BOOK REVIEWS

Arms Industry Limited

Herbert Wulf, ed.

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The end of the Cold War and the revamping of military policies has been accompanied by a substantial restructuring among firms and industries that produce for military markets. These changes in the world's armaments industries are documented and analysed in *Arms Industry Limited*, from the Stockholm International Peace Research Institute (SIPRI). SIPRI has a well-deserved reputation for producing high quality reports on military policies, strategies and budgets, and arms production and foreign military sales. SIPRI's study on the state of the world's arms industries will do no damage to that reputation. *Arms Industry Limited* contains country or region-specific chapters on defence budget policies and trends and industry responses prepared by experts in the topic and the region or country they are writing about. The volume thoroughly documents conditions in developed countries (the United States, Western Europe, Japan and Australia), developing countries (Turkey, China and a survey chapter on 12 countries), and economies in transition (the former Soviet Union, Poland and the former Czechoslovakia).

For the developed economies, the struggle to maintain viable defence industrial bases in the context of increasing budgetary stringency is a dominant theme of the SIPRI volume. One issue that receives considerable attention is the inter-nationalization of military markets. International arms sales, of course, have a long history. While countries seek to be autonomous in their access to armaments and related output, for security reasons, they also recognize the reality that the best technology and most efficient producers often reside outside their borders. Thus, a thriving international trade in weaponry has been in existence for some time. However, there is increasing evidence that military production is going ''global'' and that producers of military goods and services are being subject to the logic of transnationalization. Transnationalization is a major theme only in Elizabeth Sköns' chapter on Western Europe, where cross-national production has perhaps proceeded the furthest, but many of the issues that underlie transnationalization are raised throughout the volume.

Transnationalization, which involves cross-national linkages in arms production, not just sales, is occurring for a number of political and economic reasons. Government actions have fostered transnational linkages through co-development and co-production agreements whereby segments of the value chain for a specific product are shared by firms in different countries. An example is the F-16 fighter aircraft, developed in the United States and co-produced with other NATO members. In addition, Governments have supported co-production, offset agreements and other inter-linkages as part of export strategies.

Government-supported inter-firm arrangements have become common in Western Europe, as Governments have promoted cross-border mergers and collaborative agreements in order to reduce chronic excess capacity, compete for international sales against larger United States firms and develop Europe-wide technology initiatives. Recent research suggests that collaborative arrangements can lead to cost savings and increase the scale of production (Hartley and Martin, 1993). In Japan, the Government has supported international collaboration as a means of obtaining technology and maintaining a defence industrial base in the face of long-standing political and constitutional limitations on the size of military budgets. The chapter by Masako Ikegami-Andersson describes some of Japan's international programmes, including the FSX collaboration with United States firms, and Japan's dual-use strategy with respect to high technology products (see also Drifte, 1985).

Pressures for transnationalization are also arising from less visible sources. In the years during and after World War II, military technology played a leading role, and innovations in propulsion systems, air frame design, microelectronics, computers and other areas spilled out from military programmes to stimulate civilian products, and in some cases to create new industries. The military even influenced management practices: Toyota engineers studied the organization of production in United States aircraft factories in formulating the just-in-time inventory management system.

More recently, however, the technological shoe has been on the other foot. As civilian firms became stronger and new competitors achieved world-class status, and as military requirements became more specialized, costly and time consuming, civilian technology assumed a leading role. Thus, the organization of production for military markets has had to adapt to changes in civilian markets.

In addition, many civilian products have been able to spread rising development costs over an expanding market, resulting, in some cases (i.e., computers) in rapidly declining costs as quality improves. Military markets, on the other hand, have shown little growth in most developed economies. In the United States, for example, real military spending grew at a compound rate of only 0.2 per cent per year from 1956, after the Korean War, to 1988, the height of the Reagan buildup. Thus, the current squeeze is occurring after more than three decades of stagnation (Gold, 1994). But as pointed out in the chapter on United States defence procurement by Gordon Adams and Steven Kosiak, the continual push for military superiority, or at least parity, drives research and development upward even as output growth declines. The inevitable result is cost growth.

It is not surprising, then, that military production has become more reliant on technology originating in civilian firms. This is reflected in the patterns of international linkages in different groups of industries supplying the military. The data presented by Elizabeth Sköns on Western Europe, drawn from SIPRI's extensive data base, shows, for example, that the degree of cross-border collaboration among firms varies substantially across product areas. (A study by Bitzinger, 1993, also uses SIPRI's data to look at firm-level developments in the United States, Western Europe and East Asia.)

In military electronics, international mergers and acquisitions, joint ventures and various non-equity arrangements have become quite common, paralleling civilian developments. These arrangements include intra-European acquisitions and alliances and those involving firms from the United States and other countries. Many of these cross-border arrangements are designed to link rapidly developing technologies, rationalize production and solidify links with civilian activities. In aerospace, collaboration, co-production and licensing are the primary forms of cross-border linkages. Mergers and acquisitions, more common in civilian product lines, have been restricted by Governments, but since aircraft technology is increasingly of a dual-use nature, Sköns foresees increasing pressure on Governments to relax such restrictions. The production of military vehicles, such as tanks, armoured personnel carriers, jeeps, trucks, etc., has remained more nationally based than electronics and aircraft. These areas, for the most part, employ mature technologies and have had greater success than electronics and aerospace in controlling unit costs.

Cross-border firm-level linkages also play a role in military programmes in developing countries. Gülay Günlük-Senesen, in her chapter on Turkey and in subsequent writings (Günlük-Senesen, 1994), points out the importance of such linkages to that nation's military modernization programme. Other developing countries that are seeking to expand their domestic arms production capabilities rely heavily on joint ventures and licensing agreements with developed country firms. Some of this data is presented in Ian Anthony's chapter on 12 "third tier" arms producers.

Transnationalization represents the expansion of the firm's domain of common governance to an international arena. When comparing military with civilian activities, a difference is that transnationalization in most military products involves not just private enterprises that are expanding their area of common governance, but Government agencies. Governments have traditionally had a major role in selecting products, structuring incentives and allocating resources in the largely monopsonistic military industries. This role may have diminished in recent years, following the greater privatization among military-sector firms in Western Europe—although the United States experience with a privatized defence sector leaves plenty of scope for Government intervention—and the growing reliance on civilian technology. One result of Government involvement is a limitation on the mechanisms of transnationalization. In the United States, for example, FDI in military industries, and in industries considered vital to national security such as telecommunications and radio and television, are severely restricted, and mergers and acquisitions by foreign firms are often disallowed (Graham and Krugman 1991, chapter 5). Such limitations may have implications for whether the potential benefits of transnationalization are realized, and how they are distributed.

Within Western Europe, economic and political developments appear to be increasing the incentives for expanded cross-border collaborations in the production of military goods and services. The still fledgling efforts to develop a post-Cold War European security apparatus are likely to increase pressures for commonality in weapons development, while economic factors will continue to promote transnationalization. In the United States, policies have yet to come to grips with the transnationalization phenomena. As Judith Reppy points out in her chapter on changes in the United States, defence firms are largely being left to manage their own transitions, leading to a wave of rationalizations and consolidations and, as described in Ian Anthony's chapter on arms exports, a renewed emphasis on selling internationally. It is possible that defence planners may seek greater restrictions on transnationalization activities, if it is thought that they might interfere with domestic mobilization and development (Kietel and Bitzinger 1994). ■

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* The views expressed in this review are personal and do not necessarily represent those of the United Nations.

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Foreign Direct Investment

Edited by Kenneth Froot

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Books based on conference proceedings are often disappointing; conference organizers often tend to "round up all the usual suspects" and they in turn present the usual papers. This edited volume is an exception, and many of the contributions offer interesting avenues for future research.

Edward M. Graham and Paul R. Krugman look at the question of the upward trend in foreign direct investment (FDI), and the rise of transnational corporations' (TNCs) activities more generally, in the 1980s. They suggest four reasons for the growth of TNCs: "increasing integration of world markets, growing similarity of national markets, improved communications and control of technology, and growing symmetry in the international generation of technology" (p. 24). They conclude somewhat disappointingly that "the conceptual foundations of discussion about FDI are fuzzy enough to allow many hypotheses" (p. 31). One is left with the impression that the authors are trying too hard to look for the fundamental forces driving FDI, while ignoring some obvious facts. The continuous growth of FDI throughout the 1980s and the subsequent downturn in the early 1990s indicates that, to a large extent, FDI is cyclical. As with any investment, FDI decisions are affected by the availability of earnings for reinvestment and profitable opportunities, both of which are curtailed during periods of recession.

A less ambitious approach, such as looking more closely at disaggregated figures, would have revealed that the upward trend is at least partly the result of the growing number of firms engaged in FDI, particularly in the service sector and newly privatized industries. These firms in turn are investing in more and more countries as attitudes towards FDI have changed and as competitive positions have shifted.

Rachel McCulloch offers a thoughtful piece on the conceptual similarities between trade and investment, and on how international negotiations on trade issues neglect this aspect of international competition. Raymond Vernon and Richard E. Caves discuss the strategic aspects of TNC behaviour as a way of understanding the direction that behaviour is likely to take in the future. The subsequent three chapters consider case studies of individual host countries.

Robert Z. Lawrence discusses the low level inward investment in Japan and the role of inhibitions on acquisitions. It is now widely recognised that the share of the Japanese economy accounted for by foreign-owned firms is uniquely low in Japan. While Government-imposed barriers may have played the dominant role in the past, market structure is now more important. Even in the best of times, Japan would be a costly market to enter. Under normal circumstances, firms would opt for entry via acquisitions of local firms with extensive knowledge of the local economy. If this is precluded, as it is indeed the case with the Japanese *keiretsu* system, then FDI is also curtailed. Regression analysis suggests that *keiretsu* appear to inhibit acquisitions by foreign firms, but not intra-Japanese mergers. Lawrence argues that "the expansion of stock cross-holdings among *keiretsu* members and other Japanese firms during the 1970s was an explicit device to prevent foreigners from buying Japanese companies" (p. 105). Although such practices do not violate any international laws, they nevertheless serve to undermine market access in certain industries. The author concludes, somewhat ominously, that "it is hard to imagine that the current asymmetries will be maintained" (p. 106). In spite of Lawrence's claim that the *keiretsu* are more exclusionary than they are efficient, the debate will no doubt continue.

Robert Lipsey describes at length the changes in FDI in the United States over three decades. With the abundance of information provided by the United States Department of Commerce, there is much to discuss. But it might nevertheless have been more interesting to devote more attention to policy changes, as well as to the evolution of corporate strategies. Much of the information provided is, after all, publicly available. Louis T. Wells looks at the evolution of investment in Indonesia, from quota-hopping FDI by other Asian countries producing for the developed countries, to local market-oriented production in the face of trade barriers, and finally to footloose Asian producers interested in serving their own home markets or the whole region from an offshore base. Interestingly, he notes that "from the point of view of the host country, local firms' access to the marketing channels from the industrialized countries may be the most important advantage offered" (p. 185) from FDI. It is a useful reminder of the myriad subtle ways in which inward FDI benefits the host country which are often lost in the misguided discussion of exports and employment.

David Yoffie presents a case study of the semiconductor industry. It is one example of how FDI location determinants can sometimes shift away from labour-rich countries over time back towards the centre, in contrast to the usual view of the product cycle flowing from North to South.

The remaining two chapters focus on mergers and acquisitions involving foreign firms rather than at direct investment *per se*. Because of the prevalence of acquisitions in total flows, it is one area for which industrial organization and finance theories can offer insights. Paul Healy and Krishna Palepu examine international corporate equity acquisitions and find that these are deterred by government regulations in the host country and by differences in ownership structures, and that they are encouraged by growth in the target country. Their regression analysis leaves much to be desired.

Deborah Swenson looks at foreign mergers and acquisitions in the United States. Not surprisingly, they account for the largest share of total FDI. She finds that, after removing industry and country differences, foreign firms routinely pay a hefty premium compared with domestic firms for their acquisitions in the United States. A nagging doubt still remains over whether or not she really has removed all other influences, but the findings are nevertheless fascinating and offer yet another potentially fruitful avenue for research.

If there is one criticism of this book, it is the focus on FDI in and by the United States, with the only exception being the contribution by Wells. While this should not be surprising given the location of the conference and the nationality of the participants, it nevertheless ignores many new developments in other parts of the world involving non-United States TNCs. Given that many of the theories which have evolved to explain United States FDI have not translated well into other countries' experiences, this narrow focus does not fit well with the all-encompassing title of the book. ■

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