry ( 1000 Tons )**

Source: Turk Stat and ITC Trade Statistics

In the 9 months of 2019, **on value basis**, the share of exports in production rose up to 15% and the share of imports in domestic consumption realized as 9%.

At the end of 2019, in the plastic product sector, with an optimistic view and **on value basis**; production is estimated to be 31.5 billion dollars decreasing by 8%, imports to be 2.5 billion dollars decreasing by 10% exports to realize as 4.8 million tons decreasing by 1% and domestic sales to be 29.2 billion dollars decreasing by 9% compared to 2018. According to this estimate, the foreign trade surplus will be 2.3 billion dollars increasing by 12% in the sector.

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	2018/9	2018	2019/9	2019 /T	% Increase 2019/2018 (9 M)	% Increase 2019 /2018 (E)
Production	25,717	34,289	23,636	31,515	-8	-8
Imports	2,200	2,796	1,884	2,511	-14	-10
Exports	3,491	4,823	3,583	4,777	3	-1
Domestic Consumption	24,426	32,262	21,937	29,249	-10	-9
Foreign Trade Surplus	1,291	2,027	1,699	2,266	32	12
Exports/Production (%)	14	14	15	15		
Imports / Domestic Consumption (%)	9	9	9	9		

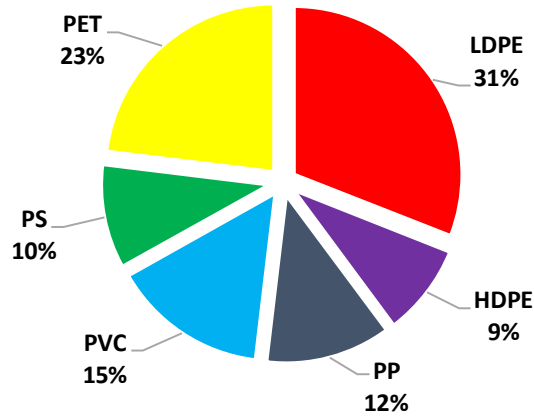
**Table: 13 Supply and Demand in Plastics End Products Industry ( Million \$ )**

Source: Turk Stat and ITC Trade Statistics

### 3. PLASTICS RAW MATERIALS INDUSTRY

#### 3.1. PRODUCTION

It is estimated that, in the 9 months of 2019, the plastics raw materials production realized as 761 thousand tons . In this period, 31% of the total plastic raw materials was LDPE 9% was HDPE, 15% was PVC, 12% was PP, 10% was PS and 23% was PET.



**Graphic 15: Plastics Raw Materials Production (2019/9)**

Source : PETKİM and Other Producers

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### 3.2. FOREIGN TRADE

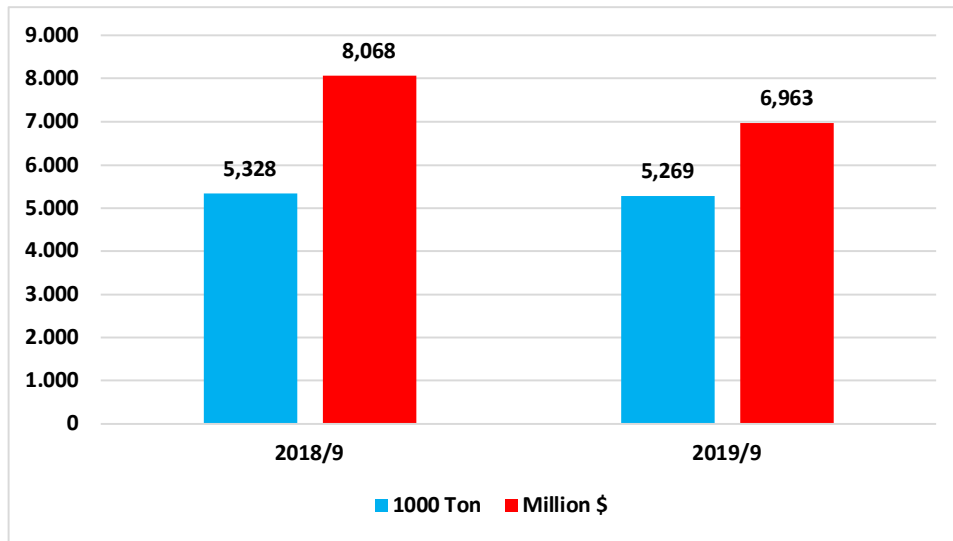
#### 3.2.1. IMPORTS

In the 9 months of 2019, 5 million 269 thousand tons and 6 billion 963 thousand dollars of plastic raw materials were imported. Plastic raw materials imports decreased by 1% on amount and 14% on value basis with respect to peer period of 2018.

	2018/9	2019 / 9	% Increase
<b>1000 Tons</b>	5,328	5,269	-1
<b>Million \$</b>	8,068	6,963	-14

**Table 14: Peer Period Comparison of Plastics Raw Materials Imports**

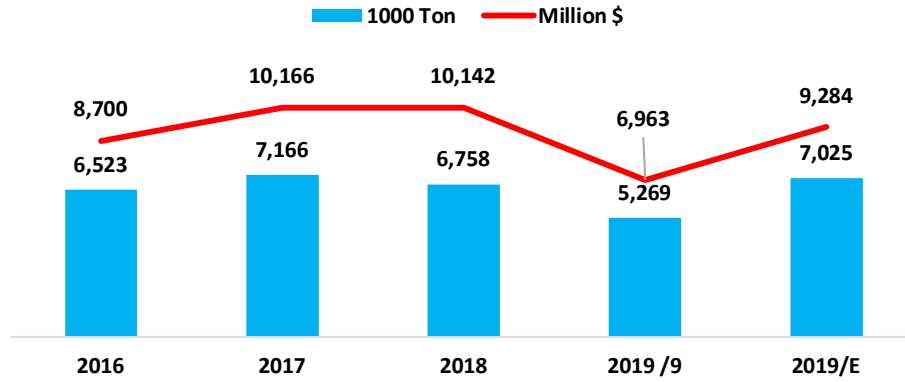
Source : PETKİM and Other Producers



**Graphic 16: Peer Period Comparison of Plastics Raw Materials Imports**

Source : PETKİM and Other Producers

If the same trend continues in next half period, it is estimated that plastic raw material imports will be 7 million 25 thousand tons and 9 billion 284 million dollars at the end of 2019.



**Graphic 17: Plastics Raw Materials Imports**

Source: Turk Stat & ITC Trade Statistics

In the 9 months of 2019, the highest imports on amount basis were polyethylene and polypropylene. The imports of these two raw materials have received a 54% share of total plastic raw material imports on amount 51% on value basis

HS Code	CN Description	1000 TON	TON- %	Million \$	\$ - %
3901	Ethylene polymers (initial forms)	1,183	22	1,412	20
3902	Propylene and polymers of other olefins (initial forms)	1,679	32	2,184	31
3903	Styrene polymers (initial forms)	339	6	493	7
3904	Other olefin polymers with vinyl chloride/homogenous	513	10	506	7
3905	Vinyl acetate/polymers of other vinyl esters (initial forms)	34	1	75	1
3906	Acrylic polymers (initial forms)	174	3	303	4
3907	Polyacetals, other polyether's, epoxide-alkyd resins (initial forms)	624	12	1046	15
3908	Polyamides (initial forms)	69	1	214	3
3909	Amino resins, phenolic resins, polyurethanes (initial forms)	162	3	318	5
3910	Silicones (initial forms)	27	1	114	2
3911	Petroleum resins, coumarone, indene/coumarone-indene resin, polytrees	27	1	76	1
3912	Cellulose and chemical derivatives (initial form)	29	1	108	2
3913	Natural polymers, modified natural polymers, derivatives (initial forms)	3	0	19	0
3914	Polymer based ion exchangers (initial form)	4	0	10	0
3915	Wastes, residuals and scraps from plastic	401	8	85	1
	<b>Total</b>	<b>5,269</b>	<b>100</b>	<b>6,963</b>	<b>100</b>

**Table 15: Plastics Raw Materials Imports by HS Codes ( 2019/9)**

Source: Turk Stat & ITC Trade Statistics

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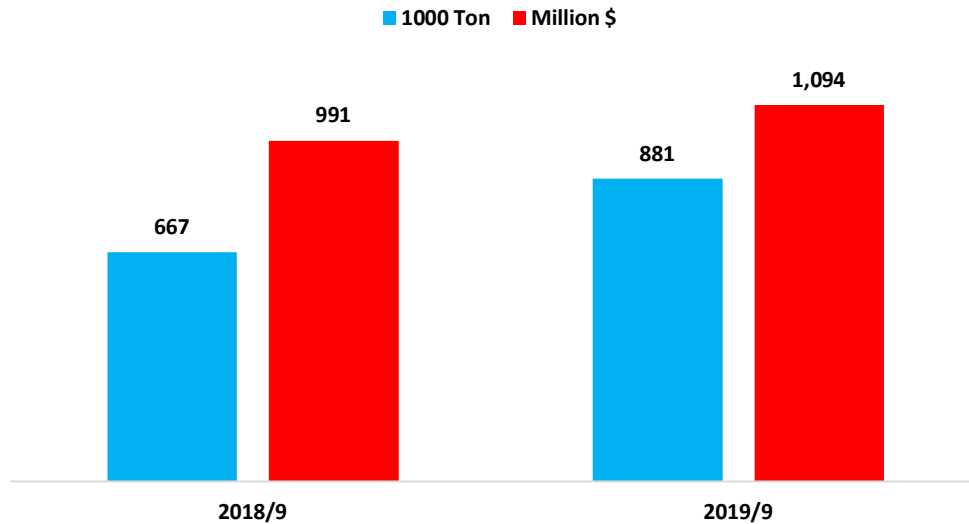
### 3.2.2. EXPORTS

In the 9 months of 2019, 881 thousand tons and 1 billion 94 million dollars of plastic raw materials were exported. Exports of plastic raw materials increased by 32% on amount and 10% on value basis with respect to peer period of 2018.

	2018/9	2019/9	% Increase
<b>1000 Ton</b>	667	881	32
<b>Million \$</b>	991	1,094	10

**Table 16: Peer Period Comparison of Plastic Raw Materials Exports**

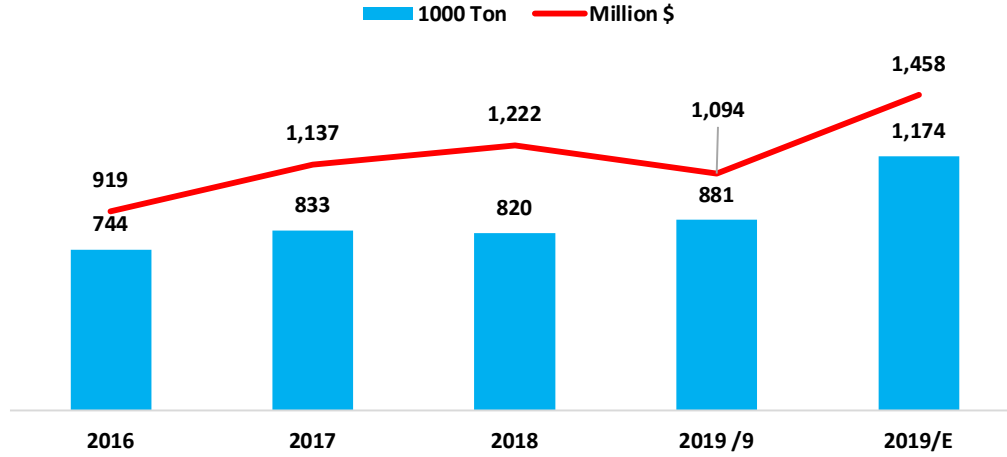
Source: Turk Stat & ITC Trade Statistics



**Graphic 18: : Peer Period Comparison of Plastic Raw Materials Exports**

Source: Turk Stat & ITC Trade Statistics

By the same trend, it is estimated that exports will increase up to 1 million 174 thousand tons and 1 billion 458 million dollars by the end of 2019.



**Graphic 19: Plastics Raw Materials Exports**

Source: Turk Stat & ITC Trade Statistics

Acrylic polymers and polyacetals, which are in the 3906 and 3907 HS groups, have the biggest shares in total exports on amount and value basis in the 9 months of 2019. The total share of these plastic raw materials realized as 42% on amount and 485% on value basis.

HS Code	Description	1000 Ton	Ton- %	Million \$	\$ - %
3901	Ethylene polymers (initial forms)	175	20	158	14
3902	Propylene and polymers of other olefins (initial forms)	25	3	28	3
3903	Styrene polymers (initial forms)	71	8	83	8
3904	Other olefin polymers with vinyl chloride/homogenous	21	2	25	2
3905	Vinyl acetate/polymers of other vinyl esters (initial forms)	51	6	44	4
3906	Acrylic polymers (initial forms)	179	20	202	18
3907	Polyacetals, other polyether's, epoxide-alkyd resins (initial forms)	192	22	332	30
3908	Polyamides (initial forms)	12	1	28	3
3909	Amino resins, phenolic resins, polyurethanes (initial forms)	98	11	109	10
3910	Silicones (initial forms)	5	1	18	2
3911	Petroleum resins, coumarone, indene/coumarone-indene resin, polytrees	1	0	5	0
3912	Cellulose and chemical derivatives (initial form)	40	5	53	5
3913	Natural polymers, modified natural polymers, derivatives (initial forms)	0	0	1	0
3914	Polymer based ion exchangers (initial form)	0	0	0	0
3915	Wastes, residuals and scraps from plastic	10	1	8	1
	<b>Total</b>	<b>881</b>	<b>100</b>	<b>1,094</b>	<b>100</b>

**Table 17: Plastics Raw Materials Exports by HS Codes (2019/9)**

Source: Turk Stat & ITC Trade Statistics

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### 3.2.3. EXPORTS AND IMPORTS BY COUNTRIES

Turkey imports plastics raw materials from over 100 countries while exports to more than 100 countries each year.

In the 9 months of 2019, Turkey's imports from 10 countries shared 64% on amount and 67% on value basis. In this period, Saudi Arabia, S. Korea and Germany took the first three places in total plastic raw material imports and the share of these 3 countries in total plastic raw material imports was 34% on amount and 35% on value basis.

Turkey is exporting plastic raw materials to more than 100 countries and 10 countries have received 46% share of total exports on amount and 47% on value basis in the 9 months of 2019. In this period Germany, Iran and Egypt and were the top 3 countries in plastic raw material exports of Turkey. Total share of these export markets realized as 16% on amount and 19% on value basis.

Imports					Exports				
Countries	1000 Ton	Million \$	Ton- %	\$ - %	Countries	1000 Ton	Million \$	Ton- %	\$ - %
S.Arabia	905	1.075	17	15	Germany	55	82	6	7
S.Korea	537	771	10	11	Iran	27	62	3	6
Germany	348	645	7	9	Egypt	58	61	7	6
Belgium	324	445	6	6	Italy	47	58	5	5
USA	292	346	6	5	Russian Fed,	27	52	3	5
Egypt	254	304	5	4	Romania	57	47	6	4
Netherlands	193	283	4	4	Spain	31	42	4	4
Spain	193	277	4	4	Iraq	28	38	3	4
France	195	273	4	4	Uzbekistan	20	36	2	3
Italy	146	266	3	4	China	56	36	6	3
<b>10 Total</b>	<b>3,388</b>	<b>4,685</b>	<b>64</b>	<b>67</b>	<b>10 Total</b>	<b>405</b>	<b>513</b>	<b>46</b>	<b>47</b>
<b>Others</b>	<b>1,881</b>	<b>2,277</b>	<b>36</b>	<b>33</b>	<b>Others</b>	<b>476</b>	<b>580</b>	<b>54</b>	<b>53</b>
<b>Total</b>	<b>5,269</b>	<b>6,963</b>	<b>100</b>	<b>100</b>	<b>Total</b>	<b>881</b>	<b>1,094</b>	<b>100</b>	<b>100</b>

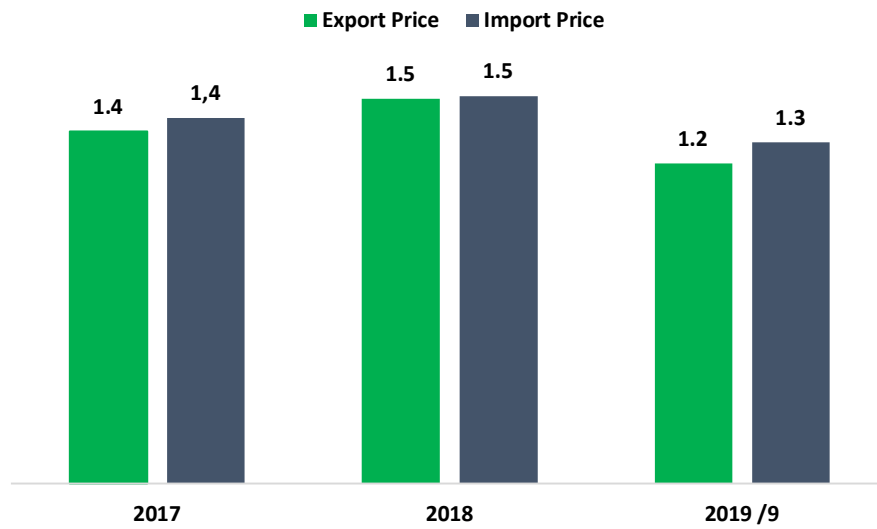
**Table 18: Plastics Raw Materials Imports and Exports by Countries ( 2019/9)**

Source: Turk Stat & ITC Trade Statistics

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### 3.2.4. IMPORT AND EXPORT PRICES

In the 9 months of 2019, the average unit import price of plastic raw materials realized as 1.3 \$/Kg and the average unit export price was 1.2 \$ /Ton. The import price decreased by 12% and export price by 17% compared to 2018.



**Graphic 20: Plastics Raw Materials Average Foreign Trade Prices (\$/Kg)**

Source: Turk Stat & ITC Trade Statistics

HS Code	Import Prices			Export Prices		
	2018	2019/9	% Increase	2018	2019/9	% Increase
3901	1.36	1.2	-12	1.2	0.9	-23
3902	1.42	1.3	-8	1.3	1.1	-13
3903	1.77	1.5	-18	1.5	1.2	-22
3904	1.02	1.0	-4	1.1	1.2	9
3905	2.55	2.2	-14	1.0	0.9	-11
3906	1.86	1.7	-6	1.2	1.1	-8
3907	1.94	1.7	-13	1.9	1.7	-10
3908	3.10	3.1	0	2.4	2.4	-2
3909	2.64	2.0	-26	1.4	1.1	-21
3910	4.75	4.2	-11	4.1	3.6	-11
3911	3.00	2.8	-6	3.1	3.1	1
3912	3.99	3.7	-6	1.3	1.3	1
3913	7.13	6.5	-8	4.7	6.0	29
3914	2.58	2.3	-11	2.5	2.5	-2

The intellectual property rights of this report belong to PAGEV and cannot be quoted even partly, without being shown as a source.

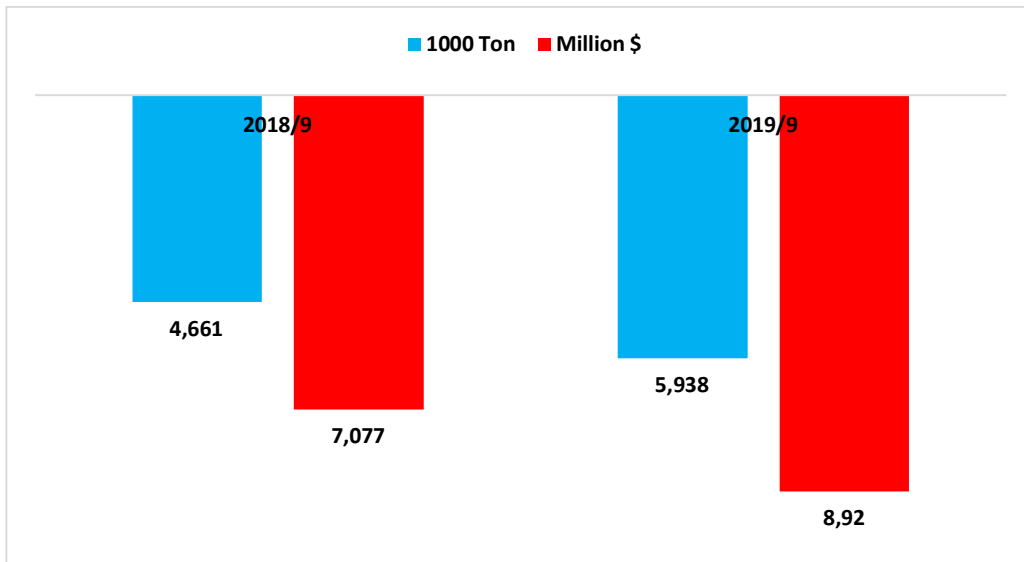
3915	0.27	0.2	-21	1.1	0.8	-24
Average	1.50	1.3	-12	1.5	1.2	-17

**Table 19: Plastics Raw Materials Average Import and Exports Prices by HS Codes (\$/Kg)**

Source: Turk Stat & ITC Trade Statistics

### 3.2.5. FOREIGN TRADE DEFICIT

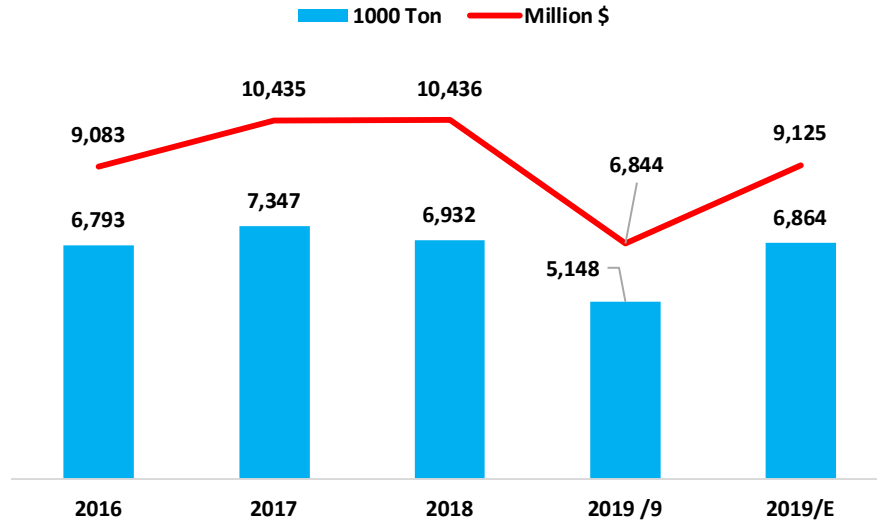
Turkey is a country that gives deficit in plastics raw materials foreign trade. In the 9 months of 2019, the plastic raw material foreign trade deficit realized as 5.9 million tons and 8.9 billion dollars. Foreign trade deficit increased by 27% on amount and 26% on value basis with respect to 2018.



**Graphic 21: Peer Period Comparison of Plastics Raw Materials Foreign Trade Deficit**

Source: Turk Stat & ITC Trade Statistics

It is estimated that plastic raw materials foreign trade deficit will be 5.9 million tons and 7.8 billion dollars by the end of 2019 if the same trend continuous in the next months of the year.

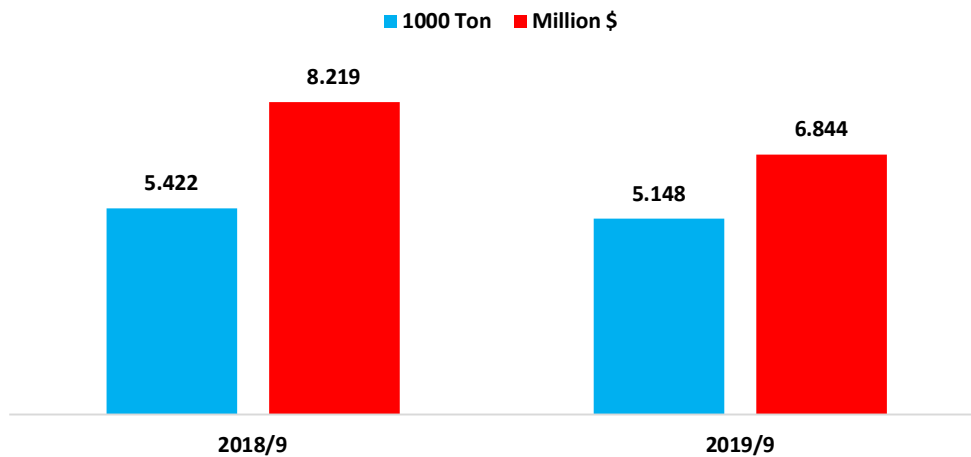


**Graphic 22: Plastics Raw Materials Foreign Trade Deficit**

Source: Turk Stat & ITC Trade Statistics

### 3.3. DOMESTIC CONSUMPTION

In the 9 months of 2019, domestic consumption of plastic raw materials was 5.1 million tons and 6.8 billion dollars, decreasing by 6% on amount and 17% on value basis with respect to 2018 with respect to peer period of 2018.

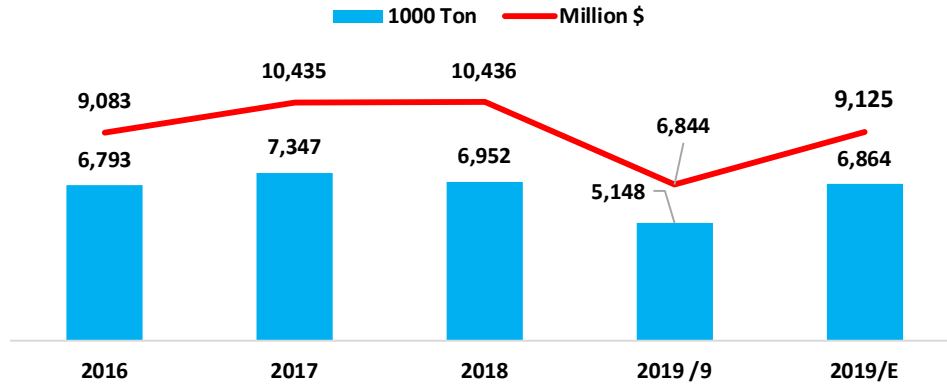


**Graphic 23: Peer Period Comparison of Domestic Consumption in Plastics Raw Materials**

Source: Turk Stat & ITC Trade Statistics

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It is expected to increase to 6.9 million tons and 9.1 billion dollars at the end of the year if the same trend continues in the next months of the year.



**Graphic 24: Plastics Raw Materials Domestic Consumption**

Source: Turk Stat & ITC Trade Statistics

### 3.4. SUPPLY AND DEMAND EQUILIBRIUM AND 2019 ESTIMATES

In the 9 months of 2019, while plastic raw material imports decreased by 1%, domestic consumption decreased by 5%, foreign trade deficit decreased by 6%, exports increased by 32% compared to the peer period of 2018.

Parallel to the expectations of the decline in the plastic product sector in 2019, it is estimated that the imports of plastic raw materials will increase to 7 million tons, exports to 1 million 174 thousand tons and domestic consumption to 6,86 million tons in 2019. The share of imports in total supply is expected to remain at 87%.

	2018/9	2018	2019 /9	2019/T	% Increase 2019 / 2018 ( 9 M )	% Increase 2019 / 2018
Production	761	1,014	761	1,014	-	-
Imports	5,328	6,758	5,269	7,025	-1	4
Exports	667	820	881	1,174	32	43
Domestic Consumption	5,422	6,952	5,148	6,864	-5	-1
Foreign Trade Deficit	-4,661	-5,938	-4,388	-5,850	-6	-1

**Table 20: Supply and Demand Equilibrium in Plastics Raw Materials (1000 MT)**

Source: Turk Stat & ITC Trade Statistics

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#### **4. CONCLUSION**

The important thing is to produce high value-added raw materials in Turkey. Taxes that Turkey pays when importing raw materials purchased by everyone, such as polypropylene and polyethylene that the industry cannot meet the domestic demand, negatively affect Turkey's competition. It is known that when we eliminate these negativities, the added value that Turkey's industry provides to the economy will increase even more.

Negative developments in Turkish and the world economy, makes it difficult to compete with the standstill or even declining sales prices and narrow profit margins.

The most important problem of the industry that it can't provide enough added value. There are mainly two ways to provide higher value-added production and exports. To produce innovative high value-added products or to increase profit margins by reducing costs without compromising quality. To enhance production and export opportunities in a competitive global market without compromising on quality, the industry must produce environmentally friendly at EU standards.

The companies which can't compete with the change in prices due to increasing global competition, must issue the "Costs of the Competition "to the forefront, to increase profitability. To create a successful competition that makes the difference in cost, it is necessary to implement changes in the changing world beyond the known method of saving techniques.

The work needed to produce advanced plastic center will facilitate Turkey's lives should be made. The traditional production model that does not provide added value in the industry should be transformed into the production of advanced plastics.

Even though only 13% of the raw material needs are covered by domestic production, the sector is deprived of the raw material supply facilities with high import prices and tax rates for the protection of domestic production at more economical prices. This reduces competitive export opportunities of sectors in global markets for the protection of the domestic raw material producer. Local producers should be protected by applying incentives to reduce production and investment costs instead of putting taxes on imports of raw materials. If the production of plastic raw materials cannot meet the need, importing obstacles must be removed. The plastic sector should be included in strategic investments regardless of foreign trade data and the minimum investment amount should be determined as 5 million dollars.

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Turkish Plastics Industry Follow-Up Report 2019/9

**BİLİNÇLİ BİR TOPLUM  
AYDINLIK BİR GELECEK  
GÜZEL BİR ÜLKE VE  
DAHA YAŞANILABİLİR  
BİR DÜNYA İÇİN  
AMBALAJ ATIKLARINI  
KAYNAĞINDA  
DOĞRU AYRIŞTIRARAK  
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Halkalı Caddesi No: 132/1 Tez-İş İş Merkezi Kat: 4 Sefaköy- İstanbul  
Tel. +90 (212) 425 13 13 Fax. +90 (212) 624 49 26 E-Mail. [pagev@pagev.org.tr](mailto:pagev@pagev.org.tr)