PRODUCTION AND EXPORT OF MILITARY PRODUCTS IN THE CONTEXT OF ROMANIA'S FOREIGN POLICY BETWEEN 1968 AND 1989

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Abstract: *Since 1960, after massive investments in the refurbishment of factories and more specifically, of the factories producing military equipment, weapons and ammunition, the evolution of the national defense industry has been constant, Romania managing to produce more than necessary for its own armed forces, the surplus being exported to obtain a substantial contribution to the state budget. The performance of the domestic defense industry was known worldwide, with military products manufactured in the country being purchased by the Warsaw Pact member states, as well as by countries in the Arab world, Asia, Latin America and Africa. In this article we will analyze and highlight the peak period of the Romanian military industry, as well as its export performance, as the sale of military equipment on the international market has contributed substantially to stabilizing the trade balance of the Romanian state and paying off the national debt.*

Keywords: defense industry, export, ammunition, military equipment.

1. INTRODUCTION

Due to its specificity, the concept of the defense industry is not one often addressed in the literature, but for which multiple definitions can be identified. A fairly practical definition, presents the defense industry as *"a branch of industry which contains industrial sectors for the production of goods for military use"* [1] (weapons, ammunition and combat equipment), but also *"Industrial sectors that produce civilian goods, useful to military structures"* [2] (unarmored vehicles, electronic equipment, etc.). Another definition presents the defense industry as a structure consisting of *"economic sectors intended for the production of goods, services and technology having as final consumer the armed forces"* [3].

When we talk about the development of the defense industry of a state, we must mention that, no matter how developed that state, on its territory, not all the equipment necessary for the armed forces can be manufactured by its own forces (it would be a utopia to believe this), as it is impossible for all industries involved in the arms effort to be equally technologically developed, especially if we take into account the diversity of force categories and types of weapons involved in military operations, of weapons and weapon systems, the particularities of the terrain, the weather conditions, the season, etc.

The production and export of military equipment or trade in weapons, ammunition and weapons systems are a basic component of the economic system.

Thus, from the retrospective study on the situation of Romania's foreign trade, during the years 1968-1989, it can be seen an extension of import-export relations and economic cooperation with the communist treaty countries, with some developing countries, including states developed of the capitalist system. The Romanian state has signed important bilateral trade agreements, long-term technical-scientific and economic cooperation agreements, as well as a large number of cooperation agreements and protocols, for various branches of economic activity, including the defense industry. The analysis of how they were carried out took place periodically, within the intergovernmental framework of the joint commissions, the number of countries with which the Romanian state developed trade and economic relations was increasing, from 110 in 1970 to 152 in 1980, following that it should fall to 142 in 1989 [4].

2. THE MANUFACTURING AND EXPORT OF LAND FORCE SPECIFIC WEAPON AND AMMUNITION SYSTEMS

From the analysis of the possibilities offered by the national defense industry, for the manufacture of armored cars and cannons, the modernization of T54 and T55 tanks, as well as for the provision of spare parts, in the early 70s the Romanian state allocated significant funds to refurbish the at Mizil (built in 1951). The problem of manufacturing subassemblies was only the first step, because our ultimate goal was for these fighting machines to be produced in Romania, in its entirety, thus avoiding their acquisition, at high cost, from other Member States of the Treaty. This idea was the subject of discussions at CAER, in Czechoslovakia (1973), where, at the meeting of the Standing Committee, the Romanian delegation, led by General C. Șandru, expressed the desire for the Romanian state to obtain the necessary licenses for the production of school airplanes, cars. combat equipment, missile systems, radio stations, ships, aviation ammunition and AG-9 launchers [5]. So, the desire to expand the manufacturing capabilities of military equipment, through the care of Romanian researchers or under license, represented, in the '70s, a desideratum and an ambition of the politico-military leadership of the Romanian state. Thus, the production of missiles, cannons, weapons and related ammunition, trucks, trucks and TAB amphibious armored personnel carriers, optical systems and transmission equipment, helicopters and airplanes was started.

Later, in the 80's, the Romanian army was manufactured and equipped with A-436 2×30mm, model 1980 towed anti-aircraft cannon, aimed at defending troops and targets against low-flying, low-velocity targets [6]. These systems of combat with the air enemy were verified in the firing range of Capul Midia, after which they entered the endowment of some anti-aircraft artillery units within the Romanian Land Forces, they being also the subject of export requests.

Also in the 80's, the aircraft factory from Bacău started the series production, under license, of the BM-21 GRAD rocket launchers, while the Mechanical Enterprise Mija, after an intense research work, managed to produce an anti-tank complex installed on TAB amphibious armored personnel carriers (having as reference the Russian origin 9M14M missile)[1]. In this context, according to the archives, during the 80's, the special products exported by Romania reached the amount of 246.6 million lei, 140% higher than the anticipated amount, the difference coming from the capitalization of these products on

[1]Known as Maliutka, which in Romanian is translated "little girl".

third markets and not from export to treaty countries[2]. The main Romanian military products, capitalized for export during this period (armored personnel carriers, 122mm launchers, 14.5mm ZU-2 machine guns, 7.62x39mm machine guns, semi-automatic rifles and submachine guns, 40mm AG-7 launchers, 73mm launchers, were quite sought after due to their technical complexity and tactical efficiency.

The issue of exports of military products was the most delicate issue in international relations, the country's leadership being forced to carefully analyze the geo-political context and the partner countries concerned. A special situation was the experience with the state of Pakistan, which, during the 1970s, insisted on purchasing ammunition made in Romania, only that this ammunition was of Soviet origin, the Soviet partner had to be informed and then his agreement obtained. Tense relations between India and Pakistan have led the Romanian authorities not to comply with the demands of Islamabad and thus avoid creating tensions with India or the USSR, military exports to the state of Pakistan would certainly have inflamed these relations.

In 1976, Manea Mănescu, the Romanian Prime Minister of that time, forwarded a letter to his Chinese counterpart, Hua Guofeng, asking to the Beijing leadership, on behalf of Romania, for equipment, production lines, military products and technical documentation specific to the production of submarines, destroyers, Rolls Royce engines for supersonic aircraft, 7.62mm machine guns, 152 mm, 130 mm, 122 mm and 100 mm artillery rounds, 23mm cannons, as well as the purchase of 2 bombers, type HJ 5[3]. From the requested, China decided to support the Romanian state with equipment and technical documentation for the production of: 82mm bombs, 122mm rounds, 7.62mm machine gun, submachine gun barrels, lines, tools and dies needed to produce 14.5x114mm, 20mm and 30mm cartridges. All the other requested products being rejected by the Chinese side [7].

In the 1980s, the value of national defense output peaked. More than 80% of the needs for the Romanian army were covered by domestic production, Romania continuing to export various types of military equipment, weapons and ammunition, from infantry weapons, artillery bombs, grenades and cartridges, to tanks, armored personnel carriers, fighter jets and helicopters, most of which were manufactured under Soviet licenses. Statistical data from that period showed that the export of Romanian military equipment reached the value of 620 million USD, our country being on the ninth place in the top of the states exporting military products. The level of development of the defense industry, the maximum load of production capacity, shows that, at that time, the national defense industry had become the engine of a strong industry, benefited from elite researchers, and some results of military research were successfully applied. and in the civilian environment, most of the profile factories also have sections destined for civilian production.

The efficiency of the work in this field, validated by the quantity of the exported products and by the impressive sums received, determined the country's leadership to expand the activity and to set up new factories and factories, better endowed with more efficient resources. Thus, in the mid-1980s, the factories in Filiași, Dragomirești and Plopeni also came into operation.

[2]The 246.6 million lei collected are divided as follows: 44.4 million lei from contracts with socialist countries, representing approximately 60% of the anticipated value and 202.2 million lei from contracts with other countries, representing approximately 20.5% of the value anticipated.

[3]Medium-sized bombing and reconnaissance aircraft made in the People's Republic of China by copying the Soviet-origin aircraft IL 28. It was copied without the consent of the Soviet Union, being exported under the name Harbin Hong 5 (simple order) or HJ 5 (double command).

We can say that the national defense industry had become a real colossus due to the huge quantities of products manufactured and exported, the foreign exchange contribution to the budget and the approximately 200,000 people who worked in this industry.

The arms trade brought very high profits, the value of the revenues reaching in the analyzed period (1968-1989) over 6 billion dollars. Statistics in this area show a number of already traditional partners, including the Soviet Union, North Korea, Vietnam, Iraq, Libya, Angola, Egypt, Algeria and Ethiopia, some of them at the end of the communist regime (1989), having to return to the Romanian state important sums from the values of the imported military products during the analyzed period.

In conclusion, the export of military products, for the land forces, had become a very profitable commercial activity for the Romanian state, the funds obtained from these trade relations being used to pay some external debts that Romania had accumulated in the post-war period.

3. THE MANUFACTURING AND EXPORT OF NAVAL FORCES SPECIFIC PRODUCTS

In the period 1968-1989, the production and export of means of combat specific to the maritime area were affected due to the attitude of the Romanian state towards the USSR and towards the other partner states, members of the Warsaw Pact, involved in the invasion operation of Czechoslovakia (1968). At that time, the Romanian head of state received applause from the "west", but from the "east" he chose to stop visas for manufacturing licenses of naval equipment and to stop the export of shipping to Romania. In these conditions, Romania sought alternatives and, finally, with the financial and technical support of the Chinese[4], authorities, started the construction of fast attack ships based on the model imported from China, but also of some ships of its own design, at the shipyards. from Mangalia and from Drobeta-Turnu Severin [8]. However, the ambition of the supreme leader of the Romanian state to equip the maritime fleet with submarines was very high, as a result of which, in 1977, discussions were held for the acquisition of these ships from France. Unfortunately, the discussions on this topic were not successful, France refusing to export submarines to Romania.

In 1980, after several discussions, the Soviet Union agreed to supply a submarine to Romania, the parties signing a delivery agreement negotiating the type of ship (a medium-sized model), the technological standards in the field, the price (40 million dollars) and delivery time. Only after 5 years (1985) the submarine "Dolphin" was delivered to the Romanian side, in secret, together with the ammunition and the complete set of accessories and spare parts [5]. The list of negotiations on the acquisition of the submarine also contained some conditions of the Soviet side, the most interesting being the proposal that the Romanian state agree with the extension of the validity of the military treaty for another 20 years. In these conditions, it was appreciated that the Soviet strategy represented for Romania an irrefutable offer, especially since our communist leader cared a lot about this acquisition.

[4] The financial assistance obtained from China consisted of two preferential loans: one amounting to $ 100 million, due in 1979, and the second amounting to approximately $ 50.7 million, payable in ten. equal annual installments, due in 1990, both of which are interest-free (the latter was in fact the value of machinery purchased from China).

[5] The submarine to be delivered is part of the Kilo class - a high-efficiency attack submarine used against nuclear submarines. It has a length of 72.9 m and a width of 10 m, its shape being like an elongated drop of water, which, together with the rubber membrane used for its complete coating, makes it easier to move in immersion.

Moreover, the signing of this agreement was a sign of reconciliation between the two countries, and later began the production of ships on our shipyards, with documentation and under a Soviet license.

In the context of the achievements of our defense industry, we must mention the fact that, in the naval environment, the most important construction was the ship Admiral Muntenia, at the Mangalia Shipyard (1979-1985), a ship of Romanian design, equipped with high-performance weapons, at sea. Romanian side, considered the largest military ship built in Romania, the ship Admiral Muntenia was launched on August 2, 1986. In 1990, its name was changed to the Destroyer Timisoara, later, following technical improvements, the ship came to be called the Mărășești Frigate [9].

In conclusion, analyzing the dynamics of the development of the Romanian naval military industry, in the period 1968-1989 and taking into account the important acquisitions, as well as the export of military equipment in the naval field, made in that period, we can say that this stage was beneficial for naval forces. and the performance of naval equipment has risen to the level of modern armies.

4. THE MANUFACTURING AND EXPORT OF AIRFORCE SPECIFIC PRODUCTS

At the beginning of the 20th century, the world was delighted to receive among the great engineers and inventors three pioneers of aviation: Traian Vuia (1872-1950), Aurel Vlaicu (1882-1913) and Henri Coandă (1886-1972), three Romanians who „ *"Throughout their lives, they have shown that almost nothing is impossible, not even flight."* [10]. Immediately followed by the First World War (1914-1918), a huge conflict of property that brought more than 38 million civilian and military casualties to humanity, mainly due to the emergence and use of new weapons in land, naval or air combat, such as aircraft, machine guns, anti-aircraft artillery, tanks, submarines and poison gas. The First World War was also the first major conflict that included the plane as a weapon of attack and anti-aircraft artillery as a weapon of retaliation against airstrikes, the first plane being shot down on September 19, 1916 (the date of the day of the Romanian anti-aircraft artillery).

The plane quickly became an important weapon of the theater of military operations. At the beginning of the conflict, bombers, then fighter jets, flew into the airspace. Subsequently, some aircraft were equipped with cameras and acted as aerial research aircraft, with the mission of discovering and transmitting information about the combat device (fire system, control system, logistics base, combat reserve, etc.) of the opponent.

Immediately after the end of the war, considering the effectiveness of aircraft in combat and operation, a series of production capacities for aeronautics were established in Romania, as follows: in Bucharest (1919), the Romanian Aeronautical Arsenal; in Arad (1923), Astra Aircraft Factory; in Constanța (1924), Air Transport Company; in Brașov (1925), the Romanian Aeronautical Industry (IAR), an important role in this industry having the association of the Astra Aircraft Factory with the Romanian Government and with two French companies (Lorraine - Dietrich and Bleriot - Spad). The profitable operation of these industrial structures, in the period between the two wars, shows that the Romanian aeronautical industry had become strong, managing to have at the end of the second conflagration about 2,500 aircrafts produced in Romania, of which more than 1,400 at Romanian Aeronautical Industry (IAR), Brașov.

During the 1950s, at the urging of the USSR, much of the aeronautical production capacity was destroyed, with the rest being transformed into tractor or truck factories, with the aviation industry remaining dormant until 1965, when the country's leadership moved to reconsider aeronautical production capacity, as a country with traditions in the

production of helicopters and military aircraft. The period of the 60's followed, when Romania, from desire to deed, completed the stage of research and technological training and, starting with 1968, started the process of manufacturing aviation equipment in Romania. Thus, the first steps were taken to apply for Soviet manufacturing licenses for some categories of aviation equipment. In this regard, a Romanian delegation led by General Vasile Ionel, during a visit to Moscow, presented a list of products that the Romanian state wanted to produce, under Soviet license, as follows: MiG-21 fighter jets, destroyers, cannons and BTR-60 amphibious armored personnel carriers.

The Soviet Union was neither pleased nor interested in the Romanian state's proposal to switch to the production of modern fighter jets and helicopters, as the member states of the communist treaty were not allowed to exceed the imposed threshold of technological independence. Thus, Romania was forced to resort to some agreements and partnerships with other states outside the treaty. In 1970, for the production of helicopters, Romania initiated a collaboration with the French company Aérospatiale, for the manufacture of Puma and Alouette III type aircraft, under the name of IAR 330, respectively IAR 316B.

The manufacture of helicopters was profitable, so that by 1980 (in about 10 years), IAR Brașov produced 145 such devices distributed in part to the Ministry of Defense [11], and some were exported to France, which was an unprofitable business because the license was of French origin, so the price was very low. Under these conditions, part of the production was sold as military equipment to some countries in South America and Africa, with the consent of NATO.

regarding the production of airplanes, we went on a collaboration with the USSR, unprofitable for the Romanian state, because at the end of 1979 Romania produced only a few training airplanes. In 1979, the Romanian-Yugoslav collaboration on the manufacture of an IAR 93 fighter jet in Craiova began [12], intended to support ground troops and attack at low altitudes. In fact, this device was the only fighter that was manufactured under the communist treaty, without being of Soviet origin. A series of variants of this aircraft followed (IAR-95, IAR-S, IAR-99) all built in Craiova, but the ambition of our communist leader was too great, he wanted this supersonic aircraft to reach at least a speed of 2, 5 Mach. In reality, the engines sold by Rolls Royce did not even reach a speed of 2 Mach, because for the communist countries this company sold technologically outdated engines. Probably this reason, corroborated with pressure from the leadership of the communist treaty, on August 1, 1985 the Romanian state leadership decided to stop the program of manufacturing supersonic aircraft, the factory in Craiova will build civil aircraft type AG 6 (agricultural aircraft) and IAR-705 (medium courier transport aircraft).

The first commercial jet aircraft, ROMBAC 1-11, in the communist area of Europe (except the USSR) was built under the license of an aircraft from England, courier medium, BAC 1-11, before 1989, at the Bucharest Aircraft Company (today Romaero Băneasa). On January 28, 1983, the plane made the inaugural flight with passengers, on the route Bucharest-Timisoara, and on March 23, 1983 it had the first external flight on the route Bucharest-London.

The manufacturer was to manufacture 80 ROMBAC 1-11 aircraft, but only 9 aircraft of this type were built (plus two unfinished), all aircraft being purchased by TAROM and Romavia. TAROM has sold seven of them to other airlines in Africa and Asia. The plane had a pilot and a co-pilot, the passenger capacity was 119 people, and the maximum distance was 3,500 km.

There were at least some serious reasons why this project failed: Romania's economy had deteriorated and the supply for the construction of model 1-11 had decreased substantially; growing currency restrictions have delayed the delivery of imported components; the market provided by the Romanian state did not show the expected interest; Due to too much engine noise, some airports in Europe have banned the landing of this type of aircraft.

CONCLUSIONS

Following the analysis of the production and export system of military equipment, specific to the context of Romania's foreign policy, we consider that at least the following conclusions are required, as follows:

- At the end of the analyzed period (1968-1989), the situation of the Romanian defense industry changed radically in a very short time. With the installation of the new regime and the transition to a market economy, the national defense industry entered a downward slope which led to a drastic decrease in the number of Romanian factories and factories of armament, ammunition and military equipment (from 100 in 1989, to 15 economic units with state capital), under the coordination of the Ministry of Economy;

- As a result of the change of system in the late '80s, Romania entered the stage of transition to a market economy, a process accompanied by profound legislative and institutional reforms, which involved significant costs (shock therapy through price liberalization, restructuring and deindustrialization economy), including on foreign trade, which also suffered the impact of the abolition of CAER. The level of exports fell by almost half in 1990 compared to 1989, only after 2000 did it manage to surpass it;

- From a logistical point of view, the Romanian army was on an ascending slope, the effort of the Romanian industry being characterized by: the complete endowment of the army with equipment and products manufactured by its own defense industry; the weapons systems were in line with the Warsaw Pact; most of the military capabilities were developed during the '80s, and successfully coped with the export of military products (the volume of exports exceeded the figure of 800 million USD per year), Romania being the fifth country in the world in the export of weapons and ammunition; the defense industry had covered more than $ 7.5 billion of the country's total debt, with military research findings also applicable to civilian production; some factories had a dual production, ie military capabilities could be supplemented with civilian capabilities and vice versa; there were over 220,000 employees working in the military sector.

REFERENCES

[1] Munteanu, V. (2014). *Globalizarea – Influențe asupra forțelor navale și industriei naționale de apărare*. Buletinul forțelor navale, nr. 22, 40;
[2] Todd, D. (1988). *Defence Industries: A global perspective*, 22. Londra: Routledge;
[3] Todd, D. (1989). *Defence industrial base and the West*, 63. Londra: Routledge;
[4] Zaman, G. & Georgescu, G. (2018), S*tudiu retrospectiv privind comerțul exterior al României în ultimii 100 de ani*, 21, Munich Personal RePEc Archive;
[5] https://jurnalul.ro/scinteia/special/nicolae-ceausescu-si-programele-industriei-de-aparare-507253.html, accessed on 20.01.2022, 11.30;
[6] https://ro.unionpedia.org/i/Tun_antiaerian_calibru_2x30_mm_model_1980, accessed on 20.01 2022, 11.55;
[7] https://opris7.rssing.com/chan-45846363/all_p1.html (scrisoarea lui Manea Mănescu către Hua Guofeng, omologul său de la Beijing, 1976), accessed on 21.01.2022, 08.41;
[8] https://adevarul.ro/locale/turnu-severin/noua-nave-lupta-construite-Santierul-naval-turnu-severin-acostat-portul-severinean-1_5917412c5ab6550cb8127368/index.html, accessed on 10.01.2022, 00.20;

[9] https://presagalati.ro/sefii-santierului-care-a-construit-crucisatorul-muntenia-cea-mai-mare-nava-de-razboi-romaneasca-la-colocviile-navalistilor-galateni/, accessed on 09.01.2022, 23.50;
[10] https://www.historia.ro/sectiune/general/articol/romanii-pionieri-ai-aviatiei-traian-vuia-aurel-vlaicu-henri-coanda, accessed on 22.01 2022, 12.20;
[11] https://www.agerpres.ro/economic-intern/2021/03/17/airbus-helicopters-si-iar-isi-extind-parteneriatul-strategic-pentru-elicopterul-h145m--679953, accessed on 09.01.2022, 23.05;
[12] http://www.resboiu.ro/39-de-ani-de-la-primul-zbor-i-a-r-93-vultur/, accessed on 09.01.2022, 23.49.