The consequences of globalisation on the arms industries

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Résumé : Avec l'effondrement de l'Union soviétique, la globalisation économique se développe, conduisant à une crise de l'économie publique et donc des industries nationales d'armement. L'industrie de l'armement s'insère progressivement dans le processus de la mondialisation. Les efforts d'exportation et de compensation commerciale se développent, ainsi que les essais de coopérations régionales. Dans ce secteur la domination des Etats-Unis s'accroît, avec une R&D militaire puissante ouverte aux technologies duales. De fait, la globalisation apparaît souvent comme un facteur d'américanisation avec le soutien efficace d'une industrie d'armement dominante.

Summary: With the collapse of the Soviet Union, economic globalisation developed, leading to a crisis of the public economy and thus of the national arms industries. The arms industry is gradually becoming part of the globalisation process. Export and trade compensation efforts are developing, as well as attempts at regional cooperation. In this sector, the dominance of the United States is increasing, with a powerful military R&D open to dual technologies. Indeed, globalisation often appears as a factor of Americanisation with the effective support of a dominant arms industry.

Industries d'armement, globalisation économique, R&D, technologies duales,
Arms industries, economic globalisation, R&D, dual technologies,

The notion of globalisation expresses the integration of productive and commercial activities into a global market system. It is extended to the chain of value creation, from simple export to the global integration of production, through all intermediate stages. Investment and personnel choices are now made on a global scale, prompting states to open up their economies on an regional basis. Multinational firms (MNFs) adjust their policies to international rules and regulatory gaps between states. They sell standardised products in all countries, with some trade adjustments linked to the specificity of each country.) They exercise domination effects in order to redefine for their own benefit the rules of the game previously imposed by states and international organisations. They thus exercise a triple power, namely the incitement to the implementation of an "international law" favourable to their interests, the choice of productive or commercial establishments according to the rules of competition and the exercise of internal power over national political structures.

The process of interdependence leads to a homogenisation of products, production factors and cultures. States have lost an important part of their regalian rights, to the benefit of continental, semi-continental or regional entities, which constitute valuable support points for MNCs. The macroeconomic policies of the state have lost their relevance in the face of the strategies of the large firms, particularly in terms of tax optimisation and evasion. The arms sector is affected by globalisation, particularly by the development of arms exports, the importance of intermediate consumption of imported arms and the development and generalisation of the compensation system (Hébert, 1998

The arms industry has always been protected in the great military powers. However, the 'commodification' of the products of this industry has developed and the firms in the sector are engaged in concentration and restructuring procedures similar to a globalisation process. The power of a state is now based on economic competition and the improvement of national competitiveness. Economic weapons, so-called oblique weapons, are used in the quest for leadership. Although arms companies are only just beginning to be part of the globalisation process, this limits their influence in the quest for state power.

The arms industry is gradually becoming part of the globalisation process. However, until recently, it was strongly hostile to any rapprochement with foreign companies, in the name of national defence. Today, the arms industry is in crisis, and the conversion of some of its activities is proving costly. Its role in the development of research and development is likely to diminish, without civilian R&D making up for this reduction in public and private funding. Finally, arms companies have restructured, often with the approval of governments, they have diversified or specialised their production, and they have engaged in a dual process of concentration and internationalisation.

Before the last world war, the question of the military-industrial complex (MIC) was almost never mentioned. However, as early as the beginning of the 1930s, California, but also Germany and Japan, had set up a MIC, with the inevitable announcement of the Second World War. After the disarmament following the end of the war, the Cold War re-launched the arms race, characterised by three factors:

1) The emergence of nuclear weapons and the appearance of strategies of deterrence by terror or "from the weak to the strong";

2) The systematic application of oblique strategies of economic warfare (embargo, boycott, but also the policy of impoverishment through the arms race, or on the contrary Ostpolitik), using the economy for political ends (Fontanel, Bensahel, 1993);

3) The development of a powerful CMI, independent of citizens' choices, became a considerable political risk. As early as 1960, the President of the United States, Ike Eisenhower, had strongly questioned the citizens of his country on the dangers of the development of the CMI for democracy and peace.

The crisis in the armaments sector

With the Strategic Defence Initiative (Fontanel, 1988), Ronald Reagan accelerated the course of power relations between the USSR and the United States. As in a poker game, faced with the colossal sums allocated to US military research and development, the USSR no longer had the economic strength to keep up with this trend and had to negotiate an end to the arms race for its own security. Paul Kennedy (1988) saw the overemphasis on military power as an inevitable factor in the

decline of both superpowers. With the failure of the Soviet experiment, a disarmament process was initiated, which is rather costly and does not lead to immediate peace dividends. The arms industries were faced with drastic reductions in orders and then suffered an economic crisis of varying depths depending on the country. Since 1987, global military spending has been cut by more than a third, mainly in Russia and the United States, but also in some countries facing a severe economic crisis. However, South East Asian countries are now temporarily rearming. These trends are detected by both SIPRI and USACDA, despite their different estimates of military expenditure. Between 1989 and 1999, the so-called Western European countries reduced their military spending by 10 to 30% depending on the country. The decrease in military research and development credits followed (Fontanel, 1998).

The search for industrial cooperation, with a view to developing economies of scale, has interesting economic advantages. Thus, European countries have more than twice as many types of armaments as the United States for equipment expenditures that are almost three times lower. Overproduction is characterised by the excessive supply of armaments companies in a partially regulated market. There is thus strong competition and demand dominance, which can lead to "pauperising" exports, at prices below the overall costs incurred (but below the marginal costs). The result is an increase in the unit costs of equipment and a quest to produce new armaments in order to promote the obsolescence of existing products. Some firms have abandoned their military business (Nobel Industries was sold to Celsius) or have been taken over (Martin Matin merged with Lockheed and Westland became a subsidiary of GRN). Public companies have seen their military activity eliminated (INI in Spain, transferred to Ténéo). Diversification procedures have not often been undertaken, as the results are far from immediate, while remaining risky.

The consolidation of the American arms industry was rapid, through the simple application of market principles, despite the reduction of national orders. The conversion was mainly achieved by the simple application of market principles, even if the State favoured certain concentration, cooperation or export operations. The state provided 2 billion dollars in aid for rationalisation and cost reduction. Despite the opposition of the anti-trust authorities, this concentration policy aims to bring

together all high-tech research and development capacities in a specialised national firm, in order to safeguard "know-how". The government has allocated market shares for each group and selects official suppliers, free from competition, for each type of weapon. Increasing their responsibility for financing major future weapons programmes is the main objective of US arms companies. The crisis has been overcome, with growing profits, high stock market values and strong optimism in the sector about future developments.

In Western Europe, the process of internationalisation is not leading to greater rationalisation, due to the demands of individual member state governments. France wants to start European negotiations on the new generation of attack aircraft in Europe, despite a difficult, competitive and uncertain export market. With 10,000 subcontractors involved, France has only 25 companies directly dependent on the defence market, with the top five companies carrying out two-thirds of the contracts, often as prime contractor. The main obstacles to a European defence are the "juste retour" principle, the supranational nature of long-term procurement, the insufficient importance of "European preference" and the maintenance of transatlantic cooperation.

For Russia, the arms industry has collapsed and the question of conversion is acute, in an economic situation in deep recession (Fontanel, Borissova, Ward, 1995; Skharatan, Fontanel, 1998). Arms exports are mainly older models, often on sale. This crisis also concerns all the industrial regions, often heavily involved in the production necessary for the Soviet military-industrial complex.

The export and compensation process

Data on arms exports are heterogeneous and subject to strong variations, depending on the source. The secrecy, the time lags in industrial, commercial and financial operations between order, delivery, payment conditions and realisation of the claim, as well as the particularly centralised and diversified nature of the agreements, require great vigilance in the use of figures. SIPRI and USACDA estimates differ widely, although the five largest exporters are clearly identified as the world's largest economies, with the exception of Japan. Since 1996, restrictions on domestic arms sales have been partially lifted in the US, allowing US companies to outbid Europeans on sales proposals. With the enlargement of NATO and its new military needs, new

markets should open up. For command, control and communication equipment alone, standardisation has already been achieved, to which new Visegrad allies must conform.

France's strategic policy implies certain independence in the field of armaments. Arms production is characterised by high profits and high R&D costs. Exports reduce unit costs, increase learning effects and subsidise part of the independence strategy. The unit price of 500 aircraft is assumed to be 20-430% lower than the cost of producing 300 aircraft needed for national defence. Arms exporters have often developed highly sophisticated technology through aggressive trade policies. They are an active component of foreign and defence policy. Secondly, there are solidarities that develop between buyer and seller countries, both militarily and economically and commercially. The state exercises control, for security reasons relating to technological secrets, international agreements or the possibility of destabilisation and war.

Furthermore, export is not a panacea. From a financial point of view, it is questionable whether it is not better to buy the planes than to build one's own. The arms industry has probably not played a considerable role in the economic development of France, according to econometric results (Fontanel, Ward, 1992), even in the most favourable case where debtor countries actually pay their debts (which is not always the case). Sometimes arms exports can be pauperising.

In a buyer-dominated market, the potential for exports is too small to revive the activity of domestic arms industries depressed by declining domestic demand. The arms company gets richer and the country gets poorer when the buyer country does not pay the invoices, taking into account the insurance against non-payment. Exporting sometimes produces negative effects when the price is lower than the real cost, especially when new specifications are required at constant prices. The priority given to exports leads to changes in equipment and delays in deliveries to national armies. Buyers constantly demand new advantages in the form of offsets, which reduce the financial burden of their imports, limit currency transfers and provide technological inputs. Forward offsets involve the establishment of deferred reciprocal contracts, which extend to certain civilian products, obliging the arms industries to set up an international trading activity. Workload transfer and manufacturing collaboration involves co-production and subcontracting,

maintenance, component manufacturing or on-site assembly arrangements. Technology transfers and local investments are of great interest to buyers, who will improve domestic employment conditions and benefit from a learning process of military or dual technologies. In addition, certain financial provisions are attractive, close to a gift, with the multiplication of bonuses or advantageous financial arrangements. The prices are also rather 'vague', with more or less secret commissions, with possible political compensations and retro-commissions. For South Africa, the compensation rate was 55% and 50% for the Philippines. Commissions have become a key element in the conclusion of arms exports. The selling country bears the rather negative consequences, with a reduction in the number of jobs or a decrease in national investments. Arms exports sometimes lead to crowding out and competition effects caused by domestic imports linked to the contract.

A mainly regional cooperation process

The main argument in favour of a national arms industry monopoly is that the equipment would be better suited to the country's needs, while providing a strong industrial base necessary for national political independence. However, autarkic production is expensive and medium-sized countries cannot do everything unless they give up their immediate growth potential, and thus their long-term security. Cooperation is often a political decision that favours work-sharing and compensation arrangements. If they do not want to depend on American hegemony, European countries must accept the constraints and servitudes of security interdependence. Cooperation is economically attractive, leading to economies of scale, overcoming thresholds and increasing capabilities. The European Union seeks to improve the competitiveness and duality of armaments companies.

However, the tendency of governments to defend and favour their national industries taints the outcome of negotiations. Agreements are often made according to political criteria and costs are only one element of the choice, rarely dominant. They come up against several stumbling blocks, in particular the acceptance by the military of the production of standard and interoperable armaments, the encouragement of R&D rationalisation and the control of the costs and quality of the production of consortia, especially European ones. In these

conditions, the will to build a European defence is not unanimously encouraged, nor shared (Fontanel, Smith, 1991), and must face industrial and NATO lobbying, which is rather in favour of equipment standardisation. The search for gains through the rationalisation of production and purchases comes up against numerous problems of information and uncertainty, notably concerning the exact specifications (what weapons are needed?), technological feasibility, economic conditions (costs and time) and strategic and tactical responses adapted to threats.

The future of military R&D

The contribution of civilian industry to defence can lead to a substantial reduction in costs. International cooperation is likely, under certain conditions, to improve the necessary economies of scale. In 1998, in the United States, aircraft and associated weapons programmes accounted for 45% of the R&D effort, compared with 28% for defence missiles and 12% for nuclear weapons. American military R&D still has seven to eight times more funding than France, which is second in this sector. After the CTBT (Comprehensive Nuclear Test Ban Treaty), the nuclear powers have different research policies. The United Kingdom and the USA have officially abandoned the development of new systems, which is not the case for Russia and China, which are focusing their efforts in this area. France has decided to continue new programmes, despite the ban on nuclear testing.

Bill Clinton is now proposing to transfer sophisticated military technologies to civilian use, despite the disappointing results of experiments in recent years. The mastery of technology is not a decisive factor in its success in the civilian field. It is a support for the development of the company, but profit remains the main criterion for success. In contrast, military R&D, which is generally very capital-intensive, aims to put in place the conditions for national survival in the face of an enemy attack, which reduces the importance of cost considerations. Even if certain activities offer equivalent services (helicopters, IT) to both sectors, dual activities have often benefited the military sector in the short term. Three hypotheses are generally used to study the economic efficiency of military R&D:

- The crowding-out effect assumes that credits committed to military R&D are at the expense of the civilian sector, which is not proven (Hébert, 1998).

-Technology transfers between the military and civilian sectors imply a shift from a technological priority to an economic priority. Military secrecy prohibits certain technological disclosures. However, it frequently happens that a scientific discovery made in the military field of one country is forbidden to be disseminated, but is rediscovered by a firm in another country for immediate civilian application. In this case, military R&D prevents the development of a civilian activity in a national company, thus placing it in a delicate competitive situation.

- The demand-pull effect highlights the role of market and production opportunities in innovation. Even when applied to the military sector, the existence of additional demand for R&D encourages innovative forces. If civilian spin-offs were as important, the US, UK and France should be leading in civilian technologies, given their investment in defence technologies. Instead, the military is increasingly interested in civilian producers of modern technologies. Michael Ward (1994) has pointed out that Japan's military technologies, unlike those of the US, have had a positive impact on civilian technologies, as if the duality was not only desired, but also rather inherent in the type of social organisation.

American domination

The US military has been partially converted. Budget cuts since the collapse of the USSR have affected the size, structure and health of the military and defence sectors. However, considerable changes would have been made anyway with the explosion of information technology. In the United States (Gansler, 1997), this dynamic is underway, with the call for a wide use of standard commercial specifications, the consideration of the cost of military equipment or the transformation of the acquisition laws, among others. The dominance of a few firms has increased but there is still excess production capacity, which opens the way for further concentration. This results in lower arms costs for the US military. The government has to take into account the following characteristics:

- National monopolies limit choices, except for the use of foreign military products.

- Current consolidation should allow for better integration of dual technologies.

- Will the US giants become 'global' firms or will they continue to compete with European or Chinese products? Global firms are increasingly turning to external sources, buying from the best suppliers anywhere, rather than relying solely on their own captive internal resources. However, missile or space launch technologies, high-resolution satellite imagery and satellite navigation are under some scrutiny, but the bridge between military and civilian is difficult to build, so principled interests are often left to commercial interests. Lockheed-Martin has teamed up with Brunichev and Energia to market Protons rockets worldwide. There are also agreements between Boeing and Zenit (Ukraine). The fundamental basis for these mergers, agreements and openings are usually managed directly by US multinational companies.

Thus, armaments are no longer just another instrument of national security, they are a means of protection, threat and control of the great powers in the unequal sharing of the world. The fundamental weapons of the new content of geostrategic forces are the economy, information technology and culture.

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