

# Preface

The idea for this book arose from an international conference on economic aspects of arms trade offsets, held 25-27 September 2002 in Cape Town, South Africa. The conference was sponsored by the South African and United States chapters of Economists Allied for Arms Reduction (ECAAR), the National Research Foundation of South Africa, the Institute for Social and Systemic Change at the University of Port Elizabeth, South Africa, the Center for Conflict Resolution and the School of Economics at the University of Cape Town, and Middlesex University Business School, London, UK.

Contributions to this book consist of selected conference papers and of invited papers, especially written for this book. As the proposal for the book itself, all work, selected and invited, was subject to the normal academic peer-review process and was revised before final inclusion in the book. All papers are published here for the first time.

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# Introduction

*Jurgen Brauer and J. Paul Dunne*

Eight years ago, Stephen Martin published a widely-cited volume of papers on arms trade offsets (Martin, 1996), volume 4 in a series of studies in defense economics, published by Harwood Academic Publishers (now Routledge). Since then, much has changed in the global arms market. This is evidenced not only by Routledge's willingness to issue another volume on the topic but also by our contributors – many of whom had written for Martin's book – who were keen to take an updated look at various offset theory and policy issues, and to illustrate these with case studies.

We chose to include papers by a set of international authors, economists for the most part, of diverse intellectual and political persuasions. A good number of them work for military academies (e.g., in Australia, in Belgium, in the UK) or for think tanks (e.g., in Germany, Sweden, and the USA), others hold appointments at a variety of universities across the globe. No attempt was made to select contributions whose results all may have fallen in a certain direction. Yet, surprisingly, among the authors there is near unanimous consent that arms trade offsets do not work as advertised. Even where we can explain why offsets are used by arms procurement agencies (or their governments), neither economic theory nor extant empirical evidence suggests that offset arrangements yield net benefits for a country's economic development at large.

What are arms trade offsets, and how are the presumed benefits advertised? The long answer is contained in the details of the chapters published in this book. The short answer runs something like this: A country that wishes to spend, say, \$100 million to import arms from another country transfers \$100 million worth of funds to the arms seller, the only value gained in exchange being the putative security-value of the imported arms. To increase this value, the importing country may stipulate for example that the arms-exporting firm must take some portion of its \$100 million revenue to set up arms coproduction facilities in the arms-purchasing country, or else to commit itself to any of a variety of other possible activities that would secure a *flow-back* of some of the \$100 million to the arms-importing country. If this flow-back is made part of the arms trade contract, we call this an offset. The advertised benefit is that the arms-importing country not only obtains the arms it wishes to import but that some of the public funds expended on the arms purchase "remain" in the country and thus are expected to stimulate domestic economic development, just as if they had been spent domestically in the first place.

To be able to "double-dip" – to get the arms, and yet to keep the money at home

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– is seductive for politicians, especially in democracies, who must justify expenditure of public funds, usually in the face of crying social need.<sup>1</sup> The logic sounds so convincing: sign a contract that requires the arms-selling party to use some (or even all) of the expended funds to set up arms production facilities in the purchasing country or to make non-military purchases in or from the arms-acquiring country.

Economists are skeptical. To us, the offset idea sounds like a variant of the “free lunch” idea. As a matter of pure logic, lunch may be free to those invited but the host still has to pay the bill. The chapters assembled in this book take a collective look at who this host is that pays the bill. The answer is not easy to ferret out and is usually case-specific. But that something may be amiss can be gauged from the fact that the World Trade Organization’s Agreement on Government Procurement generally forbids the use of offsets in government procurement. Exceptions are granted, in article 23, on account of reasons pertaining to national security and public health. The agreement, moreover, is “plurilateral,” meaning that not all WTO members have acceded to, and therefore are not bound by, its provisions (see [www.wto.org](http://www.wto.org)).

The use of offsets is by no means restricted to the field of arms trade, nor even to intra-government procurement. Offsets, and related forms of “countertrade,” constitute a vast, pervasive business practice – involving tens of thousands of people around the globe, reaching far beyond the market for military-related items – and is variously estimated at ranging between five and thirty percent of world trade.<sup>2</sup> There are plenty of offset-related conferences, and the literature numbers in the thousands of items, including those produced by academic specialists in international business, marketing, and economics (e.g., Hammond, 1990; Korth, 1987; Liesch, 1991; Martin, 1996). Nonetheless, much of the attention centers on the arms trade. Specialized trade publications, e.g., *Countertrade Outlook*, *Countertrade & Offsets*, and *BarterNews* are produced, publications such as *Aviation Week and Space Technology* and *Jane’s Defense Weekly* take a natural interest in the subject matter, academic journals such as *Defence and Peace Economics* and *Defense Analysis* frequently carry articles on the offset topic, and there are a large number of companies specializing in facilitating offsets as lawyers, consultants, financiers, and brokers, in addition to the offset offices housed within many of the affected corporations and government bureaus. At least one dedicated commercial web service exists solely to link offset-related buyers and sellers ([www.e-offsets.com](http://www.e-offsets.com)). In 1995/96, US taxpayers alone shouldered the pay of some 6,500 federal government employees in connection with US arms exports (Hartung, 1996, p. 12), much of this associated with offsets.

There exists an American Countertrade Association ([www.countertrade.org](http://www.countertrade.org)) – countertrade here being used as a synonym for offsets – whose seven member executive committee includes high-level employees of Motorola, GE, and Boeing, and a Defense Industry Offset Association (DIOA) consisting, in 1998, of 65 member companies, representing nearly 100 percent of the US military-aerospace prime contractors. ACA and DIOA hold joint biannual conferences (1998, 2000, 2002), the last one 22-25 September 2002 in Tucson, Arizona. In addition, even a cursory Internet search finds an International Reciprocal Trade Association, a National Association of Trade Exchanges, a Corporate Barter Council and, for deals gone bad, an offset Investment Recovery Association.

In the US one finds steady government interest in the issue, especially with

regard to arms trade offsets, culminating in the formation, in 1999, of a Presidential Commission on Offsets in International Trade ([www.offsets.brtrc.net](http://www.offsets.brtrc.net)).<sup>3</sup> Prior to that, the US Congress has taken sporadic interest in offsets, resulting *inter alia* in a number of requests to the US General Accounting Office (GAO) to report on various aspects of arms trade offsets in particular (see references). Congress also mandates an annual arms trade offsets report, furnished by the Department of Commerce's Bureau of Industry and Security.<sup>4</sup>

Furthermore, the United States National Research Council's Board of Science, Technology, and Economic Policy has produced two substantial conferences and reports (Wessner and Wolff, 1997; Wessner, 1999), the Federation of American Scientists ([www.fas.org](http://www.fas.org)) has an ongoing interest in the issue inasmuch as it impinges on international arms sales, and so do numerous other interested and disinterested parties, including of course the foreign policy and military sectors. For instance, the US Department of State publishes *Defense Trade News*, and the US Department of Defense sponsors a quarterly journal published by the Defense Institute of Security Management Assistance (*The DISAM Journal*; <http://disam.osd.mil/Journal.htm>) which frequently publishes on arms trade offsets.

These observations would suggest that arms trade offsets are part of normal trade relations among arms sellers and arms buyers. Certainly, offsets are common. But are they "normal"? What is normal practice from a business point of view may not be normal from an economist's point of view. To help answer this question, inspect some examples of prevailing definitions of offsets.

- < "Offsets, coproduction, barter, and countertrade are compensatory trade agreements – agreements that incorporate some method of reducing the amount of foreign exchange needed to buy a military item or some means of creating revenue to help pay for it" (Neuman, 1985, p. 183).
- < "... an offset is a contract imposing performance conditions on the seller of a good or service so that the purchasing government can recoup, or offset, some of its investment. In some way, reciprocity beyond that associated with normal market exchange of goods and services is involved" (Udis and Maskus, 1991, p. 152).
- < "... an offset occurs when the supplier places work to an agreed value with firms in the buying country, over and above what it would have bought in the absence of the offset" (Martin and Hartley, 1995, p. 125) and offsets "... are usually designed to achieve a relocation of economic activity from the country of the equipment supplier to the purchasing nation" (p. 127).

These definitions can be read, as many authors do, to hold in common some degree of *coercion*. In contrast, in an important (but somewhat overlooked) article Peter Hall and Stefan Markowski (1994) argue that no seller can in fact be coerced to sell. One may lose a sale to a competitor, but one cannot be coerced to sell. The distinction between coerced and voluntary trade is important because in the former case, coerced trade leads to trade diversion and therefore to welfare losses, whereas in the latter case offsets are viewed as part of the negotiation over a complex package of goods and services which include military and non-military items and may well be welfare enhancing, as all voluntary trade is (at least in pure international trade theory). For

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instance, if corporation S from country S offers to sell 50 fighter aircraft for three billion dollars to the government of B (the “primary contract”), but then on account of competition from corporation SS from country SS offers a “compensating offset” purchase of \$3 billion worth of agricultural products from country B to sell in country S, why indeed should the prospective buyer (B) be prevented from extracting economic rent from among the competing would-be sellers (S and SS)?

Consequently, Hall and Markowski offer this definition:

- < “Offsets are simply goods and services which form elements of complex voluntary transactions negotiated between governments as purchasers and foreign suppliers ... they are those goods and services on which a government chooses to place the label ‘offsets’ ... ” (Hall and Markowski, 1994, p. 179).

The jab – that offsets are “those goods and services on which a government chooses to place the label ‘offsets’” – is correct in that there is no logical difference between a \$3 billion primary aircraft contract with a compensating agricultural offset valued at \$3 billion and a \$3 billion primary agricultural contract with a compensating aircraft offset valued at \$3 billion. That which we call the “primary contract” and that which we call the “compensating offset” is arbitrary and therefore interchangeable. “All that can really be said is that a joint purchase of two different elements is being made” (Hall and Markowski, 1994, p. 178). A big buyer demands respect. Wal-Mart purchases millions of items from thousands of suppliers, but it also purchases changes in its suppliers’ operations. It purchases not only stationary and toys, but also makes supply-chain management demands. It purchases multiple products in a complex deal.

If we agree with this conceptualization of offsets as normal trade, then we might as well push it to its logical extremes. At one extreme, a weapon system’s R&D, testing, and production take place entirely in the US, say, and it is then transferred elsewhere in exchange for monetary compensation. At the other extreme, only the R&D is conducted in the US and everything else is outsourced to the buying country. (The offset here consists of licensed production.) In that case, the US sells military blueprints, and the buyer produces. The US sells, in a word, deadly ideas others wish to buy. Within the realm of pure economics, this is not unlike trade in endangered species and child pornography. Economists are not immoral, but economic science is amoral: a trade is merely a trade, and what is important is the efficiency, not the morality, of the trade. Accordingly, the starting point for Hall and Markowski is whether arms trade offsets are voluntary or mandated. If mandated – if purchasing governments *insist* on a particular offset percentage, be it 50 or 100 or 150 percent of the value of the underlying arms trade contract – then Hall and Markowski agree that there will be trade diversion, trade distortion, and welfare-diminishing effects. In chapter 3, they review their own argument, first made ten years ago, and place it on a firm theoretical base. Grouping offsets into three categories – countertrade, local content requirements, and bundling – their conclusion is straightforward and sound: mandatory offsets are not be welfare-enhancing, but voluntarily agreed offsets might be.

Why do governments resort to offsets in the first place, whether mandatory or otherwise? Travis Taylor, in chapter 2, provides a new theoretical framework, based

on transaction cost analysis, that not only explains (at least part) of the puzzle but also provides a handy guideline for procurement officials of when to ask for what type of offset, if any. As it turns out, mandatory offsets are rarely advised. But even if voluntary offsets could be welfare enhancing, at least in principle, Lloyd J. Dumas argues in chapter 1 that they are, nonetheless, antithetical to economic development. Offsets, even if welfare-enhancing in a narrow sense, do not, Dumas argues, overcome the welfare-diminishing effects of military expenditure that finances the arms trade in the first place. At best, although he doubts even that, offsets are a step forward after military expenditure on arms took the economy five steps backward. In chapter 4, Jurgen Brauer, reviews the variety of economic theories of offsets, the offset players, and the empirical evidence. Like Markowski, Hall, and Taylor, Brauer finds that while positive economic development effects from arms trade offset deals are not impossible, they are theoretically implausible and empirically improbable, especially for the case of developing states. Indeed, an unambiguous *economy-wide net benefit* has yet to be demonstrated for any offset deal ever concluded. Of course, data availability is in short supply, and Brauer closes his chapter with a call for states to establish *arms offset audit teams* to publicly account for the costs and benefits these deals involve.

Ann Markusen, a member of the US Presidential Commission on arms trade offsets discusses, in chapter 5, arms trade as illiberal trade. Her chapter explores “why the arms trade should remain illiberal, why it needs reinvigorated oversight, and why commercial interests must be subordinated to security concerns, including a return of lead responsibility for arms trade regulation from [the US] Defense and Commerce to the State Department.” In contrast, Ron Matthews, in chapter 6, attends to the practicalities of arms trade offsets. In this context, he identifies recent offset trends. In particular he notes that while offsets agreement used to be struck between military firms, from military systems vendor to military buyer and coproducer, offset agreements then moved toward defense-civil offsets, i.e., military offset obligations were fulfilled by purchases from or investments in the civilian sector of the arms buying state. This eventually led to an increasing number of civil-civil offset agreements, and now, Matthews writes, we increasingly observe civil-defense offset agreements, contracts by which sellers of *civilian* products and technology are asked to “reinvest” in the *defense* industry of the buying country.

The remaining chapters of the book consist of case studies on Britain and Germany (chapter 7), Britain and the Netherlands (8), the Nordic countries (9), Finland and Sweden (10), Belgium (11), Poland (12), Brazil (13), Argentine (14), India (15), Japan, South Korea, and Taiwan (16), Indonesia and Singapore (17), Australia and New Zealand (18), and South Africa (19 and 20).

## Abstracts

Chapter 1: Do offsets mitigate or magnify the military burden?

By Loyd J. Dumas

The offer of an offset package as part of a weapons procurement deal is intended primarily as a marketing tool, not as a means of encouraging development. But whatever the motive for offering such a package, it is important to ask what effects,