

# **The Changing Military Industrial Complex**

**J Paul Dunne**

University of the West of England, Bristol and University of Cape Town

**Elisabeth Sköns**

Stockholm International Peace Research Institute (SIPRI)  
Stockholm

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## **Abstract**

The first reference to a military industrial complex (MIC) was made by US President Eisenhower in 1961. He then referred to something historically specific: the build-up of a large permanent military establishment and a permanent arms industry, which raised his concerns for the unwarranted influence of these societal forces. Subsequently the meaning of the MIC evolved to refer to the vested interests within the state and industry in expanding the military sector and in increasing military spending, with external threats providing the justification. During the Cold War, when the defence was strongly focused on deterrence, this produced a set of specific state-industry relationships that in turn generated a beneficial environment for the development and strengthening of the MIC. With the end of the Cold War, the conditions for a strong MIC were less favourable, at least initially, with changes in the international security environment, cuts in military spending and arms production, and ensuing privatisation, commercialisation, and internationalisation of military activities as well as of arms production. This paper discusses how the MIC has been affected by these changes and the degree to which there has been continuity of old power structures and a continuing MIC.

**Keywords:** Military industrial complex; arms production

**JEL:** H56; D4

## **Introduction**

Dwight Eisenhower, an ex-military Republican President of the USA, in his 1961 Farewell Address was the first to express concern about the impact of the 'conjunction of an immense military establishment and a large arms industry', which, he noted, was 'new in American experience'. He alerted councils of governments, saying that 'we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex [MIC]. The potential for the disastrous rise of misplaced power exists and will persist.' (Eisenhower 1961:162). Subsequently, the concept of the military-industrial complex was developed by social scientists, being seen as coalitions of vested interests within the state and industry, which could lead to decisions being made which were in the interest of the coalition members and not necessarily in the interests of national security. This coalition was expanded to include not only interests within the military establishment and the arms industry but also within the political organs (Dunne, 1995).

Much of the work on the MIC sees it as a fairly clear and constant feature of the Cold War, when threats were overemphasized to justify absurdly high levels of military spending. In the literature it is used to represent the groups within society that benefit from military spending and its growth, but what is meant by it is often vague and sometimes inconsistent (Fine, 1993). With the end of the Cold War the security environment changed radically and initially this had a profound impact on the military sector. Post-Cold War reductions in military expenditures and changes in military requirements and technology led to considerable changes in the Defence Industrial Base (DIB) and in the relations between the DIB, the military and the legislature (that is where the pork-barrelling takes place) (Chapman and Yudken, 1992).

This paper considers the nature of the MIC, how the changes in the new security environment have affected it and indeed whether the concept of a MIC is still useful. Finally, it assesses the present state of the MIC and its likely future prospects and the challenges for governance.

## **The Military Industrial Complex**

The core of any theorising on the Military Industrial Complex is the existence of a strong Defence Industrial Base around which vested interests can coalesce. What Smith (1977) characterises as the liberal or institutional approach, hinges on the nature of an MIC as composed of conflicting interest groups and institutional linkages. The MIC becomes a self generating structure (agency) which embodies the interests of various groups in society. The strength of the vested interests and their competition for resources leads to internal pressures for military spending, where external threats are often exaggerated to provide necessary justification. This leads to the MIC imposing an unnecessary burden on the rest of society and having adverse effects on the civilian sector. It crowds out civilian resources, and the companies involved develop a culture which leads to inefficiency and waste and an increasing reliance on defence contracts as they become less able to compete in the civilian market (Melman ,1985; and Dumas, 1986). The

theoretical underpinnings of this work were originally based on C Wright Mill's analysis of the power elite, but there are also variants, which follow a Weberian focus on the role of bureaucracy and the work of Galbraith on coalitions (Slater and Nardin, 1973) and, in the US context, the work of Veblen on the importance of the military 'waste' to the ideological and institutional structure of the US economy (Cypher, 2008).

There is also some work on the MIC from a Marxist perspective, with a number of strands which tend to differ in their treatment of crisis and in the extent to which they see military expenditure as necessary for capital accumulation (Dunne and Sköns, 2010; Dunne, 1990). Best known is the underconsumptionist approach developed from the work of Baran and Sweezy (1966) which sees military spending as important in preventing realisation crises, by allowing the absorption of surplus without increasing wages, unlike other forms of government spending, and so maintaining profits. A similar perspective, but one which focuses on the tendency for capitalist economies to overproduce is the permanent arms economy. In this theory, military expenditure is wasteful and the allocation of resources into it prevents overheating. Thus the inefficiencies of the MIC and the DIB can be seen as positive factors, and the development of the MIC plays a positive role in capitalist development (Howard and King, 1992).

While the concept of an MIC grew out of the particular historical circumstances of the Cold War, it appears to be of most value as a descriptive rather than an analytical concept (Fine, 1993). This has led some researchers to focus on the dynamics of the MIC at an empirical level, with Smith and Smith (1983) arguing that the MIC should be seen as a coalition of interests and that the focus should be on the structural pairings that have developed between particular sections of private industry and particular parts of the military, which have inevitably led to mutual interests. Considering the concept of an MIC in this way means that there is no reason that the concept of a MIC cannot remain a useful way to understand the dynamics of the modern military sector.

## **The Changing Security Environment**

The end of the Cold War saw profound changes in the international security environment. World military expenditures and arms exports peaked in the mid-1980s, fell gradually at first with improving East-West relations, then fell rapidly with the disintegration of the Soviet Union. While military expenditures in post-Soviet states (most notably its successor state, Russia) ended up at a fraction of those of the USSR, reductions in the US were not as radical, thus reflecting the US dominance in the post-Cold War world.

The fixed costs of R&D for major systems continue to grow, both for platforms and for the infrastructure (e.g. satellites, strategic air assets) and information systems needed to support network-centred warfare, part of the so called Revolution in Military Affairs (RMA). Given the long lead-times and the commitments made by government bodies, research teams and companies, pressures remain to continue to produce these weapons systems and to find roles for them. Together with the resistance to cut defence plans at

the same rate as defence budgets for their financing, in particular in the US, this created a mismatch which produced a pressure for renewed increases in military spending.

During the 2000s, it became increasingly clear that the US and Europe (NATO) were unlikely to face an enemy that could provide a symmetric response with more informal asymmetric guerrilla-type conflicts more likely, requiring rather different weapons systems. This uncertainty about the enemy and the growth of 'homeland security' are changing the nature of demand. In particular they are making communications and surveillance technologies increasingly important. NATO and EU troops are also increasingly involved in peacekeeping roles around the world. Apart from changing the nature and structure of the forces, these changes moved demand towards high technology systems where much of new development took place in the civilian ICT sector. Thus, while many of the long-term weapon programmes initiated during the Cold War remain, there has at the same time been a clear and important qualitative change in the nature of technology (Brzoska, 2005; Dunne and Sköns, 2010).

As a result of a long-term rapid development in many civilian technologies, the relative positions of military and civilian technology have been reversed in several areas of sophisticated technology. From the end of World War II to the 1980s, military technology had tended to be in advance of civilian technology, but by the 1990s in many areas, particularly electronics, military technology lagged the civilian sector. This was largely because the long lead-times involved in military procurement meant that much of the technology was obsolete before the system came into service (Smith, 2009). Whereas in the past the spin-off of military technology to the civilian sector was an important argument for the value of military production, now there is more spin-in of civilian technology to the military. Many areas of technology which were once the preserve of the military and security services, such as cryptography, are now dominated by commercial applications and an increasing number of components that go into the major weapons systems are commercial 'off-the-shelf' (COTS) products, produced by manufacturers who would not necessarily see themselves as part of the arms industry (Brzoska, 2005). Companies in the electronics and IT sectors, that in the past had little involvement with arms production are finding themselves part of the defence industrial base and sometimes the target of diversification efforts by the major arms producers (Sköns & Dunne, 2008; Dunne, 1995; Dunne et al, 2007).

Production of major weapon systems is concentrated in relatively few states, in contrast to small arms production, which is relatively standard and widely dispersed. Although defence companies rely on domestic support through procurement and support for exports and so are not truly 'transnational', they have, nonetheless, internationalised, with major non-US defence companies also seeking to buy defence contractors in the US as a means of entering this large defence market. Companies are also changing their supply chains, reflecting internationalisation. Governments are increasingly willing to recognise that the costs of high-technology research and development when combined with smaller national production runs have made it more necessary to make economies of scale through international collaboration and industrial restructuring. This is very different

from the position a few decades ago when governments aimed to maintain a comprehensive national industrial base for defence (Dunne and Sköns, 2010).

The outsourcing of functions that once were provided by the military has resulted in a profound expansion of the military services industry (Singer 2003; Wulf 2005). This development has been reinforced in particular by the war in Iraq, for which a great number of military services companies have been contracted. As a result, the number of major companies specializing in provision of military services has increased (Perlo-Freeman and Sköns, 2008). This trend could lead to a reduction in the defence specialisation of all but the major contractors and changes in the nature of the companies involved in the defence sector, with an increase in IT and service contractors with the growth of privatisation across Europe. (Dunne, 2006; Dunne and Surry, 2006). Barriers to entry are likely to remain considerable as the marketing of military products differs from commercial products and personal contacts and networking are likely to remain more important than general advertising (Dunne & Sköns, 2010).

Overall, while there have been significant changes in the industry part of the MIC, the changed nature of the companies should not obscure the fact that many of the features of the Cold War industry remain. The major contractors, although there are less of them and they have 'hollowed out' and often diversified into new security products, are still dominant and often have considerable monopoly power and influence on government policy. Internationalisation has given them new freedoms, but they are still dependent on the home market and government support. The newcomers have developed successfully in some of the new areas, but have not successfully displaced the incumbents in the core areas of arms production.

## **State Industry Relations**

With the end of the Cold War, governments changed their attitudes to the arms industry. The resulting cuts in military spending, called into question the ability of even the major countries to maintain a comprehensive indigenous defence industrial base. Governments were in a position where the change in the security environment made it harder to justify previous levels of support for the industry and 'competitive procurement policies aimed at value for money were introduced in a number of countries' (Dunne and Macdonald, 2001). In the US there was a striking change in industrial policy. During the Cold War industrial planning was undertaken through the Pentagon, but this was only an implicit industrial planning. In 1993 a merger wave was stimulated by the 'last supper' when Pentagon Deputy Secretary, William Perry, told a dinner of defence industry executives that the DOD would begin subsidizing mergers that were expected to result in cost savings. This policy ended when the process had resulted in a degree of concentration that was considered to be detrimental for competition and thus the cost trends that the DOD had sought to prevent, and a proposed merger between Lockheed Martin and Northrop Grumman was blocked in early 1997 (Markusen and Costigan, 1999).

In Europe, with a number of smaller defence markets, restructuring necessarily involved cross-border mergers, which raised political issues. The major players in Europe also had quite different ownership structures, including a substantial degree of state ownership in France. Both factors made a financially-driven merger boom of the US type more difficult. Nonetheless, there was an increase in concentration and by 2005 the West European restructuring process had resulted in a web of cross-border ownership and collaboration relationships in aerospace and electronics, while Europe-wide integration in other sectors was more limited. The developing defence industrial networks also had a rather significant transatlantic dimension (Dunne & Sköns, 2010).

Concentration in the defence industry is still not as high as in comparable high-tech industries, however, suggesting that market forces have not been allowed to work freely in the procurement, production and sales of weapon systems. This could also be the result of a segmentation of the arms industry with strong concentration in aerospace and electronics and less in other defence industrial sectors. At the systems level in aerospace and electronics oligopolist tendencies are emerging at the international level, while in other sectors industry remains nationally fragmented (Sköns, 2009; Dunne et al, 2007).

In addition, the privatization of previously state-owned companies impacted on the integration of the West European defence industry as previously state controlled companies were forced to operate according to corporate business principles. The true impact on government influence and control is less clear, however, and differs across countries depending on their government's policy towards their private defence industry. What may turn out as being more important in the long run is the emergence of a security industry outside the traditional defence industry: the privatized military industry engaged in outsourced military services that has previously been provided within the military establishment, and the security industry engaged in the provision of goods and services for personal safety, primarily to the private sector but increasingly also to the government sector (Sköns, 2009).

The location of defence industries and facilities has historically reflected security issues with the result that there are defence dependent communities in various locations within any country with a large defence industry. The changing nature of the industry and of security means the geographical pattern is also changing. Closures cause considerable problems for communities as often the jobs lost are rather different to those available. While evidence suggests that defence workers, given their high skills, find new jobs relatively easily, it is usually lower-paid work and there is considerable disruption. The increased internationalisation of the supply chain also has implications for the geographical distribution of production and employment, reducing the major contractors' impact on their traditional local economies (Dunne & Sköns, 2010; Dunne, 2006).

All of these developments have led to a set of state-industry relations that look rather different to those of the old Cold War MIC, but they still suggest a dominant role for national governments and continuing close links between government, industry and the military. In Europe privatisation has reduced direct state links, but indirect ones remain powerful, though in some ways less visible, as in the US. The composition of the vested

interests has changed and expanded, but they still remain a powerful lobbying group in all countries.

## **Conclusions: Continuity and Change**

The idea of a Military Industrial Complex was a useful concept for understanding the success of the military establishment in receiving unprecedented government budget allocations in the USA and other advanced economies during the Cold War. It is a problematic concept theoretically, but it retains much of its value in understanding developments in military spending and arms production after the end of the Cold War. The components of the MIC may have changed but the dynamic and impact of vested interests remain.

Internationally, there is increasing US dominance, with US and European links developing and increasingly geographically dispersed supply chains. The old arms producers remain dominant, though they have restructured, becoming systems integrators, outsourcing to civil companies and internationally, and spinning in civil technologies and components, rather than spinning off innovations for the civil sector. There are a lot of new companies entering in the new security areas, some of whom do not know they are involved in arms production as their civil products are integrated into arms systems. New important players have emerged and there have been a considerable number of takeovers by the old primes to acquire expertise in new areas.

There have been marked changes in Europe, with privatisation and EU level legislation changing the state industry relations. Whether this is a move in the direction of a European wide MIC is unclear, as the transatlantic links would seem to be US-UK. Certainly the privatisation of European companies is altering state-industry relations to something closer to that in the US and there are numerous examples show how close and sometimes murky that relationship can be.

It seems clear that changes have taken place, but that there is also considerable continuity in the structure of the vested interest that make up the MIC and in its influence. It is still a political rather than economic logic that controls the international arms market at heart. There are clear governance issues as the restructuring could be argued to have left an MIC that is just as pervasive and powerful, but considerably less visible, less controllable and more international. Any future attempts to control and manage the sector will need to operate at an international rather than just a national level.

## References

- Baran, Paul and Paul Sweezy (1966) *Monopoly Capital*, London, Monthly Review Press.
- Brzoska, Michael (2005), *Trends in Global Military and Civilian Research and Development (R&D) and their Changing Interface*, at: [www.ifsh.de/pdf/aktuelles/india\\_brzoska.pdf](http://www.ifsh.de/pdf/aktuelles/india_brzoska.pdf).
- Chapman, Gary and Joel Yudken (1992) *Briefing Book on the Military-Industrial Complex*, Washington DC, Council for a Livable World Education Fund. Dec.
- Cypher, James M (2008) 'Economic Consequences of Armaments Production: Institutional Perspectives of JK Galbraith and TB Veblen', *Journal of Economic Issues*, vol. XLII, no. 1, March, pp 37-47.
- Dumas, Lloyd (1986) *The Overburdened Economy*, University of California Press.
- Dunne, J Paul and Elisabeth Sköns (2010), 'The military industrial complex'. Chapter 20 in Andrew T. H. Tan (ed), *The Global Arms Trade: A Handbook*. Routledge, London and New York, pp 281-292.
- Dunne, J Paul and Eamon Surry (2006), 'Arms Production'. Chapter 9 in *SIPRI Yearbook, 2006: Armaments, Disarmament and International Security*, Oxford, Oxford University Press, pp 387-418.
- Dunne, J Paul and Derek Braddon (2008) 'Economic Impact of Military R&D', Report for Flemish Peace Institute. April 2008. Available at <http://www.flemishpeaceinstitute.eu/>
- Dunne, J Paul, Maria Garcia-Alonso, Paul Levine and Ron Smith (2007) 'The Evolution of the International Arms Industries'. Chapter in Wolfram Elsner (ed), *Arms, War, and Terrorism in the Global Economy Today - Economic Analyses and Civilian Alternatives*. Transaction Publishers, New Brunswick (NJ, US) and LIT, Zurich..
- Dunne, J. Paul (1995) 'The Defence Industrial Base', Chapter 14 in Keith Hartley and Todd Sandler (eds), *Handbook in Defense Economics*, Elsevier, pp. 592-623.
- Dunne, J. Paul (2006) 'Sector Futures: Defence', Report for Cambridge Econometrics, 2006: European Monitoring Centre on Change website, a project of the European Foundation for the Improvement of Living and Working Conditions [http://www.emcc.eurofound.eu.int/sector\\_futures.htm](http://www.emcc.eurofound.eu.int/sector_futures.htm)
- Dunne, J. Paul and G. Macdonald (2001) 'Procurement in the Post Cold War World: A Case Study of the UK', Chapter in Claude Serfati (ed), *The Restructuring of the European Defence Industry*, Cost A10 Action, Office for Official Publications for the European Communities, Brussels.
- Eisenhower, Dwight D. (1961) 'Farewell Address'. In Dean Albertson (ed.), *Eisenhower as President*, New York, Hill and Wang, 1963.
- Fine, Ben (1993) 'The military industrial complex: An analytical assessment', *Cyprus Journal of Economics*, vol. 6, no. 1 (June), pp. 26-51.
- Howard Michael, and John King (1992) 'A History of Marxian Economics: Volume 2, 1929-90', Macmillan, London.



- Markusen, Ann R and Sean S Costigan (eds) (1999) *Arming the Future: A Defense Industry for the 21st Century*, Council on Foreign Relations Press, New York.
- Melman Seymour (1985) *The Permanent War Economy*, New York, Simon and Schuster.
- Perlo-Freeman, Sam and Sköns, Elisabeth (2008) 'The Private Military Services Industry', *SIPRI Insights on Peace and Security*, no. 1, September.
- Singer, Peter W. (2003) *Corporate Warriors: The Rise of the Privatized Military Industry*, Cornell Studies in Security Affairs, Ithaca, NY, Cornell University Press.
- SIPRI Yearbook: Armaments, Disarmament and International Security*, Stockholm International Peace Research Institute, Oxford, Oxford University Press, various years.
- Sköns, E. (2009) *The Arms Industry and Globalisation*, Unpublished PhD thesis, University of the West of England, Bristol.
- Sköns, E. (2010) 'The US defence industry after the Cold War', Chapter 17 in Andrew T. H. Tan (ed), *The Global Arms Trade: A Handbook*. Routledge, London and New York, pp 281-292.
- Sköns, Elisabeth and Paul Dunne (2008) 'Arms Production, Economics of', in Lester Kurtz (ed), *Encyclopaedia of Violence, Peace and Conflict*, 2nd edition, Elsevier.
- Smith, Ron (1977) 'Military expenditure and capitalism', *Cambridge Journal of Economics*, vol. 1, pp 61-76.
- Smith, Ron (2009) *Military Economics: The Interaction of Power and Money*, Palgrave Macmillan, Basingstoke.
- Smith, Ron and Paul Dunne (1994) 'Is military spending a burden? A marxo-marginalist response to Pivetti', *Cambridge Journal of Economics*, vol. 18, pp. 515-521.
- Smith, Ron and Dan Smith (1983) *The Economics of Militarism*, Pluto Press, London.
- Wulf, Herbert (2005) *Internationalizing and Privatizing War and Peace*, Houndmills, Palgrave Macmillan.