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The Role of Foreign Capital in Turkish Agriculture: Transformation Process of Direct Capital Mobility After 1980 and Determining Future Trends of Foreign Capital in terms of Agriculture Sector

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Abstract

In Turkey, during the period from the foundation of the Republic to 1980, an economy based on agriculture was adopted, the majority of the population was employed in the agricultural sector, and agriculture was supported by protectionist policies. With the decisions made after 1980, the transition to a free market economy started, and policies to support agriculture were reduced. Economic policies implemented after 1980 targeted the restructuring of production, labor, capital, and social policies, and the liberalization of foreign trade and financial markets in national and international flows. These policies executed have had different reflections on a sectoral basis.

This study discusses the sectoral structure of Turkish agriculture after 1980, its place in the Turkish economy, and the sectoral distribution of foreign capital after 1980. In this context, the agricultural policies implemented in the past were briefly discussed, and the structural arrangements after 2000, the transformation process of foreign capital movements and the future trends of foreign capital were tried to be evaluated. The study has been prepared using national and international literature and data from various institutions. This study aims to bring together what has been done in this field, express the current deficiencies, and guide those considering working on similar issues in the future.

Keywords: Turkish Agriculture, Foreign Capital, Privatization, European Union.

Jel Codes: *Q13, Q17, Q18*

Yabancı Sermayenin Türk Tarımındaki Yeri: 1980 Sonrası Doğrudan Sermaye Hareketliliğinin Dönüşüm Süreci ve Yabancı Sermayenin Tarım Sektörü açısından Gelecek Eğilimlerinin Belirlenmesi

Öz

Türkiye'de Cumhuriyet'in kuruluşundan 1980 yılına kadar olan dönem boyunca tarıma dayalı bir ekonomi benimsenmiş, nüfusun çoğunluğu tarım sektöründe istihdam edilmiş ve tarım korumacı politikalarla desteklenmiştir. 1980 sonrası alınan kararlarla birlikte serbest piyasa ekonomisine geçiş süreci başlamış ve tarımı desteklemeye yönelik politikalar da azaltılmıştır. 1980 sonrası uygulanan iktisat politikaları; üretimin, işgücünün, sermayenin ve sosyal politikaların yeniden yapılanmasını, dış ticaret ve mâli piyasaların ulusal ve uluslararası akımlarda serbestleştirilmesini hedeflemiştir. Ortaya konulan bu politikaların sektörel bazda farklı yansımaları olmuştur.

Bu çalışmada; 1980 sonrası Türk tarımın sektörel yapısı, Türkiye ekonomisindeki yeri ve 1980 sonrası yabancı sermayenin sektörel dağılımı ele alınmıştır. Bu kapsamda geçmişte uygulanan tarım politikaları kısaca ele alınıp, 2000 sonrası yapısal düzenlemeler, yabancı sermaye hareketlerinin dönüşüm süreci ve yabancı sermayenin gelecek eğilimleri değerlendirilmeye çalışılmıştır. Çalışma, yerli ve yabancı alan yazınından ve çeşitli kurumlardan elde edilen verilerden faydalanılarak hazırlanmıştır. Bu çalışma ile, bu alanda yapılanları bir araya getirerek mevcut eksiklikleri dile getirmek hem de gelecekte benzer konularda çalışma yapmayı düşünenlere yol gösterici olmak hedeflenmektedir.

Anahtar Kelimeler: Türk Tarımı, Yabancı Sermaye, Özelleştirme, Avrupa Birliği

Jel Kodu: *Q13, Q17, Q18*

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INTRODUCTION

The agriculture sector in Turkey served as the leading sector in the economy until the 1980s, and Turkey has undergone a significant transformation in terms of the new liberal economy, growth, distribution, and agriculture policies implemented in the 1980s**.** The economic policies implemented after 1980 are based on policies for improving labor and working conditions, and the revision of social policies includes social security reforms. These policies executed have had different reflections on a sectoral basis.

A direct income support system targeting small farmers was introduced in 2000 in place of the abolished subsidies. Thus, it became possible to compensate for the producer income losses resulting from free market prices. In the field of industry, policies have been implemented to support export-oriented industrialization (contract manufacturing). Within the scope of liberal policies implemented, limitations were made in agricultural support. This was also reflected in the banks, and the Central Bank's direct lending to State Economic Enterprises (SEEs) was abolished (İçöz, 2009:34). The weight of the loans allocated to support within the Central Bank loans has been reduced from 35% to 5%.

Limiting subsidies restricted the number of products and production opportunities, and rural development was affected negatively by incentives based on land size. While the number of supported products was 24 in 1980, it decreased to 18 in 1985 and 10 in 1990 (Durak and Karadağ, 2017:109).

Policies implemented in 1980 and later appeared as neo-liberal economic policies (Narin, 2011:2; Yılmaz, Göktürk and Kök, 2007:320). With the liberalization and deregulation policies implemented, the influence of the state on the agricultural sector began to decrease gradually. In addition, during this period, resources were transferred from the agricultural sector to the industrial sector, and with the impoverishment in the rural areas, the farmers tended to move away from agricultural production. World Bank (WB), International Monetary Fund (IMF), and European Union Common Agricultural Policy harmonization policies were effective in this change (Narin, 2011:2). As a result of these practices, agricultural production was seriously injured, migration from rural to urban areas accelerated, and the rural population decreased. While the share of the agricultural population in the total population was 56% in 1980, this ratio decreased to 40% in 1990, 35% in 2000 (Narin, 2011:6), and 7% in 2020.

Customs duties, which protect small producers working in the agricultural sector against price fluctuations and encourage domestic production, have been reduced. As a result, small producers have become unable to compete in international markets, and moving away from production has accelerated. All these developments accelerated the flow of unskilled labor from the village to the city. This situation, on the one hand, created a "reserve army of labor" for the "global factories" producing for the world economy, and on the other hand, it led to informalization in the labor market. Informalization in the labor market has emerged in the form of people being employed in small businesses that do labor-intensive work with low wages without social security (Yılmaz et al., 2007:320).

Loan agreements with the World Bank and the International Monetary Fund (IMF) in 1994, 1997 and 2001 resulted in fundamental changes in the agricultural sector. These changes caused the state to withdraw from the agricultural sector over time, and this process progressed to privatizing state institutions. In this process, TEKEL was first privatized (İçöz, 2009:

36). Then, the privatization of SEEs such as EBK, SEK, ORÜS, and TZDAŞ, which played an essential role in the development of agriculture in Turkey, was completed (Narin, 2011:9). The share of SEEs in the agricultural sector has gradually decreased with privatization. While the share of SOEs in GNP was 16.6% in 1986, this ratio decreased to 13% in 1990. It has decreased continuously since then (Ertan, 1997:246) and decreased to 10.3% by the 2000s. While the share of SOEs in GNP was 13.4 in 2002, this ratio decreased to 4% in 2006. While the share of SOEs in Turkey's employment was 3% in 1995 in general, it decreased to 2.5% in 2000 as a result of the continuous decrease in the number of employees in SOEs in addition to the decrease in total employment (Altunbag and Turkoglu, 2015:44). The significance of SOEs in the economy continued until the 1980s. After the abandonment of the import substitution policy in the 1980s, SOEs, which could not invest in necessary technological renewals due to insufficient resources and many of which worked with old technology, lagged behind the competition. The share of SOEs in production entered a gradually decreasing process with the strengthening of the private sector on the one hand and the privatization practices on the other (Altunbag and Turkoglu, 2015:51).

Fundamental changes in agricultural policies in Turkey have emerged due to external factors rather than internal factors (Durak and Karadağ, 2017:109). The fact that institutions such as the World Bank and the IMF see the state as the cause of waste and the policies implemented have been shaped at this point have transformed the domestic and foreign trade balance against agriculture in the post-1980 period (Eşiyok, 2004:15). In the 1990s, after the Uruguay Round, trends in which the free market dominated and the effectiveness of the state decreased in both world agricultural policies and agricultural policies implemented in Turkey gained momentum (Şahinöz, 2003:1). During this period, a short-term support policy, which could not produce solutions to structural problems, was dependent on the political structure and was price-weighted, was followed. The political weight has come to the fore in the support provided, regardless of domestic and foreign demand. These policies have burdened the budget, making it necessary to reform the agricultural sector. Another issue that Turkey attached importance to during this period was the full membership negotiations with the EU. At this point, the issue of agriculture has become an important issue discussed between Turkey and the EU. In this process, the EU required Turkey's agricultural policies to be compatible with the Common Agricultural Policies and to make agricultural reforms along with the membership process (Kazgan, 2013:9).

Since the beginning of the 2000s, several reforms have begun to be made in agricultural policies. Especially the "Agricultural Reform Implementation Project (ARIP)" and the "Economic Reform Credit Agreement" are important. With this project, which was put into practice in 2001, agricultural supports were abolished entirely and replaced with Direct Income Support (DIS) (Kazgan, 2013:11). With the DIS policy imposed by the World Bank and the IMF, demanded by the United States of America (USA) and the EU, Turkish agriculture has evolved into a different process. This situation caused the villagers to leave their land and migrate to urban areas; thus, the annual growth rate in agriculture fell below 1% (Dinler, 2014:237-240). In 2001, the ARIP was put into practice, and in 2006, "Agricultural Law No. 5488" was enacted., Rural development supports, difference payment supports, and agricultural insurance supports were operationalized with the Agricultural Law. In 2015, with Law No. 8294, it was decided to give 100 TL support per decade to the owners of small businesses that grow vegetables, fruits, ornamental plants, and medicinal aromatic plants registered in the Farmer Registration System as of 2016. In addition to the actions in 2016, with Law No. 6663, positive adjustments were made in

the VAT rates in favor of the farmers to reduce the fertilizer and feed input costs. In 2017, the "Council of Ministers Decision No. 10465" for agricultural support was issued, and in the same year, a new basin-based practice was introduced to improve plant production within the scope of the "Turkish Agricultural Basin Production and Support Model". With the latest regulations, animal husbandry supports for cities and regions has been increased, and coastal fisheries have been registered and supported in aquaculture (Ministry of Development, 2018).

However, it is seen that, as in all other sectors, foreign capital should be evaluated in a way that contributes and adapts to the agricultural sector. Foreign capital is an important resource used to ease the savings-investment tightness or capital shortage faced by developing countries in their economic development processes. When countries accept foreign capital, however, it is necessary to adjust the interests of foreign capital and the country in a non-conflicting way and to successfully calculate the "optimum point" where the benefits of the investor and the relevant country intersect (Gokhan, 2003: 53). It is especially significant to regulate the flow of foreign capital and to take the necessary measures that will not disrupt the price mechanism and support domestic production.

Accordingly, this study aims to open an academic discussion on the possible consequences of this situation in favor of agriculture in the agricultural sector. Developing countries need to open the doors of the economy to foreign capital to be attractive countries to invest in the international system and to ensure continuity in the flow of foreign capital. However, this situation may adversely affect the foreign policies of those countries. This study; discusses the current situation of Turkish agriculture after 1980, its place of foreign capital in the Turkish economy, and the sectoral distribution of foreign capital after 1980. In this context, the agricultural policies implemented in the past are briefly discussed, and the structural arrangements and the transformation process of foreign capital movements after 2000 are evaluated.

1. POSITIVE ASPECTS OF FOREIGN CAPITAL

Foreign capital investments offer important opportunities for multinational companies to increase their production and meet the resource needs of countries with capital deficits. Foreign capital inflows provide intangible opportunities for countries needing external resources such as marketing techniques, quality standards, technology transfer, information systems, human capital, and knowledge transfer (Mallampally and Sauvant, 1999; İlgazi, 2019:3596).

The economic, political, and social convergence of the world's people and the acceleration of the liberal structure in trade and economy have increased free movement and made trade even more liberal. At the same time, there have been developments in cross-border communication, and investment opportunities have increased. With the disappearance of borders, companies have entered the race to offer better quality and cheaper goods or services. This situation facilitated the access of developed countries to cheaper labor and raw material resources and accelerated the process of opening new marketing with technology and capital transfer (Bağcı, 2009:125).

In the past, the expectation of foreign capital of host countries has emerged in production insufficiency, cheap labor and raw materials, capital deficit, and lack of foreign exchange reserves. However, there have been significant changes in these expectations have changed significantly over time. Today, this trend has changed in providing full competition, evaluating natural resources economically, developing human resources, bringing technological innovations to the economy, being

informed about production and management, and getting the economic and political support of developed countries (Oksay, 2008:4). The entry of foreign investors is determined by cheap and qualified labor, the size of the domestic market, abundance of capital resources, proximity to raw material sources, developed communication network, accessible transportation, and the opportunity to gain profit from the market. Apart from these, macroeconomic policies of the countries, incentives provided by the government, facilities provided to foreign capital, applied taxes, and foreign trade policies are other factors that affect the decisions of foreign capital (Özyıldız, 1998:3; Bağcı, 2009:125).

There are numerous reasons for companies to invest abroad with foreign direct capital inflows to invest. The reasons for a company to invest directly abroad are not only limited to selling goods but also gaining advantages in many ways, such as using the advantage of cheap labor and raw materials, opening up to new markets, taking advantage of the opportunities of the foreign market, reducing transportation costs, benefiting from economies of scale, and increasing their share in other markets. (Göçer and Peker, 2014:88; Calo & Pizzutilo, 2014; İlgazi, 2019:3596).

Foreign capital investment is the financial or physical investment or commercial activity of people and institutions residing abroad. In particular, what is expected from this capital investment is to contribute to the increase of the domestic fixed capital stock, bring technology and business knowledge, create employment, and improve competition (Çomaklı, 2000:160).

2. OVERVIEW OF FOREIGN CAPITAL MOVEMENTS IN TURKEY

Recent economic developments and political changes in the world have also changed the direction of foreign capital. With the disintegration of the Eastern bloc countries, countries with different political and economic regimes, especially China, have tried to create new areas for foreign investments. Due to its cheap and qualified workforce, China has been the center of attention for foreign investments and has been one of the countries that benefited the most from these investments (Kurtaran, 2010:371). Turkey, which is among the developing countries, needs external financing resources to ensure economic development and sustainable growth. Foreign financing sources include foreign direct investments (FDI), technology transfer, international portfolio investments, and financing offered by international banks (Karagöz, 2007:3).

The Republic of Turkey tried to stay away from foreign borrowing from the first years of its establishment until 1954. During this period, Turkey struggled to pay the foreign debts of the Ottoman Empire. These issues also affected the foreign resource inflow, and there were only 24 million dollars of capital inflow between 1923-1954. Although the foreign capital law enacted by the Democrat Party in 1954 opened its doors to foreign capital in Turkey, the capital inflow remained at a limited level until 1985. Between 1954 and 1985, there was a capital inflow of 833 million (URL 1). Civil governments established after the 1980 military coup began implementing open policies. As a result of these policies being implemented, many economic crises were encountered. Factors such as the 1994 crisis, the April 5 decisions, the 1997 Mexican Crisis, the 1998 Asian Crisis, the 1999 Russian Crisis, and the 1999 Earthquake, the November 2000 and February 2001 crises adversely affected and restricted foreign capital inflows significantly (İlgazi, 2019:3597).

Since the 2000s, there has been a rapid increase in direct investment inflow and economic growth. By accepting the Maastricht (economic) and Copenhagen (political) criteria in line with Turkey's full membership goals to the EU, many western countries, especially Europe, have begun to receive a significant share of international capital. Especially since

2002, the political stability and determination provided by the one-party government gave confidence to foreign investors, and this situation directed international capital to Turkey. Foreign direct investment, which was 2.8 billion dollars in 2004, reached a level close to 20 billion dollars even in 2008 when the global crisis broke out. The increase in foreign direct investment between 2002 and 2008 was realized mainly by privatized public institutions or purchased Turkish companies. In 2008-2009, with the global crisis that affected the whole world, international direct investment inflows decreased below 10 billion dollars. The investment inflows revived again in 2011 and exceeded 16 billion dollars annually. Between 2012 and 2015, the continuously increasing foreign capital investments reached up to 17.6 billion dollars. The political instability perception caused by a failed military coup in 2016 negatively affected capital inflow, and decreasing to $12 billion. The political system has undergone a radical transformation by adopting the new government system in the 16 April 2017 referendum. During this period, a negative perception of western countries towards democracy and the basis of law emerged. This point of view has affected foreign capital inflows and caused a further decrease in interest in Turkey. This decline further increased in 2020 with the Covid-19 outbreak (URL 1).

According to the World Investment Report data published by the United Nations Conference on Trade and Development (UNCTAD), international direct foreign capital inflows worldwide decreased by 35% compared to the previous year, and the investment value has regressed from 1.5 trillion dollars in 2019 to 1 trillion dollars in 2020. According to this report, there has been a slowdown in investment projects with the impact of the Covid-19 pandemic, and new investment projects have been put on hold. In this period, foreign direct investment flow to developed countries decreased by 58% to 312 billion dollars. Foreign direct investment flow to Europe decreased by 80% to 73 billion dollars and 35% to 999 billion dollars in the world. On the other hand, Asia was the only one with a positive development with 4% growth (Table 1). Mergers and acquisitions, especially in the IT sector, have positively affected this growth (UNCTAD, 2021: 2).

Table 1. Foreign Direct Investments (FDI) by Regions (2019-2020)

Regions	**2019**	**2020**	**Change between 2019-2020 (%)**
Developed Countries	749	312	-58
Europe	363	73	-80
North America	309	180	-42
Developing Countries	723	663	-8
Africa	47	40	-16
Latin America and Caribbean	160	88	-45
Asia	516	535	+4
Transition Countries	58	24	-58
World	1530	999	-35

Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).

The findings summarized in Table 1 reveal that foreign direct investments (FDI) tend to decrease continuously in 2020 compared to the previous year. The biggest decrease was in Europe, and the biggest increase was in Asian countries. The decrease in developing countries was 8%.

FDI in Turkey remained at very low rates from 1980 to 2005. With the start of Turkey's full membership negotiations with the EU, foreign investors tended to prefer Turkey more. This situation is given in detail in Table 2.

Table 2. Foreign Direct Investment Inflows in Turkey by Years

Years	FDI Inflow ($Billion)	FDI Stock – Turkey ($ Billion)
1980	0.02	9
1990	0.7	11
2000	1	19
2005	10	71
2006	20.2	95
2007	22	155
2008	19.9	81
2009	8.6	144
2010	9.1	188
2011	16.1	137
2012	13.7	191
2013	13.6	151
2014	13.3	182
2015	19.3	150
2020	7.8	211

Source: Uslu, 2018: 512; UNCTAD, 2021: 54

According to the figures summarized in Table 2, there was a significant increase in capital flow between 2005 and 2008 with the effect of big privatization moves such as Türk Telekom and Aliağa Petkim, where FDI inflow values were below 1 billion dollars before 2000. FDI inflows, which entered a decreasing trend with the effect of the global economic crisis in 2008, decreased to 8.6 billion dollars in 2009. FDI flow, which started to rise again after 2010, increased to 19.3 billion dollars in 2015 (Uslu, 2018:512). By 2020, the effects of the Covid 19 pandemic began to be seen. In 2020, developed countries reduced their investments abroad by 56% to 347 billion dollars. This is the lowest level seen in the investment area since 2000. Foreign direct investment inflows in Turkey decreased by 15% to 7.8 billion dollars compared to 2019. The increase in investment in the last quarter of 2020 partially prevented this decline. In the first half of 2021, with the vaccine becoming widespread, the countries that took the pandemic under control entered the recovery process. Although there is a significant improvement in international project finance with mergers and acquisitions, new investments are predicted to be downwards (UNCTAD, 2021:68). When the FDI stock in Turkey is reviewed, it is seen that the investment stock, which was 9 billion dollars in 1980, showed a continuous increase until 2008 and reached 155 billion dollars. FDI flow, which started to rise again after the decline caused by the global crisis in 2008, experienced the greatest increase in 2012 and 2020 (Table 2).

The Covid-19 pandemic has negatively affected the global economy regarding both production chains and consumption and investment expenditures. Within the scope of combating the Covid-19 pandemic, industrial investments in the global supply chain, which is among the efficiency-oriented investments in Turkey, may attract more attention. During the Covid-19 pandemic, the size of sustainable-themed financial products in the capital market reached 3.2 trillion dollars, an increase of 80% compared to 2019. These products are green bonds, social bonds, sustainability funds, and hybrid bonds (UNCTAD, 2021:72).

Bonds issued by organizations such as the EU and African Development Bank to combat the Covid-19 pandemic paved the way for financing opportunities for social crisis and sustainability goals by making an outstanding contribution to developing the social and sustainability bond market. In the coming years, it is foreseen that investments will be realized towards the goal of sustainability at increasing rates. At this point, important opportunities arise for Turkey. In this context,

some special plans should be made, and a share of sustainability-oriented funding opportunities should be ensured.

3. LOCAL LITERATURE ON THE USE OF FOREIGN CAPITAL IN TURKISH AGRICULTURE

Studies on foreign capital have mostly focused on the banking sector. There are very few studies in the Turkish literature on the use of foreign capital in Turkish agriculture. The first study on the situation of Turkish agriculture and the use of foreign capital was conducted by Erçakar (2007). This study tried to shed light on the general structure and positive and negative aspects of agriculture in Turkey on the axis of foreign direct investments. It is stated at the end of the study that foreign capital is insufficient in Turkish agriculture. The second study was carried out by Husmanlar (2011). The effects of foreign capital on agricultural production in meeting Turkish agriculture's financing needs were discussed in the study. The literature review was mostly used in the study. It was stated at the end of the study that Turkish agriculture faced production problems. The third study was conducted by Koçtürk et al. (2013). The study explored the impact of international capital movements on the agricultural sector. It was concluded from the study that foreign investments in the Turkish agricultural sector are low. The study states that globalization, the share in national income, risks, and uncertainties determine the low foreign investments in the agricultural sector. The fourth study was conducted by Kişman & Kıraç (2014) which evaluated the World Bank's agriculture loans in terms of the Turkish agricultural sector. In establishing the scientific dimension of the study, official sources with supporting literature were used. The study found that the World Bank and similar organizations negatively affect the productivity and development potential of the agricultural sector. The study's recommendation section emphasises the need for Turkey to implement policies to overcome those adverse effects.

The studies in the literature are insufficient to identify foreign capital’s effects on Turkish agriculture. This study aims to contribute to the body of knowledge by addressing a gap and providing guidance to scientists considering working in this field in the future.

4. OUTLOOK OF THE TURKISH AGRICULTURAL SECTOR IN NUMBERS AFTER 1980

Since the 1980s, the neo-liberal policies implemented instead of the import substitution industrialization policy in Turkey have removed low-value-added agriculture from among the subjects of public investment. While the investments made in the agricultural sector from 1963 to 1980 had an average of 10.5% among all sectors, this rate decreased to 5.1% in 1999. At the same time, the share of investment incentive certificates given to agriculture among all sectors has decreased continuously. Especially between 1993-1999, this rate was 1.3%. The data obtained reveal that public investment in agriculture has decreased to almost non-existent (Yıldırım, 2006).

While the population of Turkey was 44.736.957 people in 1980, it increased to 84.680.273 people as of the end of December 2021, according to the results of the Address Based Population Registration System (ABPRS). While 44% of the country's population lived in cities and 56% in rural areas in 1980, according to the last census, 93.2% of the country's population started to live in cities and 6.8% in rural areas (TUIK, 2021a). It is seen that while population increase occurred in urban areas, a remarkable decrease was experienced in rural areas. This situation has caused the agricultural lands to be left empty and agricultural production to decrease.

In the first years of the Republic, the share of the agricultural sector in the GNP was 42.8%. This rate started to decrease

continuously, reaching 25% in 1980, 16% in 1990, 13.5% in 2000, 8.1% in 2011, 6.9% in 2015, and 6.7% in 2020 (GTHB, 2021). Similarly, agricultural growth rates have continuously decreased since the 1980s. Between 1981 and 1998, the annual agricultural growth rate was 1.3%; in 1999, this rate decreased to -4.6%. Between 2000 and 2020, the annual agricultural growth rate was 2.8% on average. By 2020, the agricultural sector has grown by 4.8%. The agricultural product reached 333.3 billion TL, with a 20% growth compared to the previous year (URL 2). This increase can be attributed to the uncertainty and future anxiety caused by the Covid-19 pandemic in the markets. During this period, it can be said that the tendency to turn to agricultural products had an effect.

While the number of people employed in the agricultural sector was 8.36 million in 1980, this rate showed an increasing trend in 1990, reaching 8.69 million people. The number of people employed in the agricultural sector increased slightly between 1980 and 1990. While 7 million 769 thousand people were employed in 2000, this rate decreased to 5 million 683 thousand people in 2010 and 4 million 974 thousand people in September 2021. Similarly, while the share of agriculture in total employment was 50.5% in 1980, this rate decreased to 48.88% in 1990, 24.49% in 2012 (Terin et al., 2013:45), and 18% by the end of September 2021 (URL 3).

Turkey, a producer of basic agricultural products for many years, has been rapidly moving away from this position in recent years, especially due to its policy focusing on technology and defense investments. While the ratio of agricultural product exports to imports was 531% in 1980, this ratio decreased to 274% in 1985, 120% in 1990, and 111% in 1995. After the 2000s, there have been significant changes in the foreign trade of agricultural and food products. Turkey's share in exports of global agricultural and food products increased from 0.8% to 1.2%. Depending on these developments, the export and import values of agricultural products increased; exports of agricultural products increased to 17.6 billion dollars and imports to 18.3 billion dollars at the end of 2017, and exports of agricultural products rose to 25.9 billion dollars and imports to 24.3 billion dollars at the end of 2021 (Ministry of Development, 2018; TUIK, 2021c).

Although there has been a tremendous increase in the number of animals in the agricultural livestock sector in recent years, this number is quite insufficient compared with the rate of increase in the population of the country. The number of cattle, which was 15.8 million in 1980, decreased to 14.4 million in 2013 and 14 million in 2016. Despite the partial decrease in cattle, there was an increase in small cattle. The number of sheep and goats, which was 29 million in 2013, increased to 30.9 million in 2016 (URL 8). There was an increase in the total number of animals, and the number of animals, which was 41.9 million in 2002, increased to 66.4 million in 2019, 72.3 million in 2020, and 75.6 million in 2021 (TUIK, 2021b). This situation is also reflected in meat and milk production. Red meat production of 764 thousand tons in 2002 reached 1.2 million tons in 2019, and similarly, the total milk production, which was 8.4 million tons in 2002, reached 23 million tons in 2019 (Ministry of Development, 2018).

It appears that approximately 1/3 of Turkey's land is suitable for use in the agricultural sector. Although there are more than 25 million hectares of arable land in Turkey, some lands are left idle due to inheritance law and economic structure. The existence of fragmented land reduces labor productivity and limits the use of technology and inputs. At the same time, the individual agricultural producer acts unorganized and exhibits a structure far from minimal local cooperatives. According to 2018 data, there are 11,966 agricultural cooperatives with 3,941,692 partners in Turkey (URL 4). The cooperative

structure, which dominates all European agriculture from production to marketing, could not develop as desired in Turkey despite the numerical crowd. The fact that the share of cooperatives remains at the level of 5%, especially in the field of packaging and marketing, constitutes an important starting point for the open discussion process.

Only 1/3 of the arable land in Turkey can be irrigated. Up to 1999, the total irrigated area was 4.6 million hectares. According to the investments, an average of 100,000 hectares of land can be irrigated annually. If this practice is continued, after 40 years, all arable land can be irrigated. The most crucial problem in irrigation is experienced in the GAP Region. The area opened for irrigation in the region is 300,000 hectares, and the area to be irrigated is planned as 1.7 million hectares. Since drainage facilities are not built in this region, there is a rapid barrenness and pollination process (Ministry of Development, 2018). This shows the existence of a strategic process that needs to be addressed in terms of production.

A significant part of the support specific to agricultural activities in Turkey is for fertilizers. There is a similar inadequacy and misapplication of pesticides. In both areas, there is a usage far below the European countries. Despite all these negativities, significant increases were observed in agricultural support between 2002 and 2020. In 2020, agricultural support increased by 29% compared to the previous year and reached 21.97 billion TL (URL 9).

Although Turkey has an area of 78 million hectares, 62 million hectares have erosion problems. Due to erosion, Turkey loses 1.2 billion tons of fertile agricultural land annually. At the same time, severe soil and water pollution are experienced in Turkey. On the one hand, unconscious agricultural activities, on the other hand, toxic wastes emitted from industrial facilities cause further destruction, desertification, and salinization in agricultural lands. Additionally, agricultural lands are used out of purpose. Due to varying salinization rates in Turkey, 4.2 billion hectares of land have lost their fertility and productivity partially or completely (WWF, 2021:10). Turkey is one of the 20 countries that do not have soil reserves in the world. The management of nature according to ecological principles, rising production costs, and the melting of product prices in the face of inflation accelerated the process of leaving agricultural lands empty. It is estimated that there are over 2.5 million hectares of abandoned and uncultivated land in the country (URL 10).

As a result, Turkey has fallen short in soil analysis and soil mapping. Correct land use, agricultural production planning, and soil analyses were not made, and support policies were shifted to the wrong areas. As a result of wrong practices in the geography that offers a wide variety of production, significant problems have been experienced both in import costs and in stocks that put product policies into trouble.

5. THE PERSPECTIVES OF GLOBAL POWER ON TURKISH AGRICULTURE

Dura (2008) provides a realistic approach to revealing the perceptions of foreign capital on Turkish agriculture. According to Dura, Turkish agriculture has been under siege for a long time by the U.S.A and the European Union (EU). States that the IMF, World Bank, and the World Trade Organization (WTO) conduct this siege. In his study, he continues to convey the collapse of Turkish agriculture through examples: Dura continues by providing examples of how Turkish agriculture collapsed: “In the words of İbrahim Yetkin, Chairman of the Turkish Agriculturists Association, a ‘multi-planned and programmed scenario’ has been put forward and this scenario aims to destroy all agriculture.” Turkish farmers will not produce, will buy agricultural products from abroad, will not use their own resources, will completely open their doors to

foreign capital, and will become a completely open market. As the farmers get poorer, they will move to cities and become laborers. All agricultural public economic enterprises will be eliminated. General Directorate of Rural Services, Toprak Su, General Directorate of Agricultural Protection and Quarantine, Public Economic Enterprises such as Yem Sanayii, SEK (Dairy Industry Institution), EBK (Meat and Fish Institution), TEKEL will be sold, closed, reducted, or distributed; and they will not be able to receive government support, and loans and will be forced to expensive borrowing. In summary, the IMF, EU, USA, and World Bank-oriented policies aim to make Turkish agriculture weak and desperate (Dura, 2008:3; Talas, 2009:117-118). The way to eliminate these expectations is by turning to own's essence and resources. Atatürk, who has carried Turkey forward to rising and civilization, and wanted it to go even further, including the following statement in one of his speeches:

"Gentlemen! On the contrary to Europe's progress, rise, and civilization, Turkey has regressed and tumbled into the valley of decline. Now, to improve the situation, certain obligations have emerged, including taking advice from Europe, doing all the work according to the desires of Europe, and learning all the lessons from Europe. However, what independence is there that can rise with the advice and plans of foreigners? History has not recorded such an event!" (Gazi Mustafa Kemal Atatürk March 6, 1922, TBMM (Grand National Assembly of Turkey)).

The most important dimension of globalization in agriculture for Turkey is actually the dispossession of villagers whose lands were taken away by debt. In Turkey, where the foreignization of the financial market exceeds 60%, the easy access to credit channels, which is followed by farmers, who are far from international competition, not being able to pay their debt because their products do not make money, and as a result, their land is confiscated and owners are found from distant lands is the summary of the situation. This situation, which will cause the citizens of the Republic of Turkey to have property problems, also reveals the need for more comprehensive field research. As a result, multi-faceted and planned new approaches that are shaped according to the country's needs with State policies are needed. This approach should be in a structure that protects national interests without staying far from the world's realities.

6. STRUCTURAL ARRANGEMENTS REGARDING FOREIGN CAPITAL INFLOW IN TURKEY

It has been observed that the income of developing countries from international direct capital has increased continuously since 1980. However, Turkey cannot benefit from this increase sufficiently. Turkey put forward a new approach within the framework of the decisions of January 24, 1980, to turn this negative situation in its favor. In this context, it is aimed to provide a transition from an import-substituting industrialized structure, where the state intervention is intense, to an outwardly open economic order, which adopts an export-oriented economic structure and free-market conditions are valid.

The main reason for the January 24 stability decisions is the problems encountered in obtaining production inputs from abroad in the real sector. To solve these problems, it is planned to make resources more effectively and create a competitive environment for production inputs. In order to reach the targets set at this point, efforts were made to reduce the burden of the public in the economy, foreign trade was liberalized, VAT application was started, foreign capital inflows were facilitated, imports were liberalized, the private sector was brought to the fore, the positive real interest was applied with the opening of the banking sector to competition, and financial instruments were diversified by establishing a free market (Köse, 2002:121). Within the framework of the January 24 decisions, some legal arrangements were made to attract foreign

investments. In this context, "Foreign Capital Framework Decree" No. 8/168 entered into force on 25.01.1980. Later, with the decree issued in 1986, the Council of Ministers Decision was foreseen for foreign investments with a total capital amount of more than 50 million US dollars (Çeken, 2003:105). Despite all the efforts and regulations, the private sector could not deliver what was expected, and there was a significant decrease in the amount of production. The main reason for this situation can be shown as the private sector being accustomed to a non-competitive and risk-free market order. At the same time, the high-interest income of short-term instruments prevented investment (Köse, 2002:122).

Restrictions on foreign exchange and foreign exchange movements were lifted completely with "Decision No." With this adopted law, the private foreign borrowing of banks was opened, non-residents were given the right to open foreign currency deposit accounts, and gold imports became free (Kula, 2003:145).

These regulations led to short-term capital movements in the 1990s. This mobilization emerged as a capital movement aiming to profit from high-interest rate applications or fixed exchange rate regimes instead of foreign direct capital formation. These negative experiences played an important role in Turkey's encounter with the 1994 crisis (Cihan, 2005:98).

With the 1994 crisis, April 5 decisions were taken to determine the economic role of the state. These decisions aim to make the state a structure that produces, considers social balances, and ensures the functioning of market rules. At the same time, attempts were made to control short-term international capital movements, which constituted the main cause of the 1994 crisis. The most important regulation during this period was expanding the scope of foreign capital and creating the first legal regulations for the privatization of Türk Telekom (Köse, 2002:121). Again in 1994, the Competition Board was established, and the Law on the Protection of Competition was adopted. On June 24, 1994, with the Decree-Law No. 544, the Turkish Patent Institute, affiliated with the Ministry of Industry and Trade, with administrative and financial autonomy, was established, and important steps were taken to protect intellectual and industrial property rights (URL 5). With the regulation made for foreign capital in 1995, the production of all kinds of goods and services was made free, provided that it did not create a monopoly for foreign investors.

With the Customs Union (CU), which was accepted at the Turkey - European Economic Community (EEC) Association Council meeting (1995) and entered into force on 1 January 1996, the customs tariffs applied to EU industrial goods were abolished. With the agreement, it was accepted that not only industrial products but also people should have free movement. However, this situation has not found a place in practice. At the same time, financial and technical support in the form of grants or credits committed with the customs union agreement were not provided either. Turkey was deprived of subsidies compared to other countries, and although it joined CU, it was denied membership to the EU. CU undertook an economic integration mission regarding the free movement of industrial goods and processed agricultural products. The Industrial Sector expanded its capacity by increasing its trade volume with CU. Turkey, however, could not achieve the expected welfare increase from CU, the European Union fell short, especially in terms of foreign investments, and the loans envisaged within the scope of CU were not given to Turkey. Additionally, Turkey's lack of a planned industrial policy has been tried to compensate with export incentive policies from the 1980s to the present, and foreign dependence has deepened by exporting low-tech or import-related products. In the last period of the CU, Turkey's common customs tariff application for third countries became mandatory. Since Turkey is not a member of the EU, it could not express its own will, and the EU

countries were forced to act in line with their own interests, thus the foreign trade regime was completely under the control of the EU (Karluk, 2007:451-479; İnan, 2004:85-86; Bilge & Ersel, 2007:6; Dincer, 2008:12). In 2008, Turkey signed a bilateral agreement including 80 countries for mutual promotion and protection of investments (URL 6). With the socio-economic and legal reforms implemented in the last 15 years, Turkey has found itself in 13th place in the world economy ranking (URL 7).

7. SECTORAL DISTRIBUTION OF FOREIGN CAPITAL OVER THE YEARS

Looking at the sectoral distributions of foreign capital investments between 1980 and 2021, the situation can clearly be seen in the periods given below. It would be more beneficial to evaluate the years 1980-2001 under the heading of free market economy, the years 2002-2011 under the heading of the years of intense privatization, and the years 2012-2021 under the heading of policies implemented after privatization, in order to see the effect of foreign direct capital on the agricultural sector.

7.1. Sectoral Distribution of Foreign Capital Between 1980-2001

Developing countries have used foreign capital to alleviate the savings-investment bottleneck or capital shortage throughout the economic development process. In accepting foreign capital, countries have determined a policy compatible with both foreign investors and country interests. While making investment decisions, foreign investors aimed to maximize their own interests instead of developing a country. In this context, it is necessary to calculate the optimum point that considers both the investors' and the country's interests.

Policies aimed at rationalizing the rural economic structure in the 40 years after 1980 did not yield the expected results, and significantly disrupted the economic balances in the agricultural sector. Development plans put into practice after 1963 reduced the interest in the livestock sector, and with the decisions of January 24, 1980, the livestock sector was completely deprived of support and protection. Along with the removal of the subsidies given by the state to agriculture to a large extent, there have been irreparable numerical decreases in the number of animals and economic contractions.

Table 3. Distribution of Allowed Foreign Capital in the Agricultural Sector in Sub-sectors of Agriculture Between 1980 – 2001 (Million TL)

Sectors	Number of Companies	Existing Foreign Capita	Share in Total Foreign Capital	Companies Capital Total	Share of Foreign Capital Companies
Herbal Production	30	1 877 450	0.05	2 775 729	67.64
Stockbreeding	21	2 292 947	0.06	5 935 275	38.63
Aquaculture	16	197 347	0.01	1 161 967	16.98
Forestry	3	58 949	0.00	121 160	48.65
Agricultural Service	66	209 770 221	5.36	220 789 362	95.01
Total	136	214 196 914	5.48	230 783 493	92.81

Source: (Aral ve Cevher, 2000; Gökhan, 2003: 53).

The distribution of foreign capital allowed in the agricultural sector between 1980 and 2001 is given in Table 3. In terms of agricultural sub-sectors, the distribution of foreign capital was towards the agricultural service sector and crop production. Within the scope of the findings in the table, the negative situation of the sector has been shown as the reason for the foreign

capital's indifference to the agricultural sector. The main reason why foreign capital does not invest has been accepted as the lack of infrastructure. At this point, foreign capital primarily expects the infrastructure of the sector to be sufficient for sustainable production.

7.2. Sectoral Distribution of Foreign Capital Between 2002-2011

Foreign direct investment in Turkey peaked in 2006. Especially after Turkey decided to start the negotiations for full membership to the EU, there has been a large capital inflow. This situation can be seen in Table 4.

Table 4. Sectoral Distribution of Foreign Direct Capital (Gross; $ Million)

Years/Sectors	Agriculture	Service	Industry
2002	27	5.540	10.703
2003	43	10.915	19.637
2004	236	16.400	20.539
2005	81	43.031	26.795
2006	181	64.396	28.871
2007	310	104.359	47.260
2008	92	56.567	18.748
2009	299	9.170	47.541
2010	524	114.235	66.112
2011	523	75.121	55.268

Source: TCMB, 2021 (www.tcmb.gov.tr).

The highest increase in foreign direct investment in Turkey occurred in 2006. Turkey reached 4.1% in 2006 in terms of the foreign direct investment rate. With this rate, Turkey ranked 17th in the world rankings and reached its best level (URL 7). This success of Turkey has shown its effect in the EU negotiations and with the privatizations realized in line with foreign direct capital (Şir & Şit, 2013:50).

The economic collapse that emerged with the 2008 global crisis also affected Turkey. As of 2009, the share of the world in general from FDI was 0.7%, while the share of developing countries was 1.4%. Between 2010 and 2011, foreign capital investments recovered again (Şit & Şit, 2013:50).

As the distribution is analyzed on a sectoral basis, it is seen that the agricultural sector had the least share between 2002 and 2011. The share of the agricultural sector in all sectors remained below 1%. Looking at the service sector, the share of the sector increased continuously from 2002 to 2007, bottomed out in 2009 and peaked again in 2010. The contribution of foreign direct capital to the service sector was the highest in 2005-2007. As for the industry sector, the contribution of foreign direct capital rose continuously from 2002 to 2007 and followed a fluctuating course after 2007 (Table 4).

7.3. Sectoral Distribution of Foreign Capital Between 2012-2021

Direct capital inflow to the agricultural sector shows a fluctuating trend from 2012 to 2021. Foreign capital inflow in the field of agriculture reached its lowest level remarkably in 2018. The industrial sector, on the other hand, follows a fluctuating course, yet it is in an uninterrupted downward trend. In 2018, it went down its lowest level. The service industry also follows a fluctuating course. The biggest rise in the service sector was in 2020, and the biggest reduction was in 2021. By 2021, direct capital inflows to agriculture, industry and service sectors decreased (Table 5). The Covid-19 pandemic, which

emerged in 2020, adversely affected the inflow of foreign capital, and with vaccines becoming widely available in the first half of 2021, the countries that took the pandemic under control entered the recovery process.

Table 5. Distribution of International Direct Capital Inflows by Sectors Between 2012-2021 (Gross; $ Million)

Years/Sectors	Agriculture	Service	Industry
2012	769	102.008	80.990
2013	807	79.614	63.054
2014	1.067	95.153	78.582
2015	777	80.383	66.427
2016	730	79.477	56.228
2017	1.354	101.071	80.296
2018	377	92.703	39.123
2019	798	101.621	46.515
2020	1.396	124.131	93.407
2021	1.074	70.765	57.922

Source: TCMB, 2021 (www.tcmb.gov.tr).

While the total gross capital inflow was $10 billion 751 million in 2012, it decreased to $6 billion 886 million in 2016 and $6 billion 791 million in 2020. Transportation and storage, finance and insurance, wholesale and retail trade, and construction services were among the sub-sectors that received the most investment within the service sector. Within the industrial sector, the energy, food, and chemical industries are among the sectors that have developed the investment network the most (TÜRMOB, 2016:7).

8. ECONOMETRIC METHOD

In the analysis of the data, exponential smoothing methods were utilized. The exponential smoothing method is a clear, understandable, and transparent time series method that has been preferred for a long time. Series that have time-varying parameters and that can be explained by more than one regression curve since there is no potential to return to the regression curve or line are called series with stochastic tendencies. The exponential smoothing method can be applied to all series with both deterministic and stochastic trends (Yagimli & Ergin, 2017). In this method, which has components such as trend, error and seasonality, forecasts for the future can be made using data from the past (Bergmeier et al., 2016). It uses exponentially descending, weighted moving average data. Based on this basic idea, exponential smoothing improves the modeling of different components. These different components are seasonal variations, trends, or the long-term variation of the series, repetitive components in the series during the determined periods, or other unpredictable components. The components of the method are the combination of the duration and growth of the current condition (Yagimli & Ergin, 2017). Exponential smoothing is a simple method of adaptive estimation. It is an effective way of estimating as there are only a few observations to base on. Contrary to predictions from regression models using constant coefficients, predictions from exponential softening methods are adjusted for past prediction errors (Bowerman & O'Connell, 1979). Since the annual data between 1980 and 2021 were used in this study (there are no periodic data), single exponential smoothing, double exponential smoothing and Holt-Winters- (non-seasonal-two parameter) exponential smoothing methods were used.

8.1. Single Exponential Smoothing Method

It estimates parameters by minimizing the sum of squares of errors. When the estimated damping parameters are close to

1, this is a sign that the series is close to a random walk where the latest value is the best estimate of future values.

The single exponential smoothing method is suitable for series that randomly move above and below a constant average without a trend or seasonal pattern. The corrected $\hat{y}_t$ batch $y_t$is calculated recursively by evaluating the following:

$$\hat{y}_t = \alpha y_t + (1-\alpha)\hat{y}_{t-1}$$

Where 0< α ≤ 1 is the damping (or softening) factor. the smaller α is, the more the y_t series is smoothed. With repetitive substitution, we can rewrite the recursion as follows:

$$\hat{y}_t = \alpha \sum_{s=0}^{t-1} (1-\alpha)^s y_t - s$$

This shows why this method is called single exponential smoothing. The estimate $y_t$of is a weighted average of the historical values of y_t, where weights are exponentially reduced over time. Single softening estimates are fixed for all future observations. This constant is given by:

$$\hat{y}_{T+k} = y_T$$ all k's are greater than 0.

Along with T is the end of the prediction sample.

To initiate the recurrence, an initial value for $\hat{y}_t$ and a value for α are required. The average of the $y_t$first (T + 1) / 2 observations of can be used to initiate the recurrence (where T is the number of observations in the sample). Bowerman and O'Connell (1979) suggest that α values between 0.01 and 0.30 work absolutely well. Moreover, estimating α helps to minimize the sum of squares of one-step estimation errors.

8.2. Double Exponential Smoothing

This method applies the single correction (smoothing) method twice (using the same parameter) and is convenient for linearly inclined series. The double smoothing of a y series is defined by iterations:

$$S_t = \alpha y_t + (1-\alpha)S_{t-1}$$

$$D_t = \alpha S_t + (1-\alpha)D_{t-1}$$

where *S*is the single flattened series and *D*is the double flattened series. The double smoothing method is a single-parameter smoothing method with a damping factor of 0<α≤1.

Double exponential smoothing estimates are calculated as follows:

$$y_{T+k} = \left(2 + \frac{\alpha k}{1-\alpha}\right) S_T - \left(1 + \frac{\alpha k}{1-\alpha}\right) D_T = \left(2S_T - D_T + \frac{\alpha}{1-\alpha}(S_T - D_T)k\right)$$

The final statement designates that the double smoothing estimates are based on a linear trend $2S_T - D_T$ with breakpoint $\alpha(S_T - D_T)/(1-\alpha)$ and slope.

8.3. Holt-Winters- (Non-seasonal - Two Parameters)

This method is appropriate for series with linear time trend and without seasonal change. This method is similar to the

double smoothing method in that it organizes estimates with a linear tendency and does not contain seasonal components. The double smoothing method distinguishes better since it uses only one parameter, which is a two-parameter method. The flattened $\hat{y}_t$ series is obtained from the following formula:

$$\hat{y}_{t+k} = a + bk$$

where a and b are permanent components and trends as defined in the above equation. These two coefficients are defined by the following iterations:

$$a(t) = \alpha y_t + (1-\alpha)\big(a(t-1) + b(t-1)\big)$$

$$b(t) = \beta\big(a(t) - a(t-1)\big) + 1 - \beta b(t-1)$$

where $0<\alpha, \beta, \gamma < 1$ are damping factors. This is a two-parameter exponential smoothing method.

Estimates are calculated as follows:

$$\hat{y}_{T+k} = a(T) + b(T)k$$

These predictions $a(T)$ lie on a linear trend that intersects with $b(T)$ and slope. Non-seasonal Bi-Parameter Holt-Winters is not with addition or $\gamma = 0$ multiplication. Condition $\gamma = 0$ only restricts the change of seasonal factors over time, so there are still (constant) non-zero seasonal factors in estimates.

9. FINDINGS

Table 6 presents the observed data of the research variables. According to the results obtained from the table, it is seen that the share of the agricultural sector in foreign direct investments in the period from 1980 to 1999 followed an upward and downward course, with a maximum of 4.6%, but its share in foreign investments fell below 1% after 1999, and this figure was 0.83% in 2021. It was found that the share of the industrial sector in foreign direct investments followed a decreasing and increasing course from 1980 to 2021, but it was constantly decreasing, and this rate was 44.64% in 2021. It was determined that the share of foreign direct investments in the service industry followed an upward and downward trend from 1980 to 2021, and this rate was 54.33% in 2021 (Table 6).

Table 6. Observed data of research variables

Year	FDI	AGS	ISI	SERVICE	AGS%	INDUSTRIAL%	SERVICE%
1980	35	0	3203	298	0,00	91,50	8,50
1981	141	42	10293	3722	0,30	73,00	26,40
1982	103	62	6077	4038	0,60	59,00	39,20
1983	87	0	7534	1166	0,00	86,60	13,40
1984	162	356	11097	4730	2,20	68,50	29,20
1985	158	427	9622	5451	2,70	60,90	34,50
1986	170	782	9044	7140	4,60	53,20	42,00
1987	239	478	10731	12667	2,00	44,90	53,00
1988	488	1610	29182	17666	3,30	59,80	36,20
1989	855	513	53694	30609	0,60	62,80	35,80
1990	1005	3518	65526	28844	3,50	65,20	28,70
1991	1041	1145	57984	42889	1,10	55,70	41,20
1992	1242	2236	86940	33658	1,80	70,00	27,10
1993	1016	1016	77216	22758	1,00	76,00	22,40
1994	830	1577	62167	18841	1,90	74,90	22,70

1995	1127	1240	76523	32570	1,10	67,90	28,90
1996	964	1639	16099	78470	1,70	16,70	81,40
1997	1032	722	53561	47162	0,70	51,90	45,70
1998	976	293	60317	36112	0,30	61,80	37,00
1999	574	574	37884	18655	1,00	66,00	32,50
2000	18812	45	11732	7035	0,24	62,36	37,40
2001	18686	46	11439	7201	0,25	61,22	38,54
2002	16270	27	10703	5540	0,17	65,78	34,05
2003	30595	43	19637	10915	0,14	64,18	35,68
2004	37175	236	20539	16400	0,63	55,25	44,12
2005	69907	81	26795	43031	0,12	38,33	61,55
2006	93448	181	28871	64396	0,19	30,90	68,91
2007	151929	310	47260	104359	0,20	31,11	68,69
2008	75407	92	18748	56567	0,12	24,86	75,02
2009	138010	299	47541	90170	0,22	34,45	65,34
2010	181171	524	66112	114535	0,29	36,49	63,22
2011	130912	523	55268	75121	0,40	42,22	57,38
2012	183767	769	80990	102008	0,42	44,07	55,51
2013	143475	807	63054	79614	0,56	43,95	55,49
2014	174802	1067	78582	95153	0,61	44,95	54,43
2015	147587	777	66427	80383	0,53	45,01	54,46
2016	136435	730	56228	79477	0,54	41,21	58,25
2017	182721	1354	80296	101071	0,74	43,94	55,31
2018	132203	377	39123	92703	0,29	29,59	70,12
2019	148934	798	46515	101621	0,54	31,23	68,23
2020	218934	1396	93407	124131	0,64	42,66	56,70
2021	129761	1074	57922	70765	0,83	44,64	54,53

FDI: Foreign direct investment (Million USD)

AGS: Agricultural sector foreign direct investment (Million USD)

ISI: Industrial sector foreign direct investment (Million USD)

SERVICE: Service sector foreign direct investment (Million USD)

AGS%: Agricultural sector in foreign direct investment (%)

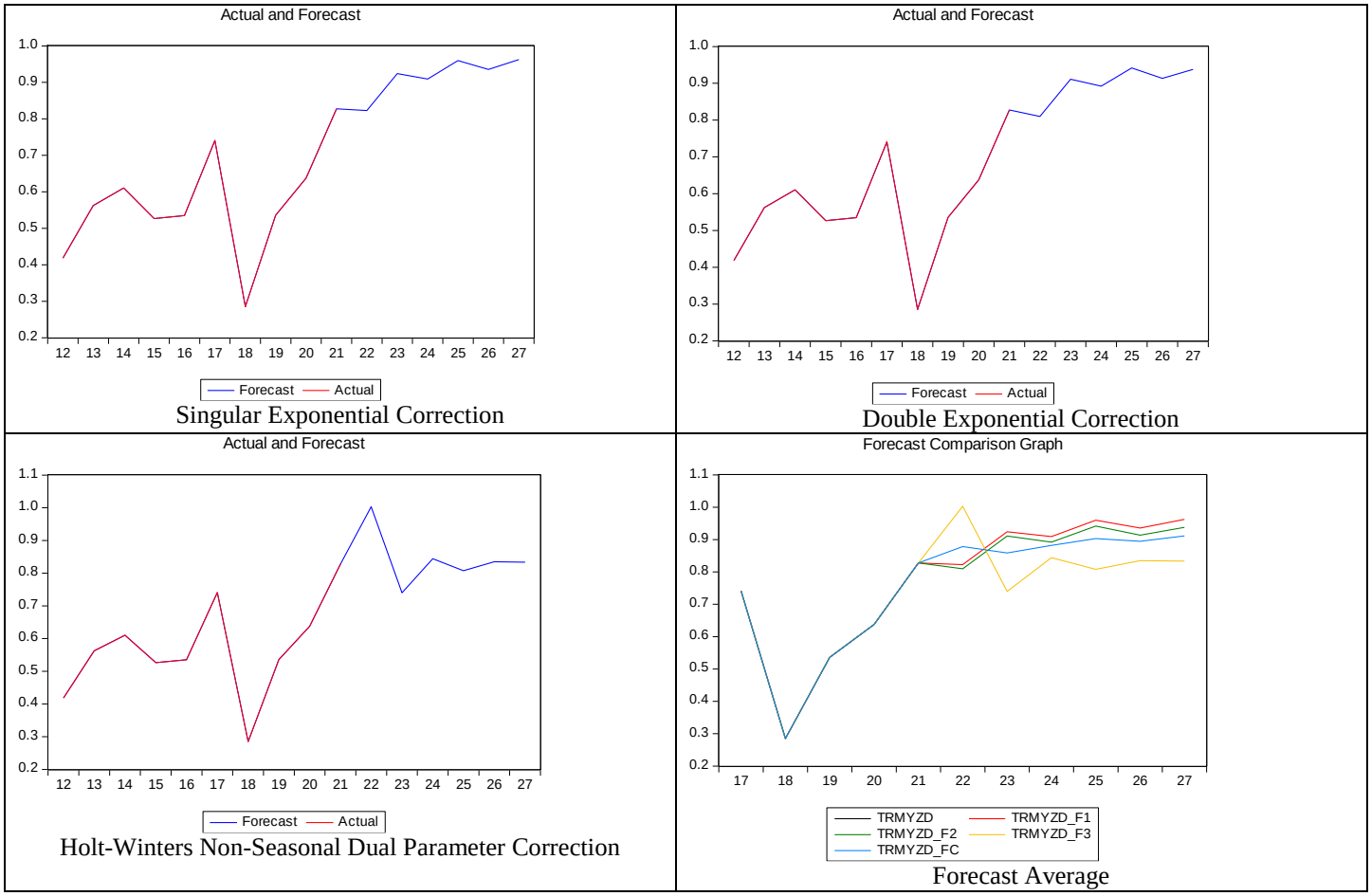
INDUSTRIAL%: Industrial sector in foreign direct investment (%)

SERVICE%: Service sector in foreign direct investment (%)

Table 7 shows the estimation results of the share of the agricultural sector in foreign direct investments in 2022-2027. The basic average (Simple mean) was selected as the method for the estimation average in the average column.

Table 7. Estimates for agricultural sector share in foreign direct investments 2022-2027

Forecast Year	Singular EC	Couple EC	Holt-Winters	Forecast Average
2022	0,822673	0,809964	1,002984	0,878541
2023	0,924224	0,911070	0,739874	0,858389
2024	0,909152	0,892195	0,844010	0,881786
2025	0,959860	0,941884	0,807796	0,903180
2026	0,935539	0,913578	0,835043	0,894720
2027	0,962538	0,938969	0,833595	0,911367



Graph 1. 2022-2027 estimates and forecast comparisons for agricultural sector share in foreign direct investments

When the prediction results are examined, it is estimated that the agricultural investment in foreign direct investments in 2027 will be 0.96% according to single exponential smoothing, 0.94% according to double exponential smoothing and 0.83% according to Holt-Winters non-seasonal double parameter exponential smoothing. According to the average of the estimates obtained, the share of agriculture in foreign direct investments is expected to increase to 0.91% in 2027. In comparison with the share of agricultural investment in foreign direct investments in 2021 (0.83%), this change represents an increase of approximately 10%.

CONCLUSION

Changes in information and communication technologies in recent years have brought countries closer to each other, and thus, capital flows have accelerated. This situation has caused the economic events to be carefully examined by everyone. At this point, the effect of foreign direct capital has increased according to the political, economic, and national power of the countries.

Agricultural activities are generally carried out by small family businesses and the income from these activities remains quite low. In this case, the enterprises do not have the opportunity to save and there is a lack of capital. Depending on technological innovations, increases in the use of pesticides and chemical fertilizers in enterprises, the substitution of machinery instead of labor, and developments such as new production techniques, etc. have increased the demand for

financing. Therefore, businesses cannot meet their undercapitalization with their own resources, and they need foreign capital. At this point, the efficient operation of enterprises depends on providing foreign capital.

Foreign indirect capital investments are shifted to areas with high profitability in the short term instead of the agricultural sector. The low capital turnover rate and high risks and uncertainties in agricultural production limit the applicability of new investments and technological developments. At this stage, the existence of foreign capital at a higher level than the scale of the enterprise adversely affects the interest burden, the presence of unplanned foreign capital, and the sustainability of the enterprise.

Foreign capital investments create an income-increasing effect on the net income of businesses. Taxes paid to the host country increase the income of the host country. In addition, foreign capital investments can contribute to employment and increase productivity indirectly in other investment institutions by creating sub-industries. Another criterion is related to whether foreign direct capital will adopt a "labor-intensive" mode of production or a "capital intensive" mode of production.

There is a need for a rural development move and the restructuring of agriculture in a period during which the negativities experienced at home and abroad have affected agriculture. Within this framework, there is an obligation for not only domestic capital but also foreign direct capital to invest in investments that will modernize agriculture and provide the necessary support to producers. It is known that the agricultural sector is a sector that meets the food and nutrition needs of the country above all else. However, when providing the support, it will be appropriate to not only depend on the soil but also to support the product that emphasizes productivity.

International direct investment inflows in Turkey remained at a symbolic level until the 2000s, despite the liberalization movement that started in the 1980s. Since the 2000s, there has been a rapid increase in direct investment inflow and economic growth. By accepting the Maastricht (economic) and Copenhagen (political) criteria in line with Turkey's full membership goals to the EU, many western countries, especially Europe, have begun to receive a significant share of international capital. Especially since 2002, the political stability and determination provided by the one-party government gave confidence to foreign investors, which directed international capital to Turkey. The global economic crisis in 2008, the social and organizational actions against the perceptions of internal political unrest in Turkey in 2012, a failed military insurrection attempt in 2016, and lastly, the stability of the global financial and economic collapse in 2020 with the impact of the Covid-19 pandemic disrupted and hampered economic growth. At the same time, foreign currency inflows remained well below the expected level. On the other hand, the fact that the resources obtained from the capital obtained from the privatization between 2003 and 2020 were not transferred to agricultural investments had a negative effect.

Turkey has undergone a great transformation in the last 30 years when new-liberal economic policies have been implemented, and there have been serious changes in agricultural employment. Based on the data from TUIK (Turkish Statistical Institute), agricultural employment has decreased both numerically and proportionally in the last 30 years. Similarly, foreign capital inflows have continuously decreased in terms of the agricultural sector. Especially between 1980-2001, the agricultural sector did not receive attention compared to other sectors. The main reason for not investing in the agricultural sector during this period was the lack of infrastructure. Between 2002 and 2011, the agricultural sector was

among the sectors with the lowest share. The share of the agricultural sector in all sectors remained below 1%, except for 2003. Direct capital inflows to the agricultural sector fluctuated but decreased from 2012 to 2020. Despite the reformist movements in the field of agriculture, foreign capital inflows reached their lowest level in 2020.

In accordance with the results obtained from the table, it is seen that the share of the agricultural sector in foreign direct investments in the period from 1980 to 1999 followed an upward and downward course, with a maximum of 4.6%, but its share in foreign investments fell below 1% after 1999, and this figure was 0.83% in 2021. It was found that the share of the industrial sector in foreign direct investments followed a decreasing and increasing course from 1980 to 2021, but it was permanently decreasing, and this rate was 44.64% in 2021. In the service industry, it was found that the share of foreign direct investments increased from 1980 to 2021, and this rate was 54.33% in 2021. According to the average of the estimates acquired for determining the future trends of foreign capital in terms of the agricultural sector, the share of agriculture in foreign direct investments is expected to increase to 0.91% in 2027. In line with the share of agricultural investment in foreign direct investments in 2021 (0.83%), this change represents an increase of approximately 10%. In 2027, it is estimated that the agricultural investment in foreign direct investment will be 0.96% according to the single exponential smoothing, 0.94% according to the double exponential smoothing and 0.83% according to the Holt-Winters non-seasonal double-parameter exponential smoothing. Based on all the data obtained, it is inferred that the share of the agricultural sector in foreign direct investments will improve in the next five years; however, this rate will be very insufficient compared with the industry and service sectors.

In addition to the economic developments, the developments in the political field also significantly impacted foreign direct investment in Turkey. The membership negotiations between Turkey and the EU have also affected the international direct investment trend. Particularly, the lack of a promising approach within the framework of the EU membership negotiations, the gradual decrease in the interest in EU membership, and the loss of motivation in the reforms to comply with the EU criteria have further reduced foreign capital inflows.

With the adoption of the new government system in the 16 April 2017 referendum in Turkey, there has been a radical transformation in the political system. In this process, a negative perception emerged in the approaches of western countries towards Turkey. This perspective has affected foreign capital inflows and led to questions about entering Turkey. In addition, the Covid-19 pandemic, the problems with neighboring countries, and the negative conditions caused by the hot war in the border regions have adversely affected foreign investors.

Today, the expectation of a more equitable distribution of income by regions and increasing employment lies in encouraging foreign capital. Organizations with foreign capital provide additional employment to the country in which they are located. However, the use of capital-intensive technology by foreign capital in the agricultural sector, which is a labor-intensive mode of production in Turkey, limits this effect.

Being among the developing countries, Turkey has to increase its agricultural investments to break the cycle of underdevelopment. As a result of the wrong practices in a geography that offers a wide variety of products, great problems both in foreign purchases and product policies were experienced. At the same time, agricultural production planning, soil analysis, and support policies were incomplete and slow. Turkey needs foreign capital in an environment where there is a

savings-investment bottleneck, structural problems, and increased risks and exchange rates. At this point, it is necessary for Turkey to reconsider its agricultural policies and relations with the EU and to change the EU's perspective on investments in terms of agriculture.

ETİK BEYAN VE AÇIKLAMALAR

Etik Kurul Onay Bilgileri Beyanı

Çalışma, etik kurul izni gerektirmeyen bir çalışmadır.

Yazar Katkı Oranı Beyanı

Yazarların katkısı %50-%50'dir.

Çıkar Çatışması Beyanı

Çalışmada potansiyel bir çıkar çatışması bulunmamaktadır.

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