New Priorities Shape the Defense Industry

by Cem Akalın

The Defense and Aviation Industry Performance Report prepared by the Defense and Aerospace Industry Manufacturers Association (SaSaD) was published on April 26 on SaSaD's website. According to the data, which is collected from sector players every year in April – May, foreign defense industry sales revenue in 2019 amounted to US$ 3.068 billion, while total domestic and foreign sales reached US$ 10.884 billion. According to the data, imports amounted to US$ 3.088 and the R&D expenses realized reached US$ 1.672 billion. Total employment increased to 73.771.

The Defense Industry's foreign sales revenue was announced as US$ 2 billion 740 million 988 thousand by the Turkish Exporters Assembly (TIM) in the last days of December 2019. When the latest up-to-date data is included from the members of SaSaD and also the data from foreign exchange generating services related to Defense and Aerospace (SSI) full year 2019, the foreign sales revenue of 2019 reached US$ 3.068 billion. In 2018, the foreign sales revenue was recorded as US$2.188 billion.

According to data the provided by SaSaD, the turnover per capita in 2019 increased to US$ 147.539 with an increase by 13% compared to the previous year while the total number of orders received fell by 12.56%. The total received orders in 2018 amounted to US$ 12.204 billion, and this figure dropped to US$ 10.671 billion in 2019.

After this substantial decrease in 2019, defense industry exports increased by 5% in the first two months of 2020. However, just like all sectors, the defense industry's export figures experienced a sharp decline with the coronavirus pandemic in March and figures decreased by 49.5% compared to the same month of the previous year.

SaSaD Secretary General Hüseyin BAYSAK evaluated the performance of the sector in 2019 as well as the impact that COVID-19 has had on the sector, the measures adopted, and the activities performed within SaSaD for our magazine.

Defence Turkey: Dear Mr. BAYSAK, before commenting on the impact of the pandemic on the sector, can you take us through last year's numbers, taking a look at the metrics and graphical assessment of the Defense and Aerospace Industry's previous year results?

Hüseyin BAYSAK: I suppose it would be better to start with good news. We have just completed the preparation of the Sector Performance Metrics of

2019 and a few days ago published them upon the approval of the Presidency of Defense Industries. Our sector seems to have had quite successful performance in 2019. We witnessed positive developments in almost all metrics. In brief, while our turnover reached US$ 10,884,081,347 with an increase of 24,3 % compared to the previous year, the Overseas Sales Revenue rose to US$ 3,068,519,809 with an increase of 40.21%, again compared to the previous year.

In addition to the Overseas Sales Revenue, there is a similar development also in the Sector's Exports. The exports reached the level of US$ 2,741,988,000 with an increase of 34.6% compared to the previous year. Meanwhile, an increase that was not at a similar level to the turnover was seen in imports and the imports amounted to US$ 3,088,465,82, an increase of 26.11%. In employment, an increase of 9.71% was achieved compared to the previous year and the number of employees in our sector reached 73,771.

Similar favorable developments were achieved in the product and technology development activities conducted in our sector as well. With an increase of 15.44% compared to 2018, the expenses in this group accumulated to US$ 1,672,052,468 and of this amount US$ 1,423,067,193 was spent in Product Development where Technology Development expenses reached US$ 248,985,275. 19.8% of the total Product Development and Technology Development expenditure that is US$ 331,291,055 is equity capital expenses (the expenses of the sector players financed by their equity capital). Compared to the previous year, there was a decrease by 12.56% in new orders received by the sector and the amount realized was US$ 10,671,519,679.

All these developments are pleasing, and we appreciate their value as they also signal the sustainability of the competence and capabilities acquired by the sector. We will be displaying these figures in a mathematical sense, presenting them in a detailed report with our added analyses and we will share them our stakeholders in the upcoming days.

Defence Turkey: Turkish Defense Industry Exports were declared by TIM in December 2019 to have reached US$ 2.741 billion. What are the differences between the data you provided as SaSaD and the data declared by TIM?

Hüseyin BAYSAK: As SaSaD we do not use the term 'exports', instead we refer them as Overseas Sales Revenue. The Defense and Aerospace Exporters' Association publishes the amount of the exports of the items that pass through customs and exports that remain within the customs tariff statistics position (HS Code) as the total amount of exports. But we add our sector players' engineering activities held abroad and foreign exchange generating services resulting from various support activities to the export figure and we define the total result as the Overseas Sales Revenue. As a result, the amount of our exports realized was US$ 2.742 billion. When we add around US$ 378 million in foreign exchange generating services that show decent progress to that figure, we obtain the figure of US$ 3.088 billion.

Defence Turkey: Do you also include the data provided by Civil Aviation, MRO and Military Shipyards to the Foreign Exchange Generating Services?

Hüseyin BAYSAK: When we combine these data, we include all the data on the activities conducted in defense, military and civil aviation, MRO (Sea, Air and Land) and homeland security as well.

Defence Turkey: We observe that the data of imports and exports are almost in balance this year. What does the balance between Import and Export data mean?

Hüseyin BAYSAK:: An increase of 34.6% was achieved in exports, where it had risen to the level of 18-19% in the previous years. 2019 was a fruitful year. Regarding imports, the indigenization efforts regarding certain import items as part of the indigenization and nationalization activities launched by the Presidency of Defense Industries are demonstrating a positive effective. Therefore, where the import/export coverage ratio was at the level of 80-90% in the previous years, this year we can say that this ratio reached nearly 100%.

Defence Turkey: There is a substantial increase in R&D and Product Development expenses. What would you like to say on this issue?

Hüseyin BAYSAK: The Turkish Defense Industry has been allocating a significant amount of resources to Technology and Product Development areas. These are conducted through projects supported by the state and the fund generated by the equity. Almost every year we observe an increase of around 15-18% compared to the prior year. Here we are speaking about an expense increase of almost 16-17% for Product Development and Technology Development

Total Sales	10.884.081.347 $
Overseas Sales Revenue	3.068.519.809 $
Import	3.088.465.821 $
R&D Expenditure	1.672.052.468 $
Number of Employees	73.771

expenses, reaching an amount of US$ 1.6-1.7 billion within a turnover of approximately US$ 10 billion. The Gross Domestic Product consists of nearly 1% in R&D expenses. Resources at the level of 16-17% are being allocated to Product Development and Technology in Defense Industry.

Defence Turkey: Mr. BAYSAK the figures shared in 2019 were at a promising level for our defense industry. However, a new era has begun with the pandemic in 2020. How has the COVID-19 impacted the Defense and Aerospace Industry? This unprecedented global crisis spans sectors, our local and the global economy and countries. What are your thoughts and assessments about the post-pandemic era?

Hüseyin BAYSAK: The pandemic we have been going through has unfortunately started to affect our country as well since March 11th. A series of measures are being adopted and implemented by the state and the government in the fight against the outbreak as well as for the management of the crisis. As a result of these measures, the lockdown implemented in all countries has either completely or partially slowed down or either terminated the activities in numerous sectors, thus negatively affecting the economy. The Defense Industry is being regarded among the critical sectors in every country and almost all countries allow the operations to continue while placing great

importance on the health and safety of employees.

By placing the health of employees into the forefront, to protect them, our sector players designed some special procedures where the working methods and precautions were redefined, and they were put into practice. To this end, new working procedures were implemented. We prepared a survey to identify the new procedures implemented by our members, a survey on how they are managing their business during this period. We asked them certain questions and according to their responses we determined the following results:

- 6.82% of industrialists maintained their pre-crisis working procedures/processes,
- 9.09% of industrialists suspended operations at their facilities and launched a remote/ working from home model,
- 36.36% of industrialists conducted operations with certain employees on site continuing to operate at the facility as required by their position, while other employees continued work remotely/ from home,
- 13.64 % of industrialists grouped their existing personnel into shifts/ teams, decreasing employee density by modifying shifts into a staggered schedule of 2-3 shifts,
- 31% of industrialists implemented all the aforementioned steps, while just 2% of industrialists suspended all their operations for the first two weeks.

Consequently, the sector players continued their activities during the normal days and the lockdown days with the privilege granted by our state. During the last two weekends and the last 4-day lockdown (April 23 National Sovereignty and Children's Day), we enabled our stakeholders to carry out their activities through special permits. Nevertheless, as a result of the conditions set by the process and the anxiety among employees, we have witnessed a loss in efficiency and we observe that the output of the activities is below the expected level or the level we are accustomed to. Based on such observations, we designed a survey composed of 25 questions where we included the detections and suggestions of our stakeholders on the impacts of the pandemic and on ways to minimize these impacts and we shared the study with all the relevant authorities (Presidency of Defense Industries, Ministry of National Defense, Ministry of Treasury and Finance, Ministry of the Interior, Ministry of Health and Ministry of Trade). We are pleased to see that most of our suggestions were in the announced support package as well as in the decisions taken by our Presidency, our Ministry of Treasury and Finance, Ministries of Health and Interior and Governorships. In respect of fulfilling the requirements of the healthcare institutions during the pandemic, especially regarding the production of special personal protective equipment, our sector players generated solutions by utilizing their existing engineering and design infrastructures and production infrastructures. Witnessing such efforts pleased us on behalf of the representatives of the sector and I would like to state that this is certainly a gratifying development for our country.

In the previous years, we launched a study with Hacettepe Teknokent to find out how Healthcare, Defense and Information Industries could cooperate. For instance, there is a significant amount of foreign currency expenses regarding medical equipment in the healthcare sector. It was determined that the know-how and infrastructure accumulated in the Defense and Information Technology Sectors were at the level to fulfil many requirements. In the Capability/Competence and Requirements matrix prepared on this subject, it was determined that much of the equipment that is being imported could be manufactured in our country. Unfortunately, this project remained incomplete after the first stage. However, some of our members that took part in the aforementioned project, witnessed that they had very significant and important infrastructures, concerning in particular imaging devices, surgery and laboratory equipment. From this perspective, we placed and prioritized the medical devices from neighboring sectors in our sector's sustainability strategy. The Medical Imaging Devices of Aselsan are a good example of this. One of our members, Nanobiz conducted critical activities for the Coronavirus diagnostic tool. They have reached the clinical trial stage. Biyosis, Dora Makine, Arçelik and Bayraktar are also conducting activities on respiratory devices. We may refer to these endeavors as examples of where the know-how and infrastructure of the defense industry are utilized.

A brief look at the state aid packages launched by various countries in the world is provided in the figures below:

- Countries allocated the following: The U.S. US$ 2 trillion, Japan US$ 988 billion, Germany € 750 billion, Italy € 400 billion, United Kingdom £ 81 billion, Switzerland US$ 43 billion and Israel US$ 22 billion. Turkey declared its support package in this period as US$ 14.5 billion (with the additional support the total amount reached US$ 30 billion).
- 30% of the support package announced by the U.S. is allocated to individuals, families, 25% is to Major Companies, 19% is to SMEs, 17% is granted to Local Administrations and 9% is allocated to Public/Healthcare services.

Though the breakdown is not known yet in our country, it is possible to mention that there is a similar breakdown based on supported groups. Since our sector players are carrying out their operations in some way, they feel the impact of the pandemic at a lower level, for instance less than in the civil aviation and tourism sectors, especially in domestic orders received and their domestic activities. However, when we look at the interaction with foreign countries, the initial data reveals that this interaction would be lower. The study conducted by TIM reveals a 49.8% reduction in Defense Industry's exports from 1 January 2020 - 31 March 2020, compared to the same period the previous year. This study reveals a deeper decline from 23 March - 31 March, plunging to a decline of 57.2%. These percentages are higher than Turkey's average and thus they should be regarded as signals for potential setbacks to be experienced in the upcoming period in terms of exports. We have to pay utmost attention to this area.

Defence Turkey: We observe that potential losses may be experienced in defense industry exports. Could our defense industry companies, those that can add value and provide equipment needed by foreign countries, for the healthcare industry for example, offset these export losses?

Hüseyin BAYSAK: It will compensate for the losses to a certain extent. From now on, the healthcare industry will remain in the forefront within the priorities to be identified by the states in the utilization of resources. The food sector will stand out similarly. We presume that the Defense Industry will slightly recede, and this will pave the way to a certain amount of regression in defense industry exports. We need to explore ways to replace this. One option will be the healthcare sector, which remains among the priority areas. We will need to build upon the serious potential in producing healthcare equipment, medical devices (medical imaging devices), laboratory - surgery equipment and export them. It will be difficult to reach a certain level of maturity in 2020 or in 2021 but we will be including the aforementioned products to the exports of the defense industry stakeholders.

I would like to proceed this interview with assessments in this area with excerpts from the document "Projections on the New Economic Order after COVID-19" prepared by the Aegean Region Chamber of Industry. The projections by Silicon Valley signal certain positive developments in terms of the working environment. Though, this research mentions that there would be certain negative impacts in terms of the economy and that businesses would progress slower than usual, what I find interesting is that Silicon Valley itself has a projection that Artificial Intelligence may cause calamity to humanity. They state that capitalism will end, and socialism will appear on the agenda and that universal basic income (UBI) will be discussed. Again, a more connected yet decentralized world is envisaged, it is foreseen that dependence upon other countries particularly in areas such as medicine, food and technology would be questioned and ways of gaining independence in such areas would be sought after. Moreover, the research includes that the industry and working methods would be altered and renewed, physical meetings that gather people would be minimized, while working from home and telecommuting methods would become popular. The research contains a finding that in this period, companies that implemented telecommuting experienced an increase in efficiency. It is believed that a comfortable working environment and better concentration will pave the way to the extension of remote work models.

The assessments made by the leaders imply the following:

- Expense priorities will shift, and new priorities will be defined,

Hüseyin BAYSAK - SaSaD General Secretary

- The nation state concept and nationalist tendencies will grow stronger,
- Multiple step supply chains involving multiple countries will change and shrink, and a return to national resources will occur,
- The axis of power will shift towards the People's Republic of China and Asia, which will achieve an earlier recovery in terms of social and economic aspects,
- Long-term decreases will be experienced in business travel; promoting and marketing activities, contract negotiations will be conducted online without travel,
- The budget allocated to healthcare services will increase and technology companies will conduct intense activities on innovation and creative applications.

From this point of view, it is likely that the process ahead will not be very bright for the defense industry. In order to maintain and improve our current status, we need to carry out new activities.

Within this framework, if we take into consideration the shift in spending priorities of countries, meeting defense requirements will probably lag behind other priorities of many countries. Resources allocated to this area will be more limited. I believe that this case will signal a recession for our sector in terms of exports. Considering the prominence of medical requirements in priority areas, a new business area will emerge for our sector and we may regard this as an area that would cover for our losses. Besides, I believe that Cyber Security, Big Data and Industry 4.0 will be among the top priorities.

Based on issues such as isolation precautions and the protection of employees' health after the pandemic, it is very probable that instead of working in offices and conducting physical meetings, working from home will become widespread. As part of the preparations to be made in case of potential crises, we may project that the demand for automation and Industry 4.0 implementations will increase and in this way measures to decrease the number of employees onsite in the workplace will be adopted as well. There will be a long-term decrease in business travel and it will be replaced by online promotion activities and meetings. We can also say that the basis of global production will be hit hard, and nationalist tendencies will grow. Within this scope, supply chains with multiple steps and multiple countries will also be reevaluated. This method will diminish as individual countries become supported by governments as indigenization and nationalization efforts increase, paving the way for the emergence of a new area of business for our industrialists. A new stage where the supply chain will be executed remotely, including customers, will be opted for. We also must underline the view suggesting that profit margins may decrease while this system enables a more flexibility in the sector.

We can say at the end of the day that the future holds many political, economic and social novelties.

Defence Turkey: Mr. BAYSAK, I believe it will be useful to remind our readers of when the Sector Performance Report covering the detailed breakdown will be announced. When will this report be published?

Hüseyin BAYSAK: Our colleagues are preparing the graphics. Most probably we will have prepared the printed version of this report in mid-May and will be sharing it with our stakeholders.

Defence Turkey: Mr. BAYSAK, thank you very much for this interview.

Hüseyin BAYSAK: Our sector has quite competent human resources and a valuable product, design and development infrastructure. I expect to see the utilization of the infrastructure in a variety of different sectors, as we recently have demonstrated with the prioritization of producing medical devices. Moreover, when there is a setback in the other sectors such as transportation, automotive and energy, our sector could be directed towards these neighboring industries to support them. I am quite confident that our sector will be maintaining its dynamism and sustainability. Thank you...