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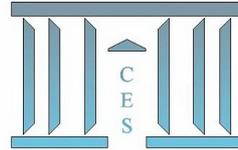
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## **Military spending : A perspective on the restructuring dynamics of the defense sector**

Eleonora GENTILUCCI

**2012.60**



# Military spending : A perspective on the restructuring dynamics of the defense sector

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This article is articulated in two sections. In the first-one we try to explain the dynamics of military spending and others social expenditures in the period 1988-2010 for the United States. According to empirical data we support the argument that there is a remarkable trade-off in the allocation of public spending, because, often, the increase in military expenditures was to detriment of those for the education, social security and health. In the second section we analyze the transition from the old “military industrial complex” to the new “military security system” in the light of defense industry restructuring. We focus in particular on the role of financialization and industrial concentration of the firms.

**Keywords** : military–industrial complex, industry concentration, defense sector, military expenditures, public spending, trade-off effect, financialization, industry restructuring, military-security system.

*Les dépenses militaires : perspective sur la dynamique de restructuration du secteur de la défense*

Cet article est développé en deux sections. Dans la première nous essayons d'expliquer la dynamique des dépenses militaires et d'autres dépenses sociales dans la période 1988-2010 aux États-Unis. D'après les données empiriques, nous soutenons la thèse selon laquelle il y a un remarquable effet d'arbitrage dans l'allocation des dépenses publiques, car souvent, l'augmentation des dépenses militaires est faite au détriment des dépenses pour l'éducation, la sécurité sociale et la santé. Dans la deuxième section, nous analysons la transition de l'ancien « complexe militaro-industriel » au nouveau « système militaro-sécuritaire », compte tenu de la restructuration de l'industrie de la défense. Nous mettons l'accent, en particulier, sur le rôle de la financiarisation et de la concentration industrielle des entreprises.

**Mots-clés** : complexe militaro-industriel, concentration industrielle, secteur de la défense, dépenses militaires, dépenses publiques, effet d'arbitrage, financiarisation, restructuration industrielle, système militaro-sécuritaire.

**JEL codes:** H, H56, L, N4, P.

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The economic and financial crisis had profound effects on the global economy. This resulted in a reduction of public expenditure of the states, while military spending continues, to increase. The questions that arise are the following: why this type of expenditure follows a different and contrary route compared to other public expenditures? What are the interactions between this trend in military expenditures and that of arms industry? Furthermore, could we provide a satisfactory answer to these demands, without considering the changes in the economic system as a whole and particularly the financialization of the economy?

From the methodological perspective, two choices are required: one concerning the geographical dimension and the other the temporal dimension.

We chose to conduct our analysis on military spending and on structural changes of the defense sector, limiting ourselves to the particular economic and geostrategic area represented by the United States, because we believe that it constitutes the most representative case and we will explain later the reasons that compel us to support this thesis.

Given the available data for the aggregate object of this work, our analysis covers about two decades, from 1988 until the years 2008-2009.

This article supports the argument that the structural changes and dynamics of concentration and financialization of the defense sector are the maximization "of waste and illegal profits"<sup>2</sup> in the sense used by Reich, perpetuated by the so-called "vested interests", and this in a area which has always been a source of waste in favor of those individuals who gravitate around the defense industry.

We will try to defend this thesis both from a theoretical and empirical point of view, through the data concerning the evolution of military spending and other expenditures, the financialization of defense and the dynamics of concentration of the industry. Theoretical analysis of mutation of the "military-industrial complex" characterized by using the concept of the "military-security system," represents the heart of the issue since it is closely influenced by the so-called vested interests.

## **1 The dynamics of military spending and other public expenditures in a historical perspective**

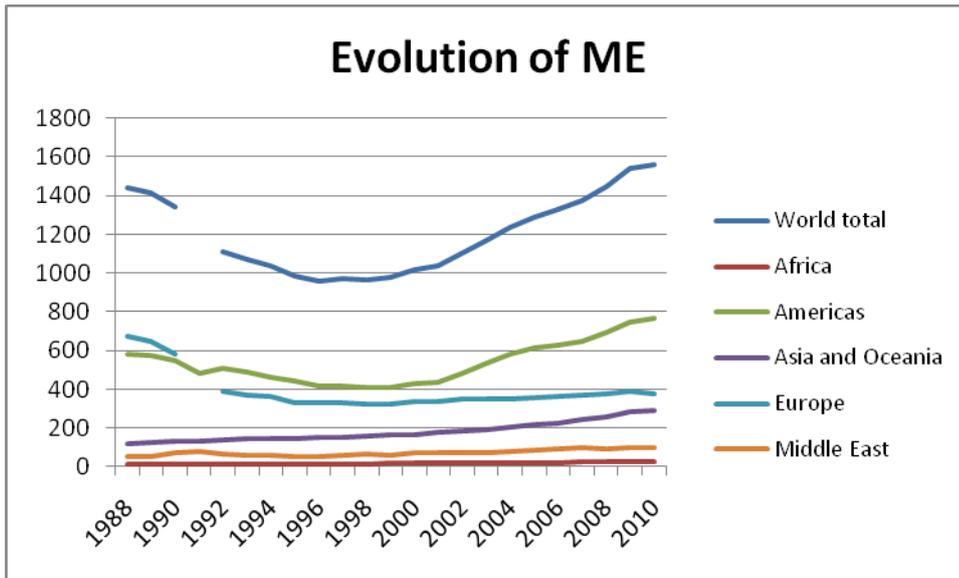
According to the data provided by SIPRI<sup>3</sup>, world military spending has increased constantly since 1998. The following graph was developed from the SIPRI data on military expenditure in constant dollars of 2009 and shows the evolution of these expenses from 1988<sup>4</sup>.

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<sup>2</sup> Reich, M. (1975) "Se le spese militari siano necessarie all'economia degli Stati Uniti", Massimo D'Antonio (ed.) La crisi post-keynesiana, Universale Scientifica Boringhieri, Turin.

<sup>3</sup> SIPRI : Stockholm International Peace Research Institute.

<sup>4</sup> The interruption of the two lines in the graph in 1991 is due to a lack of data for the period concerned.



**Figure 1. The evolution of world military expenditure in millions of constant US dollars at 2009 prices. Source: SIPRI**

Indeed we can easily see in this graph that from 1999 there was a strong recovery in growth of military spending worldwide, driven primarily by North America and particularly by the United States. This trend appears to be in sharp contrast to the long-term forecasts formulated by several researchers and international agencies after the fall of the Berlin Wall, about the so called "peace dividend"<sup>5</sup>. Soon, we will find that the reconversion of the military system in civilian activities represented only a tepid mirage face the reality.

As already mentioned in the introduction, we must consider the joint evolution of defense spending and defense industry in its context more representative and more structuring in the economic world. Is for this reason that we will study the military of the United State, the country where there are the largest military expenditure in the world, and on the geostrategic level, can also be considered as the leader capitalist country, because of its supremacy both economic and political-military<sup>6</sup>.

In fact, U.S. military spending represent 45% of the world total in 2007. Following the commitments to military operations in Afghanistan, military spending in the U.S. increased between 2001 and 2007 by 59%<sup>7</sup>. Since 2007, military spending by the U.S. reached the highest levels since World War II. Certainly it is extremely important to distinguish the evolution of military spending in constant dollars and as the percentage of GDP, as shown by the graphs below.

<sup>5</sup> This notion was introduced for the first time by Knight, Loayza and Villanueva (1996), who by using a Solow-type model of growth showed that the increase in military spending produced a negative effect on growth. The quantification of benefits derived from the reduction of these costs has been called the "peace dividend".

<sup>6</sup> Similar methodological considerations are developed by Mampaey (2009).

<sup>7</sup> Source : Sipri Yearbook 2008. <http://www.sipri.org/yearbook/2008/05/05>.

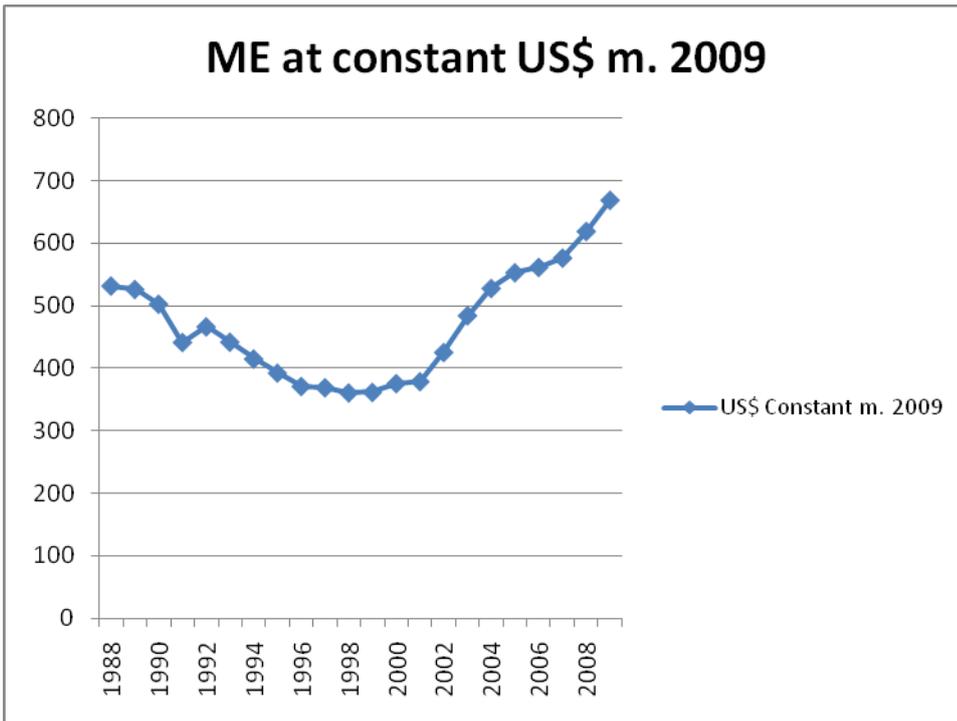


Figure 2. Military expenditure in the U.S. in millions of dollars constant at 2009 prices. Source: SIPRI

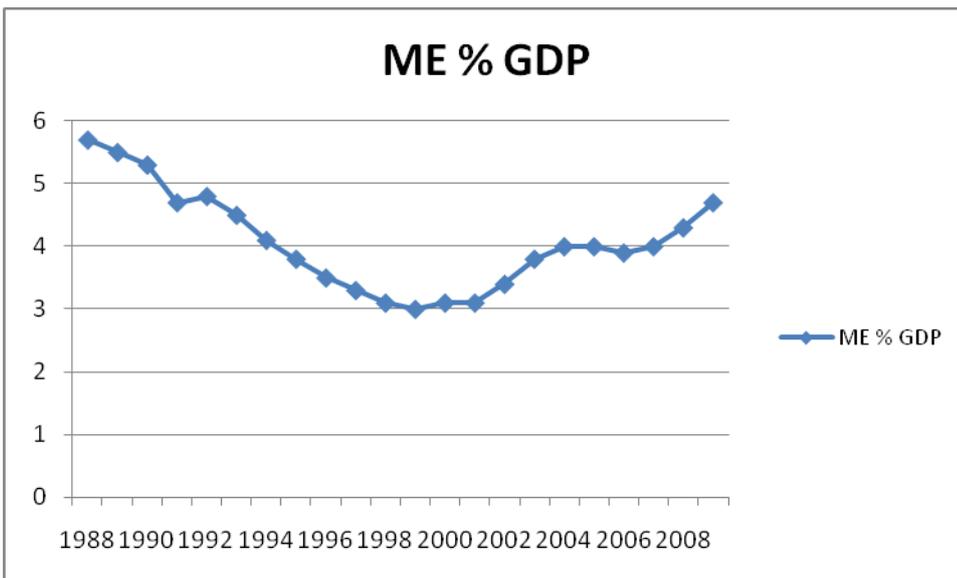


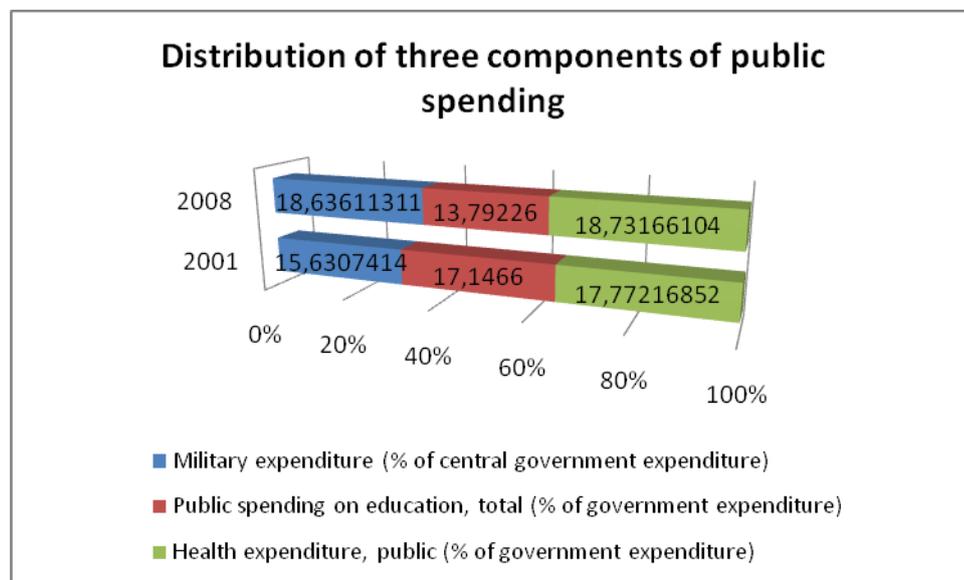
Figure 3. U.S. Military expenditures as a percentage of GDP. Source: SIPRI

So if we take into account only the change in weight of military spending as a percentage of GDP, we might conclude hastily that over time the impact of military spending on the U.S. economy declined and never reached exceptional levels hit at the end of Star Wars<sup>8</sup> (1988). However it is essential to also take into account data on U.S. military spending in constant dollars in 2009. It is then possible to note that despite the downward trend that followed the fall of the Berlin Wall during the decade 1989-1998, we are

<sup>8</sup> Star Wars (or Strategic Defense Initiative) was a project launched in 1983, during the Cold War, by the U.S. president, Ronald Reagan.

witnessing again a strong upward trend since 1999. Already in 2005, the constant dollar value of military spending exceeded the extraordinary level of 531.691 billion of dollars<sup>9</sup> recorded in 1988, and continued this strong growth during the successive period, reaching 668.604 billion dollars<sup>10</sup> in 2009.

In the United States, military spending represents the second largest public expenditure, after that of health. Comparative analysis of the evolution of the three major public expenditures (Health, Education, Military) teaches us other important lessons<sup>11</sup>.



**Figure 4 The expenditures on military, education and health as a percentage of public spending of the government in 2001 and in 2008. Source: World Bank**

A reading of the figure tells us that between 2001 and 2008, the government's public expenditure devoted to military spending has increased significantly (3%), much more than health care (1%), while education expenditures have drastically dropped by 3.4 percentage points. The interpretation of this stylized fact suggests the hypothesis that the increase in military spending resulted, at least in part, from an arbitration effect over the other expenses considered. At this stage of our research, the lack of data from the same source for the previous period, prevents us from assessing the trend of these expenditures during the whole period covered by our study. However, this result confirms the findings of an empirical study<sup>12</sup> that we carried out in 2004<sup>13</sup> whose purpose was a diachronical comparative analysis between the ratios defense spending / total public expenditure (Sd) and expenditures for that we called the "Welfare State"<sup>14</sup> (SW). On the basis of the data obtained for the period 1975-2001, we demonstrated (see graph below) that

<sup>9</sup> Source : SIPRI.

<sup>10</sup> Source : SIPRI.

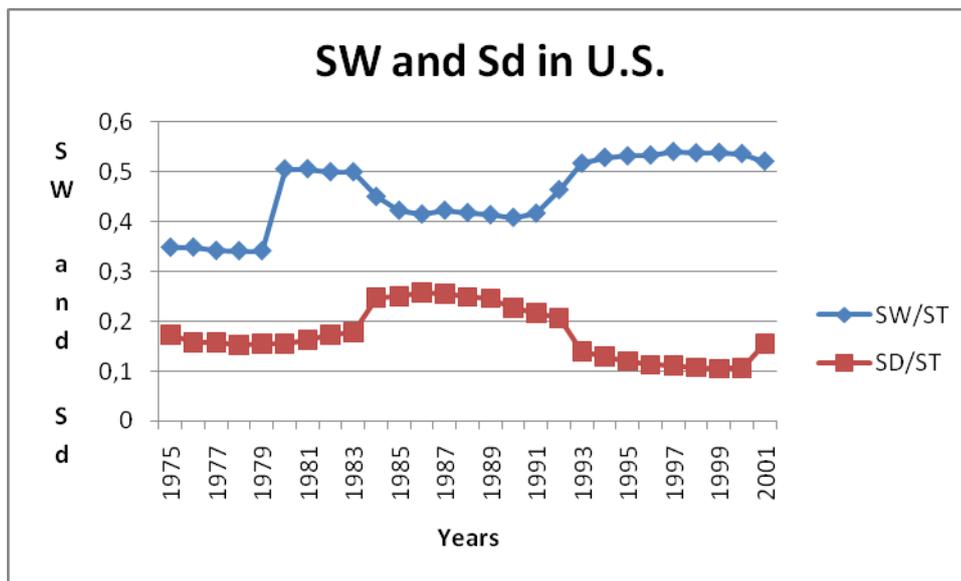
<sup>11</sup> It should nevertheless be noted that the data provided by the World Bank is not exhaustive. It does not provide complete data for the period 2001-2008. <http://databank.worldbank.org/ddp/home.do?Step=3&id=4>

<sup>12</sup> The weak point is represented by the lack of homogeneity of the data used in both analyzes and therefore, although the results are indicative, we can not bring a correct and consistent comparison of the two results.

<sup>13</sup> Gentilucci, E., *Spese militari e sviluppo economico*, Thesis for a degree in business administration, University of Urbino "Carlo Bo", Urbino, March 30, 2004.

<sup>14</sup> This ratio is given by the following formula: (Education Expenditure + Expenditure on Health + Expenditure on Social Security) / Total public expenditure. Data source: Government Financial Statistics Yearbook of the International Monetary Fund.

in the United States there has indeed been a trade-off between the two ratios characterized by an opposite and specular trend of  $Sw$  and  $Sd$  over time, when the first increases the second falls, and vice versa.



**Figure 5** Changes in defense spending and spending for the welfare state on the total public expenditure.

At this stage of our work, three results deserve especially to be highlighted in order to tackle, in the next section, the analysis of the restructuring of the armaments sector.

The first relates to how the U.S. emerged as a leader with regard to military expenditures. Their superiority is shown first by the size of the budget allocated to this expenditure compared to other countries. It suffices to note that during the period studied and in 2009 and 2010, the U.S. has supported nearly half of world military expenditure.

The second, despite the results provided in Figure 3 which shows that the ratio  $DM / GDP$  refers to the way in which military expenditures in this country have risen sharply during the period 1988-2008 (see Figure 2). Expectations related to the fall of the Berlin Wall and concerning "peace dividends" were disappointed. In fact, the decrease of military expenditures characterizing the period 1989-1998 was of short duration. At the end of a process of exceptional growth, they have reached levels even higher than that they obtained in 1988. This increase may be explained both by economic, political and military reasons inside the country and attached to the "vested interests" of the so called "military-security system"<sup>15</sup>, and by geopolitical reasons connected with the leading role played by the United States on the international scene. In the following analysis we will place our attention mainly on the first set of reasons by relying on the literature on the "military-industrial complex" and on the "military-security system" to assess the impact of the restructuring of the armaments sector.

Finally, another key element that emerged from our empirical analysis concerns the distribution of public expenditure of the state between its three main components, i.e. those for health, for military and education. On the basis of the data analysis we can see that, in the interval 2001-2008, military expenditures have experienced a significant growth, whereas at the same time, those for education fell

<sup>15</sup> We will return later on this concept which can be considered like the evolution of the "military-industrial complex."

significantly. In support of our 2004 study we were able to support the argument that there is a remarkable trade-off in the allocation of public spending, because often the increase in military spending was at the expense of allocations for education, social security and health.

## **2 The restructuring of the defense sector : from the "military-industrial complex" to the "military-security system."**

It is with the famous farewell address by President Eisenhower in 1961, we started talking about the "military - industrial complex." The "military-industrial complex" is considered an independent entity, located above the influences that may affect other types of public spending and submit them to some control.

These coalitions of interests are composed of members of the armed forces, the legislative assembly and private enterprises who produce weapons as well as the Department of Defense. In this way decisions on defense and military policy in particular, remain strongly influenced by pressure groups that compose the "military-industrial complex."

As argued by Mills (1956), one of the specific characteristics of the "military-industrial complex" is the link between the elites who have held political, military and economic power.

The military establishment consists of the armed forces, bureaucracy, private arms companies. As stressed by Galbraith<sup>16</sup>, there was "at stake [, ...] very tangible financial rewards " especially since these expenses "enriched individuals - corporate managers, scientists, engineers, members of the defense lobbies, workers of armament. " However Galbraith asserts that military power is not only supported by political and democratic decisions, but it also has a very strong self-determining power.

To better understand the functioning of the "military-industrial complex", we should highlight certain features, which are quite singular, regulating military expenditures: first it is public spending that cannot be controlled by public opinion as it is a strategic sector in which sensitive information "may" not be revealed. This aspect helps to explain the lack of transparency about feedback on military expenditure. This "secret" character results in a second feature, namely the impossibility of finding a "good measure"<sup>17</sup> to quantify the economic and financial efforts made in this sector. This prevents us from making an objective judgment on its weight because the scope is, in the final analysis, the "security" of the nation. It also follows that those who make decisions regarding the security of the nation may always justify the huge effort made in this sector without delivering verifiable data. Moreover information may also be manipulated by sector entrepreneurs and by those who have the power to "share the pie" because military spending is extremely advantageous for the contractors of the Department of Defense. As argued by Melman<sup>18</sup> rising costs and government grants is ideal for sector companies and managers of the military industry in the Pentagon because it increases their decision-making power. In addition, the most important companies in the military sector contribute significantly to the election campaigns of politicians especially members of the U.S.

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<sup>16</sup> Galbraith, J.K., *Economie hétérodoxe*, Editions du Seuil, Septembre 2007.

<sup>17</sup> The Pentagon's management accepted the growing historical cost as methodology of cost determination in the defense sector. The Air Force Systems Command in 1965 offers a guide for assessment of costs based on historical cost data to determine future ones. See Fitzgerald (1972).

<sup>18</sup> Melman, S., *Guerra S.p.A. L'economia militare e il declino degli Stati Uniti*, Città Aperta Edizioni s.r.l., Troina, 2006.

Congress. The "waste and illicit profits," as already noted in 1975 by Reich, are inherent to the nature of the sector.

The testimony of former economist of the National Security Agency of the United States, John Perkins<sup>19</sup>, emphasizes the strategic role of defense. He argues that there were three phases to force foreign states (in particular developing countries) to implement the economic policies decided by the USA. The first was the persuasion of the heads of governments, "the money in a pocket and a gun in the other", if that one did not lead, then there was a second phase in which CIA<sup>20</sup> agents went into action to overthrow the Government or to assassinate political leaders. Finally, if the goal was not reached, the armed forces went into action. The geo-economic and political vision of defense related to the international role of the United States show us the new form of exploitation of sources of profits where they occur. So here's the concept, according to which militarism is only the armed wing of capitalism is revitalized by a new powerful force, thus restaging of the concept of imperialism<sup>2122</sup>.

However, today as in the past, to try to understand more fully the challenges facing the sector we must ask a basic question, "Cui prodest"? Indeed it is in Seneca's tragedy, *Medea*<sup>23</sup> that we identify the following verses: "Cui prodest scelus, is fecit", that is to say literally: "for whom the crime advances, he has done it"<sup>24</sup>. And so we return to the "vested interests" hiding in the defense sector.

Certainly, today, we can identify the main source of self-determination of military power in the network of relationships and power cemented by the economic-financial component, which links the major players in the defense sector by uniting them in the common goal of optimizing the interests of benchmark lobbies often manifested by profit maximization.

Today the concept of "military-security system" was replaced by that of the "military-industrial complex." In order to understand the true nature of this change, we must analyze its two key issues: the security issue and the dynamics of the financialisation of defense, which will be discussed in the next section.

As stated by Serfati (2008<sup>25</sup>) one of the most important factors characterizing what he defines as the current military-industrial system, is represented by the transition from the concept of defense to the more general one of security. Indeed, Serfati explains that the concept of security refers to a strategic dimension and is a sort of corollary to the current globalization.

We fully share with Serfati the focus on the strategic dimension of the concept of security in the current globalization and the idea of a transition from the model of "military-industrial complex" to that of "military-security system", while emphasizing the continuity of functions that these two modes of regulation play in the reproduction of capitalism, through a combination of historically determined

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<sup>19</sup> See Report, "Effetto valanga" Michele Buono interview with John Hopkins, 30 October 2011.

<sup>20</sup> Central Intelligence Agency was founded in 1947 in the United States by the National Security Act.

<sup>21</sup> For a deepening into the links between militarism and imperialism, see: Serfati, C., *Impérialisme et militarisme : actualité du XXI<sup>e</sup> siècle*, Editions Page deux. Collection « Cahiers libres », Losanna, 2004.

<sup>22</sup> See Hobson (1902).

<sup>23</sup> Seneca, L.A., *Medea*, Translations of Alfonso Traina, facing Latin text. Preface to the text, introduction and notes by Giuseppe Gilberto Biondi, pp. 165, Fabbri Editore, Milan, 2000.

<sup>24</sup> Our translation.

<sup>25</sup> Serfati, C., *Une économie politique de la sécurité*, Karthala, Paris, 2008.

institutional forms. The political and ideological goal of a creation of the Department of National Security<sup>26</sup> was to promote the extension of the concept of "security" beyond the more restrictive connotation of "defense".

## **2.1 *The financialization of the defense sector***

In consideration of the fact that the objective of our analysis is to evaluate the defense sector in the economic environment, we cannot ignore one of the phenomena that, with the concentration, have most strongly marked recent economic changes: it is the financialization of the economy. In fact we are witnessing the rise of a strong system, mainly characterized by the "*accumulation à dominante financière*"<sup>27</sup>.

Besides, we must focus on the financial component to analyze the changes in the "military-industrial complex" and its transition to the "military-security system." From the 1980s on, but especially in the 1990s, there was a restructuring process of the armaments sector characterized by two main phenomena: the strong dynamics of industry concentration accompanied by the sector financialisation. These two phenomena are closely linked because, increasingly globalized finance penetrates the capital of military industrial groups that are restructuring by increasing their degree of concentration, also thanks to capital provided by institutional investors. Indeed, according to Mampaey (2009)<sup>28</sup>, on average the percentage of capital held by all the institutional investors in the twelve major groups of armament, reached the level of 80% while the average of the Standard & Poor's (S & P ) is 71.5%. Still, "the fifteen largest institutional investors in a group have on average 47.6% stake in this group," but in fact "the capital of major weapons companies is focused on a handful of assets managers, present in the capital of almost all major groups of weapons, and often in a position of the reference shareholders with stakes from 5% to over 15%."

Restructuring of the armaments industry, is characterized also by a phenomenon closely related to that just described above. In effect, managers of large enterprises, as in the civilian sector of the economy, have on average a percentage of capital of around 5%. This transformation explains why companies are also increasingly subject to the criteria of financial profitability and thus searching for short-term profits. In our opinion, this trend, far from marginalizing, strengthens, in the name of free market, the power of some "vested interests", while opening the door to the logic of financial speculation.

## **2.2 *The concentration of the defense sector***

One of the processes characterizing the world economy, in the sense of Chesnais, is "the tendency to homogenization, taking the form of strengthening the" world market "as a common area of valorization that puts all companies in competition causing a direct elimination process and a strictly global

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<sup>26</sup> To deepen the role played by the Homeland Security Department, see L. Mampaey and C. Serfati, "Les groupes de l'armement et les marchés financiers : vers une convention « Guerre sans limites? », *La finance mondialisée. Racines sociales et politiques, configuration, conséquences*, edited by François Chesnais, La Découverte, Paris, 2004.

<sup>27</sup> See on this subject: F. Chesnais (2002) op.cit. and C. Serfati, "Puissance du capital financier : les limites endogènes du capitalisme mondialisé", in G. Duménil and D. Lévy, *Le Triangle infernal*, op.cit. and "La domination du capital financier" in Appel des économistes pour sortir de la pensée unique, *Les pièges de la finance mondiale*, book edited by F. Chesnais and D. Plihon, Editions La Découverte et Syros, Paris, 2000.

<sup>28</sup> Mampaey, (2009), pp. 249-251.

concentration."<sup>29</sup> From this observation, the question is whether these trends also affect the field of defense economics. Statistical data provided by SIPRI show that in 2009 seven of the ten largest companies in the defense sector were American.

Starting from the middle of the 1990s, the defense sector has been marked by an increase in the degree of concentration of military industries. In effect, we have seen an important process of mergers and acquisitions that occurred primarily in the United States. In the table below, we can observe the evolution of the concentration in the sale of weapons and in total sales of the largest companies in the defense sector, in the period 1990-2005.

<b>Concentration Ratios: Changes in Concentration Ratios (% of combined total of SIPRI Top 100 Companies, 1990-2005)</b>								
	Arms Sales				Total sales			
Company selection	1990	1995	2000	2005	1990	1995	2000	2005
5 Largest Companies	22	28	41	43	33	34	43	45
10 Largest Companies	37	42	57	62	51	52	61	62
15 Largest Companies	48	53	65	69	61	64	71	73
20 Largest Companies	57	61	70	74	69	72	79	81

**Table 1: The change over time of concentration ratios of the defense sector. Source SIPRI.**

The level of concentration of the sector has grown remarkably in the interval 1990-2000, while between 2000 and 2005, the increase was less important. In fact, this industrial strategy found its starting point around 1993, when the Deputy Secretary to the Department of Defense in the United States, W. Perry, prompted the leaders of the largest companies to merge.

This process has been stopped to some extent in 1998 when the Department of Justice expressed an opinion unfavorable to the acquisition project of Northrop Grumman by Lockheed Martin. However, acquisitions started up again, and using the SIPRI data, we achieved two scatter plots showing the evolution of the concentration of companies through their market share (see Figures 6 and 7).

The two graphs below concern the evolution of the concentration of 20 companies of the military from 1990 to 2005. They refer respectively to total sales and sales of arms of the top 20 companies in the armaments sector. We marked the trend line to show more explicitly the increase in the market share held by the enterprises concerned.

<sup>29</sup> Chesnais, F. « La théorie du régime d'accumulation financiarisée : contenu, portée et interrogations. », Forum de la Régulation, Paris, 11-12 October 2001, Revised and amplified for distribution, March 29, 2002.

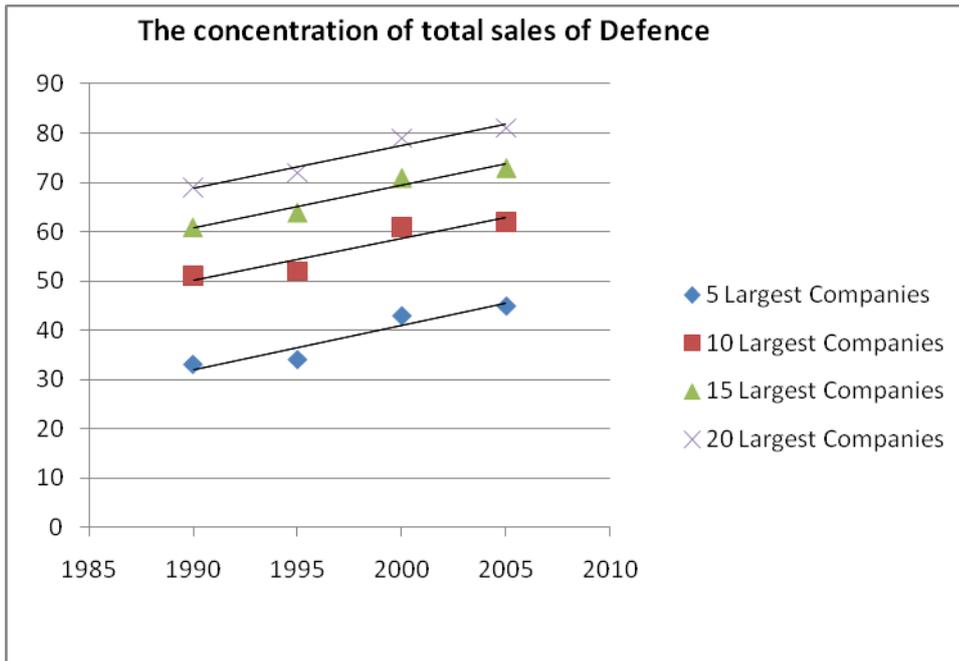


Figure 6 - The concentration of total sales of Defence. Source: SIPRI

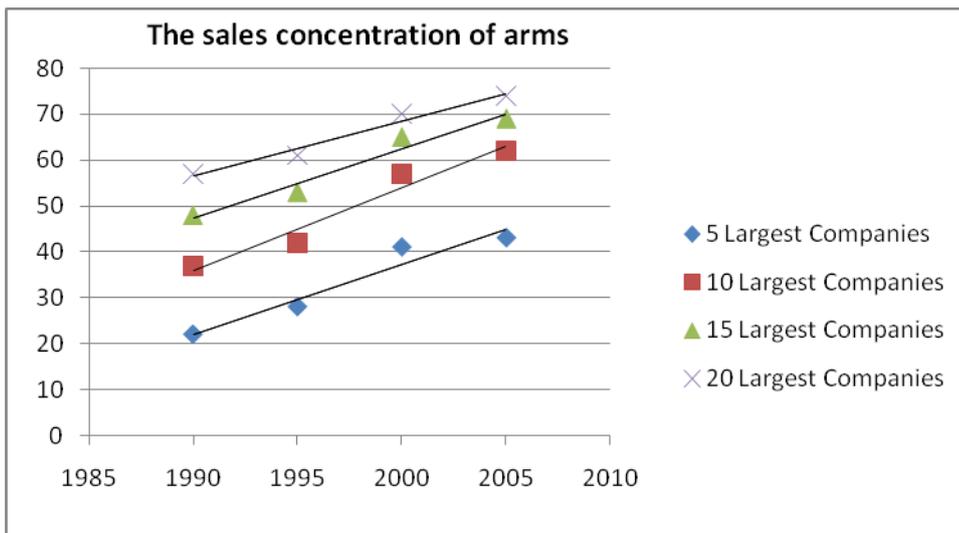


Figure 7 - The sales concentration of arms. Source: SIPRI

The market share of weapons held by the top five companies of armaments between 1990 and 2005 increases from 22% to 43%, while the one owned by the top 20 companies from 57% to 74%.

The linear trend line is a good approximation of the evolution of the concentration as shown by the value of the coefficient of determination ( $R^2$ ) which is very significant, approaching unity (see Table 2).

	Value of R <sup>2</sup>			
	5 Largest Companies	10 Largest Companies	15 Largest Companies	20 Largest Companies
R <sup>2</sup> total sales	0,898	0,8733	0,9607	0,9556
R <sup>2</sup> arms sales	0,9346	0,9529	0,9607	0,973

**Table 2: Values of R<sup>2</sup> calculated for the trend lines of Figures 6 and 7.**

It is clear that the increase in the concentration of the market was very strong. This is especially horizontal concentration, but also vertical concentration. In fact, the disengagement of the groups that produce mainly for the civilian activities from armaments production (especially the sub-armament systems) has determined the acquisition of these activities by the major groups of armaments, namely the *prime contractors*<sup>30</sup>. This fact has led to increase the market power that Mampaey and Serfati (2004) call "relational power"<sup>31</sup> because of the characteristics of the armaments sector. As evidenced by Mampaey, "the scheme of vertical concentration [...] does not match the dominant strategic model, only if we consider that the technological process of production of weapons is, in its entirety, a specific trade."<sup>32</sup>

This leads us to conclude that the defense sector continues an original development dynamic. In fact, its entirely unique evolution brings us to characterize it as a complex system of interrelations between several actors, bearing special and convergent interests.

Increasing the concentration determines a two sided phenomenon: on the one hand, there is an increased dependence on the arms industry compared to the military component of their business, and therefore compared to the decisions of the DoD as well as compared to the strategic choices made by those responsible for international security policy.

On the other hand, the number of companies which are "prime contractors" decreases more and more, as well as the number of enterprises which are suppliers of armament sub-systems. Therefore, the DoD is in a situation where competition among companies falls sharply. This raises questions and doubts about the quality and performance of the systems proposed by the "prime contractors" that, following their vertical integration, can control most of the market, thanks to their "relational power", reinforced moreover by the new financial component. Thus, as we have just seen, in the analysis of factors leading to this high concentration we do not forget the role of financialization in the dynamics of mergers and acquisitions that changed the world economy.

### 3 General conclusions

From the analysis in this contribution, it is possible to identify two main sets of conclusions that articulate in a logical order, both theory and history, as well as empirical evidence and theoretical conceptualization.

1. The first set concerns the identification of three key stylized facts, often unnoticed in the economic literature on this topic, namely:

<sup>30</sup> The "prime contractors", that is to say the main contractors of DoD (Department of Defense).

<sup>31</sup> "*Pouvoir relationnel*".

<sup>32</sup> Mampaey (2009), p. 239.

- After a period of sharp decline between 1989 and 1998, military spending has begun to grow, reaching levels higher than those recorded in 1988;
  - At the sectoral level, the financial component of the economy has affected this sector through the provision of capital from institutional investors as well as through the acquisition, by the managers, of a part of the company's capital (around 5%);
  - Finally, the exceptional dynamics of industrial concentration that characterized the industry and which sees the top twenty companies owning more than 80% of the market.
2. The second set of conclusions concerns the theoretical interpretation of the meaning and the issues of these stylized facts. It refers to three main considerations that can contribute to explain the thesis, proposed by Serfati of the passage, from the "Military-Industrial Complex" to the "Military-security system".
- a. First, the dynamics of military spending is the driving factor of sector restructuring. This latter can be regarded as the product of the response of the arms industry and of the old "military industrial complex" to the effects of the budgetary cuts to military spending, which followed the fall of the Berlin Wall. It should be understood as the result of a period of severe crisis for interest-bearing (more or less hidden) of the defense sector, a crisis triggered by cutting military spending in favor of the so called "peace dividend". Expectations for this latter were ephemeral and deceptive: after nine years, the restructuring of the defense sector by means of concentration and financialisation, has laid the groundwork for what is called the "military-security system". In this context, many subcontractors, who produced arms subsystems for prime contractors have disappeared; companies that had a dual<sup>33</sup> production, have withdrawn completely from the defense sector, and many of them have been acquired (vertical acquisition) by the prime contractors that have diminished following a process of horizontal mergers and acquisitions. With the exception of some particular cases, the authority to regulate competition was rather tolerant, as evidenced by the concentration data. In parallel, we are witnessing a radical change in the shareholding structure of the defense industries: institutional investors are "reverted" in this sector to achieve much higher shareholdings than in the rest of the industry. Moreover, the managers have had access to participation in the capital firms.
  - b. Second, the joint effect of the dynamics of financialization and concentration is associated with an industrial strategy more short-term oriented. However, submission to the logic of the short-term financial speculation of a sector strategic by definition such as the defense, can, in our view, accentuate trends to waste and to the pursuit of illegal profits, which have always characterized this sector. In this sense, the old "military industrial complex" changes and becomes systemic. Here we have one of the key factors in the genesis of what Serfati called the "military-security system".

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<sup>33</sup> That is to say, in the two branches of the economy: civil and military.

- c. Finally, these changes in the structure of the "military-industrial complex" have also enabled the most powerful "vested interests" to win the internal war triggered by budgetary cuts to the sector. They have also changed its nature and turned it into a "military-security system." The power output of the system is enhanced, while allowing to endogenize and strengthen some of the largest lobbies of power among the oldest "vested interests". Vested interests and the economy in all its aspects, including the financial dimension, support each other taking advantage of the oligopolistic market gained, in a more or less hidden way. The links between interest-bearing were tightened systemically, while the influence and the power of finance on the DoD, on the military and on the politicians increased.

The transition to the "military-security system," resulting from the logic of sector restructuring, was also reinforced by the more extensive assertion of the security concept that has replaced that of defense.

The monster of whom Eisenhower spoke in his farewell address to the nation appeared to have been mortally wounded by the disarmament race that followed the end of the Cold War. However, soon we realized that the military industrial complex, like the Phoenix is always reborn from its ashes. It has reappeared, transformed, more powerful and less vulnerable than ever before: the power of the lobbies around him, increasingly enhanced.

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