CURRENT SECURITY POLICIES IN TURKEY ON THE PERSPECTIVE OF DEFENCE INDUSTRY TECHNOLOGIES: A REACTIVITY-PROACTIVITY ANALYSIS

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Abstract

Today's world is facing with many security crises that are growing each day. Since its recent past, Turkey has been forced to deal with many high priority security issues, such as the Cyprus problem, separatist terrorist acts, and the Syrian Civil War. In order to solve these problems, Turkey has developed various strategies over time and has evolved into a more effective and proactive security understanding by taking lessons from the obstacles it faces in this sense. In particular, it has contributed a lot to the development of an effective and proactive security understanding by evolving from an almost completely foreign defence industry to a Turkish defence industry, which is increasingly becoming a leader in some specific technology sectors in the world. There should be no inhibitive barriers to achieve the objectives of the determined national policy with maximum efficiency and gain. Developing defence industry technologies reduce the "inhibitive" elements that pose obstacles to Turkey's security policies and enable Turkey to implement longer-term strategies. In this research, it is aimed to examine the security problems that Turkey has to struggle against and the policies it has developed from the perspective of defense industry technologies and to present a reactivity-proactivity review, especially on the recent past and today.

Keywords: *Security Policies, Defence Industry, Technology, Reactivity, Proactivity, Turkey*

SAVUNMA SANAYİİ TEKNOLOJİLERİ PERSPEKTİFİNDEN TÜRKİYE'DE GÜNCEL GÜVENLİK POLİTİKALARI: BİR AKTİVİTE-PROAKTİVİTE ANALİZİ

Öz

Günümüz dünyası her geçen gün aralarına bir yenisi daha eklenen birçok güvenlik krizi ile karşılaşmaktadır. Türkiye yakın geçmişinden beri; Kıbrıs sorunu, ayrılıkçı terör eylemleri, Suriye İç Savaşı gibi pek çok yüksek öncelikli güvenlik sorunu ile mücadele etmek zorunda kalmıştır. Türkiye, bu sorunlarına çözüm üretmek için zaman içinde çeşitli

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stratejiler geliştirmiş, bu anlamda karşılaştığı engellerden dersler çıkararak daha etkin ve proaktif bir güvenlik anlayışına doğru evrilmiştir. Özellikle, neredeyse tamamen dışa bağımlı bir savunma sanayiinden; günümüzde her geçen gün yerlilik ve millilik oranı artarak devam eden ve bazı spesifik teknolojik alanlarda da küresel anlamda ilk sıralara gelmiş bir Türk savunma sanayii, etkin ve proaktif bir güvenlik anlayışının gelişmesinde çok katkı sunmuştur. Belirlenen ulusal politikanın maksimum verim ve kazanım ile amacına ulaşması için önünde bağlayıcı engeller olmaması gerekir. Gelişen savunma sanayii teknolojileri, Türkiye'nin güvenlik politikalarının önündeki "bağlayıcı" unsurları azaltarak, Türkiye'ye daha uzun erimli stratejileri uygulama olanağı sağlamaktadır. Bu bağlamda bu çalışma; özellikle yakın geçmişte ve günümüzde Türkiye'nin mücadele etmek zorunda kaldığı güvenlik sorunları ve bunlara karşı geliştirdiği politikaları savunma sanayii teknolojileri perspektifinden incelenmesi ile bir reaktiflik-proaktiflik incelemesi ortaya konması amaçlanmaktadır.

Anahtar Kelimeler: *Güvenlik Politikaları, Savunma Sanayii, Teknoloji, Reaktivite, Proaktivite, Türkiye*

INTRODUCTION

Security is the vital element of peace and prosperity of modern world. However, implementing an effective and strong security policy on a geography of full of conflicts is difficult.

Today, Turkey has to cope with many internal and external threats. Turkey has confronted and jeopardized by several security challenges, such as separatist terrorism, the Cyprus Dispute, the Cold War so far, and currently Syrian Civil War.

Turkish Defence Industry became a vital actor to Turkey's challenge against security issues. Today, in many areas, Turkish defence industry technologies are accepted as determinants of fields. It can be stated that there is no other time that current security policies have relied on more defence industry technologies in Turkey's history.

In this study, current security policies of Turkey will be attempted to examine and analyze in terms of reactivity and proactivity mostly on current developments and events. Before defence industry sections are mentioned, terms of reactivity and proactivity will be defined and their purpose of usage will become clear to proceed. To understand current Turkish defence industry technologies and their purpose frame, history of Turkish defence industry and Turkey's security challenges will be briefly explained. Then, as

three internal separate section, important Turkish defence industry technologies, which are implemented and currently using by Turkish military, and their respective developers will be analyzed in terms of reactivity-proactivity paradigm. In last section, this information which was analyzied and presented to the reader will be summarized as a macro analysis.

1. A BRIEF OVERVIEW ON TERMS OF REACTIVITY AND PROACTIVITY

Terms of reactive-reactivity and proactive-proactivity are usually used by psychology-related branches of social sciences. Basically, "pro-" is a Greek prefix and means "before", leads us to think/act before happening of an event. As contrary, "reactivity" means think/act when event occurs (Grant and Ashford, 2008: 28). As is easily observed, there is a tendency to use these terms in nearly all fields, yet in fields related with the military, these terms are worthwhile to be analyzed.

For the way of thinking of strategy, proactivity is vital to achieve predetermined aims and goal in case of major or complete success. As ancient as human history, creation and implementation of strategies based on diverse variables. Humankind firstly just reacts what they confronted, then elevates to think further on these variables, and finally creates a prudent way of approach. Therefore it means getting option of proactive way of think/act. It is possible to say proactivity is outcome of a process of experience.

Also, proactive approach is an option to determine a strategy, and as we can see, it is optional. Sun Tzu usually refers to use of proactive way of approach on his famous book of The Art of War (2009: 9) and says "the greatest victory is that which requires no battle" and leads to see, the art of war is also art of peace. From another point of view, retired Major General Osman Pamukoğlu (2014) contributes to Sun Tzu's book on his words through his experiences and summarizes book with this sentence, "be prepared not to get in trouble!"

2. A BRIEF OVERVIEW ON TURKISH NATIONAL DEFENCE INDUSTRY AND TECHNOLOGIES

Turkish Defense Industry is as old as Ottoman history. However, the adaptation to new technologies arising from the industrial revolution and the

attempts to produce them within the country were delayed efforts/actions for the Ottoman period and remained as limited attemps. Last decades of The Ottoman Empire continued on heavily and expensively importing the needs of army, navy, and later the new established air force (Gencer, Örenç and Ünver, 2008: 240-45). In such circumstances, Turkish War of Independence highlights the importance of a single bullet, and newly founded Turkey Republic focused on national and domestic supply of defence industry.

The need for a more domestic and strategically more independent Turkish defence industry emerged at that time of Cyprus Dispute. Some defence equipment purchased (or donated) from allied countries could not be used because of the limitations of the producers during the time of Cyprus Dispute. The barest example is the 1964 dated Johnson letter that prohibits usage of United States origin military equipment on a possible Cyprus Intervention (Şahin, 2019: 142). Most notably, an arms embargo imposed on Turkey after the Cyprus Peace Operation at 1974.

After these negative circumstances, Turkey took the first steps to establish its own independent defence industry infrastructure, founded the Turkish Air Force Strengthening Foundation (Türk Hava Kuvvetleri Güçlendirme Vakfı) in 1970 and the Turkish Land Forces Strengthening Foundation (Türk Kara Kuvvetleri Güçlendirme Vakfı) in 1974 (Sezgin, 2017: 23). These two foundations, later known as the Turkish Armed Forces Foundation (Türk Silahlı Kuvvetlerini Güçlendirme Vakfı) by merging in 1987, founded ASELSAN (Military Electronic Industries), İŞBİR (İŞBİR Electrical Industries), ASPİLSAN (Military Battery Industries), HAVELSAN (Aerospace and Electronics Industry) and ROKETSAN (Rocket Industries) strategic defence industry companies and formed the basis for the national defense industry. Turkish Aircraft Industry Joint Corporation (TUSAŞ) was established within the Ministry of Industry and Technology and then transferred to the Turkish Armed Forces Foundation (Yalçın, 2013a: 317-320).

Today, Turkish Defence Industry is improving rapidly in terms of national and strategic technologies. On land systems, naval warfare capabilities, air dominance, strategic subsystems and many more areas, Turkish defence industry market reached $1.2 billion, and continuning to grow (Mehmet, 2018).

3. CURRENT SECURITY CHALLENGES OF TURKEY AND TURKEY'S COUNTERMEASURES

3.1. Internal Security and Counter-Terrorism

The concept of national security constitutes the essence of traditional security. The main reason for this situation is that the traditional security concept is shaped in the realist paradigm axis (Karabulut, 2015: 20). Roughly, Turkey's oldest and most important problems originates from separatist-foreign backed armed movements and terrorism activities insides its borders. Turkey confronted couple major attempts of rebellion on Eastern provinces and prevailed, early years of republic (Bozkurt, 2011: 146-52). Integrity of this region to Turkey in case of identity and development usually faced external provocations, and as a result Turkey faced another significant internal problem. Turkey struggles with internal terrorist activities due to new asymmetric warfare concept for almost two generations (Çapar, 2013: 179-80). The nature of the asymmetric war has uncertainty, confidentiality and surprise, and each application has its own characteristics (Seren, 2017: 69). In the first period of the terror incidents, underestimation of the actions of the Separatist Kurdish origin terrorist organization by authorities, and not taking it seriously (even calling them as "several bandits") caused the problem to become more complex over time. (Alan, 2016: 11). Thousands of Turkish soldiers and citizens have lost their lives, many more have displaced, and the region became a warzone for almost 40 years.

On the other hand, this long period revealed the capability and incapability of Turkish Army on asymmetric warfare. The doctrine of Turkish Army was established on Cold War era conventional battle technics, and the army was not ready to fight effecitvely against guerilla warfare, which PKK terrorist used bitterly (Yılmaz, 2012: 68-69). Turkish government showed a reactive way of respond to prevail for the first time, but could not effectively succeed. Threat has not been eliminated completely but we can arguably say that it was brought to its knees, thanks to experienced Turkish Military and Turkish Defence Industry technologies (Başbuğ, 2011: 144-46).

From 1980s to 2010s, both Turkish Military and Turkish Defence Industry gained much experience to show proactive approach to fight against terrorism. Using micro-intensive tactics on field, and proactive strategies results less casualties and more efficiency (Yarar and Bozkurt, 2016: 263-64).

3.2. Turkey's Naval Competency and Current Issues

19th Century was the century of innovations and industry. Sultan Abdülaziz (1861-1876) showed ultimate attention to modernization of Ottoman Navy during his reign. However, swiftly changing maritime technology and giving less importance to navy and maritime by Sultan Abdülaziz's successors on Ottoman throne made Ottoman Navy obsolete (Songur, 2017: 1634-35).

Ottoman Empire had this considerable outdated and weak navy on the contrary of its enemies, at the beginning of 1st World War. During 1st World War, Ottoman Empire suffered a heavy toll due to lack of a proper and modern navy, especially at Çanakkale Front.

After its foundation, Turkish Republic valued the importance of navy, and understood the factor of being more efficient on maritime affairs. A modern and competent Turkish Navy vision has continued to today accompanying many developments. With no doubt, naval competency of Turkish Navy is developing more and more on surrounding seas. However, contemporary tension of East Mediterranean, on especially Aegean Sea, seems elevating too.

Due to Aegean Islands and Cyprus Disputes between Greece and Turkey, East Mediterranean has a high tension. To illustrate tangibly, Greek Military shows an aggressive behavior on Aegean Sea, and provoke Turkish Military constantly. Also, Greek Military is advantaging of its islands, and using them as "Aircraft Carriers" against Turkey (Taşkıran, 2007: 147-48).

For Turkish Navy, to overcome this disadvantageous situation is vital. The solution is a capable and large naval competency which includes high amphibious assault skills and aircraft carrier capabilities in order to be efficient and prestigious on its coasts and beyond (Sandıklı and Kaya, 2012: 224).

Therewithal, new energy routes and possible fuel sources on East Mediterranean are another tension areas of international relations that needs to Turkey's valuable attention (Üşümezsoy and Şen, 2003: 225-26). Possible natural gas and oil reserves on East Mediterranean adds another dimension to Cyprus Dispute. This leads, to have capable and large naval competency to gain a strong position on maritime energy routes and possible advantages for Turkey.

4. PROACTIVITY FROM REACTIVITY: A MORE COMPOTENT PARADIGM FOR DEFENCE TECHNOLOGIES

The implementation of national security strategies requires the development of a defensive power that is appropriate to the requirements of the security environment. The core competence in determining the power and effectiveness of this power; technology or, more clearly, the ability to develop and utilize technology in a way that is superior (Yılmaz, 2009: 219).

"The greatest victory is that which requires no battle" is the motto and main proactive-based strategy of The Art of War (Sun-Tzu and Giles, 2017). Today's conditions for Turkish military, this paradigm can be summarized as follows; "be effective, deterrent, and respected". Turkish defence industry technologies are key points to implement a proactive-based and long-term strategies. The understanding of this paradigm will be clarified and supported by examples from land, naval and air systems in order to understand importance of proactive-based policies.

4.1 Proactive Based Paradigm on Land Systems Technologies

4.1.1 Paradigm Change on Tactical Wheeled Armored Vehicles

Turkey has experinced threats both inside its borders ans in Syria and Northern Iraq, especially in asymmetric warfare field with deep experience and terrain-shaped armored vehicles. Thanks to Turkey's experince in the fight against terrorism, the use of technology developed in this area has enabled the formation of a proactive combat strategy, and a more result-oriented and professional security policy approach has prevailed. Instead of the front lines where the armies used to collide, today the conflict is mostly in residential areas, forcing world-wide security paradigms to change. Turkey has significantly improved its capacity to combat against terrorism in the residential area, a challenging and up-to-date experience from facing domestic security issues.

Another dimension of asymmetric warfare, many defence industry technologies have been developed for residential area conflicts and are now available to entire Turkish security forces. Also, the current equipment and vehicles has been updated with feedbacks, and got upgrade. An example, RCWS (Remotely Controlled Weapon System) are placed on 4x4 TWAV (Tactical Wheeled Armored Vehicle) to provide option to engage personnel

without exiting vehicle. Domestic and national 4x4 Vehicle Systems; Ejder Yalçın III, Cobra I and II, KAYA I and II, Kirpi upgraded with domestic and national RCWSs. Rather than just upgrading armor, providing RCWS is micro-perspective proactive based decision in the overall of "reactive" concept.

To summarize, a request for a land vehicle which is equipped with agile and modern systems, resistant to all sorts of mine-traps and crossfire, more protected than the world standards, and robust armor expectations, able to suppress the enemy under fire with remote command weapon stations was created, which is a "reactive" form of a behavior. However, the process of adapt-improvise-overcome is an effective key element, and leads more macro-perspective "proactive" measurements.

4.1.2 Paradigm Change on Altay Main Battle Tank Concept

Altay MBT (main battle tank) project is designed by OTOKAR, and later carried out under the main responsibility of the BMC, which is assigned by the Presidency of Defence Industry (SSB) to mass production. The Altay tank is equipped with the latest technology as a 3+ generation tank and is developed to provide all the tactical capabilities required for the modern armies of the 21th century. Although the development process of Altay MBT have taken quite long, current needs of a MBT have increased. Therefore, Altay's concept design has been equipped with its new features that can handle new duties in near future.

In the contract signed on November 9, 2018 between SSB and BMC, a total of 251 tanks will be produced from Altay MBT in three different models. The first 40 of these tanks will be T1 variant, similar to the four prototype models that completed the test and planned to be commissioned with Turkish Armed Forces in 2021. The next 210 vehicles will be the Altay T2 standard with increased protection and improved situational awareness systems. The T2 variant is expected to be delivered shortly after the delivery of the T1 standard tanks. The T3 variant which is called a single tank will be produced. The turret will be equipped with an automatic loader. Whether or not this tower is entirely unmanned is clearly not expressed, but because of the structure of the tank, development will focus on the automatic loader. This T3 variant, planned for qualification in 2024, is thought to be more useful for learning and technical evaluation than for servicing Turkish Armed Forces. As an analysis, it is possible to say that T2 concept is a

"reactive" behavior of current needs, and T3 is going to be the first step of Turkish future paradigm of MBT in fields. Such a possibility to see entirely "unmanned" heavy armor on Turkish warfare is obviously a "proactive" based technological choice.

From diffirent point; Altay MBT is designed to be an anti-armor role, however, today's warfare focused on urban areas that leads to asymmetric warfare, rather than conventional toe to toe tank battles. Because of that, Altay MBT gained a twin design as "Altay AWT" (asymmetric warfare tank). Lead designer of Altay AWT, OTOKAR refers these skills will provided for this project (2017); ERA (explosive reactive armor) and bar armor systems to increase tanks's survivability in hybrid and asymmetrical combat conditions, such as guided and unguided missile attacks, pits and barriers created between roads and streets, HMEs (handmade explosives) and mine attacks. New optical systems integrated with RCWS which re-deployed on tank's design will provide 360° wide-range awareness. Besides all these, in front of the tank there is a directional dozer blade that can be controlled by the driver, prepared defensive positions, cleared obstacles to combat, filled tank ditches, which are Turkish security forces regularly confronted recent combats against PKK.

As a consequence, Altay MBT was designed on a conventional basis but can meet decent needs of today's warfare, which can be named as a "reactive" behavior from macro-perspective. However, current struggles of Turkish military led it design to a "proactive" shape from both micro-perspective and macro-perspective.

4.1.3 Autonomous Land Systems and Possible Usage in Near Future

Origins and main duty of unmanned systems are reducing the risks for combatants. This is clearly a proactive approach, so this technology can be evaluated in this framework. Autonomous systems and AV's (autonomous vehicle) emerges to be the most important actor of modern warfare. As technology improves, capabilities and skill of new AV's improves too. AV's offer the potential to dramatically increase the mobility, accuracy, and capacity of logistics competency, thereby markedly improving the sustainment warfighting functions; as well as targeting and intelligence capabilities (Epshtein and Faint, 2019). It is possible to say, usage of AV's is going to be take a major part on logistics in near future.

It could also be very useful in positioning troops and moving them into or evacuating them from combat zones. AV's could also serve in humanitarian missions and disaster relief tasks. In case of earthquake, for instance, they might be used to transport aid workers, to provide equipment and supplies to remote areas, and for evacuation. But perhaps the biggest advantage that AV's can offer is in the area of protection. Fielding AV's significantly reduces the number of personnel and contract operators put in harm's way. AV's will be especially important in future warfare, which is most likely to occur in dense urban areas. The greatest danger may come from something as simple as crossing the street. Securing logistical capabilities will provide that more of it is available when it is needed.

Turkish military has started use AV's in Operation Olive Branch on Syria. And SSB (Türkiye Cumhuriyeti Cumhurbaşkanlığı Savunma Sanayii Başkanlığı - Presidency of The Republic of Turkey Presidency of Defence Industries) made a call for more AV's projects of light, medium and heavy classes. Currently developed in Turkey, there are 8×4 Tarantula UV's weighing 2.000 kg and 1.100 kg RCSP (remote controlled shooting platform) which are currently being developed in Turkey (https://www.defenceturk.net, 2018). It is possible to say that Turkish military authorities have realized the importance and competency of AV's' future operational usage (Mehmet, 2018).

Hereby, potentiality of AV's is clear, when AV technology is mature enough, and become fully integrated into operational forces, autonomous ground-based vehicles will be able to move further, faster, into more-dangerous situations, and with more payload in support of Turkish Security Forces' logistics. Therefore, almost entire concept of AV technologies constructed on a "proactive" way of understanding. In near future, it is possible to see entire task forces made up with AV's based, without risking the life of any soldier.

4.2 Proactive Based Paradigm on Naval Capacities

Turkish military legacy based on land warfare and naval warfare usually stayed behind of its. Although Turkey is surrounded by seas, its importance to the Navy is too minor, except few initiatives in last century. This situation created a reactive and defence based behavior on Ottoman Empire in its last decades, which led catastrophic losses on Çanakkale due to not having a proper and modern navy. One can cleary understand that,

Turkey must have a formidable naval force, which is a "proactive" approach. Modern Turkish Navy has realized this fact, and started to increase its capacity with many project. Current major Turkish Navy projects indicates on two main task description; which are, creating a modern and national-domestic built navy and amphibious assault competency.

4.2.1 MİLGEM National Ship Project

SSB and the Turkish Navy revealed that through a vision and determined stance Turkey and the maximum rate at which uses national resources National Ship (Milli Gemi-MILGEM) Project. According to the first time, today's technology in Turkey has high standards for complicate above-water warfare. The design and integration of the ships was carried out with the support of the domestic industry using national facilities. Within the scope of the project; ship design, classification services, model tests, main drive system, all other systems, the construction of the ship / equipment to be used in the construction of the construction and all the services required to provide services during the construction of the tasks are provided. In addition, the STM (Defence Technologies Engineering CO. Savunma Teknolojileri Mühendislik A.Ş.) is officially authorized to export MiLGEM (https://www.defenceturk.net, 2017).

With this project, Turkey was able to design a Corvette-type military ship for the first time, thus providing the necessary knowledge, experience and infrastructure in the field of ship design, ship construction and system integration, and the integration of military shipyards and ship design, facilities and capabilities in the private sector. Therefore, prototype ship TCG-HEYBELIADA and second ship TCG-BÜYÜKADA were used under command of Naval Forces. Third Ship TCG-BURGAZADA on June 18, 2016, fourth ship TCG-KINALIADA on 03 July 2017 was launched and its testing activities are continuing. Unlike the first four ships of the corvette class, next four ships will be the frigate class (https://www.ssb.gov.tr/, 2018).

In the light of this information, Turkish Naval capabilities and effectiveness take its sources from national project experiences, which leads Turkish naval strategies to be more proactive and predictive on macro perspective. Less dependency on import-based reactive policies is the most vital element to create national-domestic based proactive policies.

4.2.2 Amphibious Assault Competency: LST's and LHT's

The main task of the LST (landing ship tank)-amphibious ships is the amphibious operations, vehicles and equipment with the troop support and fire support. In addition to providing advanced communications, electronics and command control facilities, the vessels also contribute to the operational and logistical tasks as well as the ability to fulfill their natural disaster relief tasks when necessary. The LST amphibian ships, which are constructed as a single hull, displacement type and completely steel construction, have full personnel protection for nuclear, biological and chemical attacks, and there is also a helicopter platform to allow the landing of a 15 ton general purpose helicopter (https://www.ssb.gov.tr, 2017) Two ships of project, TCG-BAYRAKTAR and TCG-SANCAKTAR delivered to use of Turkish Navy (http://www.hurriyet.com.tr, 2018).

LHD (landing helicopter dock) or the multipurpose amphibious assault ship, is primarily intended for the transport and landing of military vehicles with troops, logistics equipment, and supplies. It can also be used as a healthcare and hospital support facility, stationary food supply shelter and power supply center. Main ship of Turkish LHD project, the TCG ANADOLU will be utilized in the Aegean, Black Sea and the Mediterranean operational areas, and if necessary, other oceans and seas. TCG ANADOLU can transport one amphibious battalion as well as carrying the necessary combat and support vehicles, which are ready for mission anytime. Also, in case of crisis, troops will transport to regions without the support of the main base (https://www.ssb.gov.tr, 2017).

Additionally, the TCG ANADOLU on which tactical aircraft are capable of Short Take Off and Vertical Landing (STOVL) like F-35B warplane can deploy will be able to transform the regional force projection capability of the Turkish Military into a medium-scale global force projection capability. The Multi-Purpose Amphibious Assault Ship is planned to be the largest naval platform in the inventory of Turkish Navy. Also, twin ship of project, TCG TRAKYA is going to launch after delivery of TCG ANADOLU in 2020-2021 (http://www.c4defence.com, 2018).

With LSD's and LHD's in its inventory, Turkish Navy will be competent to any amphibious and crisis missions that are very important to Turkish Naval dominance over other Mediterranean countries. Turkish

attempts to intervene Cyprus crisis at 1960s showed its naval incompetence for such amphibious assault. Since that time, Turkish Navy gained a "proactive" behavior to respond future naval conflicts and crisis before they happens. Furthermore, it is possible to say that Turkish Navy will be the key element of entire Turkey's proactive based defence policies.

4.3 Proactive Based Paradigm of Air Systems Technologies

"Unmanned aircraft vehicle" (UAV) systems or also known as "drones", whose potential benefits were seen too late at the beginning, spread rapidly since the beginning of the 2000s, while the number and types of systems were increasing, but also their capabilities were very advanced and brought a new understanding to the military related fields. Today, most of the air operations tasks carried out with manned air vehicles will be carried out with UAV systems in the future, depending on the development of technology, which is clearly seen by authorities (Karaağaçlı, 2016: 2-3). This does not mean that at some point in the future Air Force will only be made up of UAV and pilots will remain unemployed. While all of the tasks are carried out with drone systems, both manned and unmanned air vehicles will be used in many air operations. Because of some aspects such as the fact that human-improvise could not be done by drones at least in near future, human-personnel dependency will continue, however risk of death of an combat-operator will be set to zero respectively. In another words, it is a very important paradigm change based on proactive approach.

Turkish Military arsenal have great amount of experienced UAV's, such as MALE (medium altitude long endurance) class ANKA/S and BAYRAKTAR TB2 Armed UAV's which are using effectively and efficiently on current operations (Yalçın, 2013b: 404). Very soon, Turkish Military arsenal will gain AKINCI HALE (high altitude long endurance) class armed UAV's (http://www.millisavunma.com/, 2018).

It is possible to suggest that, soon Turkish military authorities will gain another dimension of capability, the DST (Drone Swarm Technology). DST usage fuels on the ability of drones to autonomously make decisions simultaneously based on shared data—has the potential to revolutionize the dynamics of combat. STM shows on their very recent report from February 2019, planning to use the first national kamikaze drones of Turkey developed by STM to form the first national example of swarm intelligence with KARGU and ALPAGU surveillance drones to perform multiple drone

operations in large groups. These systems is going to develop system solutions that can move autonomously, learn, make decisions, and fulfill the tasks given as a whole. These features include advanced functions such as real-time object detection, diagnosis, tracking and classification through deep learning based computer vision techniques (https://thinktech.stm.com.tr, 2019).

It obvious that; swarm size, customization, hardening and diversity will be the key areas to increase competency and technological advancement of DST in near future. In fact, swarms will have significant implementations to almost every area of national and internal security. Swarms of drones could search the seas and coasts for adversary submarines and other naval threats. Drones could disperse over wide areas to identify and eliminate any incoming hostile SAMs (surface-to-air missiles) and other air defenses. Drone swarms could potentially serve as unconventional missile defenses, a mean blocking incoming hypersonic missiles, and could also be considerable as a proactive approach. On the internal security front, security swarms equipped with CBRN (chemical, biological, radiological, and nuclear) detectors, anti-drone weapons, facial recognition sensors and other capabilities offer counter-measures against a wide range of threats.

CONCLUSION

Turkey, today, increases its own defence industry capacities in terms of being more domestic and national, day by day. With both declining foreign dependency and the increase in domestic products with high international competitiveness, the growing export volume can provide a significant relief for the Turkish economy.

Turkish military has struggled to respond asymmetric/guerilla warfare on its first encounters. However, Turkey responded defence industry technologies too by gaining more information to know how to respond. Many current proactive-based micro and macro perspective policies implement on such experience.

Turkish Naval capabilities and its respective competency might have been hindered by some events in history. However, today, Turkish Navy and naval policies have the power to determine the fate of East Mediterranean. Proactive-based naval policies are implementing more than ever in Turkish history. Soon, it is quite possible to see overseas naval operations, with large fleets. As Turkish Navy motto explains; “To be safe

in the motherland, to be strong in the Sea; to have a say in the world, to exist in all the Seas".

Turkish air dominance elevated with usage of UAV's. Tomorrow's air warfare seems to dominate from Unmanned Fighters. Turkish Defence Industry Technologies created a ladder for UAV systems. Through a certain aim and support, Turkish armed UAV's will be one of the most reliable and prestigious in entire world, soon. Furthermore, usage of land UV's and UAV's are key elements of future's proactive-based military strategies. Investment and research funds to these sectors must continue and increase.

From the point of macro perspective, tendency to reactive-based policies are results of current political/international conjuncture, shortage of know-how and economic dependency. Turkey has struggled to achieve a high-independent and competent economy during Cold War. However, circumstances paved the way for Turkish security policies to create and implement proactive-based policies to cope with problems. As a conclusion, Turkey's security policies evolved from obligatory reactive-based dependency to proactive-based independency. Creation of national strategic defence industry is the most contributed element in this process. To summarize, tomorrow's security policies of Turkey will be more proactive and farsighted.

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