



The 12th International Scientific Conference
**“DEFENSE RESOURCES MANAGEMENT
IN THE 21st CENTURY”**
Braşov, November 9th -10th 2017



**THE ROMANIAN DEFENSE INDUSTRY IN THE CONTEXT
OF THE NEW GEOSTRATEGIC ENVIRONMENT**

Liviu-George MAHA*
Spiridon PRALEA*
Ionuț-Bogdan IONESCU**

* Prof. univ. dr., Research Centre in International Economic Relations and European Studies, „Alexandru Ioan Cuza” University/ Iași/ Romania

** Ph.D. student, Doctoral School of Economics and Business Administration, „Alexandru Ioan Cuza” University/ Iași/ Romania

Abstract:

The events that took place in the world during the last decade have influenced, beyond any doubt, the geostrategic environment in ways that urged states and international organizations to reconsider their strategies and priorities. Some of the most important events can be split up in the following categories: military conflicts (the wars in Irak, Afghanistan, Siria and Ukraine), the rise of powerful terrorist organizations (Daesh, Al Qaeda or the Talibans), the migration phenomenon and, last but not least, the political changes (the military coup in Turkey, Donald Trump’s election in USA, NATO’s transformation process and Brexit).

All these events, and especially their consequences on security, have made governments worldwide to search for solutions. One aspect that needs immediate attention is the defense industry and its influence on security. This is also true for Romania, especially now, when our country is part of the most powerful organizations in the world, NATO and EU. Thus, the Romanian defense industry, even if it used to be one of the most developed in the world during the ’80s, must keep up with the modern warfare technologies and provide the desired interoperability standards with the other NATO partners. Our country has made consistent efforts to reach this goal but it still has a long road ahead.

The aim of this article is to analyze the present state of the Romanian defense industry, in the context of our national goal to become an equal partner to our allies, and what measures will make this endeavor achievable. Moving ahead, and linking the defense industry with the geostrategic environment, it is clear that the political conditions are now favorable to develop this part of the national industry. Taking into account the engagement of all NATO members to allocate 2% of their gross domestic product to the defense sector, which was unanimously adopted at the NATO Summit in Brussels on the 25th of May 2017, we consider that this is the chance for Romania to prove, once again, that it can develop its defense industry at the standards required by the new geostrategic environment.

Key words: geostrategy, security, defense industry, NATO.

1.Introduction

Even if nowadays states around the world face different issues ranging from climate changes to military conflicts, analysts have gathered all these problems, and integrated them in the “security” concept. Thus, no matter the threat, we can find it analyzed from one of the dimensions that security encompasses: political, social, economic, military or environment [3]. However, one of these dimensions in particular seems to be the first priority on the agenda of most governments worldwide. I am referring to the military

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dimension of the security concept, due to its implications on all the other aspects of modern life as we know it, but also from the difficulty that states face in their endeavor to provide security to their peoples.

As Adam Smith pointed out in his magnum opus “The Wealth of Nations”, the core functions of a state must be to provide and maintain the defence of its territory and people, to keep order, build infrastructure and to promote education [6]. Thus, peoples worldwide have handed to the government the security responsibility, mainly because this is a task that needs consistent resources and also central management. In order to fulfil this task, states need to take into consideration a large variety of factors that influence how the defence of a state is implemented and how a state can develop the capabilities to protect its citizens and deter enemies. Some of the most important factors that need attention are the geostrategic context and how it will develop, both at the international level as well as regional, the existing and future threats, the transformation of international organizations (NATO, UN and EU) and also political and economic alliances between various actors.

Even if states, starting with Antiquity, tried various methods through which they considered that security can be achieved, one of the most successful and enduring way proved to be the development of defense capabilities. Thus, whatever country possessed the most advanced weapon systems, was the one able not only to secure its borders and citizens, but also to gain access to economic and political opportunities. This statement can be validated if we take a quick glance at history and at all great empires. Nobody can deny that there is a connection between the weapons used and the battles won. This was the case for glorious empires like the Chinese, Roman, Mongol or Otoman, just to mention a few. During present days, we can see that things remained almost the same and that the most powerful states in the world are also the ones that have the latest weapon systems and modern warfare technology. The defense industry of states provides strategic advantages, leverage in international negotiation and also represents the status of a powerful nation.

2. The Romanian Defense Industry

No matter how we look at the “security” concept and what it encompasses, we are bound to find that, at a certain point, we will have to deal with the arms that help achieve, protect or provide security to different states or entities. As the Roman writer Flavius Vegetius Renatus pointed out in his work, *De Re Militari*, “*Si vis pacem, para bellum*” (“If you want peace, prepare for war”), the leaders of states worldwide understood the importance of security and there has been a priority for them to invest in production of arms and technology to produce state of the art weapon systems. In the globalization era, insecurity becomes a permanent reality and the safeguard of national security becomes a permanent priority [2]. Romania is no exception from this rule and, since the 19th century, has undertaken measures that were necessary to keep up with the development of modern weapons and military technology.

After the end of the Second World War and beginning with the Cold War in 1947, states have started the so called “arms race” and most of the resources available were directed to the production of arms and also to the defence innovation sector in order to have better weapons systems than their opponents. Romania followed this trend and, during the communist regime, has developed the infrastructure to produce arms, both for internal use but also for external trade. This was especially the case after 1968 when Nicolae Ceaușescu’s ambition for Romania to become a self-sufficient economy became a national priority. During that time, the Romanian defense industry was among the first ten major countries involved in the arms export due to the fact that Romania developed its

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national naval and air production capabilities but also the small arms production. The chart below presents the Romanian arms exports and imports during 1971-1989:

Chart 1. Romania's arms exports and imports during 1971-1989 in \$ million [10]

As depicted in the table, during the communist regime, the Romanian defense industry was indeed a serious player in the arms trade worldwide as a buyer but also as a seller of weapon systems. Besides the economic advantages, this situation provided the background for Romania not only to become a relevant actor in the Black Sea Region, but also helped it to create ties with countries from the Middle East as well as China and North Korea. Even if there are also other reasons that contributed to the consolidation of Romania as a powerful actor in that period of time, the role that the Romanian defence industry played was significant. This happened primarily because the arms trade exceeds the simple selling and buying of arms between different parts and the implications stretch into the political and economic level as well.

3. Current situation of the Romanian defense industry

With the fall of the communism regime, Romania entered a period of deep transformations which involved the entire nation and all domains. This process, after 27 years, is still ongoing and, from current estimations, it will still last for the years to come. This is mostly due to the fact that the communist heritage still influences the way the Romanian politicians think and act, and also because it makes it difficult for the Romanian people to change its mentality and be more open to change and progress.

The Romanian economy evolved from the socialist organization model to the capitalist one during the last twenty years. Thus, the free market system took over and everything needed to adapt to the new conditions. Romania wasn't prepared for such deep changes and democracy, with its benefits, and the capitalism was not understood as it should have been. Some of the measures taken by the governments that followed after 1989 regarding the national industry proved to be wrong and a lot of the infrastructure that existed at that time was abandoned, was not updated to the new technological level, sold at very low prices or even destroyed.

If we look at the Romanian defense industry, we can say that the strategy was not the right one, and some mistakes were made, because Romania lost most of the contracts it had previously signed for various reasons and had to reduce its capabilities both in human resources and also in production establishments. This situation continued and deteriorated as the years passed. All of the facts mentioned above led to the present state of the Romanian defense industry, one that struggles to recover and retake its place in the region and also in the world.

Nowadays, after all the changes that the defense industry went through, the production of arms became a state owned business, a monopoly, and only state companies have the right to produce and sell weapons of different types. Some steps have been taken to change the current legislation in order to allow access for private companies but nothing has happened yet. The old Romanian factories have gathered under a single national company, ROMARM [15], in the subordination of the Ministry of Economy. In addition to this, another important national company that activates in the defense industry is ROMTEHNICA, a company that belongs to the Ministry of National Defense [13]. This company handles directly the issues that the Romanian Military faces, is usually involved in the trade of surplus equipment and is the most important trader of goods and services

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offered by the Ministry of National Defense. There are also some other private companies that are tied to the defense industry, but they only provide maintenance services and are not relevant for our study. The two companies mentioned before are the main actors of the Romanian defense industry and their branches and coordination are presented in the following table:

Company	Branches	Coordination
C.N. ROMARM S.A.	Tohan S.A. Carfil S.A. U.M. Cugir S.A. U.M. București S.A. U.M. Sadu S.A. Arsenal Reșița S.A. U.M. Plopeni S.A. Pirochim Victoria S.A. Metrom S.A. Uzina de Produse Speciale Făgăraș S.A. U.M. Mija S.A. Automecanica Moreni S.A. Uzina de Produse Speciale Dragomirești S.A. Electromecanica Ploiești S.A. Fabrica de Arme Cugir S.A. Fabrica de Pulbere Făgăraș S.A.	Ministry of Economy
Intreprinderea Optică Română		
IAR S.A. Brașov		
Avioane Craiova S.A.		
Șantierul Naval Mangalia		
Uzina Mecanica Orăștie		
S.C. ROMAERO S.A.		
C.N. ROMTEHNICA S.A.		Ministry of National Defense

Tabel 1. Companies that activate in the defense field [13] [15]

In order to have a correct image of the current state of the Romanian defense industry, we consider that it's relevant to present it briefly through the perspective that Michael Porter proposed, that of the "national diamond", and reveal the degree in which the components of the "national diamond" are currently present and how they interact. Even if Michael Porter's theory applies mainly to private companies, we can also get relevant data if the theory applies to an industry, as it is the case with the Romanian defense industry.

The "national diamond" is composed of the following: 1. production factors, 2. internal demand, 3. related and supporting industries and 4. firm strategy structure and rivalry. [5]

The first component of Porter's "national diamond" is composed of human resources, natural resources, the know-how (both from the technological but also from the marketing point of view), the capital available for investments and lastly the type, quality and the cost for the use of the available infrastructure. A brief analysis of the above reveals that, indeed, the Romanian defense industry lacks the primary element to be successful. The human resource is surely very important and, from official statements, currently the average age of the worker in the defense industry is 52 years [9]. This means that in the next years Romania will face a problem that needs immediate attention. Most of the

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workers will retire and no one will be able to replace them, at least not immediately. Another production factor is the know-how used in the defense industry. Here, Romania is not at the same level with other important countries. Romania produces weapon systems using mostly old Russian technology that was made available during the communist period. Little was invested in research and innovation of weapon systems and so the market share that Romania has is reduced.

Another important production factor is the capital available for investments in the defense field. Looking at the last 27 years, it is clear that the authorities do not consider the defense industry a priority and, as a result, most of the infrastructure that existed in the past has degraded to such a degree that it is cheaper to build new premises than to refurbish the existing one. The percentage of GDP allocated was always under the needs of the Romanian Ministry of National Defense.

The second component of the “national diamond” is the internal demand. As it is the case with other countries, in Romania the main “customer” for defense products is the Military but also the Police and other security divisions that require weapons and ammunition. Unfortunately, as we mentioned before, the Romania’s defense industry did not represent a priority in the years that followed after the fall of the Communist Regime and thus, with little to almost none investments, the Military had to manage with the existing weapon systems and equipment. This led to a minimum demand for what is supposed to be the primary “customer” and, as a result, this also turned into a cause that led to the decline of the Romanian defense industry.

The third factor taken into consideration by Porter’s theory is represented by the related and supporting industries. Even if, under normal circumstances, alongside the defense industry, there should be other supporting industries, in Romania’s case, these industries had to reconsider their strategies and changed the nature of their products in order to remain competitive. As a result, almost all related industries either left or started to produce goods that were requested by the private sector.

Not much can be said about the strategy structure and rivalry, the final component of Porter’s “diamond”. All companies that managed to survive are state owned and lack the ambition to become competitive. The existing management does not strive to improve the existing situation for various reasons, starting with corruption and ending with the existing legislation that, in most cases, works against the development of companies. Here, we mention that these companies, in order to work with private companies to procure different materials, have to follow the government guideline of “the lowest price” which, even if reduces the national financial burden, has several side-effects with negative impact regarding quality and the life cycle of military equipment.

4. The new geostrategic context and Romania’s place

While there are many ways to look at the contemporary geostrategic context, a relevant way to analyze it would be from the perspective of the connections that exist between the security threats and the development of national defense industries. The development of defense capabilities is a direct result of the threats that countries face. As such, countries that play key roles in the regional and also in the international context, have developed modern defense industries and managed to develop the most powerful armies. These countries have important roles in the organizations they are part of and through these organizations manage to promote their interests and neutralize the threats that they face. In the context of international security and cleavage between the powerful states and the less powerful ones, Kennteh’s Walyz opinion is that “war and the risk of war are more painful to bear than the costs of building and sustainment of management systems” [7].

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As mentioned above, a developed national defense industry offers the possibility to have a strong national military which, in turn, provides a country leverage in the relations with other countries and also a seat at the table of the most important organizations like NATO, UN and EU. These countries have the capability to provide assistance and resolve some of the world most urgent issues and can influence the geostrategic environment. So, we can analyze the new geostrategic context having as main axis the military power and the defense industry of main international actors. Analysts from Global Firepower have released the 2017 Military Strength Ranking, based on 50 relevant factors, where we can see that countries with the most powerful militaries are also the most powerful in the world. The first ten countries are presented in the following table:

Rank	Country	Affiliations	PwrIndex¹
1	United States of America	UN NATO	0.0857
2	Russia	UN	0.0929
3	China	UN	0.0945
4	India	UN	0.1593
5	France	UN NATO European Union	0.1914
6	United Kingdom	UN NATO European Union	0.2131
7	Japan	UN	0.2137
8	Turkey	UN NATO	0.2491
9	Germany	UN NATO European Union	0.2609
10	Egypt	UN	0.2676

Table 2. 2017 Military Strength Ranking by Global Firepower [11]

In addition to this, according to data from SIPRI's (Stockholm International Peace Research Institute) Arms Industry Database, the most important public and private companies that deal with arms-producing and military services are also registered in US, UK, Italy, France (one of the world's top weapons exporter) and Russia, countries which were also present in the 2017 Military Strength Ranking.

Rank 2015	Rank 2014	Company	Country

¹ "Power Index" (abbrv: "PwrIndx"). PwrIndx scores are judged against a perfect value of "0.0000" which is realistically unattainable due to the number of factors considered per country. Balance is the key - a large, strong fighting force across land, sea and air backed by a resilient economy and defensible territory along with an efficient infrastructure - such qualities are those used to round out a particular nation's total fighting strength on paper; it is not enough to field 10 million men or 20,000 tanks or lead the world in oil production.

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Rank 2015	Rank 2014	Company	Country
1	1	Lockheed Martin Corp.	United States
2	2	Boeing	United States
3	3	BAE Systems	United Kingdom
4	4	Raytheon	United States
5	5	Northrop Grumman Corp.	United States
6	6	General Dynamics Corp.	United States
7	7	Airbus Group	Trans-European
S	S	BAE Systems Inc. (BAE Systems, UK)	United States
8	8	United Technologies Corp.	United States
9	9	Finmeccanica	Italy
10	10	L-3 Communications	United States
11	12	Thales	France
12	13	Huntington Ingalls Industries	United States
13	11	Almaz-Antey	Russia
14	17	Safran	France
15	29	Harris Corp.	United States
16	16	Rolls-Royce	United Kingdom
17	14	United Aircraft Corp.	Russia
18	19	Bechtel Corp.	United States
19	15	United Shipbuilding Corp.	Russia
20	23	Booz Allen Hamilton	United States

Table 3. Army Industry Database [14]

Basing on the information presented above we can observe the connection between the most powerful militaries and the most important countries that have developed defense industries. These countries are among the most influent and play important roles on the world stage. Furthermore, the strength of a country's military is directly linked to its influence on the world. [12]

In Romania's case, even if it does not have a defense industry that ranks among the first in the world, Romania is still part of the most important international organizations and, during the last period, has started to play a role of increased importance in the Black

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Sea Region. Even if indirectly, Romania takes part in the most significant events that are occurring nowadays in the world. In all of these events the most important actors are also the most powerful countries in the world and the military plays an important role in the development of these matters. The most relevant ones that shape the new geostrategic context, and in which Romania is also involved as NATO and EU member, are the following:

Event	Region	Main Actors	Secondary Actors
Terrorist attacks in EU	European Union	European countries Daesh	NATO
Trump election in the United States	USA	USA	USA partner nations EU NATO UN
Sirian war	Siria	Siria Daesh	NATO Russia
Migration phenomenon	European Union	Imigrants from Siria, Pakistan, Afghanistan	European countries
Turkey's military coup followed by Erdogan's referendum	Turkey	Turkey	NATO EU
Brexit	European Union	UK European Union	European countries
North Korea threat	Asia	North Korea South Korea USA	NATO UN
Ukraine's occupation by Russia	Ukraine/Crimea	Ukraine Russia	UN NATO
War in Irak and Afghanistan	Irak Afghanistan	Al Qaeda Daesh Afghanistan Irak	NATO UN EU Pakistan
Extremist and populist election	European Union USA	European countries USA	

Table 4. Relevant events that shape the geostrategic context [16]

Romania is involved in these events because of its membership in NATO and EU and also due to its interests in the region. Even if Romania's place in the 2017 Military Strength Ranking presented by Global Firepower is 42, it still has managed to successfully take part in the wars in Irak and Afghanistan, has provided humanitarian help to immigrants from Siria, Afghanistan and Irak, sends trained personnel as UN observers in Ukraine and during the last years has proved to be a strategic ally for the USA in the Black Sea Region. Also, with regards to the present tensions between NATO and the Russian Federation, Romania, as a NATO member, has under its command the NATO Multinational Division South-East, a NATO Multinational Battalion, the Air Defense Missile compound at Deveselu and has sent military personnel to serve under NATO

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command in different parts of the world. This proves that, even if the Romanian defense industry and subsequently its military is not at the same level with the powerful countries, Romania is still a serious and relevant actor in the new geostrategic context. However, in order to rise to the expectations that our allies have, our country needs to take immediate measures to strengthen its military and develop its national defense industry.

5. Romania's Defense Industry - Way ahead and Conclusions

A country's defense industry is of great importance, not only from an economic perspective but also from a geostrategic one. As I mentioned before, Romania has to take steps to consolidate and develop its national defense industry in order to strengthen its military and become a relevant actor in the Black Sea Region and a trustworthy ally for our partners in NATO and UE.

Some of the aspects that need immediate attention from the Romanian political leaders have to do with the obligations that Romania has assumed as part of NATO and EU. In this regard, Romania has to undertake changes at the legislative level, the procurement policy and at the national and international level. [8]

Whatever the political leaders decide regarding the defense industry, there are certain key aspects that represent top priorities due to their immediate effects and impact. Firstly, the latest decisions taken at the NATO Summit in Brussels on the 25th of May 2017 (engagement of all NATO members to allocate 2% of their Gross Domestic Product to the defense sector), must be implemented and continued for the years to come.

Secondly, Romania has to find the necessary resources to refurbish what has remained from the old weapons factories and build new capabilities keeping in mind that nowadays all military systems and weapons need to provide interoperability with the ones that our allies possess. In this way the Romanian military will have the ability to stand next to our partners and fulfill the tasks of the Alliance.

Thirdly, in order to develop a robust defense industry, Romania has to undertake changes at the political, legislative and internal level in such a degree that the new industry will be able to function at full capacity and without interruptions. The modern state is "the result of modern history as mercenary armies transformed into modern, stable and professional armies of the present" [1].

The current situation, even if there are some good signs, is not going in the right direction. One solution to the problem might prove to be the access of foreign investments. Romania doesn't have the necessary resources to invest in the defense industry and, as Ludwig von Mises proposed, the use of foreign capital will have positive effects [4]. This solution has implications in various ways: the property form will have to change, the management will have to adapt, the degree of political involvement will be less, there will be a new production structure and the quality and performances of producing weapon systems will be better.

In conclusion, the Romanian defense industry represents an asset that Romania has to invest in, not only for economic reasons, but also for the geostrategic benefits that it may produce. The current security context is above all complex and in a continuous change. Wars are no longer fought only in the battlefield, but also in new environments that require developed weapon systems and also enhanced knowledge of the components and actors that take part in these events. The defense industry can provide a significant part of this knowledge and the instruments needed. The defense industry must play a more active role

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in Romania's foreign policy and must be supported accordingly with funding for research, building of new production capabilities and training for the human resource.

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