# Emerging Trade Partnership between the South Korea and Turkey: The Case of Defense Industry

Güney Kore ve Türkiye Arasında Gelişen Ticaret Ortaklığı: Savunma Sanayi Örneği

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## Abstract

Defense is a crucial industry that nations invest for economic and strategic reasons. The world allocates 2.3% of gross domestic product for defense expenditure. Global trends show that developing countries increase their share in defense markets. Developing countries are expected to have more significant effect on the future of defense markets and therefore, understanding the cooperation between those countries is important in the realms of defense literature. The current study is focused on the issue of defense industry partnership between two emerging nations, the South Korea and Turkey, which hasn't been addressed adequately. Both countries have compatible bases and products that make defense collaboration easier. Joint development and production are on the rise between the two countries, which formerly greatly depended on direct procurement. The case of the South Korea and Turkey is a successful example of trade partnership that has strong prospects.

*Keywords:* Defense Collaboration, Defense Procurement, Korea, Turkey, International Trade.

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# Öz

Savunma sanayi, ülkelerin ekonomik ve stratejik nedenlerle yatırım yaptığı önemli bir sektördür. Tüm dünyada gayrisafi millî hâsılanın %2,3'ü savunma harcamalarına ayrılmaktadır. Küresel eğilimler göstermektedir ki, gelişmekte olan ülkeler savunma sektöründeki pazar paylarını artırmaktadır. Gelişmekte olan ülkelerin savunma endüstrisi pazarlarının geleceğinde daha etkin olacağı beklenmektedir. Bu nedenle, bu ülkeler arasındaki iş birliğinin anlaşılması, savunma literatürü açısından önemlidir. Bu makalede, daha önce yeteri kadar incelenmemiş olan Güney Kore ve Türkiye arasındaki savunma sanayi ortaklığı ele alınmaktadır. Her iki ülkenin uyumlu platformlara ve ürünlere sahip olması savunma alanındaki iş birliğini kolaylaştırmaktadır. Daha önce ağırlıklı olarak doğrudan satın almaya bağımlı olan iki ülkenin de ortak Ar-Ge ve üretim projeleri artış göstermektedir. Güney Kore ve Türkiye savunma sanayi ticaret ortaklığı başarılı bir örnektir ve gelecekte daha kazançlı işbirliklerinin yapılabileceğini göstermektedir.

**Anahtar Kelimeler:** Savunma Sanayi İş Birliği, Savunma Harcamaları, Kore, Türkiye, Uluslararası Ticaret.

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#### 1. Introduction

Participation of Turkish troops in the 1950-1953 Korean War led to establishing strong relations between Turkey and the South Korea. The cooperation between two countries deepens in various areas of commerce and industry. Defense industry collaboration has increased significantly since 2000s and the two countries have carried out several joint defense projects. Turkey and the South Korea are among the major defense spenders. Both countries have North Atlantic Treaty Organization (NATO) compatible bases and products that make defense partnership feasible. Korean defense industry has proven track of success in line with its overall industrial development. Turkey has also recorded accomplishments in domestic development and production of defense systems. Defense self-sufficiency and exports are on the rise in both countries.

Trends in defense procurement show that emerging economies have a greater impact in the future of the industry. Most of the nations wish to depend on their own defense industries for security and economic concerns. Direct procurement prevents flourishing domestic defense industry and buyer countries take some measures like offsets. Traditional suppliers are usually reluctant in technology transfers and the measures are not sufficient in building a competitive defense technology. Thus, emerging countries invest in Research and Development (R&D) and engage in bilateral or multinational defense projects.

The purpose of this study is to analyze the trade partnership of Turkey and the South Korea in the defense industry, which has strong grounds and views. The first section provides an overview of global trends in defense spending. The following sections deal with the defense industries of Turkey and of the South Korea. Then, economic and diplomatic relationships between the two countries are explained. Last section covers the current collaboration in defense industry. The paper is concluded with the remarks made in the light of the findings.

# 2. Trends in Military Expenditure and Procurement

Defense is an important sector determining the significance of a nation along with economic and political strength. Defense expenditure, often used as a tool of foreign policy and monitored by international community, is based on the country's own threat assessment.<sup>1</sup> Global defense expenditure had an increasing trend after the end of World War II until the end of the Cold War. Trend in defense spending was negative due to decelerating arms competition between the two blocks. However, defense spending accelerated after 2001 affected by the United States (US) spending which increased due to 9/11.<sup>2</sup> This trend continued until 2012 when a 0.4% fall was observed followed by a 1.9% decrease in 2013.<sup>3</sup>

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<sup>&</sup>lt;sup>1</sup> Lawrence R. Jones and Jerry L. McCaffery, *Budgeting, Financial Management and Acquisition Reform in the US Department of Defense*, Information Age Publishing, 2008.

<sup>&</sup>lt;sup>2</sup> Goksel Korkmaz, *An Analysis of Turkey's Defense Systems Acquisition Policy*, MBA Professional Report, Naval Postgraduate School, Monterey, California, 2009.

<sup>&</sup>lt;sup>3</sup> SIPRI Fact Sheet, Trends in World Military Expenditure 2013, SIPRI (Stockholm International Peace Research Institute), April 2014.

Total military expenditure of the world recorded 1,776 billion USD in 2014. The top 15 countries account for 80.3% of the world military expenditure. The share of the USA is 34.3%, followed by China with 12.1% and Russia with 4.7%.<sup>4</sup> Military expenditure decreases in developed markets, while it increases in emerging markets. Economic growth, escalating conflicts, and the need for modernization are major reasons behind the increase of military spending in emerging world. The trend of decrease in the developed markets, on the other hand, seems to be persistent when the US plans to cut defense budget by 10% (500 billion USD in 10 years) and the effects of economic crisis in Europe are considered.<sup>5</sup> Contraction of defense expenses in developed countries is expected to lead to tightening competition in emerging markets. As seen in Table 1, the only developed country that increased its defense expending in 2014 compared to 2005 is Australia. The increases of defense expenditure are observed in developing nations.

Military strategies will be driven by economic conditions and forthcoming security concerns in the next decade. The countries need to adapt the new circumstances, collaborate with foreign partners, and sustain investments to strengthen defense industry.<sup>6</sup> Existing partnerships, local presence, and past investments will play significant role in the structure of future procurement.<sup>7</sup> The world's demographic and economic trends force companies to compete in developing markets. Despite the risks and complications, companies with global collaborations are expected to obtain larger shares in the global markets.<sup>8</sup> This trend

<sup>8</sup> *Industrial Products: Aerospace and Defense. Insights Accelerating Global Growth*, PricewaterhouseCoopers Research Report, 2010, 28.

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<sup>&</sup>lt;sup>4</sup> *SIPRI Fact Sheet, Trends in World Military Expenditure 2014*, SIPRI (Stockholm International Peace Research Institute), April 2015.

<sup>&</sup>lt;sup>5</sup> SIPRI, 2014, *ibid*.

<sup>&</sup>lt;sup>6</sup> Global Defense Outlook 2014: Adapt. Collaborate and Invest, Deloitte Research Report, 2014.

<sup>&</sup>lt;sup>7</sup> Defense Mega Trends Helping Our Clients Accelerate Growth Through Best *Practices in Growth. Innovation and Leadership 2013 and Beyond*, Frost and Sullivan Research Report, 2013.

will obviously increase the bargaining power of emerging countries and it is expected to accelerate technology transfers in defense industry.

		8 2	1			
Rank		2014 Spending	Change (%)	Spending as a Share of		
(2014)	Country	(billion USD)	2005-2014	GDP (%)		
(2014)	)	(UIIIOII USD)	2003-2014	2014	2005	
1	USA	610	-0,4	3,5	3,8	
2	China	216*	167	2,1*	2,0*	
3	Russia	84,5*	97	4,5*	3,6*	
4	Saudi Arabia	80,8	112	10,4	7,7	
5	France	62,3	-3,2	2,2	2,5	
6	UK	60,5	-5,5	2,2	2,4	
7	India	50	39	2,4	2,8	
8	Germany	46,5*	-0,8	1,2*	1,4	
9	Japan	45,8	-3,7	1,0	1,0	
10	South Korea	36,7	34	2,6	2,5	
11	Brazil	31,7	41	1,4	1,5	
12	Italy	30,9	-27	1,5	1,9	
13	Australia	25,4	27	1,8	1,8	
14	UAE	22,8	135	5,1	3,7	
15	Turkey	22,6	15	2,3	2,4	
Total of top 15		1.427				
World total		1.776	21	2,3	2,4	
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# Table 1. The 15 Countrieswith Highest Military Expenditure in 20149

\* SIPRI Estimate

Developing defense systems is a long and costly process. Massive R&D efforts and many years are required to produce a commercial item. However, competition and the fast pace of technology shorten the lifecycle of an item. The increase in sales reduces the fixed costs, which is an important determinant of profitability in the limited lifecycle. Economies of scale contribute in the reduction of the cost of manufacturing weapon systems in major exporting countries. Number

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<sup>&</sup>lt;sup>9</sup> Source: *SIPRI Fact Sheet, Trends in World Military Expenditure 2014*, SIPRI (Stockholm International Peace Research Institute), April 2015.

of tested, used, and produced items increases the reliability of the systems. Thus, the scale is not solely an economic concern in defense industry and can be considered as another important driver of partnership between countries.

The costs of developing new defense systems can be very high for a country. For example, F-35 fighter is among the most advanced and expensive projects and its deployment involve a broad consortium of countries. Collaboration between developing countries in defense industry is an emerging issue. This trend helps these countries in manufacturing and marketing of indigenous products, alleviating the dependency to traditional suppliers. India's collaboration with Russia, Egypt, Thailand, and the South Korea contributed in the development of domestic technology, manufacturing, and defense exports. Brazil and Russia agreed on a cooperation including unrestricted transfer of technologies in defense industry.<sup>10</sup> Brazil has also entered defense industry partnership with Turkey to develop common projects in naval, aeronautics, space, command, and cyber matters.

**142** Security Strategies Year: 12 Issue: 23 Indigenous development is generally more expensive than direct purchases but direct purchases slow down the development of national defense industry. Many countries demand offsets with technology transfer in direct purchases to ameliorate this effect and boost domestic defense industry. Direct offsets require investment or partnerships with local defense firms. Offsets are practiced in 120 countries and contribute to self-sufficiency in developing countries.<sup>11</sup> Military offset revenues in top 20 countries in the period between 2012 and 2021 have been forecasted as 424,57 billion USD. There is a greater focus on high value technology transfer in emerging markets.<sup>12</sup> Notwithstanding austerity measures of the supplier countries, the value of military offset obligations increases.

<sup>&</sup>lt;sup>10</sup> Deloitte, *ibid*.

<sup>&</sup>lt;sup>11</sup> "Guns and Sugar: More Governments are Insisting Weapons Sellers Invest Side Deals Help Them Develop," *Economist*, Nov. 30, 1999.

<sup>&</sup>lt;sup>12</sup> Frost and Sullivan, *ibid*.

### 3. Defense Industry of Turkey

Turkey seeks to develop domestic defense industry for common reasons as other nations. But there are unique reasons such as its location being near to conflict zones, strained relationship with Greece, terror threats, and embargoes faced in the past.<sup>13</sup>

Turkish domestic defense industry started its manufacture and maintenance facilities in 1924 and continued until the World War  $II^{14}$ . Between 1950 and 1960, defense requirements had been met by foreign military aid and procurement within the frame of NATO membership. Turkey's Peace Operation to Cyprus in 1974 was a milestone for the Turkish defense industry. The US arms embargo accelerated the foundation of new state-supported defense companies.<sup>15</sup> Under-secretariat for Defense Industries (SSM) was established in 1985 as main procurement authority. Important defense industry projects started in the following years. In 1980s, private enterprises and companies with foreign partnership entered the defense market. Table 2 depicts the trends in the Turkish defense industry over the last decade. The exports of the industry were 1.647 million USD in 2014. Though the volume of defense turnover and exports increase progressively, the share of defense exports in total exports makes only a slight one percent. However, the exponential growth of R&D expenses of the industry represent a strong commitment to acquire new commercial items and there is a considerable growth potential of the industrial output and exports in the subsequent years.

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<sup>&</sup>lt;sup>13</sup> Korkmaz, *ibid*.

<sup>&</sup>lt;sup>14</sup> Husnu Ozlu, *Turkish Defense Industry after Second World War*, PhD Dissertation, Dokuz Eylul University, 2006, 6.

<sup>&</sup>lt;sup>15</sup> *Savunma Sanayiimiz* [Defense Industry], SSM, http://www.ssm.gov.tr/EN/ savunmasanayiimiz/Pages/Tarihce.aspx (Accessed: September 2014).

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Table 2. Turkish Defense Industry in Numbers (million USD)<sup>16</sup>

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Defense Exports	337	487	615	784	832	853	1.090	1.262	1.388	1.647
Total Exports	73.476	85.534	107.271	132.027	102.135	113.883	134.906	151.860	151.626	157.622
Defense Turnover	N/A	1.855	2.438	3.087	2.900	3.707	4.381	4.756	5.076	N/A
Defense R&D Expenses	79	90	465	738	711	809	893	973	1.164	N/A

SSM strategy to prioritize developing innovative products has enabled growth of the sector by acquiring and exporting new products.<sup>17</sup> The steady growth of defense industry turnover, R&D expenses, and exports show the increasing demand both in Turkish domestic and in export markets. Production of goods in NATO standards and inclusion of new products in the inventory of Turkish Armed Forces (TAF) provide fuel to growth of exports.<sup>18</sup> 2012-2015 Sectoral Strategy Document of SSM emphasizes maturity in program management, development of technological competence, collaboration with global companies, and attaining international quality standards as an important element of sustainability.<sup>19</sup> The value of the undersigned procurement projects by the end of 2013 is 49,809,374,778 Turkish Liras (about 26,2 billion USD).<sup>20</sup> Distribution of this contract values in terms of project models is given in Figure 1.

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<sup>&</sup>lt;sup>16</sup> Source: Today's Turkish Defense Industry, SSM; İhracat Rakamları, TİM (Turkish Exporter's Assembly).

<sup>&</sup>lt;sup>17</sup> Huseyin Baysak, *2012 Sektörel Analiz Raporu* [Analysis of Defense Industry-2012], TOBB Savunma Sanayii Meclis Toplantisi, Ankara.

<sup>&</sup>lt;sup>18</sup> Savunma ve Havacılık Sanayii Performans Raporu, SASAD, Turkish Defense Industry Manufacturers Association, 2013.

<sup>&</sup>lt;sup>19</sup> Ozden Ozben, "Approaches to Depth in the Defense Industry," *Defense Turkey*, 2014, 8(53): 36.

<sup>&</sup>lt;sup>20</sup> Faaliyet Raporu [Annual Report], SSM, 2013, Ankara.

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Turkey enters the next defense procurement cycle that will result in several major procurements for defense modernization. Some defense acquisition programs delayed due to global economic crisis are expected to be realized. As a result, Turkish capital expenditure of the total defense budget is projected to increase in the period between 2013 and 2017. Turkey is the most attractive market in Europe for military land vehicles in the period between 2012 and 2021, with about 20 billion USD budget and planned procurement programs.<sup>22</sup> It is obvious from Figure 1 that joint production, research and development collaboration, and strategic alliances with domestic defense firms are among the best entry strategies for Turkish defense market.

### 4. Defense Industry of the South Korea

The war between the North Korea and the South Korea, which started in 1950, ended in 1953 with an armistice agreement, but the hostility, conflict, and the potential of military confrontation have continued so far. There has not been a peace treaty signed between two states.<sup>23</sup> The Korean Peninsula has been divided since the 1950s and

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<sup>&</sup>lt;sup>21</sup> Source: *Yıllık Rapor* [SSM Annual Report], SSM, Ankara, 2013.

<sup>&</sup>lt;sup>22</sup> Strategic Defense Intelligence. The Turkish Defense Industry -Market Opportunities and Entry Strategies. Analyses and Forecasts to 2017, ICD Research, Research Report, 2013.

<sup>&</sup>lt;sup>23</sup> Chung-in Moon; Sangkeun Lee, "Military spending and the arms race on the Korean

North Korea is a threat for the South Korea. The North Korea has attempted approximately 1640 infiltrations and over 1020 local provocations against the South Korea in the period between 1954 and 2010.<sup>24</sup> The continued threat of North Korea towards the South Korea in terms of national security and national defense forces the South Korea for a significant defense spending.

South Korea was depended completely upon military aid and equipment from the United States until the mid-1960s. The formation of South Korean defense industry has been started in 1970s. This was based on the Korean government's general policy of encouraging investment in the shipbuilding, steel, and electronics industries. The North Korea's defense spending and military power were superior to those of the South Korea until the beginning of the 1970s. North Korea's increasing military provocation and diminishing US defense support to the South Korea stimulated a new and self-dependent defense policy in the South Korea.<sup>25</sup> The paradigm of the South Korean economic structure has changed from the light industry to the heavy industry, with a strong emphasis on developing and manufacturing domestic defense products during the presidency of Park Chung Hee.<sup>26</sup> The establishment of the ADD (Agency for Defense Development) in 1970 for the self-reliable defense was an important milestone in implementing Park's plan.<sup>27</sup> The formation and empowerment of the ADD has contributed to strengthening the national defense, improving the capacity of weapons by the national R&D and fostering the domestic defense industry. Defense Acquisition Administration Program (DAPA) substituted DPA (Defense

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peninsula", Asian Perspective, 2009, 69-99.

 <sup>&</sup>lt;sup>24</sup> *Defense White Paper*, Ministry of National Defense, Republic of Korea, 2010, 313-314.
 <sup>25</sup> Moon, *ibid*.

<sup>&</sup>lt;sup>26</sup> Moon, *ibid.*; and Stephan Haggard; Byung-kook Kim; Chung-in Moon. "The transition to export-led growth in South Korea: 1954–1966", *The Journal of Asian Studies*, 1991, 50.04: 850-873.

<sup>&</sup>lt;sup>27</sup> Kaan Korkmaz and John Rydqvist, *The Republic of Korea: A Defense and Security Primer*, Swedish Defense Research Agency, FOI, Stockholm, April 2012.

Procurement Agency) within the frame of the reorganization of defense acquisition process in 2006.<sup>28</sup> DAPA also funds ADD, which is the South Korean national agency for R&D in defense technology.

Amidst the threats from the North Korea, the South Korea needs to secure sea trade lines, as its economy is heavily dependent on international trade. South Korea is the seventh exporter and ninth importer of the world according to World Trade Organization's (WTO) leading exporters and importers in world trade statistics in 2013.<sup>29</sup> Another motivation to have a more powerful army is to match its economic success with influential military power. The South Korea is bordered by countries like China, Russia, and Japan. Close cooperation with these countries seems difficult due to historical legacies, territorial disputes, and presence of nationalist sentiments in Northeast Asia.<sup>30</sup>

The defense industry of the South Korea provided tanks, naval vessels, self-propelled and towed field guns, armored vehicles, and helicopters for the national army by 1990. The South Korea has had the capacity to supply all of the conventional weapons it needs by 2007 and aims to have larger shares in global arms markets. KAI's (Korea Aerospace Industries) deal with Turkey to supply KT-1 basic trainer jets was among the first major foreign sales. Some of the South Korean items that can be exported are K-9 155-mm self-propelled howitzers, T-50 supersonic trainer jet, advanced infantry fighting vehicle K-21, and various types of high-tech missiles.<sup>31</sup> Fulfillment of basic weapons needs in relatively short time, development of innovative items, increase in defense exports, industrial, and technological upgrades show the success of the South Korean defense industry.<sup>32</sup> The South

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<sup>&</sup>lt;sup>28</sup> Korkmaz and Rydqvist, *ibid*.

<sup>&</sup>lt;sup>29</sup> International Trade Statistics, World Trade Organization, 2014.

<sup>&</sup>lt;sup>30</sup> Soon Ho Lee, "Successful 'Wildcat' Bid in South Korea and Its Implications for the European Defense Industry", *Georgetown Journal of International Affairs*, 2013, July.

<sup>&</sup>lt;sup>31</sup> **Defense Industry**, Global Security, http://www.globalsecurity.org/military/ world/rok/industry.htm (Accessed: July 2014).

<sup>&</sup>lt;sup>32</sup> Chung-in Moon and Jae-Ok Paek, Defense Innovation and Industrialization in

Korea pursued a strategy to focus on exports in products they have competitive advantage, while encouraging import substitution in others.<sup>33</sup> As a result of this strategy, the South Korea's conventional arms exports have grown rapidly as depicted in Figure 2. Defense exports of the South Korea, which was 253 million USD in 2006, recorded as 3.416 million USD in 2013. Exports have been doubled between 2010 and 2011 and the increase between 2012 and 2013 has been steep.



Figure 2. Defense Industry Exports of the South Korea (million US dollars).<sup>34</sup>

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Although the South Korea is increasing the capacity of producing indigenous weapons, it was among the top 10 arms importers in the period between 2010 and 2014. The majority of the arms imports were realized from the US.<sup>35</sup> The US defense industry has had advantages in the South Korean defense market due to South Korea's familiarity with US weaponry and human network connecting the two countries. US products have advantage because of their interoperability as well.

<sup>35</sup> SIPRI 2014, *ibid*.

South Korea, Policy Brief, Study of Technology and Innovation in China (SITC) Project, No.14, 2010.

<sup>&</sup>lt;sup>33</sup> Kaya Yazgan, "Dialectic in Turkish Defense Industry," *Defense Turkey*, 2014, 8, no. 53:24.

<sup>&</sup>lt;sup>34</sup> Source: *Defense White Paper 2014*, Ministry of Defense, Republic of Korea, Seoul, December 2014, p. 188.

However, more competitive prices, higher quality, better technology transfer, and better maintenance packages make other countries preferable. For example, the South Korean Defense Acquisition Program Administration (DAPA) decided to choose European AgustaWestland AW-159 Wildcat helicopter instead of the Seahawk helicopter of American Sikorsky Aircraft Company as their new maritime operation helicopter. The Wildcat's proposal was superior except for its capability and won this deal of 567 million USD.<sup>36</sup> DAPA announced that they evaluated the proposals on four standards: cost, capability, operation suitability, and contract conditions.

# 5. Relations between the South Korea and Turkey

Turkish participation in the Korean War led to the formation of an alliance between the two countries. The presence of Turkish troops as part of a UN force continued until 1971, when Turkish honor guard was withdrawn. Turkish-Korean relationship can be analyzed in three stages:<sup>37</sup> 1950-1970 military based relations, 1970-1990 the process of founding cooperation, and 1990-2010 deepening and diversifying relations.

Diplomatic relations between two states started in 1957, but high-level visits were accelerated only after 2000s. Bilateral relations between Turkey and Korea have been upgraded to the strategic partnership level with "Joint Declaration on the Establishment of a Strategic Partnership" in February 2012. "Framework Agreement Establishing a Free Trade Area between the Republic of Turkey and the Republic of Korea" and "Agreement on Trade in Goods between the Republic of Turkey and the Republic of Korea" entered into force on 1 May 2013. There are mechanisms such as the Joint Economic Commission and the Business Council meetings where bilateral economic and trade relations are regularly discussed.<sup>38</sup> The South

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<sup>&</sup>lt;sup>36</sup> Ho Lee, *ibid*.

<sup>&</sup>lt;sup>37</sup> Heechul Lee, "An Analysis of Korean-Turkish Relations: Rising Trade Partnership And Deepening Integration", *USAK Yearbook*, 2012, 5: 227-242.

<sup>&</sup>lt;sup>38</sup> *Türkiye-Güney Kore Siyasi İlişkileri* [Political relations of Turkey- South Korea], Ministry of Foreign Affairs (2014), http://www.mfa.gov.tr/turkiye-guney-kore-siyasi-

Korea and Turkey agreed in May 2006 to hold regular military exchange meetings every year to enhance military exchanges and cooperation in the defense industry. These exchanges help to extend human networks and introduce arms on both sides.<sup>39</sup> Diplomatic relations of the two countries also involve the frameworks of Group of 20 (G20) and Organization of Economic and Cultural Development (OECD).

Cooperation between the South Korea and Turkey in trade and economics has not been sufficient, despite high-level political relations. Trade volume is below the potential and there is a considerable gap against Turkey. The South Korea is the second largest trade partner of Turkey in the Far East after China. More than 20 Korean companies were active in Turkey in 2012. Turkey attracted Foreign Direct Investment inflows worth of 436 million USD from the South Korea in the period between 2002 and 2012.<sup>40</sup> These investments were mainly in automotive, IT, mining, tourism, and manufacturing industries.

# Table 3. Trade Statistics of Turkey and South Korea (million USD)<sup>41</sup>

2009 2007 2008 2010 2011 2012 2013 304 529 528 Export 152 271 235 460 Import 4.370 4.092 3.118 4.764 6.298 5.660 6.088 Total 4.522 4.363 3.353 5.068 6.827 6.188 6.548 -4.218 Balance -3.820 -2.883 -4.460 -5.770 -5.132 -5.628

iliskileri.tr.mfa (Accessed: July 2014).

<sup>39</sup> Lee, *ibid*.

<sup>40</sup> *Countries and Regions -Southeast Asia and Pacific- South Korea*, Ministry of Economy, http://www.economy.gov.tr/index.cfm?sayfa=countriesandregionsand country= KRandregion=6 (Accessed: August 2014).

<sup>41</sup> Source: Official site of Turkish Ministry of Foreign Affairs, http://www.mfa.gov.tr/ turkiye-guney-kore-siyasi-iliskileri.tr.mfa, (Accessed: July 2014).

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#### 6. Defense Partnerships between Turkey and the South Korea

The South Korea and Turkey are among the top 15 countries with highest military expenditure. Both countries are defense spenders that are actively involved in international markets. The South Korea has been playing an important role in Turkish military projects and has emerged as a key military technology partner. There are two main reasons for this trend: Turkey's need for a reliable industrial partner for military production and the South Korea's willingness to transfer technology and production.<sup>42</sup> Turkey and the South Korea concluded a Defense Industrial Cooperation Agreement (Memorandum of Understanding) in November 1999. Other defense industry agreements between two countries are Agreement for Technological Cooperation, Agreement.<sup>43</sup> The agreements between two friendly nations encourage and support the cooperation in different fields of defense.

The North Korean invasion of South Korea in 1950 changed the perceptions of NATO and the US towards the Soviet threat, which led transformation, and extension of the treaty. Turkey joined NATO in 1952 in line with this extension process.<sup>44</sup> Turkey and the US have a long-standing bilateral and NATO-based defense cooperation, which was established on similar threat perceptions since the Cold War era.<sup>45</sup> The United States and the South Korean cooperation in defense has been close since the end of Korean War in 1953 and the South Korea has been a major non-NATO ally of the United States since 1989.<sup>46</sup>

<sup>&</sup>lt;sup>42</sup> "S. Korea Emerges as Key Military Tech Partner for Turkey," *World Tribune*, Jun. 06, 2012, 5.

<sup>&</sup>lt;sup>43</sup> *Defense White Paper 2014*, Ministry of Defense, Republic of Korea, Seoul, December 2014.

<sup>&</sup>lt;sup>44</sup> Anthony Forster and William Wallace, "What is NATO for?", *Survival*, (2001), 43 (4), 107-122.

<sup>&</sup>lt;sup>45</sup> Jim Zanotti, *Turkey-US Defense Cooperation: Prospects and Challenges*, Congressional Research Service, Library of Congress, Washington DC, 2011.

<sup>&</sup>lt;sup>46</sup> Bruno Tertrais, "The Changing Nature of Military Alliances," *Washington Quarterly*, (2004), 27(2), 133-150.

There is a strong bilateral military alliance between the United States and the South Korea and the two countries have "Combined Defense Systems" for military threats.<sup>47</sup> Defense projects such as improvement of the performance of weapons have always been discussed with the US before development by the Korean government. The close cooperation with the United States for more than half a century led both the South Korea and Turkey develop a defense industry base and inventory compatible with NATO. Korea and Turkey are among the major importers of weapons and the share of US weapons in procurement is very high; 89% and 58% respectively in the period between 2010 and 2014.<sup>48</sup> The defense industries of both countries are immensely influenced by the US. This is an important factor in making Turkish-Korean defense industry partnership feasible.

Determining the candidates, their technology and R&D capabilities for collaborations are as important as determining the technologies.<sup>49</sup> The South Korean weapon systems have cost advantage and require no additional adaptation costs and training as both countries have NATO compatible platforms.<sup>50</sup> Furthermore, high-speed economic development and government support to national companies in international collaborations provide the South Korea an obvious competitive advantage.

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The collaboration in defense industry is important and offers advantages to both countries. The South Korea is an emerging defense industry producer and in the search of markets for its domestically developed new products. Turkish procurement will obviously contribute

<sup>&</sup>lt;sup>47</sup> Ministry of Defense, *ibid*.

<sup>&</sup>lt;sup>48</sup> SIPRI 2014, *ibid*, 4.

<sup>&</sup>lt;sup>49</sup> İlhan Kaya, Mehmet Atilla Oner and Nuri Basoglu, "Critical Success Factors in R&D Project Management in Military Systems Acquisition and a Suggested Methodology for Turkish Armed Forces," *PICMET'03. Portland International Conference on Management of Engineering and Technology*, 2003, July, Portland, USA.

<sup>&</sup>lt;sup>50</sup> Ali Kulebi, Kore ile Stratejik Ortaklık [Strategic Partnership with Korea], TUSAM, Ankara, 2007.

to introducing the South Korean products in the other markets. Turkish Armed Forces has strict quality and contractual requirements in inventory selection, which increases reputation of purchased goods and systems. The partnership will provide opportunities for introducing Turkish defense products in the South Korean market as well. Trade partnership with the South Korea in defense industry offers an alternative to traditional suppliers for Turkey. It is a reasonable assumption that this is to increase bargaining power of Turkey in procurement. Table 4 illustrates top five destinations for the South Korean defense industry exports. It is seen that Turkey and the US are traditional export markets for the South Korean defense industry. The South Korean exports to Turkey were 57 million, 383 million, 427 million, 43 million, 75 million, 56 million, and 135 million USD in 2006, 2007, 2008, 2009, 2010, 2011, and 2012, respectively. Turkey is among the first export markets of the South Korea and fluctuating nature of exports depicts the contractual nature of defense exports.

Table 4. Top Five Countries of South Korean								
Defense Industry Exports (million US dollars). <sup>51</sup>								

2006		2007		2008		2009		2010		2011		2012		2013	
U.S.	136	Turkey	383	Turkey	427	U.S.	398	U.S.	486	Indonesia	1,500	U.S.	737	Iraq	1,129
Turkey	57	U.S.	209	U.S.	331	Iraq	320	Malaysia	367	U.S.	640	UK	723	U.S.	1,053
Indonesia	11	Pakistan	100	Egypt	101	Indonesia	229	Turkey	75	Turkey	56	Peru	209	Thailand	485
UAE	10	Indonesia	31	Indonesia	50	Turkey	43	Indonesia	51	Israel	28	Turkey	135	Norway	230
Malaysia	7	Syria	26	Colombia	24	Philippines	27	Libya	50	Thailand	16	Colombia	91	Peru	170

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Noteworthy trade agreements in defense industry between two countries started in 2001 with the Turkish procurement of howitzers. Though increasing significantly in the last decade and offering

<sup>&</sup>lt;sup>51</sup> Source: *Defense White Paper 2014*, Ministry of Defense, Republic of Korea, Seoul, December 2014, p. 188.

immense opportunities, trade in defense industry between two countries can be considered as not fully grown yet. Some of the major defense partnership projects of Turkey and the South Korea are explained in this section.

Turkey signed a contract for the acquisition of the T-155 selfpropelled howitzer from the South Korea in 2001.<sup>52</sup> This was the first major procurement agreement between two countries. The Turkish variant was designated as Firtina or T-155 Obus. The first batch of eight T-155s were built in the South Korea under a license agreement, while the remaining batch of over 300 units were planned to be produced in Turkey.<sup>53</sup> This agreement was one of the first major international sales of the South Korean defense industry.

Turkish Havelsan's contract for providing CN-235 Level-D flight simulator in 2002 was marked as the first major export to the South Korea. Flight simulators have been developed in order to provide CN-235 aircraft pilots with flight training, weather radar education, and emergency cases training in realistic environment. The company continued the partnership by signing 36-month Electronic Warfare Training System (EWTS) with Korean Defense Acquisition Program Administration (DAPA) in 2009.<sup>54</sup>

Korea Aerospace Industries (KAI) won a nearly 500 million USD contract for a batch of KT-1 basic trainer aircraft in 2007. Technology transfer, besides capability and cost advantages, enabled KAI to secure this deal. KAI's assistance to Turkish Aerospace Industries (TAI) in the aircraft production will help developing indigenous platforms.<sup>55</sup> The first five aircraft were built at KAI's plant

- <sup>53</sup> "K9 Thunder 155mm Self-Propelled Howitzer: South Korea", *Armytechnology*, http://www.army-technology.com/projects/thunderselfpropelled (Accessed: June 2014).
- <sup>54</sup> Annual Report, Havelsan, Ankara, 2014, 14-15.

<sup>55</sup> Kulebi, *ibid*.

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<sup>&</sup>lt;sup>52</sup> Burak Ege Bekdil, "Turkey Chases New Defense Deals in Asia," *Defense News*, 11 February, 2011.

in the South Korea and the 50 more are planned to be built by TAI.<sup>56</sup>

Korea has plans to participate in TFX, Turkey's indigenous fighter jet program.<sup>57</sup> Turkey has joined the global trend to have own combat aircraft with TFX program. TFX will be the most expensive Turkish development program, if Defense Industry Executive Committee approves the project worth of 50 billion USD. TFX planned to replace Turkey's fleet of F-16A/B/C/Ds. Three concept designs for a new Turkish multi-role combat aircraft (TFX) were presented in the International Defense Industry Fair in Istanbul held in May 2013.<sup>58</sup> Concurrently, DAPA announced that Turkey has intention to join South Korean KF-X program to develop a next generation fighter with an assumed 20% stake.<sup>59</sup> The two multi-billion USD fighter projects are offering opportunities for further collaboration between two countries in defense industry.

Another joint-program between Turkey and the South Korea is Altay Project. Altay is the third generation main battle tank (MBT) of Turkey and is being indigenously developed. The 500 million USD contract includes design, development, and integration of Altay and qualification of the tank through prototypes and testing. The project started in 2007 and the first prototype was publicly revealed in 2011. The South Korea will transfer manufacturing technology and assist Turkey with the development of the subsystems. The manufacturer of the engine hasn't been decided and the new South Korean engine that is currently under development is among the candidates. Turkey aims to manufacture about 1,000 MBTs in four separate lots of 250 units.<sup>60</sup>

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<sup>&</sup>lt;sup>56</sup> "KT-1 Basic Trainer / Light Attack Aircraft", *Airforce Technology*, http://www.airforce-technology.com/projects/kt1basictrainerorlig (Accessed: June 2014).

<sup>&</sup>lt;sup>57</sup> Bekdil, *ibid*.

<sup>&</sup>lt;sup>58</sup> "Turkey Defense and Security Report Includes 5-Year Forecasts to 2018", *Business Monitor International*, 2014.

<sup>&</sup>lt;sup>59</sup> Stephen Trimble, "Dubai: TAI launches study on Turkish-built next generation fighter", *Flight Global*, http://www.flightglobal.com/news/articles/dubai-tai-launches-study-on-turkish-built-next-generation-364893 (Accessed: September 2014).

<sup>&</sup>lt;sup>60</sup> Ali Unal, "National Tank Project Near Completion," *Daily Sabah*, Jul. 10, 2014.

Altay MBT is expected to have significant export markets.

Two countries' historical relations in military cooperation are evolving to cooperation in defense industry. Defense industry cooperation, which began with joint production of T-155 self-propelled howitzers, provided opportunities for new developments and projects. The cooperation between the two countries is expected to improve considering the South Korea's technical skills, Turkey's manufacturing base, and know-how and marketing capabilities of both countries. Collaborations of two countries in defense industry can also provide cooperation in non-defense sectors.

# 7. Conclusion

Turkey and The South Korea have had more than 60 years of relationship and experienced a strategic partnership since 2012. Implementation of the signed agreements, including negotiations over free trade agreement, is expected to strengthen the ties and promote development in both military and civil areas. Strategic partnership will contribute to improve welfare and value of both countries. The South Korea and Turkey have similarities from the defense standpoint. Both countries are among the major defense spenders and they both experience security threats that force them invest in the defense industry. Regional collaboration seems hard for both of them when the neighboring countries are considered. This fact makes both Turkey and the South Korea search reliable overseas partnerships. Historical relations, friendship between countries' people, Western style democracy, steady economic growth, capable workforce, NATO compatible bases, and products are common grounds that can lead to cooperation between two countries.

The South Korea's better technology transfer packages at competitive prices may be useful to overcome competitors and to enhance its position in the profitable Turkish market. Turkish defense products that exported to the South Korea contribute in closing huge trade gap against Turkey. Collaboration of joint production in defense industry is a key issue between the two countries. Turkey has a unique geographical and strategic location, linking Europe and Asia.

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Promising domestic and export markets make joint production with Turkish companies advantageous. The cooperation between the South Korea and Turkey in defense sector has strong grounds and prospects and it offers many opportunities for both countries.

# Özet

Bu makalede, özellikle son 10 yılda önemli bir ivme kazanan Güney Kore-Türkiye savunma sanayi ortaklığı ve ticaretinin gelişimi analiz edilmektedir. İki ülke arasındaki dostluk ilişkileri, savunma sanayi harcamaları konusunda dünyanın önde gelen ülkelerinden olmaları ve savunma sanayinde önemli atılımlar yapmış olmaları gibi nedenlerle, Güney Kore ve Türkiye arasındaki savunma sanayi iş birliği akademik açıdan incelenmesi gereken önemli konulardan biridir. Bu makalenin Kore-Türkiye ticari ilişkileriyle ilgili literatüre katkı sağlayacağı düşünülmektedir. Makalede öncelikle dünyada savunma sanayi harcamaları ile ilgili gelişmeler hakkında bilgi verilmiştir. Daha sonraki bölümlerde Türkiye ve Güney Kore savunma sanayileri incelenmiş ve iki ülke arasındaki ekonomik ve diplomatik ilişkiler ele alınmıştır. Sonuç bölümünden önce ise iki ülke arasındaki savunma sanayi ticareti ve ortak yürütülen bazı projeler açıklanmaya çalışılmıştır.

Savunma sanayi harcamaları ülkelerin ekonomik gücü, karşı karşıya olduğu tehditler ve güvenlik konusundaki algıları gibi faktörlere göre sekillenmektedir. Bir ülkenin savunma sanayinin gelişmişliği sadece askerî değil, ekonomik ve politik alanlardaki etkinliğine de katkı sağlamaktadır. Dünyada savunma harcamaları II. Dünya Savaşı'ndan Soğuk Savaş'ın bitimine kadar sürekli artan bir trend izlemis, daha sonra azalmaya başlamıştır. 2001 yılından sonra özellikle 11 Evlül saldırıları vüzünden ABD'nin savunma harcamalarını artırması nedeniyle, yükselise gecen bu trend. 2012 yılında düşmeye başlamıştır. 2014 yılında dünyadaki savunma harcamaları 1.776 milyar dolar olarak ve bu harcamaların tüm dünya gayri safi milli hâsılasındaki oranı %2,3 olarak gerçekleşmiştir. Dünya savunma harcamalarının son 10 yıldaki gelişimi incelendiğinde,

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gelişmiş ülkelerin savunma harcamalarını azalttığı; gelişmekte ülkelerin ise harcamalarını artırdığı görülmektedir. Bu trend, savunma sanayinin geleceğinin belirlenmesinde gelişmekte olan ülkelerin etkili olacağını göstermektedir. Geleneksel savunma sanayi tedarikçileri teknoloji transferi ve Ar-Ge desteği gibi konularda genellikle isteksiz davranmaktadır. Bu nedenle gelişmekte ülkelerin askerî alanda yapacakları iş birliği önem arz etmektedir. Türkiye ile Güney Kore arasında savunma sanayi iş birliği, gelişmekte olan ülkelerin savunma ortaklığı açısından oldukça başarılı bir örnektir.

Gerek Türkiye'nin gerekse Güney Kore'nin savunma sanayi 1950'li yıllarda ABD'ye ve NATO'ya bağımlı olarak gelişme göstermistir. Ancak, iki ülke de savunma sanavinde verli üretim ve Ar-Ge've ağırlık vermek suretiyle önemli başarılar kaydetmiştir. Türk savunma sanayinde yerli üretim gerekliliği, özellikle 1974 yılında Kıbrıs Barış Harekâtı nedeniyle uygulanan ambargo sonrasında önem kazanmış ve 1974 ambargosu Türk savunma sanayinde bir dönüm noktası olmustur. 1985 yılında Savunma Sanavi Müstesarlığı'nın (SSM) kurulmasıyla önemli sayunma projeleri hayata gecirilmiştir. itibariyle Türk savunma sanayinin toplam 2013 yılı cirosu 5.076 milyon dolara, savunma sanayi Ar-Ge harcamalari 1.164 milyon dolara ve savunma sanayi ihracati 1.338 milyon dolara ulaşmıştır. Güney Kore'nin savunma alanında yerli üretim çabaları ise, gerek Kuzey Kore'den askerî alanda daha zayıf olmasından gerekse ABD'nin savunma desteğinde azalma nedeniyle 1970'li yıllarda başlamıştır. Dönemin Güney Kore Başkanı Park Chung Hee savunma, kimya ve ağır sanayi sektörlerinde yerli üretimi desteklemek amacıyla önemli projeler geliştirmiştir. Bunların büyük oranda hayata geçirilmesiyle Güney Kore'nin askerî ve ekonomik alanda bugün yakaladığı basarıların temelini atılmıştır. 1970 yılında kurulan "Agency for Defense Development" (ADD) savunma projelerini yürütmüş ve 2006 yılındaki yeniden organizasyonla bu görev "Defense Acquisition Program Administration" (DAPA) kurumuna devredilmiştir. Günümüzde, Güney Kore, özellikle konvansiyonel silah sistemlerinin üretimi ve ihracatında önemli bir konuma yükselmiştir. 2013 yılı itibariyle Güney Kore'nin savuna sanayi ihracati 3.416 milyon dolara ulaşmıştır.

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İki ülke arasındaki dostluk ilişkileri, Türk aşkerî birliklerinin 1950 ile 1953 yılları arasında yaşanan Kuzey Kore ve Güney Kore arasındaki savaşa katılmasıyla başlamıştır. Askerî alanda 1950'lerde başlayan ilişkiler, 2000'li yıllarda savunma sanayinde ortaklıkla devam etmektedir. İki ülke askerî ve ekonomik alanlarda iş birliği amacıyla pek cok anlasma imzalamıs ve dostluk iliskileri üst düzev zivaretlerle geliştirilmiştir. 2012 yılında imzalanan anlaşma ile iki ülke arasındaki ilişkiler "stratejik ortaklık" düzeyine yükseltilmiştir. 2013 yılı itibariyle toplam ticaret hacmi 6.548 milyon dolara ulasmistir; ancak ticaret dengesinde Türkive alevhine 5.628 milyon dolar acık gözlenmektedir. Güney Kore'nin Türkiye'ye savunma sanayii ihracatları 2006, 2007, 2008, 2009, 2010, 2011 ve 2012 yılları için sırasıyla 57 milyon, 383 milyon, 427 milyon, 43 milyon, 75 milyon, 56 milyon ve 135 milyon dolar olarak gerçekleşmiştir. Türkiye, Güney Kore'nin geliştirdiği özgün savunma ürünleri icin ilk ihracat pazarlarından olmustur. Türkiye de aynı dönemde Güney Kore'ye önemli miktarda ihracat gerceklestirmistir. İki ülke arasında gerceklesen bazı önemli savuma projeleri arasında Türkiye'nin T-155 obüs tedariki ve üretimi (2001), CN-235 uçuş simülatörü satışı (2002), KT-1 eğitim uçağı tedariki ve üretimi (2007) ve Altav ana muhabere tankı üretimi is birliği savılabilir.

Güney Kore ve Türkiye arasındaki dostluk ilişkileri, ekonomi alanında ortaklığa dönüşmektedir. Mevcut ilişkilerin geliştirilmesi, askerî ve sivil alanda yapılan anlaşmaların uygulanmasıyla iş birliği ve ticaret potansiyelinin değerlendirilmesi iki ülkenin kalkınmasına önemli katkılar sağlayacaktır. İki ülkenin askerî altyapılarının NATO uyumlu olması, özellikle askerî alanda ortak projelerin ve ticaretin gelişmesine olanak sağlamaktadır. Son on yılda gözlenen başarılı iş birliği, gelecekte daha önemli ortak projelerin yürütülebileceğini göstermektedir. 159

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