



## The Effect of Inward Processing Regime on Foreign Trade: The Case of Automotives and White Goods\*

### Dahilde İşleme Rejiminin Dış Ticarete Etkisi: Otomotiv ve Beyaz Eşya Sektörü Örneği

Aynur ÖNÜR ASLAN<sup>1</sup> , Mithat Zeki DİNÇER<sup>2</sup> 

#### ABSTRACT

Although the Inward Processing Regime (IPR) has been criticized for increasing imports and dependence on them in production, it provides foreign exchange inflow to the country thanks to export. IPR, which is one of the most economically effective customs regimes of all export promotion practices in Turkey, ensures \$65 billion export for \$28 billion import. Thus, IPR affects current deficit positively. Ford Otosan and Arçelik, which operate under the Koç Group, one of the most important conglomerates in Turkey, also use IPR. These two companies carry out almost all their exports within the scope of IPR and provide a total of approx. \$8.5 billion foreign currency inflow to Turkey. This amount meets about 14% of exports under IPR. In short, these two companies are constituent factors of the Turkish economy in addition to the employment they provide as well as the foreign currency they bring into the country. The aim of this study is to reveal the positive effect of IPR on export by using exemplary leading company data in the automotive and white goods sectors. Social science analysis techniques, observation, interview, academic data analysis, document analysis, qualitative data collection methods and fieldwork support were used to achieve this aim.

**Keywords:** Economically effective customs regimes, Export, import, Inward processing regime

**JEL Classification:** F41

#### ÖZ

Dahilde işleme rejimi her ne kadar ithalatı ve üretimde ithal girdiye olan bağımlılığı artırdığı konusunda eleştirilere uğrasa da yapılan ihracat sayesinde ülkeye döviz girişini sağlamaktadır. Türkiye’de ihracatı teşvik uygulamaları kapsamında yararlanılan ekonomik etkili gümrük rejimlerinden biri olan dahilde işleme rejimi (DİR), 28 milyar \$’lık ithalata karşılık 65 milyar \$’lık ihracat yapılmasını sağlamaktadır. Dolayısıyla DİR, Türkiye’nin



DOI: 10.26650/ISTJCON2020-0011

\*This article is about the thesis subject that has been being studied at Istanbul University, Social Sciences Institute, Economics PhD Program

<sup>1</sup>Lect., Istanbul University-Cerrahpasa, Vocational School of Social Sciences, International Trade, İstanbul, Turkey

<sup>2</sup>Prof. Dr. Istanbul University, Faculty of Economics, Department of Economic Policy, İstanbul, Turkey

ORCID: A.Ö.A. 0000-0001-5797-0516;  
M.Z.D. 0000-0002-4928-8303

#### Corresponding author/Sorumlu yazar:

Aynur ÖNÜR ASLAN,  
Istanbul University-Cerrahpasa, Vocational School of Social Sciences, International Trade, İstanbul, Turkey  
E-mail/E-posta: aynuronur@istanbul.edu.tr

**Submitted/Başvuru:** 31.03.2020

**Accepted/Kabul:** 02.05.2020

**Citation/Atf:** Onur Aslan, A. & Dincer, M. Z. (2020). The effect of inward processing regime on foreign trade: The case of automotives and white goods. *Istanbul İktisat Dergisi - Istanbul Journal of Economics*, 70(2), 439-452. <https://doi.org/10.26650/ISTJCON2020-0011>



cari açığını olumlu etkilemektedir. Türkiye'nin en önemli şirketler grubundan biri olan Koç Grubu bünyesinde faaliyetlerini sürdüren Ford Otosan ve Arçelik de DİR'den faydalanmaktadır. Bu iki şirket, ihracatlarının neredeyse tamamını DİR kapsamında gerçekleştirmekte ve toplamda Türkiye'ye yaklaşık 8,5 milyar döviz girdisi sağlamaktadır. Bu tutar, Türkiye'den DİR kapsamında yapılan ihracatın yaklaşık %14'ünü karşılamaktadır. Kısacası söz konusu iki şirket, sağladığı istihdamın yanı sıra ülkeye getirdiği dövizle de Türk ekonomisinin yapı taşlarındandır. Çalışmanın amacı Dahilde

İşleme Rejiminin otomotiv ve beyaz eşya sektörü ölçütünde örnek öncü firma verileriyle ihracatta yarattığı olumlu etkiyi ortaya koymaktır. Amaca ulaşabilmek için sosyal bilimler analiz teknikleri, gözlem, görüşme, akademik veri analizi, doküman analizi, nitel veri toplama yöntemleri ile saha çalışması desteği kullanılmıştır.

**Anahtar kelimeler:** Ekonomik etkili gümrük rejimi, İhracat, İthalat, Dahilde işleme rejimi

**JEL Sınıflaması:** F41

## 1. Introduction

IPR is a kind of export incentive application that enables companies to import materials that they need for their production which are exempted from all taxes and all kinds of policy measures on condition that the imported materials be processed and the final product exported within a certain time. With inward processing, it is possible to avoid taxes and other obligations provided the goods are imported outside the duty region and exported in the same or in a processed form (Häntschi and Huchzermeier, 2016, p. 113). The history of IPR in Turkey dates back to the Export Incentive Communiqué of 1984. The IPR was created to harmonize with the EU Customs Code, due to Turkey's becoming a part of the Customs Union in 1996. Every product except agricultural ones are subject to the Customs Union. With this pact, any product that is produced in Turkey or in other members of the union, or that is produced in a third country but got into circulation in any EU country, shall trade freely, and customs taxes and all prohibitions and limitations shall be removed (Çak and Çak, 2007, p. 47).

As a result of developments in the world economy, the import substitution model, which had been the dominant economy model since the proclamation of the Republic, was abandoned and an export-oriented growth strategy was adopted. For this growth strategy, imports were released, domestic demand was narrowed, and production was directed towards exports. The legal framework was set up in parallel with the export-oriented growth strategy with the signing of the Customs Union agreement and came into force in 2000 under Customs Law No. 4458. With this law, IPR was regulated as an economically effective export promoting system (Tekin, 2017, p. 194). The Communiqué on IPR published in the Official Gazette dated 20 December 2006 and numbered 26382 is still in force, although it has frequently been changed in the process of time.

## 2. The IPR and its Operation

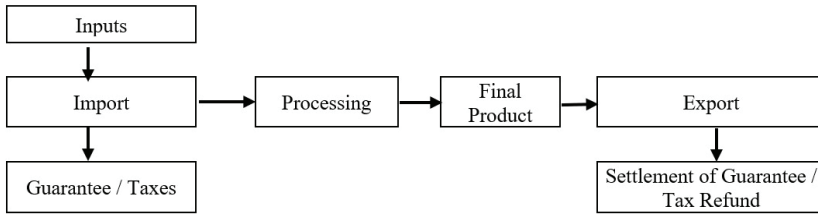
IPR is an export regime that allows enterprises to export while being exempt from tax for import inputs and to gain competitiveness in world markets in order

to encourage export. The main objective of IPR is to diversify and increase exports. In order to achieve this, inputs can be imported with customs exemption. It is based on the guarantee that taxes will be charged during the importation and the subsequent refund of the taxes paid during the importation. IPR paves the way for companies to be supplied with the inputs they need under more favorable conditions (Takım and Ersungur, 2010, p. 292).

IPR is a procedure that requires the export of final products which are produced with the help of imported inputs that are not in free circulation and which stipulates the conditions of exporting after goods have been processed by means of special reserved provisions. Taxes are refunded if the condition of being processed is fulfilled. IPR saves the producers from the customs duty burden. IPR is implemented in two different ways in terms of the payment of customs duties. The first of these is the "Conditional Exemption Method", which gives exemption from customs duty in return for export commitment. The other is the "Reimbursement Method", which foresees the reimbursement of taxes on the importation of goods, if the exportation of the product becomes reality (Selen, 2005, p. 190).

**Conditional Exemption Method (CEM):** CEM is the system that enables companies to import inputs within the scope of the Inward Processing Permission Certificate without paying taxes and being subject to trade policy measures by guarantee. If the company processes the imported input and produces a final product and then exports it from the Turkish Custom Area, then the company shall take back the guarantee, with the help of the CEM system. This system prevents the free circulation of imports for which tax has not been paid. If companies want to get inputs into circulation and to export them, then the custom taxes that had not been paid are collected, fines are imposed, and trade policy measures are implement (GTB, 2013; Başkol, 2016, p. 4).

**Reimbursement Method:** In this method, taxes of the imported inputs are paid, and trade policy measurements are applied. However, if the final product, which was produced with the help of these inputs, is exported, then all of the taxes paid on inputs are paid back to the company that owns the inward processing license (GTB, 2013; Başkol, 2016, p. 4).

**Figure 1. The Operation of IPR**

Source: Başkol, 2016, p. 4

Since IPR is a kind of incentive program for the purpose of developing exports, it provides important advantages to exporting companies. The first of these advantages is that tax exemptions enable the diversification of export products in the market. However, the advantages of IPR are not limited to this. IPR provides exemption from import quota and surveillance practices if the company fulfills the export guarantee. Furthermore, IPR envisages exemption from customs duties, VAT and other taxes, duties and charges (Kocafe-Cebeci and Yılmaz, 2013, p. 208-209). In short, it ensures either that taxes are not paid or that paid taxes are recovered.

Past experiences of developing countries, mostly from Asia and especially China, show that there is a link between foreign trade and economic growth. Therefore an increase in export has a positive effect on economic growth. IPR ensures economic growth by means of increasing exports. In addition, IPR ensures that more foreign currencies flow into the country (Georgescu, 2006, p. 24).

In order to benefit from IPR it is first necessary to have an Inward Processing Permit Certificate obtained from the General Directorate of Exports of the Ministry of the Economy or an Inward Processing Permit obtained from Customs administrations. In order to evaluate the applications, it should be possible to determine the use of the imported inputs for production, and that the interests of the domestic producers should not be adversely affected. In addition, the operating activity should be an activity that creates added value and increases the capacity utilization, and the conditions that increase the competitiveness and

export potential of the processed product should be created.<sup>1</sup> It should be added that the maximum duration of inward processing permits is 12 months. In special projects, the duration is limited to the project's completion time. The inward processing permit may be extended for a maximum of 3 months based on the date of the first import.<sup>2</sup>

While IPR encourages exports, it also increases the dependence of production on imports due to its facilitation of the latter. Custom Taxes that are related to foreign trade, and other taxes such as VAT, Special Consumption Tax, Anti-Dumping Tax that are related to normal trade are not collected if the inputs are imported as long as they are being processed and exported. IPR means that companies do not pay taxes, and make a profit, so long as these taxes and fees are on income items for the state, which means loss of public revenues (Şişman, 2017, p. 267).

IPR reduces the costs of raw materials and inputs required for the final product that is to be exported and ensures that the final product is sold at a competitive price on the foreign market. However, due to the nature of IPR facilitating imports, dependency on imports of production increases, which has a bad effect on the foreign trade deficit. On the other hand, foreign exchange inflow is provided by means of IPR, thanks to imports (Eryüzlü, 2013, p. 62). In sum, IPR is criticized for making production dependent on foreign sources, but it is an important locomotive for growth in terms of providing foreign exchange inflow to the country.

There are several studies about the effect of IPR on foreign trade. In these studies, there were negative opinions about the fact that IPR increased the dependency rate on imports, as well as positive opinions about defending IPR due to its export increasing effect.

For example, Sayılğan and Şenol (2010) analyzed the 5-year period between 2003 and 2007, and revealed that 51% of total exports and 14.9% of total imports

---

<sup>1</sup> Communiqué on Inward Processing Regime, Article 16.

<sup>2</sup> Communiqué on Inward Processing Regime, Article 20.

were within the scope of IPR, and that IPR covered 192.1 billion dollars export in response to 88.2 billion dollars import, which means the realized import to realized export ratio is 46%. As a result, they stated that IPR will increase the competitive potential in the world market by improving the opportunities of Turkish enterprises to provide cheap input.

On the other hand, Takım and Ersungur (2010) criticized the fact that IPR increases the dependency on exports to imports and causes the production of low-quality products in terms of added value. The authors suggested that for the period between 1996 and 2007, imports worth \$66 for the tire industry, \$64 for the automotive industry and \$72 for iron and steel were required for each export of \$-100. They also stated that the increase in exports also increases imports and encouraged the use of imported intermediate goods, which also impacted domestic production.

Eryüzlü (2013) examined the effect of IPR on the current account deficit. The research concluded that 40% of exports were made within the scope of IPR and that there was a causal relationship between the current account deficit and IPR because of the need to import first.

Duru, Konoşkan and Parlakay (2017) examined the IPR incentive system in the vegetable oil industry. In the research, in addition to the survey analysis, production, export and import data were used to investigate the applicability and effects of IPR in enterprises engaged in vegetable oil production and foreign trade. Findings from the research show that with the implementation of the IPR, enterprises can obtain raw materials easily and cheaply, the capacity utilization rate increases, and their market share and export values also increase.

Tekin (2017) examined the effects of IPR on import and export using 20 years of data between 1996 and 2016. In the research, the effects of IPR were analyzed on net exports, foreign exchange usage rate, and import and export data with IPR in total imports. The author argued that the imports within the scope of IPR within the total imports remained at the level of 10% and the rate of foreign exchange

usage was 40%, indicating that the dependence on imported intermediate, semi-finished or raw materials on total exports is not a result of IPR.

### 3. The Effects of IPR on Turkey's Foreign Trade

IPR has a positive effect on Turkey's current account deficit ,creating an increase both in production and in exports numbers. Although the IPR has been criticized for making production dependent on imports, production and export made with non-taxable raw material imported according to this process provide a significant amount of foreign currency input into the country. In this part of the study, the effects of IPR on both import and export will be examined separately, each with related examples.

#### 3.1. The Effects of IPR on Turkey's Imports

The share of imports carried out under the IPR in total imports in Turkey are shown in Table 1.

**Table 1: The Amount and Share of Imports within the Scope of IPR on Total Imports (Million \$)**

	Other Imports		Imports within IPR		Total
	Amount	Share (%)	Amount	Share (%)	Imports
2007	145,778	85,7	24,285	14,3	170,063
2008	171,182	84,8	30,782	15,2	201,964
2009	119,528	84,8	21,400	15,2	140,928
2010	159,495	86,0	26,049	14,0	185,544
2011	209,992	87,2	30,850	12,8	240,842
2012	204,912	86,6	31,633	13,4	236,545
2013	219,567	87,3	32,084	12,7	251,651
2014	210,619	87,0	31,558	13,0	242,177
2015	181,070	87,4	26,164	12,6	207,234
2016	174,077	87,6	24,541	12,4	198,618
2017	205,367	87,8	28,432	12,2	233,799

Source: Nakiboğlu and Aydın, 2018, p. 386.



As seen from Table 1, in 2007 approximately \$25 billion imports were made within the scope of IPR, which corresponds to 14.3% of total imports. The share of imports within the scope of IPR within total imports, which had been on a fluctuating course over the years, decreased to 12.2% as of the end of 2017. In short, IPR does not cause an increase in imports.

### 3.2. The Effects of IPR on Turkey's Exports

Table 2 shows the amount of exports and their share in total exports under the IPR. Although the ratio of exports under IPR to total exports, which was 48.6% in 2007, decreased to 41.4% as of the end of 2017, the high rate indicates the importance of IPR for the Turkish economy. Almost half of total exports are made within the scope of IPR.

**Table 2: The Amount and Share of Imports within the Scope of IPR on Total Exports (Million \$)**

	Other Exports		Exports within IPR		Total Exports
	Amount	Share (%)	Amount	Share (%)	
2007	55,109	51,4	52,163	48,6	107,272
2008	69,231	52,4	62,796	47,6	132,027
2009	55,746	54,6	46,397	45,4	102,143
2010	60,164	52,8	53,720	47,2	113,884
2011	70,711	52,4	64,196	47,6	134,907
2012	87,194	57,2	65,267	42,8	152,461
2013	83,720	55,1	68,148	44,9	151,868
2014	89,055	56,5	68,555	43,5	157,610
2015	85,027	59,1	58,812	40,9	143,839
2016	84,361	59,2	58,168	40,8	142,529
2017	91,990	58,6	65,006	41,4	156,996

Source: Nakiboğlu and Aydın, 2018, p. 384.

When Table 1 and Table 2 are analyzed, it can be seen that a total of \$28 billion was imported and \$65 billion was exported within the scope of IPR. This shows that IPR brings foreign currency into the Turkish economy.

#### **4. The Effect of IPR on Foreign Trade: The Case of Ford Otosan and Arçelik**

Automotives and white goods are among Turkey's most important exports. Ford Otosan and Arçelik, both of which are part of Koç Holding, are among the giant actors of these two sectors. They are Turkey's largest exporters in sectors where imported inputs are mostly used, and they are both benefiting from export incentives offered by the state.

Ford Otosan has become one of Turkey's largest exporters since its foundation in 1959. Ford Otosan operates in three main centers, in Kocaeli (Gölcük and Yeniköy factories), Eskişehir (İnönü factory) and İstanbul (Sancaktepe R&D Center and spare parts warehouse). A total of 11,700 workers, both blue and white collar, are employed. Ford Otosan is the leader in commercial vehicles with a market share of 30.8% and ranks third in the total market share. The company exported 329 thousand vehicles, with an increase of 11% compared to 2018. This amount of export is 74% of Turkey's whole commercial vehicle export (Ford Otosan, 2019). Today, Ford Otosan has increased its production capacity by 10 times compared to 1997, and its capacity has now reached 455 thousand from 47 thousand in 1997. While the company exported only 667 commercial vehicles in 1997, this amount has increased today by 493 times and amounts to a capacity of 328,892. Accordingly, exports increased from \$16 million to \$5.6 billion (Ford Otosan September 2019 Investor Presentation, 2019).

Ford Otosan is the largest exporter of the Turkish automotive sector today. It exports a worth of \$5.6 billion, while its exports under IPR are \$4.91 billion. This means, the ratio of Ford Otosan's exports under IPR to total exports was 87.67% by the end of 2018. Therefore, Ford Otosan provides a high amount of foreign exchange, namely \$5 billion to Turkey.

**Table 3: The Amount of Exports within the Scope of IPR of Ford Otosan (Million \$)**

	Exports within IPR	
	(Million \$)	
2009	1.20	
2010	1.84	
2011	1.07	
2012	1.16	
2013	2.18	
2014	2.64	
2015	3.56	
2016	2.69	
2017	4.44	
2018	4.91	

Source: Author's calculations.

Another giant company within the Koç Group is Arçelik. Arçelik operates in white goods, consumer electronics, small home appliances and kitchen accessories and is the leader in Turkey and second in Europe in these sectors. With 23 production facilities in 9 countries, 19 R&D and design centers in 6 countries, and sales and marketing organizations in 35 countries, Arçelik provides its products and services to approx. 150 countries (Arçelik August 2019 Investor Presentation, 2019).

Around TRY 18.5 billion (approx. \$3.5 billion) of Arçelik's sales, out of an approximate total of TRY 27 billion, are from international sales, which means exports amount to 69% of all Arçelik's sales (Arçelik August 2019 Investor Presentation, 2019) (See Table 4).

**Table 4: Total Sales of Arçelik**

	Domestic (Million TRY)	International (Million TRY)	Total (Million TRY)	Share (%)
2010	3,417	3,519	6,936	50,7
2011	3,977	4,460	8,437	52,9
2012	4,454	6,103	10,557	57,8
2013	4,617	6,481	11,098	58,4
2014	4,852	7,662	12,514	61,2
2015	5,724	8,442	14,166	59,6
2016	6,449	9,647	16,096	59,9
2017	8,125	12,716	20,841	61,0
2018	8,425	18,479	26,904	68,7

Source: Author's calculations.

As can be seen from Table 4, the share of exports in all of Arçelik's sales is around 69%. Therefore, Arçelik owes its growth to exports. Considering the dependence of the sector in which Arçelik operates on imported inputs, it is usual for IPR to benefit from export incentives. As can be seen from Table 5, Arçelik's share in the export of IPR within total exports is 98%. Therefore, Arçelik exports almost all its exports within the scope of IPR. Thus, it provides 3.5 billion dollars of foreign currency to Turkey.

**Table 5: The Amount and Share of Exports within the Scope of IPR of Arçelik (Million \$)**

	Exports within IPR (Million \$)	Share of Exports within IPR on Total Exports (%)
2009	1,093	95%
2010	1,858	97%
2011	2,671	96%
2012	3,986	99%
2013	3,577	97%
2014	3,984	96%
2015	3,484	99%
2016	3,447	97%
2017	3,132	99%
2018	3,536	98%
2019 (1-7)	1,909	98%

Source: Author's calculations.

As seen from Table 4 and Table 5, these two companies of the Koç Group alone provide 8.5 billion dollars' worth of foreign currency to Turkey under IPR. Approximately 14% of Turkey's 65 billion dollar exports under IPR are made by these two companies alone.

## 5. Conclusion

The IPR is an export incentive that provides competition and price advantages by allowing for exemptions from all kind of taxes. It also provides trade policy measures under the conditions of processing imported inputs and exporting the final product. It is applied in two different ways, namely the Conditional Exemption Method or the Reimbursement Method. The Conditional Exemption

Method involves importing inputs by providing export guarantees and exemptions from tax and policy measures. The Reimbursement Method involves taxes and fees for the imported inputs being prepaid and then all taxes paid back after the exports are returned to the exporter.

The IPR reduces exporters' input costs by providing exemptions from tax and policy measures. Therefore, it provides a serious cost advantage. However, in order to benefit from the IPR, an Inward Processing Permit or Certificate of Inward Processing is required. In addition, the inputs imported under the permit should not be put into free circulation but should be used as inputs in production and should increase the capacity utilization rate. Therefore, the IPR cannot be used to cause unfair competition for domestic enterprises.

The IPR is subject to criticism regarding making the production dependent on imports, but it is unfair to say that the IPR is disadvantageous for the country itself. By the end of 2018, Turkey's total imports in context of IPR amounted to 28 billion dollars, while total exports in the context of IPR of Turkey reached 65 billion dollars. So, criticisms regarding making production dependent on imports and increasing the foreign trade deficit seem to be undue. On the contrary, the IPR decreases Turkey's foreign trade deficit by 37 billion dollars.

The most important sectors providing foreign currency inflow to Turkey are the automotive and white goods sectors. Operating in many sectors, Koç Group has giant companies in both of these sectors. Ford Otosan is among the export champions in the automotive sector, while Arçelik is among the export champions in the white goods sector. These two companies make almost all their exports within the scope of IPR. Thus, they bring about 8.5 billion dollars of foreign currency into our country. This constitutes approx. 14% of the exports made within the scope of IPR. In short, in addition to the employment it provides, Koç Holding is one of the main constituents of the Turkish economy due to the foreign currency it provides to the national economy.

**Peer-review:** Externally peer-reviewed.

**Conflict of Interest:** The authors have no conflict of interest to declare.

**Grant Support:** The authors declared that this study has received no financial support.

**Hakem Değerlendirmesi:** Dış bağımsız.

**Çıkar Çatışması:** Yazarlar çıkar çatışması bildirmemiştir.

**Finansal Destek:** Yazarlar bu çalışma için finansal destek almadığını beyan etmiştir.

---

## References/Kaynaklar

- Arçelik August 2019 Investor Presentation. (2019). Retrieved from [http://www.arcelikas.com/UserFiles/file/Ar%C3%A7elik\\_A%C5%9E\\_Investor%20Presentation%20July2019\(2\).pdf](http://www.arcelikas.com/UserFiles/file/Ar%C3%A7elik_A%C5%9E_Investor%20Presentation%20July2019(2).pdf) (Accessed on 13.10.2019)
- Başkol, M. O. (2016). Türkiye ihracatının ithalata bağımlılığının dahilde işleme rejimi açısından analizi. *Ekonomik ve Sosyal Araştırmalar Dergisi*, 12(2), 1-18.
- Çak, D. & Çak, M. (2007). *Gümrük birliği'nin getirdikleri ve götürdükleri: Dış ticaret vergileri ve ihracat gelirleri analizi*. İstanbul: İstanbul Ticaret Odası Yayınları.
- Duru, S., Konuşkan, D. B. & Parlakay, O. (2017). IPR promotion system in vegetable oil industry: A case study of Turkey. *Turkish Journal of Agriculture - Food Science and Technology*, 5(4), 435-440.
- Eryüzlü, H. (2013). Dahilde işleme rejimi ve cari açık üzerindeki etkileri. *İnönü University International Journal of Social Sciences*, 1(1), 59-69.
- Ford Otosan. (2019). Retrieved from <https://www.koc.com.tr/tr-tr/faaliyet alanlari/sectorler/otomotiv/ford-otosan> (Accessed on 13.10.2019)
- Ford Otosan September 2019 Investor Presentation. (2019). Retrieved from [https://www.fordotosan.com.tr/doc/qYkzwh7jLN3teJHDF8tJr-JPN\\_K5n4pwx0MgGcW1cK-BYgpYxxRTpg8Vu3L3LI5XCKDsfiCy5sVY](https://www.fordotosan.com.tr/doc/qYkzwh7jLN3teJHDF8tJr-JPN_K5n4pwx0MgGcW1cK-BYgpYxxRTpg8Vu3L3LI5XCKDsfiCy5sVY)