IMPACT OF THE COVID-19 PANDEMIC ON THE NATIONAL DEFENCE INDUSTRY

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The Covid-19 pandemic has scientifically proven negative effects in the world industry, which are reflected in declining sales, downsizing productive activities and rising unemployment. The allocation of 2% of the Gross Domestic Product for the defence field, as well as the programmes developed at EU and NATO level, provide the companies from the national defence industry with the possibility to adapt their product range to the procurement programmes developed by the Romanian Armed Forces.

Another opportunity for companies in the national defence industry to seize is the use of funds available at EU level, including for research and development, as well as partnerships with large companies in the Euro-Atlantic area. In order to overcome the economic crisis generated by the COVID-19 pandemic, efficient cooperation is needed between state and private entities within the national defence industry and the line ministries, especially with the Ministry of National Defence and the Ministry of Economy.

Keywords: defence industry; COVID-19; Romanian Armed Forces; crisis; military products;

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INTRODUCTION

Globally, the arms market is one of the most profitable markets, with a total turnover of hundreds of billions of USD, the development opportunities being very high, including for the Romanian industry, in the context of increasing globalisation and global business dynamism.

At the same time, the arms market is experiencing a strong dynamic generated by the appearance of new relevant players in emerging markets as well as by the recalibration and strategic reorientation of defence policies of certain states, in the sense of allocating substantial funds for the purchase of modern weapons and defence systems adapted to hybrid warfare, characterised by non-linearity and a high degree of uncertainty.

The arms market is experiencing a strong dynamic generated by the appearance of new relevant players in emerging markets as well as by the recalibration and strategic reorientation of defence policies of certain states, in the sense of allocating substantial funds for the purchase of modern weapons and defence systems adapted to hybrid warfare, characterised by non-linearity and a high degree of uncertainty.

Today, the international armament market is dominated by large manufacturers that *"dictate"*, from an economic and strategic point of view, the evolutionary trends of modern military systems, by continuously adapting products to the paradigm of modern warfare. In order to achieve this strategic objective, significant amounts, in the order of billions of USD, are invested annually in research and development, requiring measures for the continuous modernisation of existing military equipment and for the creation of new products to meet the dynamic needs of the market, in particular to meet the operational requirements of the armed forces, which are the beneficiaries of these military products and technologies.

The COVID-19 pandemic requires, under the current conditions, the supplementation of the allocated funds dedicated to the research-development field, in order to maintain the current markets or even to gain new markets. This aspect is particularly important considering the expected decrease in defence budgets, amid declining GDP.

A very attractive area for large producers is represented by emerging areas, such as the Middle East, most states in this region having large budgets dedicated to the acquisition of modern military equipment. These large defence budgets are due to the security situation characterised by the existing conflict states in this area, which have major potential to degenerate.

In this context, an analysis of Romanian military equipment exports reveals a considerable decrease in export operations to the Middle East, while increasing to North America, especially the USA, and to EU member states. In this way, a traditional Romanian market from the '90s was lost, simultaneously with the accentuated decrease in the exports on the market of the African states, aspect that substantially affected the trade balance in this strategic field.

Romania's status as a member state of NATO and the European Union allows companies on the Romanian arms market to conclude strategic partnerships with relevant consortia in states belonging to these international structures, which will lead to the integration and adaptation of domestic products in the defence systems developed by the most important actors in the world.

Another current feature of the domestic market is the production of weapons that incorporate technologies that no longer correspond to current trends in the world market, this being a direct consequence of the lack of investment in research and development. The lack of appetite in investing in innovation, contradicts the current global trend, dominated by the *"proliferation"* of knowledge management, especially in this niche, highly specialised field, in which the focus is on American, European and Asian consortia.

Innovation in the arms market is becoming essential in the context of the fierce competition generated by the overall increase in the percentage of GDP that states invest in the defence industry.

Romania's status as a member state of NATO and the European Union allows companies on the Romanian arms market to conclude strategic partnerships with relevant consortia in states belonging to these international structures, which will lead to the integration and adaptation of domestic products in the defence systems developed by the most important actors in the world. At the same time, Romania has access to the highest NATO technologies that will allow it to modernise and equip the Romanian Armed Forces, this aspect being favoured by the allocation of 2% of the Gross Domestic Product for defence, most of these funds being intended for modernising the armed forces.

In this context, it is important that domestic producers should continuously adapt their production to the real needs of the Romanian Armed Forces, including the construction of modern facilities to ensure the maintenance of the military equipment to be purchased.

In order to really support the Romanian profile industry, whose industrial objectives are located mainly in mono-industrial areas, concrete proposals are necessary for the development of the domestic profile market, which would lead to increasing the predictability of foreign markets suitable to absorb the products made by the Romanian defence industry.

MAIN CHARACTERISTICS OF THE ROMANIAN DEFENCE MARKET

The analysis of the local market reveals certain defining characteristics that determine the profitability and sustainability of this sector of strategic interest (Boulegue, 2020), namely:

- it is a mainly state-controlled industry, with the majority of companies operating in this field concentrated at the level of the ROMARM SA National Company, which is in coordination with the Ministry of Economy;
- chronic lack of investment and state/political control have turned it into an economically inefficient industry, against the background of a revision in making decisions based solely on economic analysis;
- the absence of any assumed political restructuring/ development programme through a systemic approach to the national defence industry that uses strengths and mitigates the consequences of systemic vulnerabilities identified at the level of this strategic sector;
- lack of coupling the national defence industry to the national defence doctrine and to the procurement programmes carried out at the level of the Ministry of National Defence;
- an autarchic industry, mainly focused on maintenance and export of primary products with no high added value and encompassing technologies from the ’80s;
- an industry absent from the global economic circuit and high-tech supply chains; the national defence industry has a timid exporter presence in certain marginal markets and only for primary, unsophisticated products, which incorporate outdated technologies;

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- an industry characterised by circumstantial, opportunistic development, offset, and procurement policy of the Ministry of National Defence (in most situations of concluded military procurement programmes, local industry playing only the role of marginal service to provide maintenance);
- technological development is not adapted to current research and development processes at international level;
- oversized personnel, including situations of political *"capture"* by granting management and execution functions on the basis of subjective criteria;
- reduced integration into dual-use economic circuits, including through poor cooperation between state and private industries;
- redundancy and duplication with products available on the global market at lower costs.

The success of defence industries in countries such as the UK, France, Italy, Germany, Israel, Sweden, Spain or Norway demonstrates that autarchy is no longer an economic and sustainable long-term solution and that the state/government cannot control the entire supply chain.

The central element that determines the maintenance of the national defence industry, although declared a strategic sector, at this stage of return, is the autarchic governmental approach of this sector in the recital of ensuring self-sufficiency, security of supply, and the security of supply of the Romanian armed forces with basic products (Darling, 2020). From the analysis of global markets, the attempts to achieve self-sufficiency and total independence in the national defence industry and to ensure, at the same time, a competitive and sophisticated industry, have not been successful. Where this approach applies (developing countries, subjects of current and immediate security threats), the budgetary cost of keeping the industry functional is significant, this industrial sector being unprofitable.

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INFLUENCE OF COVID-19 PANDEMIC ON INTERNATIONAL DEFENCE INDUSTRY

Changing government priorities generated by the pandemic crisis produced by COVID-19 may lead to a reduction in budgets for military procurement programmes. Most governments allocate about 2% of GDP annually to the defence sector. Given the pandemic generated by COVID-19, there is a risk that some states will significantly reduce the budget allocated to the defence industry in order to increase the budgets for health care systems, considering the need to expand hospitals, as well as the purchase of medical equipment and services. They are objective factors in the management of the COVID-19 pandemic, given that there are poor medical systems in some states that are unable to cope with this unprecedented global medical crisis.

In the event of the loss or even postponement of important government programmes and contracts, it is necessary for companies within the defence industry to identify innovative solutions for overcoming the crisis. A potential solution is to adapt the productive range and produce the products and equipment needed by the civil industry.

In this context, governments are obliged to increase social expenditure and reprioritise budgetary expenditure in the light of the problems related to the medical crisis at the level of society. Additional pressure is exerted by citizens, who, during this period, feel vulnerable and would like for most of the available funds to be used effectively to manage the pandemic crisis generated by COVID-19. (*"International Military Cooperation Supports Covid-19 Response"*, 2020).

To cope with the unforeseen costs of the COVID-19 pandemic, governments will use the resources initially allocated to develop the defence industry to manage the medical crisis. This leads to a considerable reduction in the defence budget, with direct effects on the procurement policy and, by implication, a decrease in the financial resources allocated to the defence industry.

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The main problems identified at the level of the defence industry, against the background of the COVID-19 pandemic are:

- maintaining specialised manpower, while reducing orders for military products and equipment;
- delay in payments to suppliers of raw materials, subassemblies and utilities, with direct effects in terms of their economic sustainability;
- the level of government aid needed to overcome the crisis caused by the COVID-19 pandemic;
- reducing the budgets allocated to research and development in favour of paying current expenditure (e.g., wages, payment of utilities and raw materials), with the risk of not being technologically competitive;
- relocation of production facilities, against the background of increased operational expenditure, with effects in terms of the loss of specialised human resources;

confidence levels of investors.

Last but not least, another important problem is *"the decrease in stock market shares in large companies in the market. For example, from 10 February 2020 to date, Lockheed Martin shares have decreased by 28%, Leonardo – 55%, Thales – 33% and Fincantieri – 32%. Statistically, the shares of the biggest players in the international arms market are selling at the lowest price in five years"*. (Tirpak, 2020)

These consequences, considered secondary, are worrying against the background in which receipts from secondary markets do not significantly affect the revenues of companies. Companies intending to issue new actions to finance capital investments were obliged to stop this project in view of the unfavourable developments in stock markets. In this context, the development plans of the companies have been reassessed in order to abandon or delay certain investments aimed at the development of these economic entities.

Furthermore, against the background of the steady and significant decline in shares, it is possible that a relevant part of them may be acquired by entities in certain countries (e.g., the Russian Federation, China) which do not have an interest in the development of the defence industry in the Euro-Atlantic countries. In this context, it is necessary

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IMPACT OF PANDEMIC CRISIS ON THE ROMANIAN DEFENCE INDUSTRY

At the time of the COVID-19 crisis, Romania was already in a difficult fiscal situation, facing an excessive budget deficit, increasing public financial exposure, a substantial reduction in private and direct public investment, a heightened political and strategic inconsistency, becoming a victim of populism, amid the chronic dysfunction in other important economic and social sectors.

In Romania, the topic of tools and opportunities that may be able to ensure improved effects and overcoming the economic crisis is currently being discussed through active economic measures, including in the field of defence industry. In Romania, however, the path from debate to public policy and assumed and applied strategy is traditionally long and arduous, requiring more pragmatism in addressing strategic economic issues.

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One of the instruments seen as a factor of Romania's economic recovery is reindustrialisation. Therefore, in Romania, we expect to witness political positions that will argue the allocation of resources for *"reshaping"* the national defence industry under state control, as a tool to improve the effects of the economic crisis. (Dick, 2020).

To include reindustrialisation in the range of instruments suitable for overcoming the post-COVID-19 crisis is a welcome step, but it requires a new conceptualisation and approach, adapted to the 21st century, and not a restructuring and allocation of public resources devoid of strategic vision and objectives of economic efficiency, as it has happened so far. All the more, we do not have to follow the examples of other states where industrial/economic standardisation trends are expected, as a guarantee of a return from the crisis and an increase in the capacity to respond to future crises.

Whether the military and geopolitical security challenges on the Eastern flank of NATO/EU remain topical or not for Romania, the Romanian defence industry can become an important element in empowering the economic effort to overcome the economic and financial crisis.

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A possible first counter-argument to this geopolitical *"postulate"* would be that such an approach would cause a greater dependence of the local defence industry and the Romanian armed forces on external factors (supply security), which would implicitly adversely affect national security. However, as I have shown above, the absolutisation of the sovereignty of this national industry inevitably leads to economic autarchy and the elimination of this industry from the global supply circuit and from high tech processes.

Ultimately, the Romanian armed forces will end up making purchases exclusively from the major international contractors, without any Romanian participation. For this reason, Romania's strategic partnership with the United States of America (global leader in the field of military industry) and its EU membership are essential. The Romanian political factor must understand that there is no defence industry that is not dependent on external suppliers. The important thing is that the national defence industry is integrated into this supply chain.

Maintaining the industry autonomous, autarchic, state-controlled would require exceptionally large financial funds that the Romanian state does not have and would lead to the maintenance of an industrial base for primary, unsophisticated military products. On the contrary, it is precisely this situation that would ultimately affect the very capacity of the armed forces and, therefore, the national security.

At present, we can say that the state maintains the national defence industry regardless of its economic viability, developing and producing uncompetitive weapons that can be imported at much lower costs and providing only redundant and generally low-skilled jobs.

The current legislation relevant to the national defence industry contains tools and provides rights to the competent authorities that would allow a fundamental reconfiguration of this strategic industrial sector (The National Defence Industry Act includes references to privatisation, the use of European funds, industrial cooperation in associative formulas, public private partnerships, cross-border partnerships, cooperation with the private sector).

In addition to a possible fine-tuning of the existing legislative framework, the fundamental restructuring of the Romanian defence industry, in order to ensure a sustainable industry for the 21st century, can take the form of a National Reform Programme, politically assumed across the widest possible spectrum and rigorously implemented (i.e., precise deadlines, responsible persons/authorities etc.), as a fundamental element of strengthening national security.

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Another opportunity offered by the COVID-19 pandemic to defence industry is to produce specialised equipment for the medical sector. A major advantage of defence companies is the existence of high-precision technological equipment that allows production flows to be adapted for the manufacture of high-performance products.

In this context, Virgil Popescu, Minister of Economy, Energy and Business Environment, *"welcomed the involvement of the national defence industry in the effort necessary to prevent and combat COVID-19"*. He stated that *"we have already seen that Romanian single-patient isolation and transport units can be produced, and ROMARM will soon start producing masks. Now, two other companies in the national defence industry specialised in optics, one with private capital, Pro-Optica, and another with majority state capital, in the portfolio of the Ministry of Economy, Optical Romanian – IOR, have joined their efforts to produce a thermal scanner in our country. I welcome these public-private partnerships that lead to the development of value-added products"*. (Pachiu, 2020).

The product, 100% Romanian design, is developed by Pro-Optica, a private company, and launched in manufacturing at IOR, a company in the portfolio of the Ministry of Economy, Energy and Business Environment, with a military certificate issued by the Medico-Military Scientific Research Centre. Moreover, during this pandemic period, the first 100% Romanian conception single-patient isolation and transport units were made, produced by the researchers within the Ministry of National Defence, and the Minister of Economy announced that the ROMARM weapons factory would produce protection masks.

POSSIBLE SCENARIOS FOR THE DEFENCE INDUSTRY

"The effects of COVID-19 on the defence industry are still to be fully understood. The impact will predominantly be on the supply chain. There are several major points of interest that could have an impact on geopolitical relations and a cascading effect on the wider defence industry, specifically with regard to supply chains and competition". (*"2020 Global Defence Outlook – Growing Impact of COVID-19"*).

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If a vaccine for Covid-19 is identified within a few months, the impact of Covid-19 on the defence industry will be minimal. In this situation, only certain one-off contracts may be affected, the cancellation of certain events in the defence industry (e.g., international trade fairs/exhibitions) or the improvement of certain defence industry programmes. In this situation, the defence industry as a whole will not be substantially affected and may recover within a reasonable period of time.

If the production of a viable vaccine against SARS-CoV-2 lasts longer than expected and the development of the disease worldwide is not kept under control, the budget for the defence industry will be substantially reduced, which leads to damage to defence companies.

In both scenarios outlined above there is no magic solution, each company in the defence industry being obliged to adjust its own budgets, the conditions under which it operates in the profile market, the production chain/suppliers, and other economic and social factors.

A third possible scenario is the habit of living with this virus that causes COVID-19, in the same way that mankind has lived for thousands of years with other active viruses. In this scenario, it is unviable to pursue an endless suppression strategy, and governments and businesses will have to identify solutions to survive and redress the economic situation.

Regardless of the type of scenario, certain aspects have been identified that company managers need to consider, namely:

- the current global uncertainty generated by COVID-19 will lead to rethinking existing risk plans at the level of high-profile companies;

- strategies should not focus primarily on growth, but should include more judicious resource planning and substitution of certain materials;
- the production principles should be based on maximising efficiency, while reducing production costs, by maintaining the most profitable products on the market;
- the need for technological interventions in the production chain to increase automation and the use of automated systems for the delivery of resources/components/subsystems.

Security industry companies have quickly adapted their production for delivery to the medical system ventilators for ICU, to treat the most serious cases of COVID-19, as well as means of protection (e.g., protective masks). In this respect, we exemplify by the case of UK companies – BAE SYSTEMS and BABCOCK. Thus, a significant number of contractors have adapted their modern production capabilities (e.g., 3D printers) to produce protective materials against COVID-19.

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Also, in order to avoid the liquidity crisis in the production chain, large defence companies, which have significant funds, have accelerated payments to suppliers. For example, L3 HARRIS TECHNOLOGIES invested 100 million USD in accelerated payments to small providers to enable them to keep their productive activities in times of crisis.

Moreover, in April 2020, Lockheed Martin provided 156 million USD in accelerated payments to vulnerable equipment suppliers, with 10 million USD donated to the US healthcare system.

CONCLUSIONS

In conclusion, I am of the opinion that the development, modernisation, increasing sustainability and integration of national defence industry into the global economy simultaneously with the efficiency of the armed forces procurement programmes, would involve the implementation of the following processes:

1. Carry out an independent audit of the defence industry in order to identify the vulnerabilities of this sector, the subsectors with viable potential and the non-viable/redundant ones, those with potential integration in cross-border supply chains and efficient compatibility with the procurement programme of the Romanian armed forces, ensuring security of supply, tools and ways of restructuring the defence industry with minimal costs in order to stimulate industrial cooperation and technology transfer, structures and financial resources necessary to support viable subsectors that will continue their activity, the need for legislative and governmental measures etc.

I am of the opinion that the development, modernisation, increasing sustainability and integration of national defence industry into the global economy simultaneously with the efficiency of the armed forces procurement programmes, would involve the implementation of the following processes: carry out an independent audit of the defence industry; launch a Defence Industry Restructuring Programme; adopt new legislation in the current context.

2. Launch a Defence Industry Restructuring Programme based on audit findings and taking into account criteria such as: integration into the global supply chain, compatibility for dual civil-military use, ensuring technology transfer, state control by veto and not by ownership, geographical industrial clusters and the conclusion of industrial alliances for local technology transfer with Western partners;

3. Adopt new legislation to define the essential security interest and stimulate the development of targeted local industrial cooperation programmes with a multiplier effect for the achievement of competitive and sustainable industrial capacities.

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