Performance Management in Arms Trade Offsets:

The Rationale and Application of Effective Management Tools

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Peter Platzgummer

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Approved on the application of

Prof. Dr. Kuno Schedler

and

Prof. James W. Davis, Ph.D.

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This dissertation is dedicated to my whole family in Austria, the United States, and Switzerland, and to something, because it means everything to me.

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Abstract

Few issues are more important to governments in modern democracies than the proof of performance to its citizens. The usefulness of performance management remains largely unquestioned. While in some governments' policy domains performance management tools and instruments have been established and time-proven for decades, performance management in arms trade offsets is still largely underdeveloped. To make matters worse, scholarly research in public management has ignored this policy domain at large. This is particularly unfortunate given the fact that the cumulative value of military offset obligations demanded worldwide amounts to more than 50 billion USD annually while reliance and management is left to inadequately small governmental agencies.

The purpose of this cumulative dissertation is to explore how these offset agencies use performance management to control, steer, improve and give account to the public for their objectives. To this end, three papers have examined different clusters of performance management. Paper 1 constitutes an in-depth case study of the offset deal which was part of the procurement of the CV9030 armoured vehicle by the Swiss Armed Forces and examines how the agency responsible for the offset management measured the success of the project. Paper 2 focuses on allegations of corruption and explores which anti-corruption tools could be implemented by governmental authorities to remedy the problem. Finally, Paper 3 examines the role of the European Defence Agency in coordinating and harmonizing the performance management systems of its member states.

Arms trade offsets are highly debated, from both economic and political points of view. This dissertation comes to the conclusion that without appropriate tools to provide information on performance-related aspects of governmental action, adequate management of performance is nearly impossible and, consequently, accompanying political debates will remain ill-informed and ineffective.

Zusammenfassung

Wenig ist für Regierungen moderner Demokratien von grösserer Bedeutung, als gegenüber ihren Bürgern Rechenschaft über die von ihnen erbrachten Leistungen abzulegen. Die Nützlichkeit des sogenannten Performance Management ist daher unumstritten. Doch während in einigen Politikbereichen die Werkzeuge und Instrumente des Performance Management seit Langem etabliert und bewährt sind, ist Performance Management bei Gegengeschäften (Offsets) in der Rüstungsbeschaffung noch kaum entwickelt. Hinzu kommt, dass die Public Management-Forschung Offsets bisher nur am Rande betrachtet. Diese Forschungs- und Praxislücke ist vor Allem in Anbetracht der weltweiten jährlichen Obligationen an Gegengeschäften im Volumen von mehr als 50 Mrd. USD problematisch, die jeweils von vergleichsweise sehr kleinen Regierungsbehörden gemanagt werden.

Diese kumulative Dissertation untersucht, wie diese Offset-Agenturen Performance Management zur Kontrolle, Steuerung, Verbesserung sowie zur Rechenschaftsablage gegenüber den Bürgern nutzen. Dazu werden verschiedene Cluster der Performance Management Problematik in drei Untersuchungen in Form von Papers näher betrachtet. Paper 1 ist eine ausführliche Fallstudie des Offset-Geschäfts im Zuge der Beschaffung des CV9030 Schützenpanzers durch die Schweizer Armee, welche untersucht warum zuständige Behörden den Erfolg eines Deals unterschiedlich beurteilen. Paper 2 betrachtet empirisch Korruptionsvorwürfe im Zusammenhang mit Offsets und die Möglichkeiten, diese mit Hilfe von Public Management Instrumenten zu entkräften. Paper 3 analysiert schließlich die Rolle der Europäischen Verteidigungsagentur bei der Koordination und Harmonisierung der Performance Management Systeme ihrer Mitgliedsstaaten.

Offsets werden in der Öffentlichkeit immer wieder sowohl unter politischen als auch ökonomischen Gesichtspunkten intensiv diskutiert. Diese Dissertation kommt jedoch zu dem Schluss, dass vor Allem aufgrund der fehlenden Instrumente zur Messung der Leistungserbringung ein adäquates Management nahezu unmöglich ist. Insoweit bleiben auch die diesbezüglichen öffentlichen Debatten politisch wenig instruktiv.

1 Introduction

1.1 Public performance management

Whatever a government does and spends, it usually has to justify these activities by showing its citizens the benefits they reap from decisions made. This is neither new, nor specific to the public sector. Every company in the private sector has to show its shareholders that the input used and the activities conducted will lead to a successful company output. This business production logic is also used metaphorically in public performance, with the difference that public administration scholars extend this production process of input, throughput, and output by adding outcomes, the longer-term impacts on society as direct results of the governmental activities (see, e.g. Hatry 1999 or Pollitt & Bouckaert 2004). Performance is hereby seen as the output and outcome of the governmental activities (Van Dooren et al. 2010, 17).

To be able to quantify performance, output and outcome have to be measured. This *performance measurement* provides the information needed to not merely justify government decisions already made, but also to be able to change activities for the better. All activities reacting to this *performance information* are commonly labelled *performance management*[1]. Put more bluntly: "performance management is a type of management that incorporates and uses performance information for decision-making" (Van Dooren et al. 2010, 30). According to Van Dooren et al. (2010) a public organization should use performance management to give an account of the past activities it conducted, control the present activities, and steer them according to the objectives of the respective policies. Furthermore, it should learn based on the achieved information in order to be able to improve or change the policies and management practices used. Table 1 gives an overview of these different use-groups in performance management.

Table 1: Three clusters of performance management.

	To learn	To steer & control	To give account
Key question	Ho to improve policy or management?	How to steer & control activities?	How to communicate performance?
Focus	Internal	Internal	External
Orientation	Change/ future	Control/ present	Survival/ past
Exemplary instruments	Strategic planning, benchmarking, risk analysis, business process reengineering	Monitors and management scorecards, perfromance pay, performance budgeting	League tables, citizen charters and annual reporting, performance contracts

Note. Source: Van Dooren et al. 2010, 31.

The purpose of this dissertation is to explore how governments use performance management to control, steer, improve and give account to the public for their decisions. The focus of this research lies on arms trade offsets, an aspect to date unexplored in government activity. While we know much about the use of performance management in the most discussed areas of public administration such as health care or education, arms trade offsets have so far been eschewed in most scholarly analyses of public performance.

1.2 A short introduction to arms trade offsets

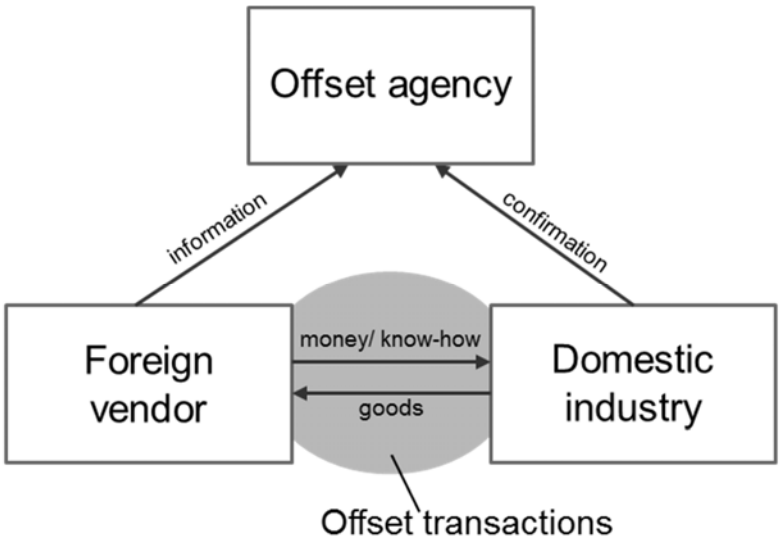
When procuring armaments, a country has to decide if a weapon system or component is to be developed domestically or purchased off-the-shelf from a foreign supplier. Between these two possibilities lie other options, wherein development or production is shared between vendor companies and supplier countries, such as licensed production[2] or co-development projects[3]. Domestic development would theoretically strengthen the domestic defence industrial base, secure jobs and technological know-how, and satisfy the specific needs of the armed forces. But it is "also likely to be the most expensive option" (Martin, 1996a, 1). In contrast, off-the-shelf purchase means getting a system

that was developed for another country's armed forces' needs, producing only foreign jobs, and carrying with it a danger to the secure supply of spare parts and technical assistance. But this latter option is likely to be significantly cheaper.

In order to overcome this dilemma, many states link their defence purchases to compensatory trade agreements (arms trade offsets[4]). This means that a country buying off-the-shelf military equipment 'forces' the foreign supplier of the product to spend an amount of the product price on the domestic industrial base. By adopting these practices, a country can get a foreign military system, not pay the initial development costs, and still generate domestic industrial benefits. These offsets are usually defined as some percentage of the purchasing contract price, and a time period is set for the fulfilment of this promise. Usually, these transactions are differentiated between direct offsets and indirect offsets (Martin 1996b, 32-33). For direct offsets, the domestic industry would produce components that are directly linked to the procured system, while for indirect offsets the companies could produce any kind of components (or even system) for the foreign vendor to export to third parties. The offset transaction not only includes the price for the domestically produced component, but can also include non-monetary resources such as a know-how or technology-transfer.

When an offset contract is signed, the foreign company works directly with domestic companies to fulfil the offset obligation. Yet, it is the governmental authority, which monitors these processes and also evaluates the performance of these offset deals. Figure 1 gives an overview of the most basic offset process.

Figure 1: The basic offset process.



Note. Own presentation.

The foreign vendor has to fulfil his offset obligations with the government by doing offset transactions with the domestic industry. After the offset transactions have been made, the foreign supplier has to inform the governmental authority, the offset agency, which will control for the value of these transactions. This control is usually not just based on information from the foreign company, but has to be confirmed by the domestic industry. The offset agency also steers the offset transactions, for example by defining which industrial branches or companies are acceptable for offset partnerships, or by admitting multipliers typically for transactions important for the maintenance or development of the defence industrial base, such as technology transfers according to its own defined objectives.

Offsets originated in the 1970s: In 1974, the replacement of the Northern European NATO countries' combat aircraft fleets gave “birth to offsets" (Hébert, 1996, 139). Belgium, Denmark, the Netherlands and Norway decided to agree on a single aircraft for all four countries, minimizing the purchase price. All three companies involved in the competition offered offsets. These started from 70% locally contracted manufacturing, or a generation of 5’000 additional jobs by erecting plants for high-technology material in all four countries, to indirect offsets such as an improvement of European landing rights in the U.S.[5] or a European access to oil transportation contracts normally reserved for U.S. companies. From then on, the use of offsets increased

rapidly. Only a year later, Switzerland actively requested "offset commitments as a form of additional quid pro quo" (Udis 1996, 322) and, especially with the fall of the iron curtain, offsets became a global phenomenon. "By 1992, a total of 130 countries had some form of countertrade/offset policy" (Martin, 1996a, 16).

Today, approximately 100 countries worldwide apply offset policies. In Europe almost all countries used obligatory offset agreements for off-the-shelf procurement, even though arms trade offsets are seen as highly trade-distorting and considered a reason for the increased fragmentation of the European defence technological and industrial base. While there is a partial trend to discontinue this practice in the European Union because of the stricter course of action of the European Commission to increase free trade, the global trend is in fact the reverse: The Asian-Pacific region especially is increasingly requesting offsets as a condition for participation in bids, and Saudi Arabia alone is expected to create military offset obligations worth more than 62 billion USD by 2021. Overall, estimations of management consultants assume that the global offset volume will be larger than 500 billion USD between 2005 and 2016 (Ungaro 2013, 6-7).

1.3 Performance management in arms trade offsets

After the severe British National Health Service crisis of the 1970s, Margaret Thatcher's conservative government started a reform covering all aspects of the public sector in the 1980s[6]. The government changed the legislation, using a different language and introducing concepts such as 'value for money' or 'performance measurement', and thereby giving birth to New Public Management (NPM) (Mwita 2000). Such changes could not only be seen in Great Britain, but reflected changes that were happening in public sector organizations all over the world (Guthrie & English 1997; Holzer & Yang 2004; Fryer et al. 2009). These first management reforms did not end abruptly but led to additional "tides of reforms" within the public sector (Talbot 2007, 492). These shifted the view of governments all over the world even more towards efficiency and results (Osborne & Gaebler 1997; Schedler 2004). Each of these reforms came up with particular tools and techniques, such as *Management by Objectives* or the *Balanced Scorecard*[7].

The usefulness of performance management as such has thereby remained unquestioned. Instead, the single real purpose of public managers today is "to improve the performance" (Behn 2003, 588). Given the centrality of optimizing public

administration, scholarly research in this field has produced a vast number of theoretical and empirical contributions. John Philipp Siegel and Lukas Summermatter (2008) selected more than 270 articles from 14 different journals within the last 20 years dealing specifically with performance in the public sector.

Today, scholars of public performance management research don't have to ask: 'what should be done'; but rather: 'how should it be done' (Dearing, 2005) and a large part of the discussions today are not about the need for performance management as such, but are more concerned with whether the Balanced Scorecard, ISO 9001 quality management system, or the EFQM excellence model makes more sense for a specific public organization.

Performance management in governments has changed rather dramatically during the last decades. For example, while the National Health Service in the United Kingdom solely used 'financial performance indicators' in the 1980s, it started to broaden its approach by introducing benchmarks ('health service indicators') in the 1990s, and a few years later 'performance assessment frameworks' to increase their accountability towards the public. In recent years they introduced 'Balanced Scorecards', a combinations of different performance indicators (Smith, 2005). In the same time span of almost 35 years, most offset agencies have not changed their main performance management instruments at all and are still heavily relying almost exclusively on financial indicators. Despite the overall rise of NPM in governments, the management of offsets has not been influenced at all by it.

Also, the relevance of NPM for offsets as a governmental activity has been rarely acknowledged by the scholarly literature. In fact, the rise of offsets remained unnoticed by academia until the mid-1980s. Scholarly attention began to grow more or less parallel to the rise of offsets after the end of the Cold War. Martin (1996a) describes two major categories of offset literature: First, practitioners' guides to successful negotiation and undertaking of countertrade deals, mostly including different countries' requirements. Second, academic articles and papers that generally discuss reasons for the growth of offsets and countertrade and whether government-mandated countertrade was the right answer to the assumed conditions. Martin further defines three major lines of argumentation: First, a very hostile view on countertrade, mainly adopting the arguments of international organizations such as the GATT, IMF or OECD. Second, the argument stating that countries mandating offsets are irrational or ill-informed of their

real (and usually bad) effects. Third, a more positive view describing offsets as a rational response to the growing costliness of arms procurement (17ff). This categorization has proven to be useful. Since 1996, a large part of the new literature on offsets can be divided in pro and con arguments [8]: one part sees offset as a means to facilitate industrial and technological development, the other highlights its inefficiency and costs.

But, while the overall economic effects of offsets have been extensively addressed in the literature (Brauer, 2004, 54), the processes and especially the role of the public authorities have not been subject to closer examinations. This is particularly unfortunate given the sheer volume of trades and money controlled by these agencies. In 2006 the overall volume of offsets in participating member states of the European Defence Agency was estimated around 5,6 billion Euros, which would correspond to 200 to 400 million Euros per annum for each country (Eriksson et al. 2007, 4). With an average of about 300 million Euros per annum, Switzerland finds itself within the same volumes (Friedli et al. 2009).

Again, from a public management point of view, offsets have not been subjects to any kind of research. Not surprisingly, the most prominent areas of interest of public managers have been areas such as education and health care, where optimization was most preeminent and most administrative reforms have been frequent (Pollitt & Bouckaert, 2004). Moreover, even though many of the earlier reforms in performance management were linked to activities of the U.S. Department of Defence, research about defence topics has been suffering from a negative overtone and has thus been viewed sceptical by the majority of academic scholars. However, exactly because of these negative views, defence and especially armament procurement and arms trade offsets should be a focus area for academic scholars. Military spending, and particularly arms procurement expenditures, is harmful for the economic development of countries (Brauer & Dunne 2002) as “the military sector itself does not produce economic value and diverts real productive resources from the kind of civilian production that does” (Dumas 2004, 22). Offsets could have an additional negative impact, as they inflate the defence procurement price to cover the costs of the offset transactions. And, they could also have a positive impact by transferring technology or capital from developed to less developed countries. In either case, measurement of the performance of offsets and development of knowledge about the processes used to control for defined objectives are needed to minimize the overall detrimental economic effects.

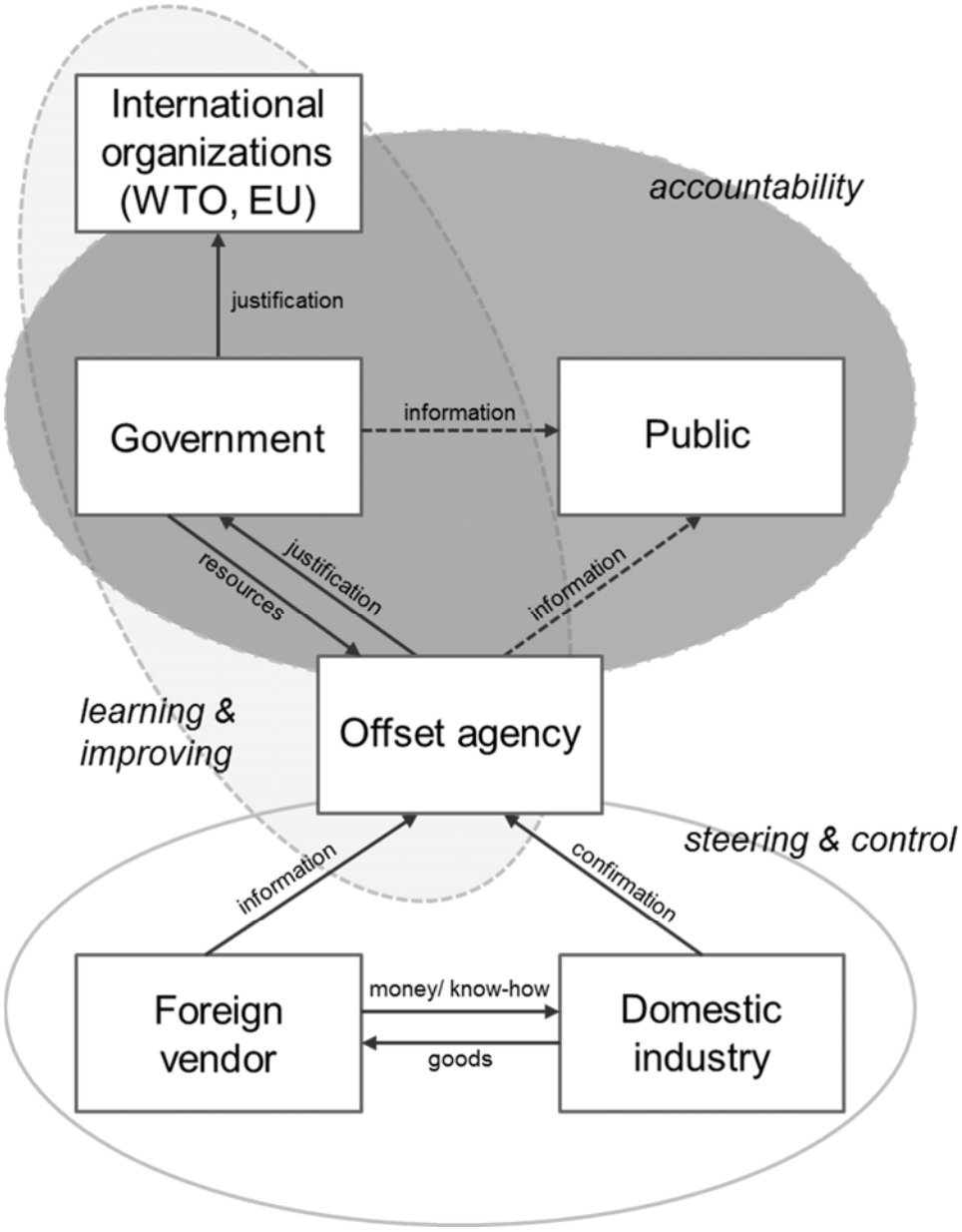
Also, while health care or education may be more important from a budgetary point of view, these areas are unfortunately inherently complex, with a great number of actors and processes involved. As a result, academic work in performance management is about abstracting from real world situations and translating these practical problems into conceptual frameworks, thereby treating each empirical problem as a unique case.

The relatively simple processes and organizational structures could be a reason to use the performance management of offset agencies as interesting cases for scholars of public management. All of the countries requiring arms trade offsets as part of their armament procurement possess only a single governmental body with a relatively small staff of about ten to twenty employees to govern these deals. Thus the objectives and functions of these agencies are relatively similar and, most importantly, they share the common problem of controlling the different offset deals between foreign vendors and domestic industries. With a single authority responsible for the evaluation of arms trade offsets of relatively similar volumes within each country, a scholar will have a unique opportunity to compare the use of performance management across countries.

The aim of this dissertation is to address the identified lacunae by investigating *how states use performance management for arms trade offsets*.

To this end, the three papers that encompass this cumulative dissertation will provide an overview by focusing on the different clusters existing within performance management. Figure 2 indicates where the different clusters can be found in arms trade offsets.

Figure 2: Performance management clusters in arms trade offsets.



Note. Source: Own presentation, based on Van Dooren et al. 2010, 31.

An offset agency has to steer and control the offsets by specifically getting performance information from the foreign vendor and the domestic industry. It has to give account by justifying that the activities and the received resources led to the output and outcome planned, and it has to inform the society, media or other stakeholder about the benefits of the activities. As offsets are seen as trade distorting and are, with the exception of purely military procurements, forbidden, the government often has to justify the use of

offsets towards different international organizations, especially when these organizations have the objective to increase free trade. In addition to this, the offset agency should use not only its own performance information, but also international benchmarks in order to be able to learn and potentially improve or modify its activities.

1.4 Organizations, policies and performance

In the literature, there have been discussions of what exactly is meant when we speak about performance. Talbot (2007) talks about distinctive foci of performance, and distinguishes between the classic *organizational performance*, *policy performance* and the *performance of individuals*, in our case public employees. This is relatively similar to what Bouckaert and Halligan (2008) define as "depth of performance" (18) where they distinguish between a *macro level*, a *meso level* and a *micro level*. In contrary to Talbot, Bouckaert and Halligan renounce the individual performance, but instead also include a macro level to define the performance of countries or even supra-national governments. The meso level could be defined as Talbot's policy performance, while the micro level is the same as the organizational performance.

This distinction especially between organizational performance and policy performance is insofar important, as the latter is traditionally part of a separate field: evaluation studies.

The differentiation is insofar understandable as a policy, is in most cases not based on the activity of a single public organization but instead is affected by a large number of agencies or even ministries; each controlling and influencing the overall policy performance differently. While this has led to a separate field of research with its own debates and developments (see, e.g. Guttentag & Struening 1975; Carley 1980 or Rossi et al. 2004) that is separate from public management or public administration, a need for better integration between the fields has been emphasized due to the increasing focus on outcome and effectiveness by public managers (Blalock 1999).

Globally, offsets could be seen as a research area that would offer a great opportunity to further discussions from both fields, as each country has a distinct agency solely responsible for the control of its own policy. However, this is not the intent of this dissertation and could be further researched at another time. To the author, the main difference between evaluation and performance is neither the depth nor the focus, but the process of how these is controlled for. Performance management activities are

ongoing, while evaluations are done ex-post. As this research is looking specifically at the day-to-day control-efforts of agencies, the project will exclude specific literature from evaluation studies. In the context of this dissertation, *evaluation* will be used synonymously to *control* but will purely focus on aspects of performance management.

1.5 Approach and outline of the dissertation

This dissertation pursues a deeper understanding of how governments use performance management when dealing with arms trade offsets. To do so, some choices have been made in its writing:

1 This thesis is in many ways cross-disciplinary and interdisciplinary as it draws on insights from Public Management, Security Economics and Political Science. It aims to enlarge the performance discussion by adding cases that have so far not been discussed as much as it aims to provide a first insight into the importance of performance management for the purely economic or political study of special cases of arms acquisitions.

2 This is a cumulative dissertation project. Contrary to a monographic dissertation, this thesis is based on three different articles of which two have been published, and one is in the process of submission. A cumulative research project has the advantage that one can focus on several aspects that are important to one's own research and the disadvantage that some things are explained implicitly rather than explicitly stated. While a monograph with the same topic would probably start with a comprehensive discussion of the theory or a long but thorough development of a useful explanation of what arms trade offsets are, this is done to a very different degree in these different papers. The goal of producing relevant, publishable papers also means that these will focus on the specific readership held by certain journals or other publications.

3 The title of this dissertation is "Performance Management in Arms Trade Offsets" and may be the biggest exaggeration of this project insofar as not one of the papers discusses performance management as a whole but rather single aspects of management, measurement or performance information use. Here, performance management is used as a hypernym for every activity that is related to management based on performance information.

4 Practical research should be based on a theoretical fundament. “The practical relevance of theoretical argumentation lies in the capacity to discover regularities in the relation between performance management and its context” (Van Dooren et al. 2010, 11). Still, there is not one grand theory used as the base of this project. Rather, the different papers use mid-range theories for their specific research questions.

While the three papers should be seen as independent projects, there exists an implicit (golden) thread through all articles: why performance management is important in the field of arms trade offsets. I argue that performance management in arms trade offsets has not been used by governments to the extent necessary and adequate given the criticality of the issue. Neither are governments able to objectively account if the self-set goals have been reached, nor can academia obtain sophisticated datasets on the issue that would allow for critical examinations and comprehensive scholarly debates. This dissertation tries to remedy these shortcomings by studying offsets as a critical issue of performance management. The outline of this dissertation is as follows:

Paper 1 focuses on a major puzzle troubling economists and questions why governments persist on using offsets despite all the academic doubts about their efficiency. It argues that agencies responsible for the steering and control of offsets within a government have a dominant institutional logic, which leads to a bias towards military or economic objectives and an imbalanced measurement of the performance of offsets. It uses a single case study on the management of offsets as part of the procurement of the Swedish CV9030 armoured vehicle by the Swiss Armed Forces as a plausibility probe. It shows that armasuisse, the Swiss defence procurement agency, as an exclusively military organization was much more interested in fulfilling the military objectives of ensuring domestic maintenance of the weapon systems than fulfilling the economic objective of increased employment. The case of Switzerland gives a good example of the control and steering functions of performance management in arms trade offsets.

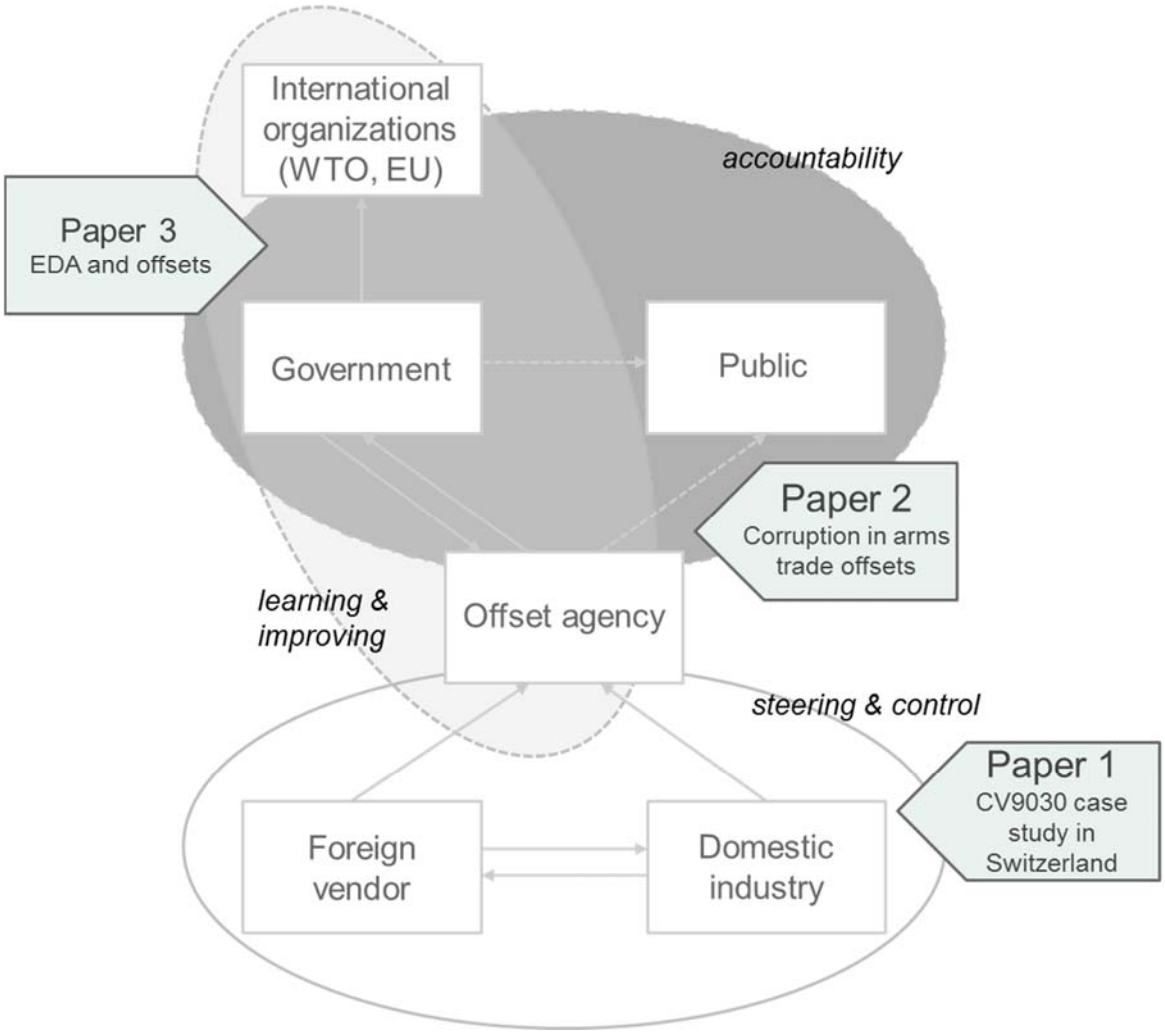
Paper 2 focuses on a secondary, however important, function of performance management. Arms trade offsets are often considered one of the most corrupt practices within the already highly corrupt field of arms trade. The paper groups corruption allegations from 1980 to 1992 along the procurement process, and discusses the use of anti-corruption tools for the defined groups. It comes to the conclusion that a large part of allegations could have been identified with relatively simple performance

measurement systems, and that the lack of transparency led to a number of wrongful corruption allegations. Therefore, the paper discusses an additional control function of performance management on the one hand and efforts to increase the accountability on the other.

Paper 3 is different as it is a chapter from a newly published book for the ten-year anniversary of the European Defence Agency (EDA) in 2014. The book focuses on EDA's offset coordination activities especially in comparison to the efforts of the European Commission (EC) to ban arms trade offsets completely. As part of a larger book project, for example the theoretical discussion is not included at all but is part of one of the introductory chapters and, it is rather descriptive because of the target readership of the book. Paper 3 shows that while the EDA never had a strong impact on the decisions of the member states during the last decade or on the institutional power of the EC. The agency's initiatives to increase the transparency of offsets by publishing all offset policies of member states as well as its efforts to collect data for benchmarking may lead to an improvement of offset practices in the long run. While it is mentioned only peripherally, EDA's efforts to benchmark can be seen as an attempt to improve the policies but also the management of arms trade offsets.

Figure 3 shows the assumption of these papers within the clusters of performance management developed by Van Dooren et al. (2010).

Figure 3: Subsumption of research paper within clusters of performance management in arms trade offsets.



Note. Source: Own presentation, based on Van Dooren et al. (2010).

1.6 Relevance and Innovation of this project

The contribution of this research is threefold. First and foremost, this dissertation project provides empirical studies based on sophisticated data in a domain that has so far been under-researched by scholars of public management. This is particularly unfortunate given the fact, that in the case of offsets, need for action to improve the performance management on the side of governments is imminent. This research therefore extends and enhances the body of literature on offsets by providing case-specific insights, thereby drawing on the most encompassing data ever retrieved on a single offset case.

Second, the paper contributes to the development of analytic frameworks within the field of public management. By reducing the complexity of cases stemming from the theoretical density within the field, the conceptual framework developed in this research project allows to better identify where problems in performance measurement exist. Moreover, by emphasizing key aspects rather than multiple technicalities, the framework allows comparison of cases across states and policy domains what hitherto has not been accomplished by academia.

A third relevance is of a practical nature. Recent developments such as the creation of the European Defence Agency (EDA) in 2004 or the release of the European Commission's Defence Procurement Directive[9] in 2009 indicate a trend towards the integration and the liberalization of European defence markets and a harmonization of defence-industrial policies and arms procurements. European policymakers, however, are confronted with the challenge posed to this process by inadequate national evaluations of the performance of arms procurements and offsets. Inadequate performance measures generate insufficient types of data on how arms trade offsets perform. In the absence of systematized information, a harmonization of defence industrial policies is doomed to remain ill-informed. By analysing the use of performance management for arms trade offsets, this dissertation project will allow the identification of problem areas and best-case practices with potential practical applications. Thus, national and European authorities might be able to optimize their evaluations of arms trade offsets.

Endnotes

[1] For more elaborate definitions of the terms ‘performance information’, ‘performance measurement’ and ‘performance management’, see Van Dooren et al. (2010, 32-38).
[2] In licensed production contractors in the buying country become integrated in the supply chain of the defence good for the production of the units purchased by their home country.
[3] In co-development industries from different countries pool their resources to jointly develop and produce a weapon system. Development and production tasks are usually allocated according to the principle of fair return whereby a company’s share is proportionally to the number of units procured by its home country.
[4] For this project, offsets are seen as an umbrella term for all kinds of compensation practices, including countertrade or license production (see, e.g. Markusen 2004).
[5] Since the late 1950s, the U.S. government has maintained very restrictive landing rights in order to increase the possible market share of (predominantly) government-owned U.S. companies in transatlantic transportation (Dierikx 2008, 88-94).
[6] See Gruening (2001) for a cursory historic overview of the development of New Public Management.
[7] For an overview, see Dinesh & Palmer (1998).
[8] See for example the (brief) literature review of Balakrishnan (2007, 23f.).
[9] Directive 2009/81/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of procedures for the award of certain works contracts, supply contracts and service contracts by contracting authorities or entities in the fields of defence and security, and amending Directives 2004/17/EC and 2004/18/EC.

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2 Arms Trade Offsets in Switzerland: Dominant Logics and Offset Efficiency

Authors:	Peter Platzgummer
Individual contribution:	Single-authored paper
	Three of the primary-source-interviews have been (co-) conducted by Alma Arcelia Gonzales Lozano (Nanyang Technological University, Singapore)
Presentations:	-
Current stage:	Prepared for submission.

2.1 Abstract

This paper argues that a governmental agency responsible for the management of arms trade offsets within a country is bound by a dominant logic derived from the institutional environment of the organisation. Furthermore, it argues that for offset management, two distinct logics exist depending on whether the organization is working under a Ministry of Economics or a Ministry of Defence. An initial examination of this argumentation is made with a plausibility probe. An in-depth case study assessing the performance of one of the largest Swiss offset programmes in the procurement of the CV9030 armoured vehicle is therefore conducted. The case study analysis shows that the organisation of offsets by an agency within the Ministry of Defence leads to a prioritisation of defence respectively while secondary economic objectives such as the increase of employment numbers or overall benefits to the industry are only partially considered in outcome evaluations. Thus the perceived success of an offset programme has significant implications based upon an agency's institutional environment.

2.2 Introduction

Offsets, or reciprocal purchase agreements, are an important and fast growing element of worldwide defence trade. With global military expenditure amounting to USD 1.753 trillion in 2012 (Perlo-Freeman et al. 2013, 1), it is estimated that defence corporations had outstanding offset obligations valued at USD 500 billion between 2005 and 2016 and the total value of on-going offset transactions has reached almost USD 50 billion per annum (Ungaro 2013, 6-7). Yet, despite the substantial volume of capital and the number of countries involved, offsets are questionable. In fact, most academic scholars would argue that the increase of offset obligations in the last years is not easy to understand from an economist perspective: "while positive (…) effects from arms trade offsets deals are not impossible, they are theoretically implausible and empirically improbable" (Brauer & Dunne 2004, 5).

The main objective of this paper is to answer how, despite all known theoretical as well as empirical refutations, government can still argue that arms trade offsets are efficient. It argues first that the loose term 'government' needs to be expanded upon in order to understand that the agencies working on offset management are bound to logics derived from their institutional context. In fact, out of 77 countries that regularly apply offsets worldwide, 61 are either solely part of a Ministry of Defence or of a Ministry of Economics (CTO 2015). In this paper, the argument is that depending on the ministry, an agency will either prioritise objectives that favour defence issues or objectives that favour economic aspects of arms trade offsets. Because of this, we should be able to evaluate the assessment of offsets by an agency by focusing on the performance management system, knowing that these systems are shaped by the same institutional logic (Van Dooren 2008).

The paper is structured in two main parts. Part 1 gives an introduction on the literature on offsets and explains the puzzle that has been plaguing researchers in this field. It then suggests to examine rather than assume who the procuring government (agency) is and how the institutional surrounding influences the actions of that agency. In order to do so, the paper suggests to focus on the performance management system of the respective organisation.

Part 2 is based on a plausibility probe to test the expectations derived from the combination of two distinctive dominant logics and clusters of performance management systems. It then focuses on an in-depth case study of the offset programme for the Swiss CV9030 armoured vehicle procurement. The case of the Swiss vehicle acquisition is insofar interesting as it is not just the largest offset programme in Switzerland since 1993, but also – according to the Swiss defence procurement agency armasuisse – the most successful offset programme in recent years. The paper concludes that the CV9030 offset programme can be seen as successful since the agency focused almost exclusively on defence objectives and keeping the costs for the management of secondary objectives as low as possible. While this is only a plausibility probe, the outcome of the case study suggests that the assumed dominant logic of defence prioritisation could have a strong effect on offset agencies within the Ministry of Defence.

2.3 Literature Review and Problem Definition

Smaller countries whose domestic companies are not among world's largest defence suppliers usually have to buy modern weapon systems on the international market. While this off-the-shelve procurement is most often less expensive than an autonomous development and production of a defence system, it can lead to a loss of technological know-how in the domestic defence industrial base and to a loss of industry workplaces in the medium term (Hartley 2013, 2). However, even countries with a relatively small defence budget have a rather large bargaining power in a market with only a few contenders and a small number of procurement projects per year. So they are able to demand additional measures to compensate for these negative effects (Taylor 2004: 31).

These "industrial or commercial compensation practices required as a condition of the purchase of defence articles and/or defence services" (Martin 1996: 31) are known as offsets. Usually, these transactions are distinguished between direct offsets and indirect offsets (Martin 1996, 32-33). For direct offsets, the domestic industry will produce components that are directly linked to the procured system, while for indirect offsets the companies can produce any kind of components (or even systems) for the foreign vendor and its suppliers to export to third parties. The objective is to re-direct the government's

investment in weapon systems back into the national economy, a strategy that can be easily portrayed as an instrument of industrial development policy and which can, therefore, be employed to justify costly defence acquisitions (Taylor 2004, 31). In fact, the practice of defence offsetting had its origins at the end of World War II when offsets were first used as part of the United States' Military Assistance Program (MAP) to promote the economic reconstruction of Western Europe and to discourage countries from joining the Soviet bloc (Martin 1996, 17). However, the popularity of offsets has substantially increased in the post-Cold War era due to the transformation of the international defence market from one characterised by high demand by industrialised states to one where reduced defence spending has given disproportionate leverage to purchasing states. Offsets are seen as a way for a country with limited procurement budgets to "provide industrial benefits in the form of jobs, technology transfer, support for the defence industrial base and foreign currency savings" (Hall and Markowski 1994; OMB 1987 cited in Martin & Hartley 1995, 127). This has created an ideal environment for offsets to thrive (Ungaro 2013, 10).

The defence consultancy Avascent assumes that, between 2005 and 2016, countries organise a larger number of offset agreements than ever before - with an estimated volume of cumulative obligations by defence companies in excess of 500 billion USD globally (Ungaro 2012, 2).

This fact about the very existence of offset agreements – and their considerable volumes, is suspicious from an economic perspective: "Notwithstanding the reported success of many offset arrangements (particularly from the buyer's perspective), economists are understandably cautious of any policy that diminishes the role of prices in market exchange" (Taylor, 2004, 30). Offsets may lead to a situation where the additional benefits are more important to the buyer than the military benefits of the procured weapon system, and ignoring other negative effects accompanying offset deals. Milton Friedman's famously used book title phrase "there's no such thing as free lunch" thus exemplifies the puzzle academics spot in arms trade offsets: "while positive (…) effects from arms trade offsets deals are not impossible, they are theoretically implausible and empirically improbable"[10] (Brauer & Dunne 2004, 5). From an economic perspective, a

world in which arms trade offsets provide additional benefits at no costs is too good to be true.

While offsets have never been in the focus of a large research community, the new trade possibilities which opened up with the end of the Cold War started discussions on the economic rationales for offsets in the field of international trade and security economics (see, e.g., Mirus and Yeung 1986; Hennart 1989, Udis and Maskus 1991). The debate among defence economists centres basically around five main arguments: First, the theoretical discussions were mobilised to explain aspects relating to international trade such as the use of offsets to selectively devaluate overvalued currencies and thereby stimulating the export of goods in the chosen industry fields (Brauer 2004, 55). Second, less developed countries ease borrowing problems on international financial markets by negotiating offset deals involving non-monetary transactions to access goods they could otherwise not procure (Mirus and Yeung 1987). Third, offsets are seen as a tool for export promotion: The procuring country can leverage the prestige of a foreign vendor involved in the offset deal to market its domestic products thereby facilitating access into new markets. (Brauer 2004, 55). For example, in 2013 the ten largest arms-producing companies in the world had total sales of between 18 and 86 billion USD (Fleurant & Perlo-Freeman 2014, 3), and according to the World Bank, all would have larger sales than the GDP of 80 countries. In 2013, the largest company, Boeing, had total sales larger than the GDP of almost 120 countries worldwide (World Bank 2014). Because these large defence companies have such a strong market power, one can assume that they are able to help a small domestic company to become a supplier in the global market. A fortiori, the procuring country may be able to sell goods that would normally not be sold due to their inferior quality (Martin 1996, 21). Or, as a similar mechanism working in the other direction, offsets can be used as a tool to share risks arising from uncertainty about the quality of the purchased system. According to this argument, coercing a company to buy back domestically produced spare parts could prevent the foreign supplier from transferring outdated technology for these parts in the first place (Brauer 2004, 55). Fourth, as Stephen Martin and Keith Hartley (1995) argue, offsets could contribute to economies of scope and therefore lower transaction costs in an area where highly complex contracts and imperfect market conditions are more a

standard than an exception (127). Finally, a fifth benefit that is discussed by Martin and Hartley (1995) is that offsets could lead prime contractors to search for more efficient suppliers (127), thereby making the procurement cheaper than it would otherwise have been. Yet, as Jurgen Brauer argues, this should be done regardless (2004, 60).

However, despite the different arguments employed by the academic community, they all try to rationalise offsets long after the countries decided to use them. “They merely suggest that, in principle, offsets may entail net benefits when compared to the status quo and that the issue needs to be decided empirically” (Brauer 2004, 55). The question that most economic research focuses on is insofar not how the existence of offsets can be explained but rather how efficient offsets really are. However, the evidence on efficiency is rather weak. Quantitative studies focusing on outcome efficiency are, due to the scarce data availability, non-existent (with the exemption of the surveys and reports on U.S. exporting companies by the U.S. Bureau of Industry & Security of the U.S. Department of Commerce since 1996, respectively the preceding reports by the U.S. Office of Management and Budget between 1980 and 1987 and the U.S. Bureau of Export Administration between 1993 and 1994). While a considerable amount of case studies and even some comparative case studies on offsets exist (see e.g. Mawdsley & Brzoska 2004; Cheng & Chinworth 1996), “none are comprehensive in the sense of an economic audit that would assess all costs and all benefits to all people” (Brauer 2004, 58). Instead, most case studies focus on the buyer side and then specifically on offset policies (Hagelin 2004, Markowski & Hall 1996, Fergusson 1996), the additional costs incurred through procurements involving offsets (Struys 2004), or the impact of offsets on the development of the domestic defence industrial base (Markwoski & Hall 2004, Perlo-Freemann 2004 Molas-Gallart 1996, Udis & Maskus 1991). Case studies focusing on the supplier side (Markusen 2004, Hébert 1996) are even rarer as most academics agree “that aside from the sale, there is little attraction for them to enter into offset agreements” (Matthews 2004, 97) - a strong argument that leaves little else to investigate.

But even with little evidence, there is almost universal agreement within academia, that offsets (especially mandatory ones) are almost never efficient (Markowski & Hall 2004a). To name just the three most prominent reasons: First, the cost-effectiveness of

technological spillovers from military to civilian applications is rather poor (Dumas 2004, 24). Second, the price of procurement projects involving offset agreements (in the extreme case of Belgium) may rise by more than 20 or even 30 % (Struys 2004, 166-167). Third, the domestic companies do not profit as expected and are often not able to become self-sufficient producers (Cheng & Chinworth 1996, 275; Bitzinger 2004, 266).

2.4 Analytical Framework – Institutional Logics

What the theoretical as well as the empirical economic literature shows is that offsets may be efficient though most probably not. Either way offsets "involve addressing a mixture of objectives" (Markowski & Hall 2004a, 45) and may "provide multi-dimensional benefits (e.g. security, jobs, technology)" (Martin 1996, 37). The argument in this paper is that at least three specific aspects have not been taken into consideration in scholarly discussions concerning offsets so far: First, the arguments provided in the economic theories are closer to as-if-rationalizations (Brauer 2004, 55) than explanations based on actual actor motivations: We do not know whether the rationales for offsets provided by economists actually translate to the motivations in which agents involved in arms trade offsets make their decisions how to manage offset deals. Do they really worry about currency devaluation, getting low quality goods on the world markets, or regional development policy? If not, what drives their behaviour?

Obviously, the answer has to do with the objectives they pursue, but again, a mere listing of plausible objectives will not get us very far analytically. Because, even if the objectives associated with arms trade offsets are behaviourally valid in general, we do not know which subset(s) are more or less important under different specific circumstances. For example, Stephen Martin (1996, 37-44) gives an overview of some of the most commonly discussed objectives for offsets such as 'technology transfer', 'employment policy' or 'defence preparedness'. A government can use offsets to receive necessary technologies needed to warrant the maintenance of the purchased weapon systems to the domestic industry. In doing so, it would not only achieve the technology transfer objective, but would also increase defence preparedness and probably employment numbers. But, as this would "divert economically critical labour and physical capital resources" (Dumas 2004, 19) from civilian towards military production,

it would have a negative impact on the production of other goods and services which are more important to the material well-being in the long run from an economist perspective (Dumas 1995, Dumas 1986). Another example would be the objective to use offsets as a form of regional policy, where some countries encourage "firms to locate economic activity in specific geographical areas" (Martin 1996, 40). While this might be advantageous for boosting the employment numbers in the region, it could, depending on the area, lead to comparatively higher prices of the overall procurement or offset package. This could for example be due to unfavourable logistic requirements, when a foreign supplier would be encouraged to use a landlocked production site instead of one close to the sea, thereby significantly increasing the transit costs of the product (Holweg & Miemczyk 2002, 66).

Given the possibility of divergence and conflict between objectives, management has to prioritise some, but which? This paper argues that this will be determined through the prevailing institutional logic nested within an offset agency.

Second, it is critical to break open the black box of what offset research defines as government. While the bulk of economic literature distinguishes between different main stakeholder roles, such as the supplier, domestic companies, or industrial interest groups (see Brauer 2004, 56-58 for an overview), there is only a vague umbrella-term for 'government', which refers to everything from procurement and offsets to lifecycle management. For example, while each military branch in Brazil has its own offset policy and management team, research conducted on Brazilian offsets makes no distinction between them (see, e.g., Perlo-Freeman 2004). This is a typical situation in the literature; in fact, of the 77 countries that regularly use offsets (CTO 2015) almost 80 percent have offset agencies that can be clearly allocated to either the Ministry of Defence (30 countries) or the Ministry of Economics (31 countries), which would imply that actors and agencies are following distinct objectives in the management of offsets. The remaining countries have either just began using offsets and have yet to define which government branch will hold responsibility, currently relying on a combined system, or are organised in a special agency relationship with the head of state (e.g. Cuba, Morocco, N. Korea, or Zimbabwe (CTO 2015)).

While a ministry of defence is obligated to protect the security of the state over all other considerations, a Ministry of Economics ranks a wider range of factors, such as GDP or employment growth higher than the needs of defence. One must keep in mind, that according to the GATT/WTO agreements for most industrialised countries, offsets are exclusively allowed for arms procurement. This can lead to a situation where the ministry of economics is steering and controlling the offset objectives while the additional costs that are generated from offset deals must be included in the defence procurement price and thereby in the budget of the Ministry of Defence. With the long-standing trend of decreasing defence budgets following the end of the Cold War era (Perlo-Freeman et al. 2013, 1), the question of how large the additional costs of offsets are becomes a growing factor in every procurement decision for ministries of defence.

From the perspective of a public manager within a government, diverging objectives are nothing new and neo-institutional theory (March & Olsen 2006; Peters 2005) has a growing body of literature on what they would define as competing institutional logics (Thornton et al. 2013). However, organisations with a narrow mandate and well-specified tasks, clearly defined institutional affiliation, and integral staff with similar professional background such as offset agencies should provide over a distinct logic when pursuing such tasks despite the different objectives offsets pursue. Offset agencies at a first glance seem more to fit the traditional neo-institutionalist view of organisations as composed of a collection of actors with similar products and services (DiMaggio 1983) who have, “a set of belief systems and associated practices” (Reay & Higgins 2005, 354) to guide their actions. Yet objectives and practices that may be secondary to the organisation’s estimates of the efficiency of offsets may be important for the other aspects of the organisation’s performance.

Therefore, a logics perspective bares considerable potentials for analysing and comparing offset-management systems across countries.

Third, the social construction of efficiency ascriptions must be kept in mind: economists argue that offsets are inefficient because their calculations are based on all possible objectives and costs. Yet public managers working in government agencies responsible for offsets could prioritise different indicators (see e.g. Van Dooren et al. 2010, 59-60) and even employ a different concept of outcome (e.g. Hood’s 1991 types of public

value). Therefore, they could conclude that offsets are efficient despite apparent economic inefficiencies. It remains unclear which school of thought is correct. For example, a public manager within the Ministry of Defence might argue that ensuring security could be a precursor for any economic activity and is not substitutable for other goods. This would mean that the very idea economists hold of monetized utility assuming a substitutability of jobs between the civilian and military sector (see e.g. Taylor 2004) would not be accepted in a military setting.

In summary, in order to determine how a government or respectively a government agency responsible for offset management can argue that offsets are efficient, we must identify the objective prioritisation behaviour of the public employees managing offset deals. The logic concept of new institutionalism could assist in explaining how public management is bound to an institutional logic depending on the organisation it is located in, "organisations (agencies) functioning for some time are likely to have institutionalised patterns effecting their social structure in particular ways" (Stinchcombe 1965 in Bátora 2009, 1077). Here, institutional logics are defined as "socially constructed, historical patterns of cultural symbols and material practices, including assumptions, values, and beliefs, by which individuals and organizations provide meaning to their daily activity" (Thornton et al., 2012, 2).

In arms trade offsets, two principal institutional logics are present [11], both dependent on the governmental agency of a country responsible for offsets and its institutional environment: A logic of defence prioritisation and a logic of economic prioritisation. The logic of defence prioritisation in offsets states that security is the prerogative of a nation-state with a preference for self-sufficiency thereby promoting a defence industry capable of maintaining its procured security systems (Bátora 2009; Bobbit 2002; Van Creveld 1999; Tilly 1985). Whereas the logic of economic prioritisation in offsets is concerned with the creation of new opportunities for industry overall including new jobs, more sales, and new technologies regardless of the intended industry; even if this has no relation to defence (Aldrich & Fiol 1994; Sabel 1993).

This paper argues that public managers dealing with offsets are influenced by the institutional environment in which the organization resides. While there is a wealth of theoretical distinction between types of institutions (see, e.g., DiMaggio & Powell 1983)

or logics of actions (March & Olsen 1989) that shape different logics, it is not essential for this research framework and will not be discussed further. Rather, the focus is to identify the underlying assessment behaviour in determining the success or failure in offset outcomes. We should be able to evaluate the assessment of offsets by an agency by focusing on the performance management system knowing that these systems are shaped by the same institutional logic (Van Dooren 2008).

Principally performance management is a management process that includes a number of distinct, however interrelated tasks. Van Dooren et al. (2010, 31) analytically distinguish between three basic clusters of performance information for decision-making: learning, steering & control, and account giving. Learning in the context of performance management focuses on the potentials of improvement of organizational performance by continuously reviewing past and present projects. Steering & control refers to activities of managing and monitoring current projects for the purpose of controlling the quality of output. Account giving refers to tools within the performance management system to give external legitimacy to the organization. Because in practice offset deals are assessed on a single case basis rather than by means of a cross case comparison the learning cluster is less important to the organisation and will therefore be deliberately excluded in the analysis. In contrast, steering & control are highly relevant because these tools directly affect the offset deal. Account giving is less relevant for the offset agency as its existence is largely unquestioned. However, its performance has implications for the legitimacy of the umbrella organisation, i.e. the Ministry of Defence or respectively the Ministry of Economics, insofar as offsets support the political procurement decision beyond the concrete enhancement of military capabilities (Taylor 2004, 31).

Applying the two relevant clusters to the logics perspective on organisations, we can expect that organisations with distinct dominant logics pursue distinct activities in the respective clusters. An offset agency institutionally affiliated with a Ministry of Defence will:

E_{D1}: prioritise offsets that imply potentials for military benefits. These offset deals will be planned, managed and monitored very carefully while fewer organisational

resources such as finances and personnel will be dedicated to offsets that imply secondary goals to the organisation such as employment.

E_{D2}: strategically limit the range of possible domestic companies that are to be included in the supply chain for the procured system to ensure the quality of the system while quality management of offset deals that do not affect the production or future maintenance of the product will be less rigorous.

E_{D3}: Because procurement and offset management costs lie directly with the Ministry of Defence the offset agency will seek to limit additional costs of offsets as far as possible.

E_{D4}: use outcome indicators that show the security benefits of the procurement as well as indicators that show the additional economic value of offsets to broaden the scope of legitimacy of the Ministry of Defence.

By comparison an offset agency institutionally affiliated with a Ministry of Economics will:

E_{E1}: prioritise offsets that imply greater societal and economic benefits. These offset deals will be planned, managed and monitored very carefully while fewer organizational resources, such as finances and personnel, will be dedicated to offsets. This implies that military goals are secondary to the agency and as such are widely taken for granted with the procurement decision.

E_{E2}: strategically open the range of domestic industries regardless of whether a company's activity in included in the supply chain or not.

E_{E3}: Because only the offset management costs lie with the Ministry of Economics the offset agency will only focus on limiting its own management costs but not the additional procurement costs associated with offset deals.

E_{E4}: use outcome indicators that show the economic value of the procurement to legitimate the role of the Ministry of Economics in defence issues, while the defence implications are treated as taken for granted.

Table 2 gives an overview of the two logics and the derived expectations.

Table 2: Theoretical foundations and empirical expectations.

	Theoretical foundation	Empirical expectations
Logic of Defence Prioritisation	Security is the prerogative of a nation-state with a preference for self-sufficiency thereby promoting a defence industry capable of maintaining its procured security systems (Bátora 2009; Bobbit 2002; Van Creveld 1999; Tilly 1985)	• prioritise offsets implying potential military benefit • limit range of companies to ensure quality of the system • limit additional costs of offsets • use indicators to show both the security benefit as well as the additional economic value
Logic of Economic Prioritisation	Creation of new opportunities for industry overall including new jobs, more sales, and new technologies regardless of the intended industry; even if this has no relation to defence (Aldrich & Fiol 1994; Sabel 1993)	• prioritise offsets implying potential economic benefit • expand range of companies to ensure quality of the system • additional costs of offsets are rather incidental -> more steering • use indicators almost exclusively to show the additional economic value

Note. Own presentation.

2.5 Research Design and Case Selection

To quantitatively test the discussed expectations of this paper an extensive amount of data across different countries and offset deals would be required. As an intermediary step between the generation of the expectations and a larger test, the remaining paragraphs will be dedicated to a plausibility probe in form of a single case study (Levy 2008, 3-7). The strategy is to assess the validity of the argument to an extent that data on a single case can reveal in depth insights as well as potentially generate new hypotheses (Eckstein 1975, 110; George & Bennett 2005, 75).

The following paragraphs examine the offset performance management of the Swiss defence procurement agency, armasuisse, which is also responsible for offset deals.

The case of Switzerland provides a unique context to assess the performance of defence offsets from the recipient side. The country possesses a relatively small defence

economy with defence production accounting for less than 1% of the GDP in 2011 (Eisenecker, Platzgummer and Rose 2012). In addition, Switzerland has a firm policy of neutrality in international affairs that has prevented its military from engaging in armed conflicts since the establishment of the Treaty of Paris in 1815 (Ogley 1970). This, in turn, explains the fact that between 1991 and 2010 Bern has invested, on average, only 1.16 % of its GDP on defence, a low figure by international standards. To compound this, as is the case in major European countries, the Swiss defence budget shows a clear downward trend, having gone from 1.7 % of GDP in 1991 to 0.8 % in 2010. Given the small size of the local defence industry, 57.6 % of all military contracts signed during the above period have been granted to foreign manufacturers, generating inwards offset investment for a total value of CHF 10.533 billion[12].

The concrete offset deals examined are part of the Swiss armoured vehicle procurement (SPz2000). After the first evaluation for the procurement of a new armoured vehicle, together with Norway, had been halted in 1993, in 1997, a second attempt to evaluate possible candidates was made and three[13] out of the eight contenders were chosen for further tests. In 1999, this led to the selection of the CV9030 armoured vehicle by the Swedish vehicle producer Hägglunds. Hägglunds not only offered a comparatively large amount of direct offsets but was also special insofar as they opened a liaison office in Switzerland to support the offset management. From December 1999 to June 2006, Hägglunds along with its foreign suppliers and 151 domestic companies conducted offset deals with an overall volume of 633 million CHF, making this the largest offset project in Switzerland since the F/A-18 procurement in 1993[14].

In line with the requirements of a plausibility probe, the organisation as well as the procurement project constitutes a most-likely case as Switzerland is one of the countries where the conduction of offsets lies within a single organisation (Eckstein 1975). Moreover, the specific case of the CV9030 against all reservations by economic theorists regarding the economic efficiency of offsets is considered by armasuisse as the most successful offset case in the last decade[15]. Also this case was chosen because in contrast to other defence procurement projects and other countries where not a lot of information on specific offsets is publicly available, primary as well as secondary data on Switzerland and on this particular case has been accessible to the author. In fact in 2013,

Transparency International published the first edition of the Government-Defence Anti-Corruption Index which included a question on transparency of offset deals. Out of the 45 countries in the survey which had some form of offset policies, only four countries scored the maximum of four points (transparent information), while 28 earned a score of zero or one (no transparent information available) (Cover et al. 2013). Also, the data retrieved can be assessed for high quality because the Swiss regularly "exercise careful control over the specification of arms trade offset agreements to ensure the precise direction into which offset-resources are steered" (Brauer, 2004: 58). Data quality is deemed particularly reliable as the case of the CV9030 has been subject to an evaluation by the Swiss Federal Audit Office whose report is open to the public as well (EFK 2007a).

Apart from secondary sources on the case the analysis draws heavily on quantitative data retrieved from armasuisse and (semi-)structured interviews (see e.g. Wengraf 2001, 51-70) with both project managers, a representative of the Swiss defence industry association (Swissmem), and an offset manager of the Swedish supplier, Hägglunds. For reasons of confidentiality the data can only be referred to in an anonymised form.

2.6 Case Findings

2.6.1 Steering

As an agency responsible for the strategic steering of offset deals, armasuisse can apply different tools to do so: In general, a policy by the DDPS defines the objectives for all offset deals within Switzerland and will provide the agency with a strategic direction. Additionally, armasuisse can ask for distinct factors within the proposal phase, otherwise it can add more specific objectives into an offset agreement. Also, by allowing the use of multipliers during the fulfilment phase, armasuisse could set up economic incentives for the foreign company to follow objectives more willingly.

2.6.1.1 Swiss Participation Policy

Switzerland, experiencing the difficulties of a self-reliant defence organization and cut-off from foreign supplies during World War II, has always been very much aware of the strategic implications of maintaining domestic defence-technological capabilities.

While never able to fulfil military systems needs domestically, the Armed Forces always made an effort to enhance existing industrial capabilities at least to a level that would allow for independent maintenance of all systems for a defined period of time. This main strategic stance has not changed since the post-war period, and even today the Swiss security policy plans for this worst-possible outcome in its self-reliant defence scenario (BR 2010a).

But, while Swiss defence procurement has focused, whenever possible, on proprietary development or at least licensed production with a high degree of so called 'helvetisations' - changes according to the specific need of the Swiss (Helvetian) Armed Forces - foreign off-the-shelve procurement is nowadays the standard procurement option. Even when a domestically developed system is chosen, the number of ordered systems is often not high enough to facilitate the economies of scale needed to maintain the defence industrial base.

Switzerland began requiring offsets from foreign defence suppliers in the 1970s when, having experienced the failure of the Mirage III licensed production programme and recognising that local industry was in no suitable position to undertake the design and production of indigenous aircraft, the Swiss government implemented an ad hoc offset policy as a last resort mechanism to acquire technologically sophisticated military air defence equipment while simultaneously obtaining the production activity required by local industry in order to keep and enhance crucial maintenance capabilities. Bern was aware that the added-benefits were not free, but the imperative to maintain an acceptable level of defence industrial self-sufficiency justified the paying of up to a 10 % offset cost premium for acquisitions above the CHF 10 million threshold (Udis 1996, 332).

In 1999, within the Federal Department of Defence, Civil Protection and Sport (DDPS), armasuisse was in charge of a so called Participation Policy, which stemmed from the Armament Policy and annual armament reports to the Parliament of the Federal Council (EFK 2007a, 8). Five objectives can be identified: (1) Maintenance of the industrial potential indispensable for the national defence; (2) a 100% additional employment effect in Switzerland; (3) Competitiveness of the Swiss companies participating in offset transactions; (4) Acquisition of additional know-how; and (5) Additional order and export volume abroad (EFK 2007a, 9). The objective of an adequate regional

distribution, which was in effect until only a few years earlier, was no longer a requirement. Also, according to the policy, Switzerland sought 100% industrial compensation package, but did not specify on the distribution of the investment between direct and indirect offsets.

2.6.1.2 Proposal evaluation

From the beginning of the evaluation, armasuisse had, due to its maintenance strategy and experience from other countries, a clear conception of which parts of the armoured vehicles should be produced domestically. To identify the price of direct offsets, armasuisse asked for two versions of the Request for Quotation: one with offsets and one without[16]. Hägglunds, using knowledge from the Norwegian experience, initially offered direct offsets in the range of 45 to 50% with additional costs of 2.1%, and considered this one of the reasons why the Swedish product was chosen, but it was seen as an unrealistically high volume by armasuisse and therefore had a very small impact on the procurement decision[17]. Also, Hägglunds had to provide armasuisse with a list of potential domestic companies capable of direct offsets prior to selection. In about 10% of the cases, armasuisse decided against the domestic companies and forced Hägglunds to re-evaluate other possible domestic candidates that could fulfil the obligation and matched the quality standards set by armasuisse[18]. In contrary to the direct offsets, specific indirect offsets were mostly not discussed during the evaluation phase as the decision of what kind of indirect offsets should be made lay with the foreign vendor. The proposed and also evaluated industrial participation program (offsets) was most probably not an important decision factor even though it counted for about half of the economic aspects and approximately 8% in the 'benefit-evaluation-scheme' (the military usage counted for about 60% in the same scheme) (EFK 2007a, 17).

The armoured vehicle procurement was insofar different from other procurements, as Alvis, the parent company of Hägglunds, bought GKN, the producer of the competing Warrior 2000 armoured vehicle in 1998 (BR 2000, 3045). For the evaluation of possible industrial participation programs, this meant that the Swiss companies would work with a very similar supplier base. At least for the two higher ranked candidates (Hägglunds

and GKN), the proposed industrial participation program was therefore less important to the final decision by the Swiss government.

2.6.1.3 Offset agreement

In September 1999 Hägglunds and armasuisse signed the offset agreement. The agreement as such was based on the offset policy and did not include many additional demands by armasuisse. The moderate approach of the offset policy very much defined this contract: it did include an overall offset commitment (obligation) of 100% of the CV9030 procurement contract price but did not declare a set distribution of direct and indirect offsets although this was highly debated during the proposal phase. Also, the contract included a penalty clause, but on a comparatively low level compared to offsets in other countries (Friedli et al. 2009). Hägglunds had to fulfil the offset obligations until four years after the delivery of the last vehicle (2009); in the event that Hägglunds would have failed to fulfil this task within the period defined, the penalty would have been 5% of the amount by which the foreign vendor failed to achieve the 100% commitment.

While the offset agreement did not include a banking clause, a side letter from Hägglunds was incorporated in the annex of the contract that listed already performed offset activities and especially defined the market assistance activities with Swiss companies that Hägglunds could claim.

2.6.1.4 Fulfilment phase

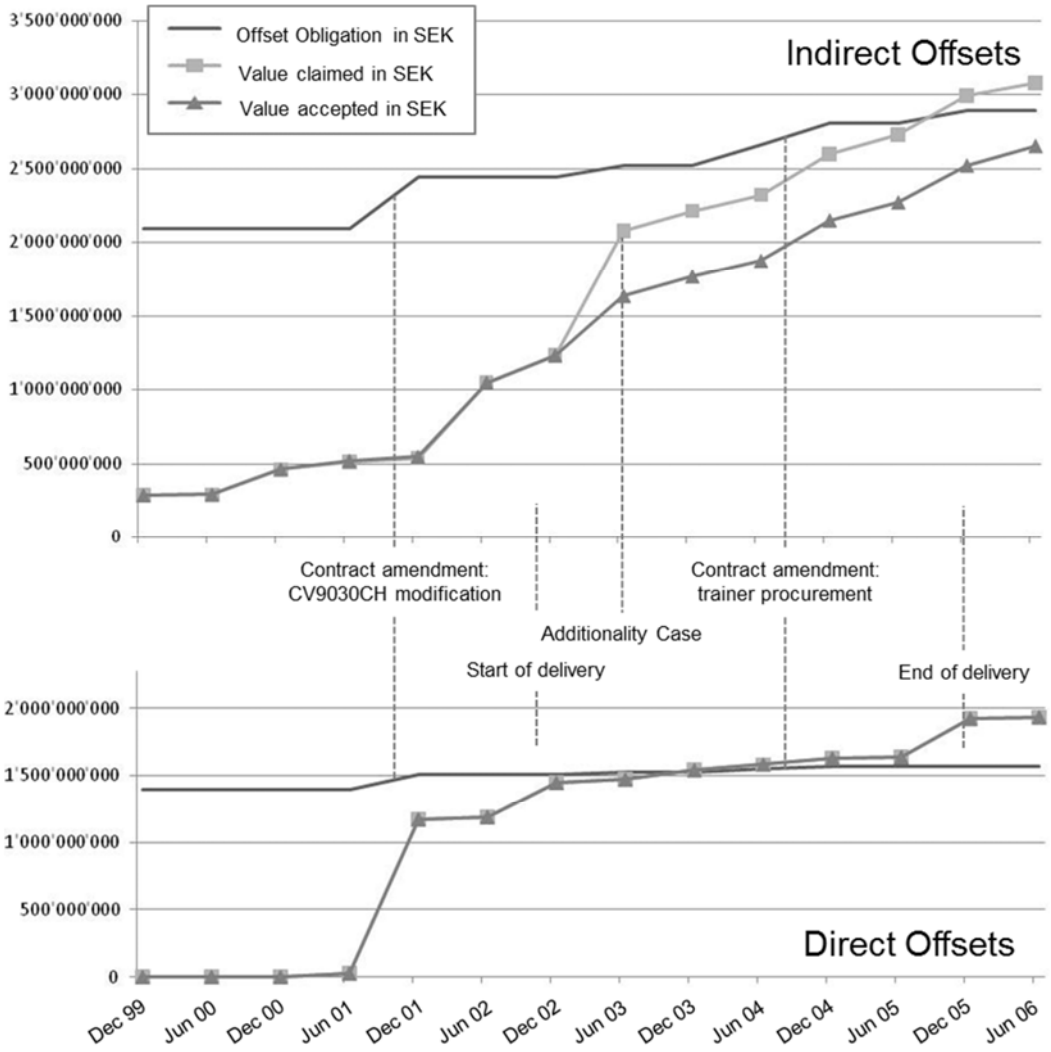
With an annual turnover of only 295 million Swiss francs in 1998 (BR 2000, 3040) and open offset obligations of 495.5 million Swiss francs (3,494 million Swedish krona (SEK)) in Switzerland, it is obvious that Hägglunds would not have been able to fulfil the contractual agreements within the given timeframe alone. Hägglunds strategy was twofold. On one hand, parts of the offset obligation were handed over to larger subcontractors, while on the other hand, Hägglunds relied heavily on its parent company Alvis, the Swedish government, and other Swedish partner companies.

Although Switzerland limited direct offsets to maximum 100,000 Swiss francs per transaction, the size of indirect offsets was not limited at all. Especially the partners were

insofar used to rapidly decrease the indirect offset obligation with relatively large single transactions.

Figure 4 gives a separate overview of the direct and indirect offset obligations, the volume of offsets claimed by Hägglunds or one of the partners and subcontractors, and the amount of offsets accepted by armasuisse at the bi-annual review meetings.

Figure 4: Overview of claimed and accepted direct and indirect offset transactions within the CV9030 programme.



Note. Own presentation.

The analysis of all review documents shows that four different phases can be identified during the execution. The first phase is distinguished by the post hoc approval of large indirect offset transactions which had been banked during the evaluation process. Here, a large transaction between a government-owned Swedish company and a Swiss rail vehicle producer was particularly responsible for the volume. The direct offsets claimed were mainly first prototypes from the different Swiss companies, direct offsets played insofar a subordinate role during this phase. The second phase, beginning in June 2001, saw a very steep increase of direct offsets by almost two third of the total direct

obligations and a relatively strong increase of indirect offsets shortly afterwards. Hägglunds was obliged to deliver three CV9030 for evaluations 18 months after the signing of the contract and start the official delivery in autumn 2002. Hence, the steep increase of claimed direct offset transactions is due to the delivery of the Swiss companies involved in the production of parts of the armoured vehicles. This delivery was accompanied by severe problems for Hägglunds. Several of the Swiss companies were delayed in their deliveries (due to licence approvals from the U.S. Department of Defence or production problems) and one company producing parts of the tower was not able to deliver to the quality standards Hägglunds had established. Here, as in other cases with similar problems, Hägglunds asked for a multiplier because of the additional work with the Swiss supplier, but contrary to indirect offsets, these were not granted for direct offsets. Some problems were also based on the quality of technical drawings by Hägglunds, and language problems due to scholarly use of English by the Swiss companies[19]. The strong increase of indirect offsets half a year later is mainly based on the final acceptance of a larger order by Hägglunds parent company Alvis. What can also be seen in this phase is that several modifications on the evaluated vehicles led to a contract amendment that simultaneously increased the overall offset obligation for Hägglunds.

Phase three, starting approximately in the beginning of 2002, can be seen as the most stressful phase for all participants. While during the first part of the phase, Hägglunds was able to claim an average number of offset transactions, the second part showed the limitations of the Swiss defence technological and industrial base. The biggest problem here was the termination of the contract with a major parts supplier due to quality problems and delays. While Hägglunds tried to find a Swiss substitute, these efforts did not lead to a successful end. According to the protocol of the review meeting, the federally owned defence company RUAG was identified as the only company that would have been able to produce the parts within the given timeframe but was considered too expensive. The proposed price of the parts, being almost 40 % higher than Hägglunds' own production costs, was due to expensive adjustments that would have been necessary for the rapid production of new parts, but most probably due to the position of monopoly in this situation and the on average higher price level in

Switzerland. In addition to this exceptional problem, Hägglunds also had to cope with at least one Swiss supplier who went bankrupt at the same time, and a relatively low level of overall support by the industry and industry associations[20]. Swissmem was seen as being on one hand far more critical than armasuisse during review meetings, but on the other not politically or sufficiently connected within the industry promoting the offset programme. It seems in many ways that the Swiss industry had a 'recipient-mentality' hoping that due to the pressure of the foreign vendor and the small industrial base, offsets would fall out of the sky. The pressure to fulfil the overall obligation within the set timeframe led to discord in this phase. While so far, almost all of Hägglunds' claims were accepted by armasuisse, Hägglunds started to claim offset transactions by partner companies where the degree of impact of the offsets on the trade was severely questioned. armasuisse denied the claim in the end as the deal between Swiss and Swedish companies unrelated at this point to any other offset transaction was seen as a result of previous cooperation between the two companies. Any specific effort by Hägglunds could not be perceived.

What can also be seen during this phase is that the volume of single transactions decreased significantly. This had two reasons. First, armasuisse accepted a special transaction wherein Swiss companies were paid the membership fee for an international offset database. The project was very much pushed by the Swiss industry association and was given above-average multipliers. Second, in many ways it seems that large offset transactions reached a limit due to the size of the Swiss defence industrial base, Hägglunds was insofar forced to come up with a large number of smaller projects.

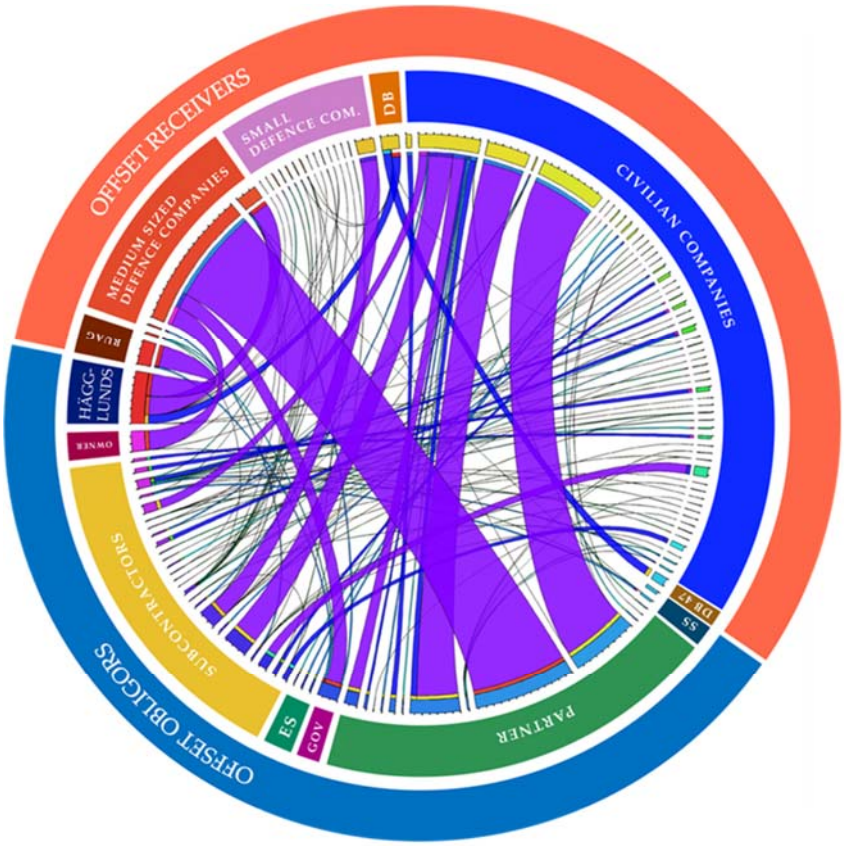
At the end of 2005, the fourth and last phase of the execution started. Because of the end of the delivery, Hägglunds claimed the last direct offsets. The acceptance of these by armasuisse led to a significant over-fulfilment of direct offset obligations. Instead of finishing these obligations, Hägglunds made an effort to ask armasuisse to change the direct into indirect offset transactions. This was accepted in June 2006.

In the end, offset obligations increased from 3,494 million Swedish kronas (CHF 495 million) in 1999 to SEK 4,466 million (CHF 633 million) in 2006 and Hägglunds was able to more than fulfil the overall obligation, surpassing it by approximately 2.6%.

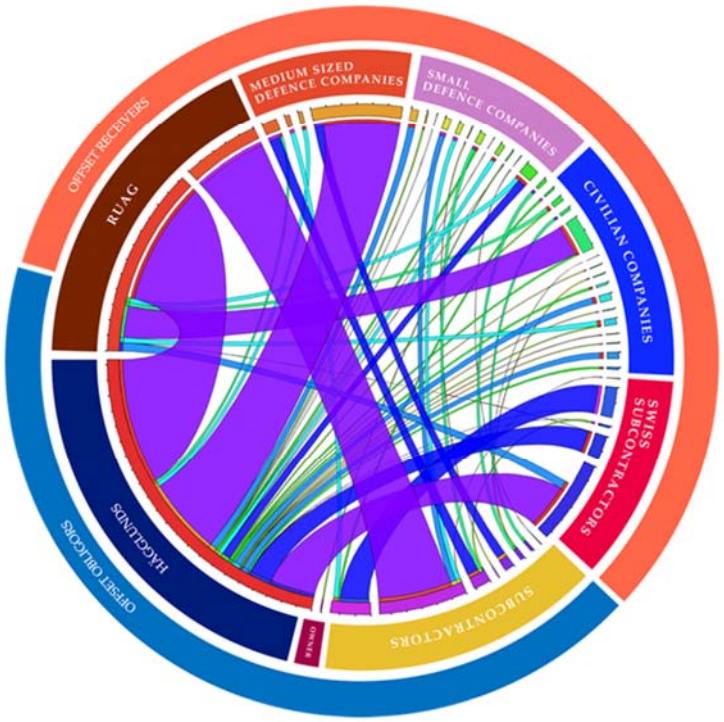
Overall, 28 different companies were successfully claiming offsets with 151 Swiss recipients. 25.2 % of all offsets arrangements were made with partners, and most of these occurred between companies that were already cooperating before the CV9030 programme started. The Swedish procurement agency FMV had four procurements with Swiss companies worth 137 million Swedish kronas, accounting for about 3 % of all offset obligations. RUAG, one of the largest recipients, also had a role being responsible for the final assembly of the turret, as a subcontractor to Hägglunds with its own offset obligations. Ruag worked with six second and third tier producers to fulfil the obligations.

Figure 5 gives an overview of all direct and indirect offsets claimed and received.

Figure 5: Overview of all direct and indirect offsets claimed and received.



CV9030 **indirect offsets**:
2,649 MSEK; 290 transactions



CV9030 **direct offsets**:
1,931 MSEK; 288 transactions

Note. Own presentation

Figure 5 reflects the different transactions during the CV9030 offset programme. The subcontractors were responsible for approximately 27.6 % (SEK 1,261 million) of all obligations. This is less than one would infer when considering the fact that Hägglunds already said in the beginning of the programme that they would channel down liabilities to the subcontractors one to one[21]. Two additional results of the analysis are probably more important. First, two thirds of the partners and subcontractors had only one Swiss partner-company to work with. This means that companies were very actively trying to keep the transaction costs as low as possible, with the exception of Hägglunds which most probably had no other choice. Second, and even more important, only 13 Swiss companies received more than 75 % of all offsets, and five of them more than half of all offsets of the CV9030 programme.

What can also be seen is that armasuisse did not influence the achievement of the objectives. While many countries use multipliers, for example, to provide incentives for the foreign company to reach specific targets such as defence technology transfer (Matthews 2004, 99), the rare situations when armasuisse allowed for (relatively low) multipliers were based on Hägglunds ex-post claiming above-average support effort towards the Swiss industry.

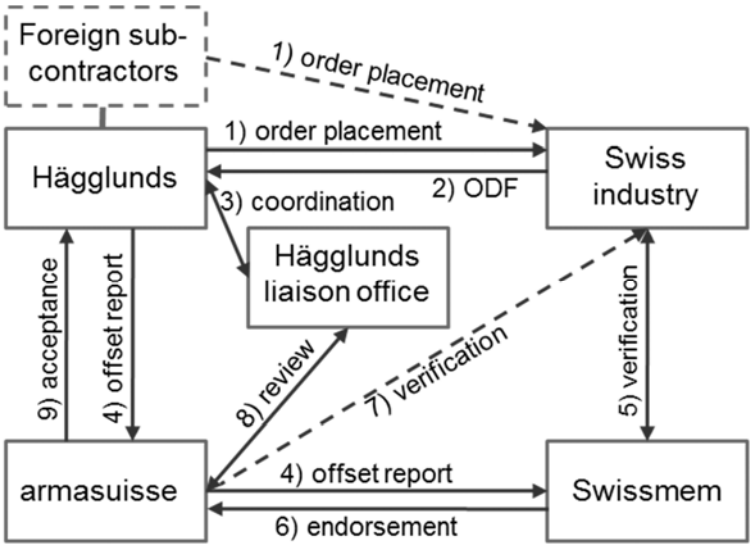
2.6.2 Control

armasuisse had a very distinct process for the control of offset transactions that was already in place during the CV9030 offset project. All relevant stakeholders, including Swissmem as the representative of the Swiss industry, were participating in this process. Usually the offset claims from Hägglunds were verified at least twice before being accepted. In contrary to these grand efforts, only light reporting was done by armasuisse for the programme. What can be seen is that the indicators were not defined well enough to allow for in depth reporting or - with the exception of the simplest objectives - a measurement of goal attainment.

2.6.2.1 Organisation

In Switzerland, the performance management of offset programmes is conducted by the same agency preparing the procurement and offset contract: armasuisse. The project manager for the procurement project is responsible at the same time for the direct offsets of the specific programme, while indirect offset transactions are controlled by the legal service within the agency. Already since the F-5 combat fighter programme in the 70s[22], Swissmem, an industrial interest group participates in the process and has advisory capacity. In contrast to other European countries (Platzgummer 2015), the department of economic affairs does not participate at all. (Figure 6) gives an overview of the CV9030 review process, which mainly took place in the form of biannual review meetings between armasuisse and Hägglunds. While Swissmem was not participating in the biannual meetings from the very beginning, they were invited to join reporting meetings in 2000 in order to facilitate direct discussions between the foreign supplier and the Swiss industry.

Figure 6: Swiss CV9030 offset review process.



Note. Own presentation based on EFK (2007a, 16).

After the order placement by Hägglunds or one of its subcontractors (1), the Swiss company had to sign a so called Offset Declaration Statement (ODS) (2) and sent it to

Hägglunds' offset manager in Sweden. Hägglunds coordinated the ODSs together with the liaison office in Berne (3) and sent a summary in the form of an offset report and the ODSs to armasuisse (4). The CV9030 project manager controlled the direct offset claims, a lawyer of the legal services the indirect claims. Additionally, armasuisse sent the report to Swissmem. The industrial interest group was specifically responsible for verifying the correct declarations in the ODS with the Swiss companies (5) and had to endorse Hägglunds claim (6). In most of the cases, armasuisse contended itself with its own review and Swissmem's endorsement, only in approximately 20 cases an additional discussion between armasuisse and the relevant company happened as well (7)[23]. The control of the report was followed by a review meeting between Hägglunds officials, armasuisse and (in the later meetings) Swissmem (8). The focus of these review meetings was on general aspects as well as on so called 'special cases'. For armasuisse, a claim was considered special when the parties disagreed about any aspect of the claim. The last part of the review process was the acceptance of the (modified) report by armasuisse (9), which was sent to Hägglunds' offset manager together with an actual overview of the previously fulfilled and still open offset obligations.

2.6.2.2 Reporting

The offset agreement between armasuisse and Hägglunds included relatively extensive guidelines for reporting and the review meetings. Among other things, these guidelines demanded Hägglunds hand in the offset declaration statements (ODS) from the Swiss companies, confirming the value of the offset transaction and its additionality, but also a tabular survey of all transactions including an overview of the cantonal distribution of the offset transactions. This is insofar interesting as a cantonal distribution was neither discussed during the bidding process, nor defined in the offset agreement or the participation policy.

Besides the reporting documents by Hägglunds, no evidence regarding additional reporting by armasuisse could be found.

2.6.2.3 Indicators

Most notable for all aspects of control in this offset project was the lack of control of strategic goals by armasuisse. While the Swiss policy defined five major objectives for offset programmes, the ODS, as the main source of information, did not provide all information needed to control for these targets. A company had to give short information of the specific project including the volume, the industry branch, one of three codes for additionality (new business, additional but larger business within an already exiting cooperation, or business where the foreign supplier demonstrably supported the Swiss company within a tender process), and the amount of Swiss value added when the value was lower than 51 % of the transaction (EFK 2007b, 79)[24].

Based on this data, the 'acquisition of additional know-how' and the 'maintenance of the industrial potential indispensable for the national defence' were not measured. Also, there was no statistical analysis of the rest of the data with the exception of the offset volume (and the analysis of the regional distribution provided by Hägglunds in the offset report).

2.6.2.4 Measurement

From December 1999 to June 2006, Hägglunds claimed an overall offset amount of SEK 5,009,981,723 (CHF 693 million) and got offset transactions worth SEK 4,580,293,030 (CHF 633 million) accepted. 42.2% of the accepted volume consisted of direct offsets. Hägglunds was not able to fulfil its own proposal of 45 to 50% direct offsets, but fulfilled more than the amount the Swiss authorities expected. All in all, 151 companies received offsets, but while ten of them received more than 3.28 billion SEK (on average 328 million SEK), 110 companies had offset transactions of only 241 million SEK (on average less than 2.2 million SEK).

While the internal performance measurement of armasuisse would not be able to provide more data on the outcome effectiveness of the CV9030 programme, the National Council's Defence Committee commissioned an evaluation of the sustainability of offsets by the Swiss Federal Audit Office (EFK) in 2005 (2007a, 3).

What can be said for sure is that the sales effectiveness of 100% was achieved, as the overall accepted offset volume was higher than the procurement price. One has to admit,

though, that this target is achieved anyway as long as the foreign company reaches its offset obligation.

The same is true for the acquisition of export volume abroad, with the exception of the offset transactions where the Swiss-owned RUAG was the prime contractor for Hägglunds (approximately SEK 231 million). According to an EFK survey with companies participating in the CV9030 programme, offset transactions were considered either 'daily business' or showed a 'clear additionality' (2007b, 18). The indirect offsets of the CV9030 programme received a score of 1.889 (out of a scale of -5 to 5, where 0 would be daily business and 5 would be completely additional) which would imply a slightly positive additionality (and above the average additionality of 1.06 in Switzerland; direct offsets are automatically considered additional, and count as 5) (13). Still, contrary to other programmes, the survey also showed one negative assessment (-1) (18). We believe that this is the case where a Swiss defence company denied signing the ODS, arguing that this transaction would have happened anyway (Alvis had had a license to produce one of this company's products since 1990, and was ordering parts for the production line). While the claim was accepted by armasuisse, one might agree that the additionality of this transaction is at least highly questionable, which is insofar problematic as it was in the end the single largest volume within the CV9030 offset programme (SEK 919 million). Also, according to the survey, 32 % of the companies involved in direct offsets, and overall 13% of the companies stated that a technology transfer happened during work with the foreign vendor (27-28). Furthermore, the "industrial potential indispensable for the defence and security of Switzerland" (EFK 2007a, 9) was most probably strengthened. Taking only the largest Swiss defence companies into account, six were in the group of the 10 largest offset receiving companies. RUAG is still responsible for the maintenance of the CV9030 in Switzerland. Two of these developed and produced subsystems were also used as part of the direct offsets in other Hägglunds products later on[25]. However, defence companies from the aerospace sector were not included, showing clearly that the overall objective of the offset policy can only be achieved with different offset programmes including different areas of defence industry.

2.6.3 Accountability

armasuisse had a limited amount of information that they used for accountability reasons: In fact, the only publicly available information is a single page in the annual armament programme which gives a short overview of the programme's progress and the additional costs. There was also a short list of six domestic suppliers for the direct offsets (BR 2000, 3050).

For internal presentations, armasuisse used the data from Hägglunds but did not incorporate any additionally sourced information. None of the internal presentations contributed to formal reporting, though they were likely reviewed by the security council of the Federal Parliament.

2.7 Discussion

I argued that an agency responsible for the performance management of offsets is bound by an institutional logic in the case that the organization is only operating under one ministry. This is the case for armasuisse, which is housed in the Swiss DDPS. According to this paper's framework, the four expectations need to be tested for and analysed in the results of the case study:

E_{D1}: *prioritise offsets that imply potentials for military benefits. These offset deals will be planned, managed and monitored very carefully while fewer organisational resources such as finances and personnel will be dedicated to offsets that imply secondary goals to the organisation such as employment.*

While armasuisse was not prioritising the defined policy objectives per se, they were very explicit in distinguishing the methods used to manage the direct and indirect offsets. From armasuisse's perspective, direct offsets are clearly used to sustain the lifecycle maintenance of the procured system, and therefore have direct influence on the capabilities of the armed forces. In contrary to indirect offsets, armasuisse was actively influencing the output in each phase of the direct offset programme. For example, despite the liberal approach with little oversight and the sanctioned use of multipliers in indirect offsets, for direct offsets, armasuisse carefully dictated which company was allowed to produce a specific component of the CV9030. Though indirect offsets

comprised more offset transactions, armasuisse had few staff and resources to control them. According to the interviews, the project manager was investing approximately 20% of his time controlling the direct offsets of the CV9030 programme, while one person of the legal service department invested only an additional 20 to 30% of working time to control indirect offsets on 6 concurrent procurement programmes.

Based on these findings, the first expectation, E_{D1}, was found to be true. There is a clear prioritisation in one group of offsets that were carefully managed and controlled while the other group received less management and resources to meet the secondary goals of the organisation.

E_{D2}: *strategically limit the range of possible domestic companies that may be included in the supply chain for the procured system to ensure the quality of the system. Meanwhile, quality management of offset deals that do not affect the production or future maintenance of the product will be less rigorous.*

With direct offsets, armasuisse is trying to gain the know-how necessary to sustain the maintenance of the newly procured system. armasuisse went as far as defining the only federally owned company as a domestic prime contractor, most probably to ensure that know-how and maintenance were kept close to the Armed Forces. Moreover, contrary to indirect offsets where Hägglunds had the 'economic freedom' to choose whomever they wanted, the Swedish company had to present possible Swiss partner companies prior to the agreement. According to the primary sources, several of proposed companies were not chosen by armasuisse due to their questionable quality. However, armasuisse was not willing to substitute a failed domestic supplier with a second, distinctively more expensive one, preferring instead to use a foreign supplier. In situations such as these, when Hägglunds requested a multiplier to compensate for the additional efforts it was not permitted. Overall, armasuisse was very rigorous regarding the management of direct offsets. This can also be seen by the professional educational background required for each type of offset manager: For direct offsets, the project manager has an engineering background and was actually controlling the detailed technical aspects of each of the projects. For indirect offsets, the offset manager was a trade lawyer and was almost exclusively focusing on a smooth and uncritical management of most of the transactions. In a way, it seems as if armasuisse had, because of this less rigorous

handling of indirect offsets, more debates with the demanding domestic industry association, than with the foreign supplier.

E_{D3}: *Because procurement and offset management costs lie directly with the ministry of defence the offset agency will seek to limit additional costs of offsets as far as possible.*

From the perspective of an offset agency, the additional costs of offsets are comprised of the management costs to the agency as well as the additional procurement price. Compared to similar agencies globally (Friedli et al., 2009), armasuisse is working with a very small amount of available resources for offset management. Also it seems as if all tasks that do not legally need to be handled by armasuisse were outsourced. For example, one of the two reviews of the ODS was done by a representative of the industry association. Also, armasuisse asked Hägglunds to collect most of the data needed for (statistical) evaluation of the programme. Interestingly, this even included indicators (regional distribution) to measure objectives that were no longer valid.

Regarding the additional procurement price, by specifically asking for both, a procurement price with and without direct offsets, armasuisse defined a fix price that also limited the efforts of Hägglunds within the price range. Regarding additional costs derived from indirect offsets, armasuisse believed that there should be no additional costs as long as the foreign company would be able to experience a (close to) free market situation within Switzerland.

E_{D4}: *use outcome indicators that show the security benefits of the procurement as well as indicators that show the additional economic value of offsets to broaden the scope of legitimacy of the Ministry of Defence.*

armasuisse did not actively collect information that would have made it possible to control for in depth information. Moreover, one of the objectives (additional order and export volume abroad) is defined in a way that by fulfilling the offset agreement, the objective is automatically met completely. Another, such as the ‘Competitiveness of the Swiss companies participating in offset transactions’ was never really an objective that armasuisse could control for but more a determining factor for the domestic industry. ‘Maintenance of the industrial potential indispensable for the national defence’ was insofar controlled as a cost benefit analysis of the direct offsets, and was made during

the proposal phase to compare the additional price of direct offsets with opportunity costs where the maintenance would be bought directly from the foreign supplier. The outcome of this indicator was not published. However, arguing that armasuisse would not have chosen an option relatively more expensive than the actually chosen one (direct offsets), probably means that the cost benefit analysis must have been rather positive for armasuisse. Compared to the added costs of 5-10% other scholars found in other cases (see, e.g. Friedli et al. 2009), overall, the 2.1% seem to be too low. Interestingly, armasuisse did not expect any additional costs for indirect offsets, arguing that by offering a quasi-free-market situation with the least possible amount of boundaries, Hägglunds should be able to find domestic suppliers without large transaction costs. Regarding the large number of deals, the possible transaction costs and the fact that Hägglunds had a liaison office installed to find new offset partners, the claim of no additional costs for indirect offsets seems rather unrealistic.

Also, armasuisse did not control for the acquisition of additional know-how, arguing that the costs for an in depth evaluation would be too high and that an acceptance of the ODS by a domestic company would automatically guarantee for a positive additionality.

Moreover, armasuisse did not evaluate any opportunity costs for secondary objectives. The main reason might be that the costs of any other form of economic promotion would be with the respective ministry and not with the Ministry of Defence. Therefore, from the point of view of armasuisse, opportunity costs for secondary objectives did not exist.

Table 3: Findings of the CV9030 case study.

Logic	Empirical expectations		Case study findings	Results
Logic of defence prioritisation	E_{D1}	prioritise offsets implying potential military benefit	very explicit in distinguishing the methods used to manage the direct and indirect offsets; in contrary to indirect offsets, armasuisse was actively influencing the output in each phase of the direct offset program; main focus clearly on potential military benefit (maintenance)	✓
	E_{D2}	limit range of companies to ensure quality of the system	Armasuisse defined the only federally owned company as a domestic prime contractor; contrary to indirect offsets possible Swiss partner companies had to be presented by Hägglunds in advance	✓
	E_{D3}	limit additional costs of offsets	tasks that did not legally need to be handled by armasuisse were outsourced; armasuisse defined a fix price that also limited the efforts of Hägglunds within the price range	✓
	E_{D4}	use indicators to show both the security benefit as well as the additional economic value	armasuisse did not actively collect information that would have made it possible to control for in depth information; armasuisse did not control for the acquisition of additional know-how and did not evaluate any opportunity costs for secondary objectives	?

Note. Own presentation.

Table 3 gives an overview of the findings. In summary, the expectations E_{D1}, E_{D2} and E_{D3} in the study were conclusive. armasuisse, as a government agency within the ministry of defence, was clearly prioritising offsets implying a potential military benefit and was limiting the range of companies to ensure the quality of the procured system. Also, the additional costs of offsets were limited as much as possible by armasuisse. However, E_{D4} is a less conclusive expectation. Overall, legitimacy did not seem to be a widely considered factor within armasuisse. Indicators were neither defined properly, nor controlled. Also, with the exception of internal documents for the parliamentary commission and the few paragraphs within the annual armament programme, there was no publicly available information. Interestingly, the fact that armasuisse did not focus on any of the indicators for accountability might imply that the performance cluster per se is not important. However, as long as the agency is not focusing solely on one of the indicators, the argument behind the expectations is neither affirmed nor denied, as the argument stated that the indicators derived from secondary objectives would be used to broaden the scope of legitimacy of the ministry. However, while the last expectation of the logic of defence prioritization is not fulfilled, it would also not be a conclusive finding for the similar expectation regarding accountability for the logic of economic

prioritisation (E_{E4}), as neither the economic value nor security benefits were presented. The reason for this might have been that accountability efforts were not seen as an important organizational response, due to a relatively reliable environmental context of the offset agency[26]. In fact, the very first evaluation of the Swiss offset program did not happen before 2007 (EFK, 2007), more than 30 years after its beginnings, and only after the end of the CV9030 case.

What remains is the question of whether this offset programme was successful or not? This paper argues that an offset agency, such as armasuisse, would prioritize objectives according to the dominant logic derived from the institutional environment. At least for this case, the data shows that the government agency seems to use a most often implicit prioritisation of defence related objectives in accordance with its dominant institutional logic. But does this lead to an efficient and therefore successful outcome from the perspective of the agency?

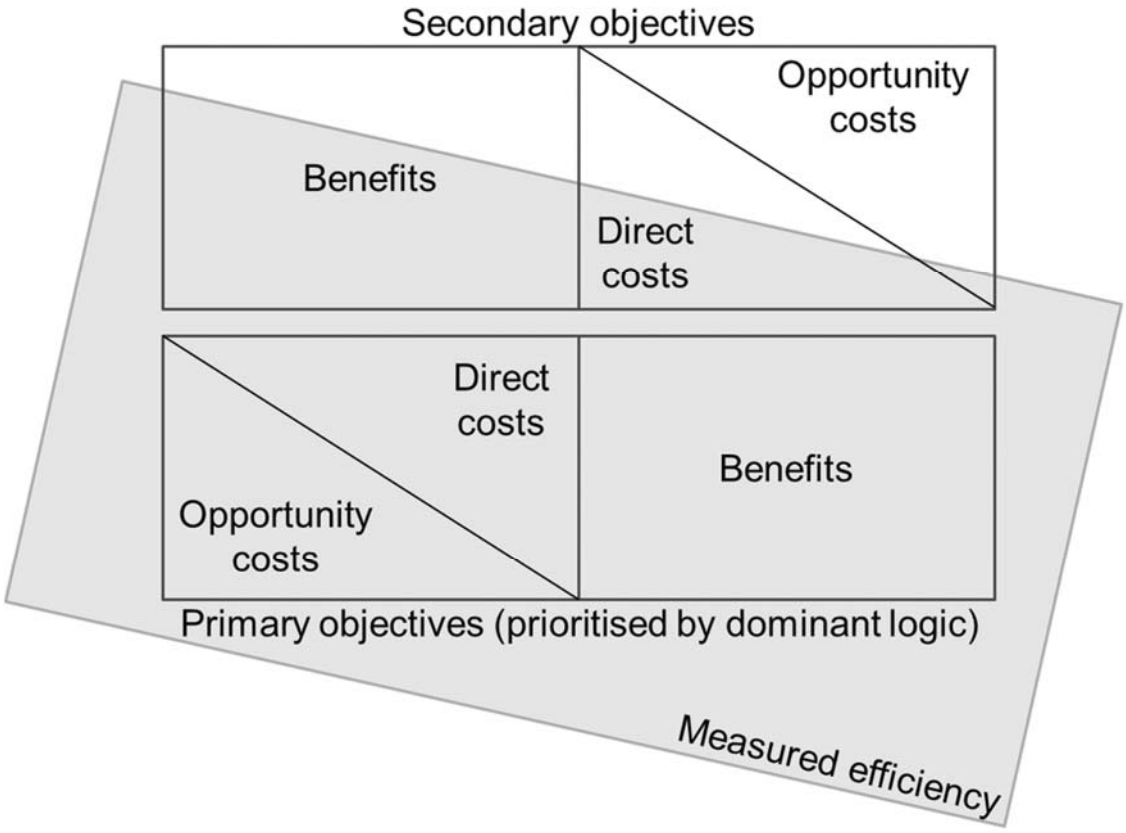
According to Aaron Wildavsky, the goal of outputs are outcomes that produce favourable policy consequences in one or multiple policy area(s), with efficiency being the achievement of these favourable consequences with the least possible effort (1979, as cited in Boozer 2008, 23). Also, it would need to include aggregate consequences of an activity (Kennedy 2005, 46) or in other words the opportunity costs of said government activity. Including these opportunity costs, efficiency would be “the maximisation of the ratio of net positive results (positive minus negative results) to opportunity costs” (Simon 1947, cited in White 1999, 14). A specific activity of a government would therefore be efficient if it would seek to increase the policy output relative to the (direct as well as opportunity) costs of this activity

However, this paper argues, that organisations with distinct dominant logics pursue distinct activities in the respective clusters, while at the same time eschew activities outside of these clusters. With an objective prioritisation behaviour, this would mean that the organisation would try to maximise the output that would lead to favourable consequences for the primary objective.

At the same time, the organisation would try to avoid activities (and therefore costs) that would mainly support secondary objectives. In the case of an objective that would normally not be within the cluster of the institutional environment, this could not only

mean that direct costs would be kept low (as long as some measurable outcome would still be achieved), but especially that opportunity costs for secondary objectives would not be included. Thus from the point of view of the organisation, an alternative activity would not be pursued by the same organisation. Figure 7 shows the extent of costs and benefits that would be measured by an organisation with a dominant logic.

Figure 7: Extent of costs and benefits included in efficiency measurements by an organisation with a dominant logic.



Note. Own presentation

Table 4 shows, that the offset agency measured the efficiency of the CV9030 programme relatively similar to the expectation.

Table 4: Overview of the measurement of primary and secondary costs and benefits within the CV9030 programme.

Logic of defence prioritisation								
	leads to				leads to			
	Primary (defence) objectives (direct offsets)				Secondary (economic) objectives (indirect offsets)			
costs / benefits	primary benefits (security)	additional costs (procurement price)	management costs	opportunity costs (buy services)	secondary benefits (economic)	additional costs (procurement price)	management costs	opportunity costs
measured?	yes, only for internal use	yes, during proposal phase	yes, as part of agency's budget, not specifically for the offset management	yes, only for internal use	yes, mostly by supplier	no, non existent according to armasuisse	yes, as part of agency's budget, not specifically for the offset management	no, non existent according to armasuisse

Note. Own presentation

While armasuisse measured all costs and benefits of the primary objectives (direct offsets), it did exclude some of the costs of indirect offsets. In fact, armasuisse omitted all opportunity costs of secondary objectives arguing that alternative activities would for example create additional jobs that would not be within the scope of the Ministry of Defence. Additionally, armasuisse argued, that indirect offsets would not influence the procurement price and that additional costs for indirect offsets would therefore not be existent.

From the point of view of armasuisse, the security benefits of being able to maintain the procured CV9030 domestically for relatively small additional costs of 2,1% of the procurement price, slightly outweighed the cheaper possibility of buying maintenance services from the supplier. Additionally, with almost no measured costs for secondary objectives (with the exception of the management costs), the secondary benefits largely outweighed its costs. Taking into account the proportion of Swiss value-added and the linear weighted offset volume for the direct and indirect offsets, the effectively returned volume of the CV9030 programme has been 2,658,942,940[27] SEK, or approximately

CHF 368 million. This would imply a job creation effect of 2'044 people/years[28]. While being significantly lower than the accepted volume of offset transactions, the CV9030 offset programme might have been exactly what the DDPS wanted: a relatively high return on investment for a very low allocation of resources. This proved not too much to significantly influence the defence budget, but enough to keep the industry happy.

2.8 Conclusion

The main objective of this research was to find an answer how, despite all known theoretical refutations, government can still argue that offsets are efficient. This paper underlines the importance that distinctions must be made regarding the problematic use of the generic term 'government' when discussing and evaluating the performance measurement of offsets. It further argues that offset agencies respond to their institutional environment and develop a dominant logic inherited from that institution. In this paper, the logic of defence prioritisation was examined with the application of a plausibility probe with an in depth single case study of an offset agency within a ministry of defence. The case of the Swiss CV9030 armoured vehicle procurement was chosen because of the available primary and secondary sources, as well as being a most likely case for the plausibility probe.

A major lesson of the analysis of the Swiss CV9030 case is that it is not possible to determine the effectiveness of the offset transactions based on the data received from the offset agency. In fact, the performance measurement system used is solely based on easy to obtained data from the ODS. And even there, the offset agency 'outsourced' the statistical analysis to the foreign vendor. With these, objectives that define an outcome not necessarily linked to the program such as the maintenance of a defence industrial base or the amount of additional jobs generated are impossible to control. Also, the results of the bi-annual reviews by armasuisse did not lead to any efforts to steer offset transactions into desired directions. In fact, with the exception of the direct offsets, there is no evidence that would imply that the offset agency demanded specific transactions to achieve its own objectives. It seems that the fulfilment of direct offsets is considered enough to imply that the defence industrial base is maintained, whereas the indirect offsets are solely used for secondary reasons. Apparently, the case did what the

institutional framework predicted: the agency clearly focused on its own primary objective and prioritised defence over economic aspects in almost all areas of performance management.

What has to be kept in mind is that this was solely a first test with a single case study. While the results of the probe might imply that the theoretical framework is already confirmed, it is important to clarify that this was a most likely case. Also, expectation E_{D4} was neither confirmed nor refuted as neither the expected. However, the framework was not falsified and might be an interesting option for future research on offsets.

Because of the report of the Federal Audit Office in 2007, a number of changes have been made regarding offsets in Switzerland. In 2010, armasuisse presented a new industrial participation strategy and a new offset policy. However, while these documents increased the transparency, they did not include any new objectives and did not change the overall offset process. Also the performance measurement was not changed with the exception of the setup of a so called offset office. This office has the same tasks that the industrial interest groups had before and is comprised of the same persons though now financed by an offset per mille Swiss companies have to pay to armasuisse when they receive offsets from a foreign vendor. The author does believe that the offset office could improve the so far unsatisfactory support by the industrial interest groups but also, that these additional costs will lead to an even greater recipient mentality by the industry now paying for their collaboration.

Endnotes

[10] In their 2004 book, Jurgen Brauer and J. Paul Dunne are using the term 'economic development' in contrary to 'economic growth' defined here as "continuing improvement in the material conditions of life of the vast majority, if not all, of the individuals in the population" (Dumas, 2004, 17). To be able to focus on the overall puzzle, this concept was excluded from the quote.

[11] According to Thornton et al. (2012, 2) there are in principle 7 institutional orders and respectively logics in society: family, religion, state, market, professions, corporations. However, an extension of logics is rather common. Also, the abstractness of the seven logics fits is relatively similar to the two defined logics for arms trade offsets, making it more plausible to work with.

[12] Own calculations based on the Swiss armaments programmes from 1991 to 2010

[13] The Swedish CV9030, the German Kuka M-12 and the British Warrior 2000. While the Warrior 2000 was evaluated as the most advanced of the three vehicles, in 1999 the cheaper Swedish CV9030 was chosen by the department of defence (BR 2000, 3045).

[14] Following the completion of the F/A-18 program in 1993, between 1995 and 2005 Switzerland has engaged in 27 more offset agreements involving 6522 transactions (EFK 2007a, 5). From then and until 2010, the Swiss economy has received offset investment for a total value of CHF 7.7582 billion. The three largest programmes have been the CV9030 armoured vehicle, the FLORAKO radar system, and the electronic reconnaissance system, valued at CHF 633 million, CHF 435 million, and CHF 301 million, respectively (EFK 2007a, 5)

[15] Interview with Mr. Alex Fritschi, Offset Manager at armasuisse, 16 December 2011.

[16] Interview with Mr. Erich Friedli, Project Manager CV9030 at armasuisse, 16 December 2011

[17] Interview with Mr. Erich Friedli, Project Manager CV9030 at armasuisse, 16 December 2011

[18] Interview with Mr. Erich Friedli, Project Manager CV9030 at armasuisse, 16 December 2011

[19] Interview with Mr. Erich Friedli, Project Manager CV9030 at armasuisse, 16 December 2011.

[20] Interview with Mr. Alex Fritschi, Offset Manager at armasuisse, 16 December 2011.

[21] Interview with Mr. Erich Friedli, Project Manager CV9030 at armasuisse, 16 December 2011.

[22] Interview with Mr. Hans-Peter Finger, Head of Department of Export Control, 19 December 2011.

[23] Interview with Mr. Alex Fritschi, Offset Manager at armasuisse, 16 December 2011.

[24] According to the compensation policy, a transaction with more than 50% Swiss value added is counted as 100%.

[25] Interview with Mr. Anders Karlsson, Director Industrial Cooperation at Hägglunds, 28 December 2011.

[26] See Oliver (1991) for a discussion on strategic responses of an organization.

[27] Own calculations based on EFK (2007b, 23): Swiss value added * linear weighted offset volume = effectively returned volume (in % of the total volume). The Swiss value added for direct offsets was 77 %, for indirect offsets 79 % (11); the linear weighted offset volume for direct and indirect offsets in the CV9030 programme was respectively 100 % and 56 % (18-19). armasuisse accepted overall SEK 1'931'078'460 direct- and SEK 2'649'214'570 indirect offsets.

[28] Own calculations based on BR (2000, 3029-3030): armasuisse estimated an overall job creation effect of 2037 person/years based on an average volume/employee of CHF 180'000 and an effectively returned volume of 79% of the total volume. While the estimated numbers are therefore lower than our calculations (armasuisse's estimation was based on the first contract price of CHF 483 million), the estimation was still impressively close.

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2.10 Annex: Primary source interviews

2.10.1 Interview with Mr. Erich Friedli, Project Manager CV9030 at armasuisse

16 December 2011; Interviewer: Peter Platzgummer & Alma Arcelia Gonzales Lozano

1. What were your main concerns during the negotiation process?

It's important to first explain our organizational structure for handling offsets. Within armasuisse we split the responsibilities between the project manager, in this case myself, who was responsible for the overall procurement project and was also responsible for direct offsets, with the Law & Offset office that controlled indirect offsets. Therefore, my main concern was to ensure the offset process would not delay the procurement.

2. How influential was the offset package in the procurement decision?

The offset package was influential in two ways, on the one hand the difference in price, and on the other hand, the ability to ensure maintenance over the product lifecycle. Regarding price, we were interested to find out the additional costs of offsets and therefore asked for two different 'requests for quotation' – one including mandatory offsets and one without offsets. The outcome of these quotations showed that the additional price would be 2.1% more to include mandatory offsets in the deal (only for direct offsets), which was acceptable since in our view indirect offsets do not affect the price. In regards to lifecycle maintenance, it was important that the foreign supplier would transfer the technologies needed to ensure the crucial areas of maintenance could be done domestically.

3. How did you decide on the distribution of offsets between direct and indirect projects?

We were not asking for a specific percentage. However, Hägglunds initially said that they might reach more than 50% direct offsets, but the actual promise dropped to 30-35% direct projects following the first negotiations with the Swiss industry. For us, we set the minimum threshold at 35% following those negotiations, any lower than that would incur penalties. And as I previously mentioned, for us indirect offsets are available for the foreign supplier to satisfy their obligation, but our preference is for at least a base minimum of direct offsets for a deal. A higher percentage of direct offset

requirement would be unrealistic for a defence industrial base in a country the size of Switzerland.

4. How did you choose the components that were used to discharge the 40% of direct offset?

We adopted the approach used by Norway in the procurement of a similar CV 9030 system, which was to have domestic companies focus on elements of the turret. This is due to the fact that the turret components regain the necessary knowledge for the maintenance competence centres, as was also the case with an earlier Swiss procurement of the M113 and the Leopard 2 Main Battle Tank. The reason we were adopting Norway's approach was that at the End of the 1980s we actually wanted to do the procurement together but this was halted by our reform of the Armed Forces in 1993. However, we maintained good communication even though we were no longer doing the evaluation together but continued sharing best practices. Also, we did not allow production costs to be more than 100,000 CHF for specific components as this allows for more flexibility in case there was an issue with fulfilment. Lastly, Hägglunds was saying that they would channel down liabilities to subcontractors one to one. We therefore knew almost exactly which foreign partners the Swiss companies would get in advance.

   a. Why is flexibility important?

Flexibility is important because direct offsets involve the production of the components for the ordered system. Therefore, a problem in production would delay the scheduled delivery date of the CV 9030 system.

5. What were the processes involved in the monitoring of the programme? What mechanisms were implemented to ensure compliance?

We had two meetings a year with the foreign supplier. Following the first year of the project, Swissmem joined in these meetings as well. We trust companies who signed the Offset Declaration Statement (ODS) to uphold the information provided. Also, we get the summary of the ODSs for the previous 6 months to review in advance of our meetings. So the meeting time focused on issues that hadn't been resolved. These were mainly involving indirect offsets, because the direct offsets are already agreed upon in the offset contract. Hägglunds was required to submit a proposal with potential domestic

(direct) offset suppliers, and we agreed to 90% of the proposed companies already during the negotiation of the contract.

6. On a scale from 0 to 10, how would you rate the achievement of the offset policy objectives[1] in this particular programme?

That's difficult to gauge, personally for me as the project manager, it was important to balance of contract to achieve 100% of the offset obligation and the sustainability of relationships between Swiss and foreign industry. Our goal was to create long-term partnerships.

7. In your view, what are the determinants of offset effectiveness?

Particularly to the direct offsets, keeping the various offset deals small and manageable for a good overview. This is crucial for direct offsets where the technical aspects are detailed and very important.

8. How would you rate the performance of the CV9030 programme versus other Swiss offset programmes?

I cannot really answer this question, as I said before, direct offsets are controlled by the procurement project manager. Most of us are dedicated to just one project since we remain involved over the system lifecycle. Whatever offset experience and knowledge one acquires working on a direct offset project is not really needed further once the project is completed.

9. In your view, what were the major challenges faced during the development of this programme?

The foreign suppliers have a poor understanding of the specialities in domestic small and medium sized enterprises (SMEs). The challenge in this limited scope was that neither foreign nor domestic companies understood the work differences, for example, small domestic enterprises do not necessarily have all the industrial certifications required for a specific offset deal, which was a surprise for the larger foreign suppliers and led to unexpected delays.

[1] CV 9030 offset policy objectives were: strengthen the industrial potential indispensable for the defence and security of Switzerland; achieve a 100% sales effectiveness; preserve existing and acquire additional know-how; and acquire additional contract and export volume abroad

Another challenge was the regional distribution of offsets, which may be needed from parliament's perspective, but from a project standpoint can force a supplier to not select its first choice. In fact, the only large issue in the CV 9030 direct offsets was due to a company, that wouldn't have been chosen otherwise, going bankrupt during the course of its production fulfilment.

10. What do offset recipient companies need to have or do in order to be effective offset partners?

What we noticed is that the effectiveness for a good partnership depended on the overall situation of the domestic industry. If there was no pressure to gain new sales, there was no proactive efforts to seek offset deals. Also, we experienced language barriers because of the limited elementary English understanding in some Swiss companies. What is needed is a higher language competency when dealing with foreign suppliers.

11. How would you rate the performance of the original equipment manufacturing (Hägglunds)?

Overall the performance was very good. For me as an engineer, it was surprising that the Swedish technical drawings were of such poor quality. This led to several misunderstandings during the negotiation phase of the offset contract.

12. How would you rate the performance of offsets in Switzerland versus other European countries?

Without much external knowledge of European offset practices, I think we did a good job and were able to handle the few problems we experienced flexibly.

2.10.2 Interview with Mr. Alex Fritschi, Offset Manager (Law & Offset Office) at armasuisse

16 December 2011; Interviewer: Peter Platzgummer & Alma Arcelia Gonzales Lozano

1. What were your main concerns during the negotiation process?

From my perspective, focusing on the indirect offsets, there was generally consensus and there was little to be concerned about during the negotiation process.

2. How influential was the offset package in the procurement decision?

Offsets were a crucial element, more so than in other procurement decisions. We were offered 3 practically equal products with relatively similar prices, therefore offsets became one of the determining factors.

3. How did you decide on the distribution of offsets between direct and indirect projects?

Indirect offsets were supplementary to the direct offsets; the focus was clearly on the direct offset deals.

4. What were the processes involved in the monitoring of the programme? What mechanisms were implemented to ensure compliance?

We checked the Offset Declaration Statement (ODS) in advance and drafted a written approval for the foreign suppliers. During the biannual meetings, we focused on non-approved claims. In addition to these meetings, along with the staff from the Swedish headquarters, we had monthly meetings with Hägglunds' liaison office in Switzerland. These secondary meetings were informal informational exchanges and did not serve to officially approve actions. Also, Swissmem was additionally doing a second review of the ODS, focusing on the Domestic industry side. Only in approximately 20 cases was that not enough and we had to go directly to the Swiss company and discuss the case.

It's important to note that there is a big difference between direct and indirect offsets. Management of direct offsets requires deep involvement in the project as the discussions are very technical in nature. Indirect participation is more abstract; it's a side issue. Within armasuisse it is a side job for the trade lawyers. Overall, controlling the indirect offsets is limited to 20-30% of our working hours with an average of 6 different offset programs running concurrently. The quality of the reports was average, nothing outstanding but nothing problematic either. We had a sense that 10% of the Swiss companies didn't know what exactly what they were signing in the ODSs.

a. How did you measure multipliers?

We are not very happy with multipliers and use them very restrictively. In our opinion they burn offset credits too quickly. Also, you have to bring in something ordinary, a critical technology, but how can you judge that? We attempted to apply an economic-benefit measurement that is usually used for granting R&D scholarships, but we didn't use it in this project, due to the large amount of resources it would take.

5. On a scale from 0 to 10, how would you rate the achievement of the offset policy objectives in this particular programme?

I would give it a score of 7, it was one of the best offset programs we ever had. Hägglunds over-fulfilled its obligations and had a very high proportion of direct participation. Also the Swiss added-value (the additional turnover) and the new business opportunities in Sweden worked out well. From my point of view, the main reason for this good outcome was the professional offset management and having a liaison office in Switzerland. The liaison officer from Hägglunds was very present in Switzerland, for example, I remember him having a large Swiss map in his office full of red & green pins to mark the companies he intended to visit and by the end of the first phase of the project, most of the map was green.

6. In your view, what are the determinants of offset effectiveness?

Clear and accepted framing conditions, and effective reporting and controlling. - Switzerland is probably not reaching these attributes sufficiently, with more resources we could have done better. And also working closely with an industry association would be important, this is an area we could have increased our effectiveness as well.

7. How would you rate the performance of the CV9030 programme versus other Swiss offset programmes?

Overall it was a very good performance, it might have been the best offset programme we've had in the past years. All stakeholders had a professional and pragmatic approach and Hägglunds was very proactive.

8. In your view, what were the major challenges faced during the development of this programme?

From Hägglunds' point of view, it was a challenge to achieve the obligations in the time given, especially in the middle of the programme; we told them more than once that they should have more fulfilled obligations at that point in the project. The big disagreements we had with Hägglunds on additionality in one large case was probably due to the concerns Hägglunds felt that they couldn't fulfil on time. From our perspective, handling such a large project with our limited resources was a challenge.

9. What do offset recipients' companies need to have or do in order to be effective offset partners?

Companies should be flexible, open-minded, proactive, and have a willingness to cooperate and enter new markets. This did not always happen; the economic pressure may not have been high enough for them to engage in this manner.

10. How would you rate the performance of the original equipment manufacturing (Hägglunds)?

Very good, they invested far more than we did.

11. How would you rate the performance of offsets in Switzerland versus other European countries?

The advantage of Switzerland is its very flexible policy. Offset programmes in Switzerland are solution-oriented instead of dogmatic, with realistic scenarios. Also positive is that there is a very broad industrial base, however if more defence-oriented offsets occur this could become problematic since the defence industrial base is not so large. We know that offsets are just a supplement to companies' regular business and we don't want them to be too heavily relied upon.

2.10.3 Interview (via mail) with Mr. Hans-Peter Finger, Head of Department of Export Control at Swissmem

Zurich, 19 December 2011; Interviewer: Peter Platzgummer

[*This interview was originally conducted in German and has been translated to English. The original German responses are included below, in italics*]

1. From your point of view, what was the role of Swissmem in the offset deals? [*Was genau war (aus Ihrer Sicht) die Rolle der Swissmem innerhalb der Offset-Geschäfte?]*

Swissmem safeguards the interests of the Swiss industry overall on behalf of the Swiss government for the fulfilment of offset deals for the DDPS.

[*Swissmem nimmt im Auftrag des Bundes die Interessen der gesamten Schweizer Industrie zur Erfüllung der Offset-Geschäfte des VBS wahr.*]

2. Was Swissmem approached by the Swiss companies to take an intermediary role, or were they proactively seeking this position on their own? [*Wurde die Swissmem von Schweizer Unternehmen angefragt die Rolle eines Intermediärs zu übernehmen, oder entstand diese eher von sich aus?*]

Swissmem has this role for more than 50 years for all offsets.

[*Diese Rolle nimmt Swissmem seit über 50 Jahre für alle Offset-Geschäfte wahr.*]

3. What was the objective of these offset deals from your point of view? (What was the most important to you?) [*Was war die Zielsetzung dieser Geschäfte aus Ihrer Sicht (was war Ihnen am wichtigsten)?*]

The objective of these deals is: to facilitate market access for the Swiss industry (for example, the CV 9030 project in Sweden), and to close additional deals. This procedure is typical globally in this branch of industry, so Switzerland is by no means a special case. All of our neighbours, etc. handle this the same way as Switzerland.

[*Die Zielsetzung dieser Geschäfte ist, der Schweizer Industrie durch diese Offset-Geschäfte zusätzliche Markterschliessungen (z.B. wie bei dem Projekt SPz200 in Schweden) zu ermöglichen und zusätzliche Geschäfte abwickeln zu können. Dieses Vorgehen ist weltweit in dieser Branche üblich, dies ist also keinesfalls ein Sonderfall Schweiz. All unsere Nachbarstaaten usw. handhaben dies gleich wie die Schweiz.*]

4. What exactly was the relationship with Hägglunds? Have you directly discussed with Hägglunds certain aspects of the deals, or were you solely concerned with the Swiss industry? [*Wie genau war die Beziehung zu Hägglunds? Haben Sie auch direkt mit Ihnen gewisse Aspekte abgesprochen, oder waren Sie vor allem mit der Schweizer Industrie beschäftigt?*]

We had a very amicable and companionable relationship with Hägglunds, both visiting each other in Sweden and Switzerland. Swissmem was strictly upheld offset contacts without influencing political or military matters.

[*Die Beziehung zur Firma Hägglunds haben wir in einem ausgesprochen freundschaftlichen und kameradschaftlichen Verhältnis durchführen können, mit jeweils verschiedensten Besuchen gegenseitig in der Schweiz oder in Schweden. Swissmem hat sich da strikte nur an die Offset-Kontakte gehalten, ohne eine Einflussnahme auf politische oder militärische Belange.*]

5. How did you associate with Swiss companies who are not members of Swissmem? Or did member companies complain that some Swiss companies receive benefits without contributing to the membership fees? [*Wie verhielten Sie sich bei Schweizer Firmen, die keine Mitglieder der Swissmem waren? Bzw. haben sich Mitgliedsfirmen darüber beschwert, dass einige Firmen Leistungen von Seiten der Industrieverbände zahlen, ohne die Beiträge bezahlen zu müssen?*]

Swissmem safeguards the interests of the entire Swiss industry regardless of whether the individual Swiss companies were members of Swissmem or any other industry association (trade association, chemical industry, metal trade, etc.).

[*Swissmem hat die Interessen der ganzen Schweizer Industrie wahrgenommen unabhängig davon, ob die einzelnen Schweizer Firmen Mitglied waren bei Swissmem oder bei anderen Branchenverbänden (Gewerbeverband, Chemische Industrie, Metallhandel usw.).*]

6. Two assessment questions [*Und zwei Einschätzungsfragen*]*:*

   a. While reading the documents, we had the feeling that you as a representative of Swissmem had a stricter policy regarding accepting obligation requirement, particularly for indirect offsets. Would you agree with that? [*Wir hatten beim Lesen der Unterlagen das Gefühl, dass Sie als Vertreter der Swissmem eine striktere Politik verfolgen wollten und nicht alles als indirekte Offsets angerechnet hätten. Würden Sie dem Zustimmen?*]

Yes, from our perspective, we exercised very strict control to ensure that Swiss industrial companies could benefit from additional deals; and so that business-as-usual deals would not be considered indirect offsets. Obviously this included personally visiting Swiss companies to confirm that the offset contractual terms and agreements were upheld.

[*Ja wir seitens von Swissmem haben eine strikte Kontrolle darüber ausgeübt, dass die Schweizer Industriefirmen von zusätzlichen Aufträgen profitieren konnten und dass "Business-as-usual"-Geschäfte nicht als indirekte Gegengeschäfte akzeptiert worden sind. Dazu hat halt eben auch gehört, dass wir die einzelnen Firmen auch direkt besucht haben, um sicherstellen zu können, dass alles nach den vereinbarten Bestimmungen und Verträgen abgewickelt werden kann.*]

   b. If the offsets were successful, what were the success factors. Or if not successful, what were those reasons from your point of view? [*Falls es sich bei den SPz2000 Offsets um ein aus Ihrer Sicht erfolgreiches Geschäft gehandelt hat: was waren die Erfolgsfaktoren? - Falls es sich bei den SPz2000 Offsets um ein aus Ihrer Sicht wenig erfolgreiches Geschäft gehandelt hat: was waren die Gründe dafür?*]

To my knowledge, all offset projects in the last 50 years (about 10 projects annually) were successfully completed. The success factors were: regular meetings and visits

between Swissmen, the "benefiting" Swiss companies, armasuisse (VBS) and in this case the company Hägglunds.

[*Meines Wissens nach konnten in den vergangenen 50 Jahre alle Offset-Projekte (jährlich rund 10 solche Offset-Projekte) erfolgreich abgeschlossen werden. Die Erfolgsfaktoren waren: regelmässige Besprechungen und Besuche zwischen Swissmen, den "profitierenden" Schweizerfirmen, der Armasuisse (VBS) und in diesem Fall der Firma Hägglunds.*]

2.10.4 Interview (via phone) with Mr. Anders Karlsson, Director Industrial Cooperation at Hägglunds (now BAE Systems), Örnsköldsvik, Sweden

28 December 2011; Interviewer: Alma Arcelia Gonzales Lozano

1. What were the strengths and weaknesses that your company had when working with Swiss companies for the fulfilment of offset obligations?

Strengths: (1) We had a good concept of local production. We had thought through a plan and had devised how to involve Swiss industry in advance; (2) Hägglunds and Swiss industry people were likeminded. Since doing business is all about interacting with people, it was a great advantage being culturally similar and having the same ways with regards to work; (3) We have a very good working-knowledge of Switzerland as a country, we understand how the country functions, not only concerning current industry, but also the country's history and the differences in the federal cantonal system. (4) Since we are not a German company, whenever there is an alternative to the Germans, it may seem like a better option to the Swiss.

Weakness: We come from a small country with limited political support and therefore we had to do everything on our own.

2. How would you compare Swiss companies to those in other European countries where your company discharged offset obligations?

It is difficult to generalise, but in our experience it was easy to be in contact, talk, discuss, and negotiate with Swiss companies. Swiss industry is a trustworthy industry. Sometimes expensive, but not overly expensive, we always managed to find competitive Swiss companies that are easy to do business with. We can rely on them, a word given is a word given. Swiss industry is in the top league of Europe.

3. Would you agree that offsets enable the Swiss defence industry to achieve the following:

    a. Develop the capacity maintenance of the purchased defence systems?

Not so much because the capabilities were already there. They already had good capability but the programme contributed to maintaining and further developing it.

b. Develop and consolidate the defence sector?

It contributed, but don't know how much. These are things you can't measure.

c. Access international defence markets?

Yes.

4. What are your general observations about the Swiss offset policy?

It was reasonable; strict but it also gave way to practical solutions. I always appreciated that armasuisse had a practical view on things. The policy was short and easy to understand and their objectives were achieved.

5. How effective is the Swiss government's offset management process in facilitating offset programmes implementation and completion?

We didn't need too much of their help; we did the job ourselves.

6. Do you think the offset package significantly influenced the supplier selection?

Yes, certainly.

7. Were Swiss producers part of your supply chain or were they incorporated merely to meet the offset obligations?

We had some Swiss suppliers, but their participation was very limited.

8. Would Swiss companies have been integrated into your supply chain on a competitive basis if offsets had not been involved at all?

No, because we didn't know about them. We may not have known about them had we not done the offset business with Switzerland. We got to know them because of that contract.

9. To what extent did indigenous Swiss companies' capabilities facilitate the fulfilment of offset obligations?

Because they had the required capabilities we did not have any big problems.

10. Did Swiss companies continue to be suppliers after the offset programme was completed?

We continue to have business with some of them. RUAG, R., and some others are still our suppliers. From the time the contract was over until now we have engaged in

transactions with our former Swiss offset partners for a total value of roughly EUR 100 million.

11. What can Swiss companies do so that through offsets they form long-term partnership with your company?

They must have the products and the capabilities that we need, together with being competitive.

12. What factors do you think explain the success of the programme?

The Swiss are easy to deal with, they had the capabilities and they were ready to adapt themselves to the product and services we sold to armasuisse. We were persistent to achieve both their objectives and ours, so things worked out.

13. Hägglunds was presenting relatively high numbers of possible direct offsets in the first proposal (45-50%). What was that based on? Were they already having good contact with the Swiss industry?

Because we already had thought-out concepts on how to produce in Switzerland, it was not difficult to calculate how much to give to Swiss industry, we had done it before in other countries and based on that we calculated how much we would be able to deliver, it was more or less the same value.

14. Who was responsible for collecting the Offset Declaration Statements (ODS): Hägglunds main office in Sweden or the liaison office in Bern? Who was responsible for the reports?

Swiss companies would send the forms to me. I was in charge of it all here in Sweden. After we got the ODSs, we wrote the report and then met with armasuisse to discuss it. The liaison office in Bern was just an extended arm of our main office and it was not only for offset, their job was directed to the Swiss DDPS, our customer, they were there to meet the customer's needs, not ours.

15. What was the reason that armasuisse wanted to have a liaison office in Bern?

It was our idea. We had to be close to the client. It was a must. We couldn't operate successfully from a distance.

16. What were the costs of the liaison office/ overall additional transaction costs for offsets in Switzerland?

I don't remember. But, the customer paid for it. We had 2 prices, one with offset and one without offsets. The Swiss parliament voted for the higher price and that included the cost of the liaison office.

17. Who came up with the E. idea? Was it a longer partnership between Hägglunds and E.? Were they really paying the whole fee?

It was E.s' idea. They tried to sell the solution to us. Then we asked armasuisse and they in turn asked the industry association. They accepted the deal, but it was a marginal thing, a very small percentage of the total value. I don't remember how much we paid, but we didn't pay the whole fee.

18. Can you speak about the positive and negative aspects of the Swiss defence market from a supplier's point of view?

The positive side is the competitiveness; there is not really a negative side.

19. Is there a part of land systems that will usually be used for direct offsets? (e.g. the turret?

No, one can't say that, it always depends on the product and country. You must always compare it with the capability of the recipient country. Swiss industry is so advanced that anything can be produced there. However, there are certain systems that would be too costly to start a new production plant in Switzerland.

At Hägglunds we do manufacture the turret in the recipient country. The reason is because for us manufacturing the turret requires less investment than producing the chassis. That's why we chose to do it this way. It is a balance between capability and cost. We always do it like that, but may not be the case for other companies.

20. During the time of the F. case - was Hägglunds afraid of being unable to fulfill the obligations?

We had the right to use Swedish companies. F. was owned by the Swedish government. We claimed their purchases as indirect offsets and armasuisse accepted them. Then, there was the renovation of a large steam turbine that this company placed in Switzerland, once more we wanted to claim it as offset, but armasuisse refused to accept this deal because it was a very large amount. At that time we didn't know if we would be able to complete the programme or not, as we were only half way through.

21. Are offsets easier for a company selling land systems or one selling air systems?

I can't comment on that, as I have no experience in aerospace. I guess aerospace has an advantage because they can discharge obligations in the civil aerospace sector as both sectors are usually given the same value, but there are no civil armoured vehicles!

22. Did Hägglunds measure the performance for their offsets in Switzerland (with own objectives, indicators, etc.) or was Hägglunds just controlling armasuisse's objectives?

We had our own targets and measurements, but we received different objectives from armasuisse. We built our own internal computer system where we kept track of the targets. We

use it in every contract. The objectives were: to satisfy industry and keep the promises we made, to achieve other indirect offsets, to have a reasonable share among the three language areas, to complete the programme in decent time, and to continue business relations after the contract is finished. We've done all that. In the Swiss case it was a win-win. That's not always the case in other countries.

3 Arms Trade Offsets and Cases of Corruption: The Usage of Anti-Corruption Tools in Special Forms of Arms Acquisitions

Author:	Peter Platzgummer
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3.1 Abstract

Because of a lack of transparency and the high complexity of administrative processes, arms acquisition is an area with a high risk of corruption. The aim of this paper is: 1) to provide a typology of cases of corruption in compensatory trade agreements, so called arms trade offsets, that have become integral parts of most arms trades; and 2) to analyse tools possessed by government agencies concerned to prevent or detect corruption. Based on an analysis of all major English-speaking newspaper articles between 1980 and mid-2012, the results show that only a few different types of corruption typically exist in arms trade offsets. Also, the lack of transparency leads to an unusually high amount of questionable allegations. Contrary to most other scholarly articles on corruption, this paper argues that there may be no need for new and stricter anti-corruption policies in this area, but that the usage of basic performance management and already existing due diligence tools could be helpful.

3.2 Introduction

Fighting corruption has become one of the major topics in public management. On one hand, a theoretical discussion on drivers of corruption, based on Robert Klitgaard's renowned book Controlling Corruption (1991) has been going on for almost 20 years. And even though these theoretical frameworks have been discussed and widely rearranged (see for example Hors 2001 or McLinden 2005) the main ideas that corruption is driven by a lack of efficient control, discretionary power, and the possibility to work within a network still remain the same. On the other hand, many researchers have been dealing with concrete strategies that states use against corruption, especially the relatively extensive research on the initiation of anti-corruption-agencies (see for example DeSousa 2006, Klemencic & Stusek 2007, or Quah 2011). Other aspects, such as the necessity for administrative reforms (Fjeldstad 2003), or the question of interrelationships between a reform such as New Public Management and corruption (von Maravic & Reichard 2003), have been discussed broadly. What can be seen is that most research and discussions on corruption are held on a national level and end relatively quickly, with recommendations to introduce either new national strategies and policies (Bryane & Polner 2008), or new audit systems (Baltaci & Yilmaz 2006 or Cantens et al. 2010).

While an introduction of a specific strategy or the change of the audit system may have a positive effect on the fight against corruption, they are both rather medium-term options for a governmental organization. Instead, this paper focuses on already existing tools within governmental agencies, which could limit repercussions arising from Klitgaards' drivers. It therefore approaches the following question:

'Does a public agency have already existing tools to detect and fight possible cases of corruption?'

The objective of this paper is to show that a high amount of cases of corruption could be uncovered by tools a public manager has at hand. The problem is often not at the strategic- but rather the operational level, where a lack of resources, knowledge or motivation eases corrupt practices. This will be exemplified by anecdotal cases of corruption in compensatory trade agreements within larger weapon system procurements, so called arms trade offsets. This choice has been made for two reasons. First, offsets are "carrying high corruption risks" (Magahy et al. 2010, 2), but only a few cases of corruption have been discussed so far. This paper is aimed to prompt further

discussion in Public Management by addressing the need for concrete data with an extensive international overview of corruption cases in offsets. Second, offsets are coordinated by one, relatively small and specialized agency per country, which makes cases well comparable and unlimited.

The first part of this paper is a directed qualitative content analysis (Hsieh & Shannon 2005) of allegations of corruption in major newspaper articles between 1980 and 2012. Newspaper articles were coded based upon stakeholders involved and at which stage of the offset-process the allegations occurred, and were compared to Heidenheimer & Johnston's typology of corruption (2001). What can be seen is that a relatively small number of different types exist and that even this small number can be combined into only two major scenarios: a governmental employee is bribed to favour one of the stakeholders in the process, or the employee is personally linked to a company and is therefore favouring it. The second part of this paper discusses usages of three already existing anti-corruption tools: concepts of due diligence, performance management, and general aspects of transparency. The paper argues that the above mentioned major corruption scenarios in arms trade offsets could be identified with already existing management tools but that the identification of corruption often lacks the usage of even basic instruments of anti-corruption policies. An additional finding is that the lack of transparency in arms trade offsets leads to a relatively high amount of misunderstandings or even wrongful allegations, these force agencies to focus on areas less important for anti-corruption efforts.

3.3 Defence Procurement and Offsets

According to a recent report from the Stockholm International Peace Research Institute, 40% of all corruption in international transactions occurs in the arms trade (SIPRI 2010, 1), moreover the Trade Promotion Coordinating Committee of the US Department of Commerce claimed in a March 2000 report that the defence sector was responsible for more than 50% of all bribery allegations between 1994 and 1999 (Magahy et al. 2010, 14). Key reasons for this concentration in arms trade corruption include the high value, and therefore the importance, of single trades for individual countries and defence suppliers. Additionally, security-relevant transactions increase in complexity because of the high amount of stakeholders involved in the process and the secretiveness of the area

as such. This makes it increasingly difficult for public managers to control and communicate information to superior authorities and the public.

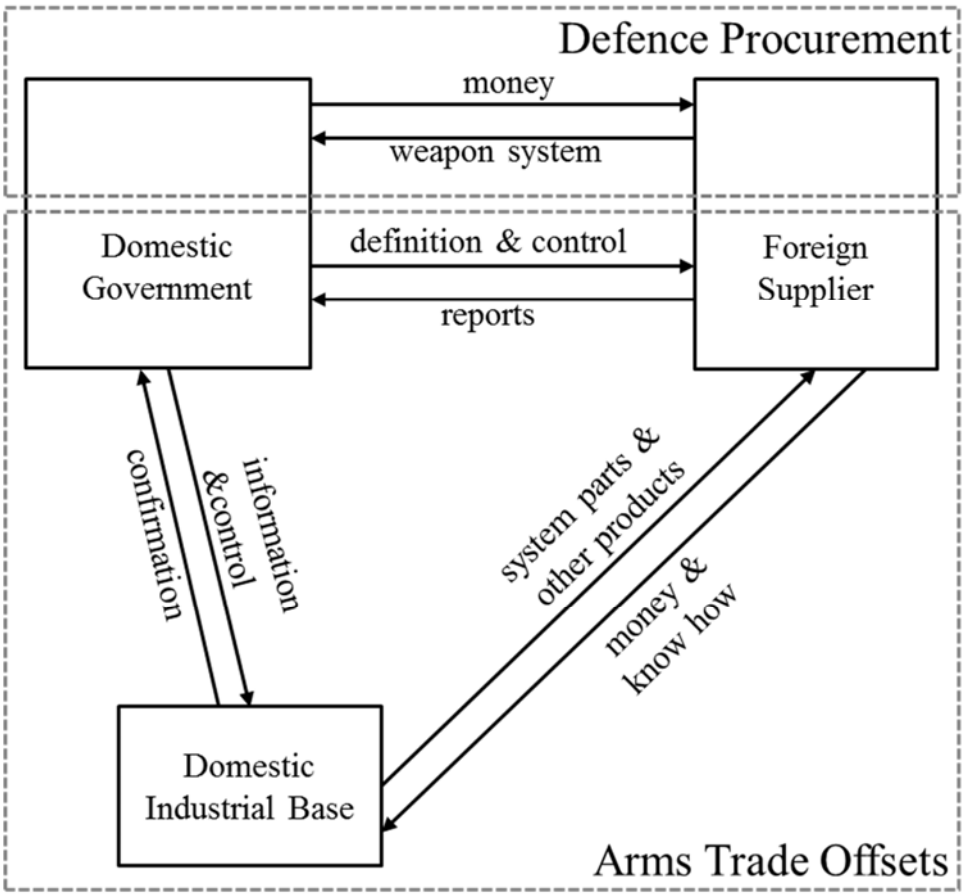
When procuring armaments, a country must decide if a weapons system, or a component thereof, can be developed domestically or should be purchased off-the-shelf from a foreign supplier. Beyond these two options lie other alternatives, such as licensed production or shared development projects wherein the development or production of an item is shared between the companies of the vendor and supplier countries. On one hand, domestic development would theoretically strengthen a country's defence industrial base and secure jobs and technological know-how, therefore satisfying the specific needs of the domestic armed forces. Yet this is "also likely to be the most expensive option" (Martin 1996a, 1) for maintaining the country's military capability. On the other hand, off-the-shelf purchasing, though potentially less expensive, means acquiring a system that is developed for another country's armed forces' needs, producing only jobs abroad and comporting a danger to the secure supply of required parts and technical assistance. However, it is likely to be significantly cheaper. In order to overcome this dilemma, many states link their defence purchases to compensatory trade agreements, often referred to as 'arms trade offsets', 'countertrade' or 'industrial participation'. Offsets mean that a country buying off-the-shelf military equipment forces the foreign supplier of the product to reinvest an amount of the product price into the domestic industrial base[29]. By adopting these practices, a country can get a foreign military system without paying initial development costs, and theoretically still generate some domestic industrial benefits. These offsets are usually defined as some percentage of the purchasing contract price, and a time period is set for the fulfilment of them. Additionally, when procurement with an offset contract is signed, the foreign company works directly with domestic companies to fulfil the offset obligation. A specialized governmental agency monitors these processes and also evaluates the performance of these offset deals. These additional processes and the coordination of several new stakeholders can lead to far more complex transactions and additional (transaction) costs of up to 20% more than a basic outright purchase over the original system price (Friedli et al. 2009). A probability for corruption increases as well.

Since the 1970s the number of countries using countertrade practices has steadily risen. While countertrade originally consisted mainly of barter agreements exchanging goods rather than using a currency and to ease transactions with countries of the former Soviet

Union and other countries with ‘weak’ currencies, this is no longer the case. Today, the vast majority of countertrade transactions include offset agreements to maintain the defence industrial base and increasingly the dual-use and civilian industry. More than 75 countries worldwide apply offset policies regularly and several additional countries use offsets for some specific procurements (CTO Data Services 2012). Most of these countries possess only a single governmental body with usually a small staff of approximately five to twenty employees to govern these deals. The functions of these agencies are relatively similar and, most importantly, they share the common problem of controlling the different offset deals between foreign vendors and domestic industries, thus making them an interesting case for further research.

As Figure 8 shows, an offset agency (within a domestic government) has three major functions.

Figure 8: The relation between the main stakeholders in arms trade offsets.



Note. Source: Own research.

First, it defines the offset contract with the foreign supplier. As offsets are based on the procurement of a large weapon system, the contract is discussed parallel to the procurement contract. It usually defines the overall amount of offsets and the division between direct offsets, where domestic companies are producing parts of the actual system ordered, indirect offsets, all transactions between the foreign vendor and the domestic beneficiaries that are not directly linked to the weapon system. The offset contract is often considered in the overall tender process. For example, in Switzerland offsets are incorporated in the cost/benefit analysis and account for 8 per cent of the result (EFK 2007, 17). The reason for the consideration of offsets within the selection of the weapon system is that the offset agreements can influence the technical specifications of the goods procured. This is especially the case when a country wants to use offsets not only for economic reasons, but to maintain or even develop its own defence technological capabilities.[30] This would raise demands for changes of the existing system produced by domestic companies considered important for national security. Second, the agency is responsible for monitoring the implementation of the offset agreement. The foreign supplier has to hand in proof for the quality and quantity of transactions with the domestic industrial base. The agency is verifying these proofs with the vendor but also autonomously with the large group of beneficiaries. For example, the 1.1 billion dollar procurement of combat vehicles in Switzerland led to more than 1000 offset transactions between the foreign supplier and more than 250 Swiss companies within 10 years (Platzgummer & Gonzales Lozano 2013). Third, the foreign supplier often lacks the specific insights needed to find the best partners in the contracted country. Therefore, the offset agency is not just controlling but also informing companies from the domestic defence industrial base about possible cooperation with the foreign vendor. Also, in some countries, agencies can suggest or request that specific companies produce parts of a weapon system. This is critical when the company is considered relevant for maintaining the defence industrial capability of a country.

What has become evident is that even though offsets are a rather exceptional activity for a government, the functions of an offset agency are relatively similar to other governmental agencies. For example, industrial promotion activities or R&D projects require comparable control- or monitoring functions.

While the overall economic effects of offsets have been extensively addressed in academic literature (Brauer 2004, 54), corruption and the role of public agencies, and therefore aspects of Public Management, have not been subject to closer examination. This is particularly unfortunate given the sheer volume of trades and money controlled by these governmental offset agencies. In 2006 the overall volume of offsets in participating member states of the European Defence Agency was estimated at 5.6 billion euros, which would correspond to 200-400 million euros per annum for each member country (Eriksson et al. 2007, 4). Even a small and neutral country such as Switzerland, with no membership to the EDA or NATO, finds itself within these same average volumes of about 300 million euros per annum (Friedli et al. 2009). Although the data is unavailable for countries outside of Europe, the volume for other continents is likely in a similar if not even higher range. This is in view of the fact that some countries tend to have offset obligations far beyond 100 percent, and are not facing the same defence procurement budget cuts as European countries have in recent years (Marshall 2012). What makes offset deals even more prone to corruption is the impossibility to compare costs between countries. First, this is because of the different military requirements within the same weapons system, and second, because of additional coordination expenses between the foreign vendor and domestic companies.

Unfortunately, quantitative data on corruption in offsets is lacking, and only a handful of examples are used in (academic) discussions thus far[31]. The reason is that, aside from speculations about the potential corruption risk claimed by most authors, only a few cases of corruption have been discussed in public.

3.4 Types of Corruption in Offsets

Usually, offsets are seen as a part of defence procurement and are seldom of higher interest to the general public. This also holds true for discussions of corruption in offsets. While corruption in arms trade in general has always been of high interest for researchers and specialized media, broader discussions of corruption in offsets are a relatively recent phenomenon. In 1999 the corruption within a South African defence acquisition came to public attention because of the sheer number of allegations and high volume of the procurement and offsets (Crawford-Browne 2009). Bringing further general awareness, Transparency International, an NGO specifically fighting against corruption, published

a noteworthy report and started a campaign against corruption in offsets in 2010 (Magahy et al. 2010).

One of the major problems when studying corruption in offsets is the fact that it is difficult to narrow down any research to specific types of corruption because "definitions are controversial, and solid evidence is often elusive" (Johnston 1991, 9). To have the maximum number of possibilities for further analysis, this paper used the relatively broad definition provided by Transparency International: "[corruption is] the abuse of entrusted power for private gain"(Magahy et al. 2010) This definition is even broader than the definition of the *United Nations Development Programme*, which defines corruption as "the misuse of public power, office or authority for private benefit– through bribery, extortion, influence peddling, nepotism, fraud, speed money or embezzlement" (UNDP 1999, 7).

To give an overview of types of corruption in offsets, a directed qualitative content analysis of newspaper and specialized magazine articles was conducted. The selection was based on a LexisNexis major world publication search, which is also the reason for the limitation to articles written in or translated into the English language. Even though it is possible that some of the corruption allegations have not been discussed in non-English written media, it is likely that all major cases of corruption in the area of armament and defence have at least been mentioned in the prominent publications available via LexisNexis, such as *Jane's Defence Weekly*, *Defence News* or *Aviation Week* which have the resources to report on all major foreign defence news items. In an initial collection set, all articles published between 1980 and June 2012 containing the words "defence", "offsets" and "corruption" or important synonyms[32] in the full text were selected. The 990 resulting articles were filtered by hand to ensure that the remaining articles explicitly dealt with corruption in arms trade offsets. The final sample contained 250 articles from 12 countries[33]. The sample was supplemented by academic papers and reports from the same timeframe that specifically discussed questions regarding corruption in offsets[34].

More than half of the articles (153) dealt with the aforementioned South African case, a case also included in all academic papers used for the data collection. The reason for this may be the uniqueness of the procurement as such (it involved an exceptionally high amount of offsets and a number of different allegations[35]) but there is a high probability that it is also due to the fact that South Africa, as an English-speaking country, would

be more frequently discussed in English-language print media. Similarly, India (30), Saudi Arabia (15) and Australia (12) were highly represented in the data, while all allegations in other countries were mentioned between one to eight times in the articles. One set of 20 articles consisted of texts where offsets were associated with corruption but no example was given, therefore these articles were not used for the categorization scheme, but will be referred to in the overall discussion in the second part of this paper[36]. It is important to mention that the number of articles pertaining to a country did not offer valuable clues on the specific number of offset deals, as a majority of the articles summarize several offset deals within a country throughout the article. A quantitative analysis of cases of allegations was insofar not possible. But, it seems that most corruption in a country happened within the same procurement. This could be explained by the fact that corruption implies a certain legal and economic risk for a company and that a company which has already crossed this threshold is more likely to repeat a so far successful practice[37].

Instead of a quantitative analysis the focus therefore shifted to a qualitative definition of different types of corruption in offsets based on the allegations in the newspaper articles. While several very general categorizations of corruption exist (e.g. Heidenheimer & Johnston 2001), a specific typology for corruption with offsets has not yet been developed. For a further discussion of specific tools a governmental agency has to detect and fight corruption, it seems inevitable to specifically define what types of corruption the agency has to face. Even though the first report on offsets of Transparency International had several quasi categorizations for portions of offset processes, for example pathways from tender to winning the award (Magahy et al. 2010, 18), they were not sufficient to encompass the range of corruption cases examined.

A qualitative content analysis was used to utilize a broader but more exhaustive method of categorization. Common typologies for corruption need data about the interests of the corrupt actors, which cannot be derived solely from the data set used. Therefore, the initial coding of the 250 relevant articles was only based on most obvious stakeholders and the sequences within the offset process. A directed content analysis was used to be able to adapt the coding to new findings[38]. This led to an extension of the number of stakeholders during the coding.

First, the allegations were divided according to the main stakeholders involved. As mentioned earlier, the increasing number of stakeholders is one of the reasons for a

decreasing level of transparency. The next division extends beyond the two most obvious groups - those of foreign suppliers and the national importing government - to include national beneficiaries (the domestic defence industrial base but also research institutions) that play a major role in the offset business as they are the recipients of the offset obligations, as well as third-party entities such as brokers or consultants (Magahy et al. 2010, 13). It could be reasonable for future in-depth studies to further break down the categories of government and the national beneficiaries into subcategories. So far, the category of government includes the offset agency, as well as the decision-makers (generally politicians, or higher-ranking officials on a ministerial level). National beneficiaries could at least be divided into state-owned and private companies, as there is a high chance that state-owned companies are favored over privatized ones, as the case of India shows (Raghuvanshi 2005). The separation of defence companies from dual-use and civilian companies could also be of further interest, as depending on legal interpretation by different governments, the WTO/GATT offset contracts only allow for security- related deals which are sometimes thereby restricted to defence companies. Alternatively, the legal interpretation could stretch to purely civilian beneficiaries[39]. The reason for this different interpretation lies in the exception of defence procurement in free trade agreements due to its effects on the security of a country (Young 2007, 315-318). The majority of countries include offsets (as part of the defence procurement) to this exception. But, countries with a relatively weak defence industrial base tend to allow civilian offsets, while countries with a stronger defence industry exclude civilian or even dual-use products to make sure that important domestic defence companies can benefit accordingly.

Second, the allegations were divided according to the course of action within the offset process. This level of analysis has already been used in an earlier study (Magahy et al. 2010, 15–17), but the process after the signing of the contract has been ignored so far by scholars. It is true that one major scenario for corruption within the arms trade as a whole is as good as done at this point, mainly the means by which one foreign company wins the procurement over its competitors. However, other possible scenarios, such as national companies attempting to become beneficiaries, still remain as opportunities for corruption. As the offset contract as such still seems to be the major turning point within the process, the categorization has only been divided into pre- and post- contract agreement phases.

Relatively similar allegations have been combined here in order to provide a good overview of the different types of corruption within offsets. Additionally, the geographical locations of these cases of corruption are listed. The articles were not analysed statistically due to the fact that multiple examples of the same case have no impact on the severity or the type of the corruption and that a clear differentiation of different cases was often not possible based on the newspaper articles. To give an overview of existing cases (and to broaden up the academic discussion to more than the so far used examples), anecdotal evidence is used in further discussions. Also, the long period of investigation between 1980 and 2012 would imply a time-series analysis. This has not been done because of two reasons. First, an increase of allegations could be found but this increase is allegeable with the overall increase of the use of offset practices, especially after the end of the Cold War and in Arab countries in the beginning of the 21st century. Second, offsets will only occur when a country has to import a weapon system. Therefore, especially larger high-tech weapon system procurements include offset agreements. With an average lifespan of about 30 years for most of these systems, and very different domestic industrial partners for the different systems (e.g. land systems, combat jets, etc.) there were not enough cases that highlight specific trends over time. Also, the types of corruption were distributed relatively evenly over time.

Table 5: Overview of cases of corruption.

		Pre contract agreement	Post contract agreement
Foreign	Supplier	Government bribed to manipulate tender (-process) (ID, IN, ZA)	• Incorrect claim of offsets (AU, PT, ZA) • Bribe is claimed as offset (KR, ZA)
Foreign	Third-Party E.	Politicians bribed to influence decision-makers (IT, PT, ZA)	
Domestic	Government	Overassessment of benefits in offset proposal (CZ, GR, PL, PT, ZA)	High ranking officials own/work for offset receiving company (ID, ZA)
Domestic	Beneficiaries	Agency bribed to receive share of offset obligation (AU, CZ, ZA)	

Note. Source: Own research.

What can be seen in Table 5 is that the number of countries with allegations is relatively small and that only seven different types of corruption could be identified based on the data collected. All pre-contract-agreement cases represented instances of corruption where one of the stakeholders tried to influence the competition between potential suppliers to its own benefit, or in other words, where the government favoured a specific stakeholder who provided more incentives, usually in the form of bribes. All these cases can be defined as public-interest-centred types of corruption according to Arnold Heidenheimer (Heidenheimer & Johnston 2001, 9). In these cases, the tender process was manipulated in a variety of ways. For example, one of the South African procurement decisions was based on a shortlist that excluded the price of the arms purchase and therefore favoured the proposal with the best offset offer (Pressly 2011). Another example was the bypassing of the Minister of Defence by the Chief of the Air Force in Indonesia (Roundup: Trade deal 2003) or the temporary loss of all offset

proposals by an Indian official (Antony warns defence 2011). This latter case, though no evidence could be found for corruption, can still be seen as an example of how a tender process could be potentially manipulated. Cases where politicians or high-ranking officials were bribed to influence decision-makers have been cited in South Africa (AFP 1999), in Italy (Pubby 2012), and in Portugal. The Portuguese case refers to an allegation in which an intermediary received 30 million euros for brokering the procurement and the offset contract, using portions of the deal to bribe others, including officials of the offset agency (Magahy et al. 2010). By far the most media attention was received by a case in South Africa because of the proposed (and never completely realized) creation of 65,000 new jobs (Crawford-Browne 2009). Several companies also tried to ensure business with the offset supplier by becoming compulsory partners for the foreign supplier. This has happened for example in Australia ('Richo' cleared 1995) and in the Czech Republic (Kominek 1998).

Other allegations of corruption can be seen in the second phase of the offset process after the selection of the supplier and the signing of the contract. Multiple cases exist especially where a company benefits from being personally associated to the high-ranking officials or politicians who organized the offsets. For example, this was the case in South Africa where a minister took up a position in an offset benefiting company directly following his political term (Mitchell), or where politicians were shareholders of such companies (February & Calland 2011). These cases can be defined as market-centred corruption (Heidenheimer & Johnston 2001, 8). The last two types are those mentioned most often in the media, but they remain the least explained cases: offset deals being used as bribes, and incorrect claiming of offset deals. Unfortunately, there is only one article that gives an explanation on how the use of offset deals as bribery could have happened: In Korea a deal was claimed as an offset but the service in return by the national company never occurred, and thus clearly equates to a bribe situation (Summer 1998). This type of case could be defined as public-office-centred corruption even though the payments seem to be to private companies rather than to public officials (Heidenheimer & Johnston 2001, 8). The last type includes cases where the foreign supplier tried to claim several offset deals incorrectly, usually by overestimating the

value of the deal. Allegations about such cases have been made in Australia (Richardson 1995) and in Portugal (Pop 2010).

It is important to mention at this point that all of the types discussed here are primarily allegations of corruption. All of the articles have been concerned with allegations that led to criminal proceedings, but only a few of these cases resulted in the conviction of a specific person. Additionally, even though the categories proposed represent, in some cases, a risk of corruption, a relatively large portion of the examples from the newspaper articles do not. In several cases the fact that the proposed offset benefits were extraordinarily high was a reason for corruption allegations. For example, a U.S. company offered new jobs worth three billion U.S. dollars to the Polish government. This lead to political statements such as: "Critics call it what it is: bribes and corruption" (Jackson 2003). The problem with this allegation is that arms trade offsets are often in a legal grey area. As already discussed, the WTO/GATT allows offset for security related deals. It is argued that arms trades do not always follow clear measures of free trade and competition as the decision is most often based on other criteria, strategic partnerships with other nations for example. The same is true for arms trade offsets, where additional costs of up to 20 percent of the original price of a system are justified by the possibility of maintaining a nation's own defence industrial base and defence technology transfers. The question is whether a focus on additional employment is within the boundaries of these exceptions. A report by the order of the European Defence Agency came to the conclusion that 26 percent of all offset deals were awarded to civilian industries (Eriksson et al. 2007, 20) and were therefore not defence related. While this was legal at that time in the participating member countries of the European Defence Agency[40], one could argue that the decision for arms trade offsets were not based on issues of defence but were efforts by public officials "without regard for the public interest in order to achieve a specific kind of private gain – re-election to public office" (Yingling 2013, 263). While this could therefore be defined as unconventional corruption (in contrast to conventional corruption where illegality is a necessary condition)[41], it is also true that additional employment is an ancillary effect of most trade interactions and - though used to promote a public support for arms trade - is not per se the main reason for these deals. Also, the focus on aspects where the public opinion is more likely to be positive is very common in general and not considered illegal. The previously mentioned allegation in the Polish procurement is insofar questionable as

politicians in the United States use the same arguments within their own campaigns for arms deals[42].

3.5 Tools to Fight Corruption

Based on the comprehensive analysis of articles, a typology of different allegations of (conventional) corruption in defence offsets was made. The question that remains to be answered is whether or not governmental agencies employ tools that would be useful in identifying or fighting these types of corruption. A growing number of academic papers have focused on aspects of how to fight corruption, and different strategies have been widely discussed in academia, however the majority of this topic occurs in the policy papers of international organizations such as the World Bank or the OECD, indicating that more comprehensive non-partisan studies must be conducted.

The overview of cases of corruption in Table 5 shows that two possible scenarios in particular seem to happen when a governmental agency is involved. Either, a civil servant is privately linked to a company and is therefore favouring it over other competitors, or, the civil servant gets a bribe from a company and is misusing his power usually by misinterpreting or manipulating performance data. These findings are concordant with two of Robert Klitgaard's drivers of corruption (1991): the possibility to work within a network (private linkage) and the absence of accountability (misuse of performance data).

Most of the cases of corruption in offsets exhibit the problem of lack of transparency. Klitgaard's discretionary power is insofar a real problem for corruption in arms trade as it leads to a complexity that does not allow for explicit verdicts. Therefore, the question of transparency has to be further discussed as well.

3.5.1 Networks and Due Diligence

As the analysis of cases shows, the usage of arms trade offsets to bribe public officials has been one - if not the - major allegation in recent years. While there are several newspaper articles that do not explain the process of bribery, and overall prompt more befuddlement than deep insight, they do identify some very specific problems. This is especially the case when a company, personally associated with public officials, is a beneficiary in the second phase of the offset process. This has for example been the case

in South Africa, where politicians have not just been shareholders of offset beneficiaries (February & Calland 2011), but where public officials have taken over a leading position in a defence company right after their term in office and during the fulfilment phase of the offset obligations (Mitchell 2008). In a very recent report, Transparency International, together with one of the biggest arms trade offsets industry associations, explicitly tackled the importance of due diligence (Fluker et al. 2012). Based on a survey of 27 defence suppliers, the report gives a short overview of due diligence practices of companies that have offset obligations. While most of the mentioned aspects, such as the use of questionnaires for prospective partners or the role of due diligence for offset brokers, target the role of companies, the interviews with suppliers showed the need for a stronger use of due diligence instruments on the side of the government. The report does not define the term due diligence as such, but highlights aspects of corruption risk awareness within companies. Transparency International's first report on corruption in offsets gives a recommendation specifically for governments, stating that they "should require due diligence to be carried out to ensure that no member of the government or official will benefit improperly from any offset contract, and to ensure that all potential conflicts of interest by officials, military officers and Parliamentarians are disclosed" (Magahy et al. 2010, 4). The problem seems to be the reactionary approach by governments when it comes to the use of such practices within a procurement rather than during the hiring process of public servants. First, even though the linkage of public officials to specific defence companies that could become offset beneficiaries may be widely known within the government, it is not proactively examined or required pre-employment information. Second, while a growing number of companies exist that do conduct very strict due diligence processes, this is not the case for all companies. As a due diligence process is not a required part of most offset proposals, companies which voluntarily or by legal restrictions (such as U.S. companies under the Foreign Corrupt Practices Act) invest additional resources for these aspects are not rewarded for their anti-corruption efforts. Also the very small number of academic literature on due diligence in public management focuses only on the audit portion and is does not discuss earlier aspects of due diligence within procurement processes overall[43].

3.5.2 Absence of Accountability and Performance Management

One of the main allegations of corruption in South Africa, as well as other countries, has been the promise of additional jobs for the domestic industry. For example, in the South

African case the foreign supplier offered offset obligations worth 104 billion involving Rand (approximately 17 billion in 1999 USD), which equates to a sum three times as high as the procurement contract volume. It was suggested that this sum would create approximately 65,000 jobs. While this number implies an extreme example of overestimation, this is hardly the case when realizing that each of these jobs was projected to cost more than 20 times as much as an average job in South Africa's defence industry at that time (Dunne & Lamb 2004, 288). Due to a lack of data, it is not possible to calculate the exact number of jobs created with the industrial participation program in South Africa, but the number is most likely not even a third as high as estimated. Several articles have claimed that the proposed number of jobs has been a "sweetener" (Unnithan 2005) for the procurement act and a "key motivation" (February & Calland 2011) for the entire deal. Unfortunately, this analysis is based solely on newspaper articles, and it is not evident if the proposed number of created jobs was part of the South African contract. For a country with an unemployment rate of approximately 30 percent at that time (Dunne & Lamb 2004, 288) such an offer was certainly more than welcome, but usually an off- set contract only contains a defined financial volume. Moreover, it is possible that this number was defined and used by the government to promote the arms procurement by explaining not only the strategic military reasons, but also a positive economic side effect. In reality, the supplier was not able to fulfill the public's expectations.

Another allegation in South Africa was the usage of multipliers from an original investment to accrue the offset credits (Ensor 2012). Unfortunately, this case is also not defined any further in the articles, but the potential allegation is/was that the company did not need to invest the complete offset obligation into the country. While to the public this seems to be a clear manipulation, it is a common practice in most offset transactions. A majority of countries use multipliers up to the factor ten (Friedli et al. 2009). This means that an investment of one million is counted as offset deals worth ten million. The reason for this is that offsets happen most often with companies that lack the specific knowledge of how to produce a commissioned part. Multipliers are then used to award the technology transfer or the production support of the domestic company by the foreign supplier.

Both given examples, employment creation and multipliers, contain estimates that can be used, in the worst case, to misleadingly overestimate the value of offset deals and, in

the best case, to further complicate the process and decrease transparency. While it could be said that some allegations were nothing more than misunderstandings by the media, they also show that the usage of indicators is always dangerous. In both cases, the allegations led to further (parliamentarian) investigations, unfortunately with unreported conclusions.

A recent study of a specific offset example in Switzerland (Platzgummer & Gonzales Lozano 2013) suggests that companies tend to overestimate their offset obligations especially after a phase of underestimated obligations claiming. The reason for this is likely due to the company realizing that the country's generally weak defence industrial base can only handle a specific amount of offsets at the same time[44], and that the fulfilment is to be at risk overall. The foreign company is often put under pressure by severe penalties of up to ten percent of the whole offset obligation (Friedli et al. 2009), which increases the risk of corruption. Even with very basic performance evaluation tools that only provide an analysis of the claimed financial volumes, phases of achievements below the average could be detected very easily. The governmental agency should not only have an overview of the already achieved volume but should also be willing to warn the foreign company in such cases. This could prevent cases of corruption.

These cases show that even a very simple performance management and audit system, containing only input and output measures, would allow an agency to detect the majority of corruption scenarios. So there is not really a need to develop new frameworks or performance management systems. Instead, efforts are best spent to ensure that a basic performance management system is used and that the results are audited internally. One possible problem with the use of performance management tools could be the personnel structure of the offset agencies. While contracting requires a high knowledge of legal aspects, performance management would require managerial know-how. Yet, it is more likely that within budgetary restrictions in governments, contracting – as the ultimate base of every offset deal – seems to be more important. So hiring lawyers is favored over hiring managers.

A more fundamental aspect of performance management that should be discussed further is the prioritization of politically adequate objectives. While the use of additional employment numbers as a major benefit seems understandable, especially from a politician's point of view, it can be seen as unconventional corruption, as mentioned

previously. Additionally, these objectives are very hard to measure correctly and are – as shown in the case of South Africa – ignored by the agency responsible for the performance management. This is especially the case when the agency is already understaffed.

3.5.3 Transparency and Media

The biggest problem with offsets seems to be the fact that they lack transparency and increase the level of complexity. More than once, unspecified allegations were made that may or may not be seen as cases of corruption. An example of such a case is an allegation in Portugal stating that offsets were claimed for already existing investments worth 34 million Euros (February & Calland 2011). While this seems to be a perfectly clear case of corruption on the surface, it does not necessarily constitute one. Most countries offer the possibility of 'banking' offset credits. This means that a company is allowed to claim a specific amount of deals that have been contracted with offset beneficiaries before the offset agreement is signed. The reason for this is that government procurements can be postponed due to tax cuts or political changes. Also, due to tight production schedules and a high probability that national companies need some time to build up the specific necessary knowledge, governments tend to award first offset contracts to national companies as soon as the competition ends, but before the offset agreement is discussed and signed. For example, Switzerland is allowing 20 percent of banking credits in the current jet fighter procurement due to a political adjournment of the procurement process (Maurer erwägt Verzicht 2012). Again, this is a possible excuse for the allegation but it does not have to be the ultimate reason. Chances are that the acceptance of this offset claim by the governmental agency in Portugal can still be a case of corruption.

While these cases lead to a lot of discussions, the solution to increase transparency is relatively easy. In 2008 the European Defence Agency launched the Code of Conduct on Offsets (EDA 2011). While the document does not include important political aspects on offsets, it has at least increased transparency. For example, all 25 participating member states have to publish their offset policies on the EDA webpage. With this, future cases, such as the aforementioned Portugal banking case, could be clarified quickly. A second allegation that is frequently made in the media is that offsets are "not bribes, but pretty damn close" as U.S. Senator Russ Feingold mentioned in a speech

asking the U.S. Justice Department to investigate on McDonnell Douglas Corp. offset practices (Sennott 1996). Even though offsets are used as marketing tools within procurement competitions, most countries demand them very actively. One of the major accomplishments of EDA's code of conduct was the confinement of offset obligations to no more than 100 percent. Prior to this code, several countries in the European Union were demanding up to 200 percent offset obligations in defence procurements. These volumes were so high that some of the companies could hardly implement them in the few defined years of the offset agreement. An additional problem here is the double standard provided to foreign suppliers, especially from the United States. While actively asking for political support to ban arms trade offsets at home, they have to promote the advantages of their own offset packages within their proposals abroad. In a globalized world, this leads to a situation where the company is sometimes confronted with allegations of bribery overseas, allegations that they were themselves using to ban offsets at home.

Also, the lack of knowledge regarding offsets and the dishevelment of the allegations imply the need for an increased transparency. In several cases, the terms *offsets* and *barter*[45], or *direct* or *indirect* offsets (Pubby 2012) were confused or ambiguous definitions were used. One allegation went so far as claiming that in "Bulgaria, one of the EU's most corrupt countries, the government set up a special offset office in the Ministry of Economy" (EU code 2009), suggesting that this is in and of itself a case of corruption. Also the report by Transparency International includes several aspects where a differentiation between corruption in the 'normal' procurement and corruption in offsets is not possible[46], which decreases instead of increases transparency within the report.

Another main factor of confusion is the United States government. From the point of view of the biggest weapons exporting country, it is comprehensible that offsets are everything but favoured as they force U.S. companies to alter already existing supply chains and invest in less competitive foreign countries. It seems that members of the U.S. government use the terms "offset" and "corruption" in the same sentence as a matter of principle, for example: "Offsets are nothing more than economic bribe" (Hunter 2004), they seem to be "a way to bribe other countries to do something" (Tolchin 1987) or they "foster corruption" (Intelligence Online 2008). These arguments

would be taken more seriously without a Buy American Act, which include the same goals and principles as offsets.

What this part of the analysis shows is that governments should increase transparency within offsets. This could be accomplished through explicitly dedicated information portals, such as that of the European Defence Agency, which offers at least transparent policies and some basic information. It could also be provided through specialized education in the form of workshops for journalists or special interest groups who focus on defence and security topics. Both options would lead to increased transparency even within tight budgetary restrictions of such governmental agencies.

A more general question that should be asked is whether there is really such a "big lack of transparency in offsets" (Pressly 2011). The problem with this allegation is that there are very different notions of transparency. Regarding the fact that offsets are part of a governmental procurement that involves defence goods, offsets are not more or less transparent than the rest of the procurement. Taking into consideration that private companies are not usually asked to disclose their complete supply chain to everyone (including their competitors), the lack of transparency seems to be relatively small. Also from the WTO's point of view, a view that clearly supports free trade and competition in a market, transparency is not really missing. According to article XVII of GATT, both contracting partners can request information about the specific operations that can impact procurement[47].

3.6 Conclusion

This paper has the intention to give an overview of known types of corruption in offsets and analyse whether tools exist to identify or even fight some of the previously defined types.

What can be seen so far is that a relatively manageable number of different (known) types of corruption in arms trade offsets exist. Furthermore, a narrow focus on the first part of the offset process from the earliest request for proposal to the date of the contract agreement cannot highlight all cases of corruption and should therefore be reconsidered. So far, the discussion of corruption in offsets has generally focused on the problems concerning the transparency and complexity of arms trade offsets. Still, by using already existing management tools, a better part of potential cases of corruption can at least be observed. The main problem is that more or less all of these specific governmental

agencies do not even use basic performance management and are highly influenced by other stakeholders, especially political actors, to use immeasurable indicators such as additional employment factors. Additionally, offsets agencies need to deal with a very negative prejudice. It is important that government officials responsible for offsets know that there is a danger of corruption, and it is even better when they are able to flag potential risks within the process. A closer cooperation with journalists or special interest groups such as Transparency International could also help defuse the negative connotation offsets have to face. Governments could increase transparency and also encourage the use of performance management tools for offsets without the implementation of new tools and with relatively low costs. The introduction of due diligence, another relatively low cost anti-corruption tool could – in combination with performance management – also ameliorate the situation for governments as well as for companies.

As the main intention of the paper is to give an overview of the usage of anti-corruption tools, some other aspects are only discussed superficially. With the introduction of stricter rules and regulations of offsets within the European Union, the discussion of conventional and unconventional corruption could be of further interest. It seems that the containment of offsets with the civilian industry is an attempt to decrease forms of unconventional corruption.

In addition, the literature review for this paper showed that there is a lack of comparative studies within the area of performance management. While a number of single case studies on the implementation of performance management instruments exist, hardly any research has focused on case-comparison. Similarly, public management is focusing – at least in this area – on successful cases, and is ignoring closer looks at the failures of performance management.

Endnotes

[29] A good definition can be found in Martin (1996b).
[30] See Hartley (2008) for a discussion of technological benefits from offsets in the case of Eurofighter Typhoon.
[31] Specific discussions have only been held on the case of South Africa (see for example Dunne & Lamb 2004) and (partially) on Saudi Arabia (Marshall 2012).
[32] An advanced Boolean search was conducted on July 06, 2012 with the following keywords and Boolean connectors: (offset* OR countertrade OR barter OR "industrial participation") AND (defen*e OR military) AND (corrupt* OR bribe)
[33] Australia AU, Czech Republic CZ, Greece GR, India IN, Indonesia ID, Poland PL, Portugal PT, Saudi Arabia SA, South Africa ZA, South Korea KR, Thailand TH, United States of America US.
[34] For example: Kilaz & Hayri (2011), Magahy et al. (2010), or Dunne & Lamb (2004)
[35] South Africa bought 70 JAS Gripen from BAE/Saab and got offered 110 billion Rand, an equivalent of roughly 16 billion USD, in offsets that were said to lead to 65'000 new jobs.
[36] This was especially the case for articles on political discussions in the United States.
[37] The term "threshold" should not be confused in this context with "threshold effects of corruption" (e.g. Bose et al. 2008) which is a more common use in academic discussions.
[38] See Hsieh & Shannon (2005) for a good introduction to this method.
[39] WTO/ GPA Article XVI-1: Entities shall not, in the qualification and selection of suppliers, products, or services, or in the evaluation of tenders and award of con- tracts, impose, seek, or consider offsets.
[40] The European Commission has since then published the new Directive (2009/81/EC) for defence and security procurement which excludes non-defence related offsets in Europe and in contrary to so far existing non-binding agreements such as EDA's Code of Conduct on Offsets, "the question of whether or not the provisions contained in Article 346 TFEU are fulfilled may be decided in court" (Weiner 2012, p. 17).
[41] For further discussion, see the very interesting article by M. Patrick Yingling (2013)
[42] See for example the U.S. KC-X program in which Boeing argued that the decision for their aircraft would lead to the creation of 50'000 new jobs (Martinez 2011).
[43] See for example: Glynn & Murphy (1996, 133).
[44] For example, with on average 300 million Swiss Francs offset obligations are responsible for more than ten percent of the annual volume of the entire defence industrial base in Switzerland (Eisenecker et al. 2012). Regarding the fact that most offset sup- pliers are not able to work with the whole industrial base from air system to land- or even sea system producer, suppliers should try to achieve a relatively balanced allocation of annual obligations.
[45] See for example: Pressly (2011), AFP 1999 or Copley 1985.
[46] See for example, the case of Taiwan in Magahy et al. (2010).
[47] For a further discussion see the very interesting article from Robert Howse (2010).

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4 The EDA and Defence Offsets: Trailing after the Commission

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4.1 Abstract

This paper discusses the efforts of the European Defence Agency (EDA) to decrease the fragmentation of the European Defence Technological and Industrial Base (EDTIB) by coordinating offset practices of its member states. It first looks at the increasing use of offsets after the end of the Cold War. Second, it discusses the activities of the I&M Directorate of the EDA that led to the adoption of the Code of Conduct on Offsets by almost all member states and increased the transparency of offset practices in Europe. The third section discusses the introduction of the Defence Procurement Directive by the European Commission (EC), and the EDA's role as a catalyst in the change process that followed. While the EDA was able to increase awareness of offsets' effects on a common defence industrial base, implementation of the Defence Procurement Directive greatly marginalised these efforts. The current situation, which will eventually forbid the use of indirect civil offsets, provides an opportunity for the EDA to better coordinate the existing defence offsets of member states in the future. The time has arrived for the EDA has to define for itself a new and preferably stronger position on offsets, one that is not as driven by decisions made within the EC.

4.2 Introduction

This paper examines the efforts of the European Defence Agency (EDA) to reduce the fragmentation of the European Defence Technological & Industrial Base (EDTIB) via the coordination the offset practices of its member states. It uses a historic, descriptive analysis in order to assess how successful the EDA has been in overcoming the negative effects of offsets, considering the state of division within the EDTIB.

The paper begins with a short discussion of the effects of offsets and an overview of the development of offset practices in the European Union (EU) since the end of the Cold War. From their inception, offsets were of more a marketing effort by foreign vendors, or a chance to forward an additional political agenda with a foreign government, than a common practice. They became an increasingly growing problem over time, when larger countries also suffered from budget cuts and higher unemployment numbers. With the economic rise of Eastern European countries and their efforts to join the European Union towards the end of the 1990s, their call for additional benefits in armament procurement deteriorated the offset situation even further, making this an important topic for all European countries and the European Union as an entity. Additionally, the European Union and several member states efforts towards a common EDTIB before the foundation of the EDA are discussed.

The next section deals with the endeavours of the Industry & Market (I&M) Directorate, particularly the introduction of the 'Code of Conduct on Offsets' (CoC) and the effects on offset policies of the participating member states and Norway. Even though the I&M Directorate was the first agency on a European level specifically responsible for offsets, the European Commission (EC) did not relinquish its own agenda. Instead it prepared measures to overcome the trade-distorting effects of offsets, especially by constricting definitions of Article 296 of the EU Treaty, with the exception of security-related issues of free trade. The efforts of the EC are also discussed in this part of the paper.

The last section concentrates on the time since the introduction of Directive 2009/81 EC, which constricted offsets definitively to the area of defence, and in doing so had game-changing effects on national policies. While implementation into national law should have already been finalised, several countries have begun to defend their own practices or only marginally change their policies. This section focuses on the EDA's

efforts within that time frame, and considers the evolving role the I&M Directorate and the succeeding European Synergies and Innovation (ESI) Directorate will have to occupy due to policy changes in the near future.

To conclude, the EDA has played a marginal role thus far in coordinating offsets. Though offset practices have seen major changes, especially in the last few years, they have predominately been influenced by the European Commission's objective to increase free trade. The chief outcome of the EDA's efforts, the CoC, almost became obsolete with the introduction of the EC's 'Defence Procurement Directive' (DPD). By limiting offsets to the area of defence, the Directive could have the positive effect that the responsibility for offsets would fall under the umbrella of the ministries of defence (rather than the ministries of economics, which began using them as a trade promotion tool (Brauer 2004, 54-55)) and could therefore be better coordinated by the ESI Directorate. Yet, while civil offsets have at least had no negative effects on the fragmentation of the EDTIB, as they do not affect defence production by definition, increased concentration on defence offsets could further divide (but in some cases also strengthen) the industrial base by introducing new defence suppliers. As a result, offsets may evolve, or even be "gradually" reduced (O'Donnell 2009, 3). However, due to the positive effects still perceived by some countries, offsets won't entirely disappear (Kimla 2013, 7-16). The EDA should therefore concentrate their own efforts on the provision of best-case practices and feasible tools for countries to use these protectionist practices for a common EDTIB.

4.3 Protectionist Practices and the European Defence Industrial Base

Much of the work of the EDA involves areas affected by decisions in the first and the second pillars of the European Union. This is especially the case for tasks of the European Synergies and Innovation (ESI; the former I&M) Directorate. Although economic or industrial interests in other directorates are often subordinate to Headline-Goal-based military objectives, a common EDTIB is subject to decisions that were made outside rather than inside the EDA. The strongly fragmented European defence market

is the result of a process driven as much by national security interests as by other factors, such as the declining military budgets over the last few decades, unemployment numbers, regional distribution between member states, and globalization (Briani et al. 2013, 13-17). Debates about an EDTIB are not so much about the collective development of future military capabilities, but mainly about defending the status quo of a country's own industry (Mölling et al. 2014, 19).

With declining national defence budgets, countries have to decide if they would still like to have weapon systems produced domestically, or buy them off-the-shelf from foreign companies. Domestic production has the advantage of having a positive effect on employment rates, and also offers the opportunity to develop a system specific to the needs of the country's own armed forces. However, due to often low economies of scale, it is likely to be significantly more expensive than a pre-developed product from a foreign vendor. The effects of importing a weapons system include a decrease of technologically specific knowledge and employment within the domestic defence industrial base (Nambiar et al. 1999, 424), and are insofar the same as those of a top-down Europe-wide restructuring process (Briani et al. 2013, 60). As a result, countries have tried to use remaining armament procurements in a way that their own domestic industry can profit, at least partially, even when the military system is imported. Especially before interoperability became a major topic for armed forces, domestic companies often heavily adapted foreign off-the-shelf products to their own soldiers' needs.

An alternative is the usage of 'juste-retour' regulations in joint-system developments, where the domestic industry gets a share of the production that is proportional to their own government's financial contribution to the system. This approach in particular has led to situations in which an unrealistically high procurement commitment was made in order to gain a larger portion of the production (DeVore 2014, 421).

Over the last few decades, the fastest growing option has been reciprocal trade agreements (Anderson & Moores 2013, 5), most often called *offsets* or industrial compensation, where "governments require [compensations] from defence contractors as a condition for purchasing defence articles or services. These compensations can cover a wide range of activities directly related to the defence project object of the

procurement contract [direct offsets]. Indirect offsets, in turn, can be defence related or non-defence related" (Schmitt 2005, 16). Offsets are conceived by policymakers aiming not only to increase employment rates, but to shift the main objectives towards giving the domestic defence industrial base the export volume necessary to sustain budget cuts, along with the knowledge to maintain or even advance the weapon systems at home. In reciprocal trade agreements, the foreign military-supply producing company must work directly with domestic companies to fulfil offset obligations based on a previously determined offset policy. A specialised national agency specifically defines the industrial fields or technologies where offsets are allowed to take place, and then supervises these efforts.

The effects of these protectionist practices are severe. Europe's Defence Technological and Industrial Base is nowhere near what was envisioned in the EDA's EDTIB 2007 strategy. It consists of a group of 'Letter of Intent (LoI) countries' with large, often government controlled national champions representing only 20% of the member states but at the same time 80% of the EDTIB, and another group comprises the remaining member states with either only a handful of small producers and suppliers or no industry at all. Even though these two groups are completely different, they are both influenced by the same two drivers: nationalisation and globalisation. National security policies have generated industrial bases that are almost incompatible and have led to an extreme situation where a government is either procuring at home or on a global scale. A preference for European producers is non-existent in European defence procurement (Briani et al. 2013: 9). With reduced market in Europe, European companies are more and more dependent on global exports (Mölling et al. 2014: 20) and with cost pressures at home they are also sourcing their suppliers on the more competitive global market (Briani et al. 2013, 10).

Offsets not only sustain the existing EDTIB fragmentation, but also in some ways accelerate it. One way, for example, is in the manner that direct offsets force a domestic company into the current supply chain of the purchased system from a foreign supplier (Eriksson et al. 2007, 53). However, while critics highlight the inefficiency and additional costs of offsets, others see them as a possibility for facilitating industrial and technological development (Martin 1996a, 38-39). From a European point of view,

offsets could ensure a better security of supply by increasing the incentives for producers to source their suppliers within Europe. Also, by using a sophisticated offset policy, they could support the development of centres of excellence (Briani et al. 2013, 20). For example, Turkey became one of the world's top 20 defence exporters by strategically using offsets since 1984 to promote its own industry (Hoyos & Amann, 2013).

With a volume of more than five billion Euros in Europe in 2006 (Eriksson et al. 2007: 4), and a specialised offset agency in almost every country, offsets and the attempts to regulate them have had noticeable effects on the EDTIB. A successful coordination of offsets by the EDA should therefore enforce the positive effects of remaining offsets and not be restricted to only overcoming the negative effects.

4.4 The beginning of offsets: a fast growing use of protectionist practices

The 'birth' of offsets began in Europe in the mid-1970s almost in parallel in different countries but in very diverse ways (Hébert 1996, 139). Offsets were offered by non-European producers to increase their chances in competitive tenders, or they were required "as a form of additional *quid pro quo,*" to strengthen a country's industrial base (Udis 1996, 322). However, the majority of these first offset agreements were not part of a larger strategic plan, but rather ad-hoc decisions included in the procurement process (Neuman 1985). Until the end of the 1980s, offsets were just another form of countertrade, and were insofar not questioned, as countertrade was often the only possibility to maintain any kind of stable trade relations with weak-currency countries.

Offsets became a real problem in the 1990s. Previously, any form of countertrade was used to increase the possibility of getting an otherwise impossible procurement contract. Additionally, countries proactively requesting offsets had relatively moderate conceptions, usually asking for offset obligations in the range of 25 to 75 percent of the contract volume. These obligations were used for the domestic production of the product under license and, as many countries required specific changes to systems to be able to introduce them to their armed forces, offsets provided an opportunity for the industry to maintain some sort of R&D knowledge. With the fall of the iron curtain, countertrades

began to rapidly increase. "By 1992, a total of 130 countries had some form of countertrade/offset policy" (Martin 1996, 16). However, the increase in numbers was not the only determining factor:

First, because of decreasing military budgets after the cold war, armed forces shrank and therefore asked for fewer quantities of a system. Tight budgets forced governments to ask for cost-efficient systems, often going for cheaper foreign off-the-shelf purchases instead of choosing their own developments (Neal and Taylor 2001, 351). Also, in many cases, governments decided to increase the offset obligation from the moderate 25 to 75 percent in earlier years to, most often, 100 percent of the contract volume. Second, the defence industry faced two trends: while larger defence companies were often state-owned up until the late 1980s, governments started to privatise the industry in the 1990s (Dunne and Surry 2006, 394). This, combined with a movement towards globalisation, led to a reduction of the domestic defence industry, especially in smaller countries. Third, the growing attention to interoperability favoured the defence industry of larger nations, as their product was more often used as the international standard (Neal and Taylor 2001, 349). And fourth, technological changes made it more difficult to involve small companies in a weapons system's pre-existing supply chain. This is because companies nowadays need several different costly certifications to be able to produce parts for modern aerospace systems, which they usually do not have if they're not already working with the foreign supplier. Also, the maintenance of a newer generation aircraft is vastly different than the maintenance required for earlier generations. While previously, the ability to maintain an aircraft meant that the domestic industry could employ a high number of workers over the complete lifecycle of a system, this changed radically during the 1990s. With the introduction of computerized test systems, which replaced members of the workforce, and the fact that changing entire sub-systems was often cheaper than just regularly changing spare parts (Sandberg & Strömberg 1999), direct offsets no longer had the employment impact they once had. Overall, these factors changed the position of the large exporters. Producers not only had to sign more contracts with more importing countries, but they were confronted with larger offset obligations in these contracts, coupled with a weaker domestic industrial base that could not easily take over the production of essential parts.

The 1990s put security back onto the agenda of the European Union. The Maastricht Treaty established the European Union with an (intergovernmental) second pillar for Common Foreign and Security Policy (CFSP) that included close cooperation with the Western European Union, and eventually the adoption of its Petersberg tasks. By 1996, the European Union had already launched its first Communication on a defence industrial issue. Just a year later, the EC called for the establishment of a European defence market. Even though these initiatives never really progressed, there were several intergovernmental policies and agreements, such as the LoI Framework Agreement or the Coherent Policy Document, which can now be considered important for the foundation of a common EDTIB (Schmitt 2005, 13). While offsets were not specifically addressed, they all introduced measures to enhance transparency and competition, and aimed at increasing cooperation and defence industrial consolidation. The EC and member states with large defence suppliers were aware of the fragmented defence industrial base and its negative effects for military capability building, but they were not ready to take the actions necessary to achieve the objective of a common EDTIB. The exemption of areas "necessary for the protection of the essential interests of (the) security," of an EU member state, as defined in Article 296 of the EU Treaty were still not brought into question by the EC. The academic literature (see e.g. Weiss 2013, 39) often mentioned the Case C-414/97, Commission vs Spain interpretation of the European Court of Justice in 1999, which supported the appraisal of the EC, stating that Article 296 does not automatically permit that exemption for all defence procurement. However, this was insofar irrelevant, as the main focus in this court case concerned questions of taxation, and the argument of exemption was brought up at a very late point by Spain and was immediately refused by the court. Up until almost a decade later, the article may have been used in political discussions (such as the argumentation in EC's interpretative communication on the application of Art. 296 in 2006), but the EC never went so far as to lay a charge against a member state based on it.

To summarise this section, the time-span between the end of the cold war and the establishment of the EDA allowed for some important changes regarding offsets. On the one hand, not only small but also larger member states of the European Union

increasingly demanded offsets as part of their defence procurements, getting the support of their own shrinking defence industrial base. On the other hand, large producers realised that they could not afford offset practices in the same way they had before, and began opposing offsets. Also, for the first time the European Union called for the creation of a common defence market, as it was faced with the increasing fragmentation of the defence industrial base, even though offsets were at most a side issue and were often ignored by European policy makers. What was completely missing was any kind of coordinative effort by European countries as offsets were still seen as a purely national area of interest.

4.5 The establishment of the EDA: the initial phase of awareness building

In June 2003, the Italian Presidency of the European Union announced the initiation of the European Defence Agency (EDA). The establishment was approved based on 'Council Joint Action (2004/551/CSFP) of July 12th, 2004' as a support authority for CSFP and ESDP "in the field of defence capabilities development, research, acquisition and armaments". The EDA and its directorates were structured around these fields, with the addition of a separate Defence Industry & Market Directorate. The existence of this functional directorate is interesting, as in a way it constitutes a hybrid between a classic military armaments agency and an economic agency. This is due to the realisation that Europe's military capability "[could not] be developed without the existence of an adequate European Defence Technological and Industrial Base" (Alfonso-Meirino 2010b, 173), as well as the uniqueness of a defence market in contrast to traditional markets. In some regards, this ambiguous structure also led to a vague flagship project for the I&M Directorate. While all other operational directorates had relatively concrete projects defined for them (e.g. Research & Technology Directorate: Unmanned Aerial Vehicles (UAVs) – long endurance), the Steering Board assigned the I&M Directorate the "launch of initiatives leading to the creation of a truly European defence market and the strengthening of the EDTIB" (Alfonso-Meirino 2010a, 39). The main objective was to analyse the options defined by the EC in its 'Green Paper on Defence Procurement' and to identify possible EDA initiatives based on these options (Grigoleit et al. 2005,

18). Taking Article 296 as the borderline between supranational EC and intergovernmental EDA work, the I&M Directorate had two different options. On the one hand it could start general initiatives that would include areas that would otherwise be part of the EC's responsibility; on the other hand, it could define the boundaries more precisely and come up with initiatives where an intergovernmental approach would clearly be necessary.

One of the first actions of the newly founded EDA was to accept OCCAR's principles; among them the abandonment of the (mostly) inefficient juste-retour system in arms collaboration projects (Mawdsley 2008, 377). For offsets, the situation was somewhat different. Except for a small sentence on the use of offsets as award criteria for tender processes and a short discussion about how offsets add to the complexity of arms acquisition programs, the 2004 'Green Paper on Defence Procurement' did not address the issue of offsets. With the adoption of the EDTIB Strategy by the Steering Board in May 2007, the EDA offered the first glimpse of its own position regarding offsets. According to the strategy, offsets could provide new opportunities for individual member states and would be an acceptable practice under the current market conditions, but should not be used as an award criterion in defence competitions. The strategy also stated that, while a common EDTIB would most probably render offsets irrelevant in the future, the short-term goal was to mitigate negative effects within competitions and the current EDTIB (Eriksson et al. 2007, 9).

The first specific initiative that began parallel to the development of the EDTIB Strategy can be considered as an attempt to define the intent of Article 296 more precisely and collect information necessary to take further steps. Due to lack of internal resources, in 2006, the I&M Directorate commissioned an external report with the objective of mapping offsets quantitatively and qualitatively, and to measure the current effects of offsets and their impact on the future development of a common EDTIB and EDEM (Eriksson et al. 2007). The report ended up being inconclusive; finding that, due to a lack of transparency and coherent data, the effects and the legal national framework could not be precisely depicted. Still, it confirmed former academic assumptions (e.g. Martin 1996) that had been made about the positive and negative effects of offsets. The external report's authors were able to estimate that the additional costs of offsets for

member states ranged between 5 and 10 percent of the contract volume. They also revealed that the negative effects of offsets were less severe the more competitive and capable the offset-requesting country's domestic defence industrial base was. The report was also the first to estimate of the distribution of direct (40 percent), indirect military (35 percent) and civil indirect (25 percent) offsets. More important is the legal interpretation of Article 296 in the report. There, the authors were more biased than the EC, EDA or even opposing countries at that time. The report came to the conclusion that it is difficult to justify any kind of offset on the basis of Article 296, which conflicted with an Interpretative Communication the EC published at the same time, one that considered only indirect civil offsets to be a legal problem (Eriksson et al. 2007, 76). The strict, literal interpretation of Article 296 was foreseen by some critics, arguing that the commission of a Swedish government agency could lead to a report that favours the interests of LoI states (CTO 2007, 2).

These were very interesting results as they came at a time when the use of offsets by some member states was rising to questionable heights, making it almost impossible to accomplish demands even while the EC was in the middle of a process leading to a stricter handling of offsets. For example, Austria, under political pressure to stop the acquisition of a new multi-role combat aircraft, demanded offsets worth 4 billion Euros for a procurement price of not even half that sum (Tiron 2002). Smaller countries hoped that the economic effects of offsets would be seen as a great incentive for the public to support procurement (de Vestel 1995, 45). By the 2000s, Eastern European countries overall were becoming aware of the economic effects of offsets. With the enlargement of NATO and the positive economic developments within the area, countries started to proactively request offsets of often 100 or more percent of the contract volume in most of their defence procurements. For example, in the early 2000s, Hungary was not only increasing the amount of European imports from 16 to almost 90 percent but was also asking for offsets of between 100 and 180 percent of the contract volume (Eriksson et al. 2007, Annex 2: 1; Friedli, Neumüller & Platzgummer 2009, 52). The hope of supporting one's own industrial base was stronger than any consideration of working towards a common EDTIB, as the example of Poland trying to boost its own naval industry against all European consolidation trends shows (Briani et al. 2013: 44). During

this time, the media's attention on offsets was growing. The Swedish company Saab and British BAE Systems were confronted with severe allegations of corruption in South Africa (Platzgummer 2013, 11) that led to many debates concerning the state of transparency in defence procurement, especially in regards to offsets.

The best-known initiative of the EDA regarding offsets was, in some senses, a response to the attention raised by the public, the EC, and the member states. With approval by the member states of a proposed 'Code of Conduct on Offsets' (CoC) on October 24th, 2008, the EDA reached a new purpose, "in the process of finding a strategy dealing with defence offsets that is acceptable to all EDA countries" (Alfonso-Meirino 2010b, 183). The CoC was intended as a gentlemen's agreement on how to use offsets in a moderate and effective way regarding both the supranational EU legislative framework and the intergovernmental regime within the EDA. The CoC, which was signed by all participating member states of the EDA except for Romania, had two core goals: First, to increase internal transparency between all member states by making the national legal framework for offsets publicly available and transmitting data on offset deals for the EDA to statistically analyse as benchmarks for all member states. Second, having member countries voluntarily vow not to demand offset practises that would have negative effects on the creation of a common EDTIB. Ideally, the benchmarking should have led to the identification of best-case practices of the positive effects of offsets for a shared optimal EDTIB.

The CoC may be seen as an absolute minimum objective for the EDA, yet it took four years for this intergovernmental organization to devise a proposal that was 'agreeable' enough to be approved by all member states. This is certainly the result of scarce resources within the EDA, where offsets may have been perceived as important, though this was never reflected in the number of employees specifically working in the Directorate (bearing in mind that even basic studies had to be outsourced). But the fact that a regulation, however innocuous, was finally approved may also be the result of some countries' realisation that existing requests were nearly impossible for the foreign vendor to accomplish, compounded by their own defence industrial base's inability to fulfil government claims. However, the CoC did lead to a slight increase in transparency, especially after the establishment of the Offset Internet Portal, and the publication of all

member states' offset policies. Unfortunately, the EDA decided to keep the benchmarking data closed to the public, which in a way contradicted its own transparency efforts (CTO 2010, 5-6).

In 2010, two years after the introduction of the CoC, with the exception of Cyprus, France, Malta, and Latvia, all EDA member states maintained an offset policy, and sought offsets within a majority of their defence acquisitions. It is apparent that a division in the participating member states purely based on the size of the national defence industrial bases was not highlighted in the policies (Platzgummer 2011). For example, the United Kingdom had a policy most similar to Luxembourg, Poland, Italy, Greece, Bulgaria and Estonia. This group had a relatively liberal approach, with few specific restrictions, and were not directly supporting their own industry with abatements (where countries 'swap' offset obligations) or special requests for SME's. Nevertheless they all used offsets as an award criterion within their procurement process, and offsets in this group were most often restricted to areas of defence or security. Spain, Belgium, Czech Republic and Germany, also had a moderately liberal approach and were, at least according to their policies, not using very strict steering mechanisms as guidelines on the foreign vendor's interaction with the domestic industrial base. In contrast to these two groups, the Nordic countries and the Central European countries had policies that were stricter, in that they explicitly defined industrial areas of interest. But, while the Nordic countries seemed to have a relatively 'realistic' view of offsets with fairly high threshold values - meaning that offsets were only agreed upon when the volume was large enough to balance out the transaction costs, along with the proactive use of abatements in order to decrease offset obligations of their own industry with foreign governments; the main commonality with Central European countries was their demand for the maximum offsets possible. Here, the CoC likely had the biggest impact as it decreased offset requests of the members of this group to the postulated 100 percent. But the EDTIB was not severely affected by this group, as these countries had already shifted their claims into the civilian market. It seems that a country with significant defence imports ask for offsets irrespective of the size its defence industrial base... However, the smaller a country's defence industrial base, the

more likely indirect civil offsets are demanded due to the “limited absorptive capacity” (Eriksson et al. 2007, 77) of their defence industry.

The division of responsibilities within offsets is also of importance. While countries that use offsets more as an overall industrial promotion tool tend to make decisions through their ministries of economics (MoE), only countries with a clear focus in areas of defence and security hold an agency within their ministries of defence (MoD) for this purpose. For example, Italian’s offset agency at the MoD was dealing with offsets completely restricted to the area of defence, while the Dutch, having an agency within the MoE, did not restrict offsets to civil areas (Platzgummer 2011, 9). This is important, since the EDA’s structure focuses almost exclusively on decision-making processes with representatives of MoDs.

The period between 2004 and 2010 constituted a phase of awareness building. Member countries underwent a process of rationalization, realizing that offsets could have negative effects for their own defence industry. However, the overall use of offsets was not questioned, as the positive effects outweighed transaction costs in most countries. It seems, that this was especially the case when the transaction costs were included in the MoDs’ budget, while offsets and their effects were steered by other (perhaps due to their size) more influential ministries. For the EDA, this first phase following its establishment was chastening. Considering its limited resources, the introduction of the CoC can be seen as a success, yet the effects seem marginal. While the CoC increased some levels of transparency, providing an overview of policies and annual volumes, the same policies did not always reflect the de facto position of a country. For example, while Spain and Germany are in the same group of countries regarding their policies, Germany, overall, has a very negative approach of offsets, and sees them more as an absolute exception. In comparison, Spain has been one of the most actively demanding countries, with very strict requirements during the offset process (Molas-Gallart 1998).

Also, while some countries may have hoped that an intergovernmental organization would be advantageous when their own offset interests were conflicting with the EC’s interests, this has not been the case. In fact, the I&M Directorate made it clear from the very beginning that the final objective would be to abandon offsets and their negative effects. The EDA made a seemly clear distinction between the role of the EC and its

own somewhat subordinate role. The EC faced no opposition, since the CoC was mainly considered an effort "within the legislative framework of the EU" to increase the information of offsets for EDA's Steering Board (Alfonso-Meirino 2010b, 183). It appears that the EDA never intended to hold a fundamental debate on the use of offsets but, instead, waited for a final decision taken within the first pillar of the EU.

4.6 The introduction of the EC procurement directive: a new focus on defence

2011 marked what was probably the most important change for offset practices in Europe thus far. By August 20, 2011, the EU member states had to adopt laws or regulations based on the Directive 2009/81 EC, the 'EU Defence Procurement Directive' which, without specifically mentioning them, had two direct implications on offsets: First, it prohibited discrimination on the grounds of nationality, based on Article 18 TFEU, meaning that a country cannot solely ask foreign vendors for compensation obligations, but would need to ask a potential domestic vendor for similar compensations. Most commentaries believe that this is against "the very nature of offsets" (Weiner 2012, 17) as tender practices contradict this principle. While this may be true, it is a smaller problem than it was made out to be as long as countries 'only' ask for a specific amount of domestic production for the purchased product, and therefore ask for equal requirements from all vendors. Second, it restrained the security-related justification, based on Article 346 TFEU, the former Article 296 of the Nice Treaty, by emphasizing that economic justifications for offsets are not accepted and that countries using offsets need to prove the essential security interest and necessity of every specific measure. Up until that point, member states had been using Article 346 TFEU as an argument for the exemption of almost all procurements in the area of defence. From 2011 onwards, the use of the exemption had to be based on specific cases and "the question of whether or not the provisions contained in Article 346 TFEU are fulfilled may be decided in court" (Weiner 2012, 17). Eventually, this should lead to the

abandonment of indirect (civil) offsets, and at the same time reduce the use of direct offsets to few specific cases, therefore limiting debauched usage.

While former regulations and interpretations by the EC already stressed the problematic usage of the exemptions, the DPD is the first output of the EC with game-changing potential in the area of defence offsets. Interestingly, the official reaction of the member states and the EDA was neither a fast nor a coordinated effort to appropriately address these new rules. Even though one would have guessed that countries in favour of offsets would proactively defend their own interests, a real examination of the effects of the directive did not start before 2011. By August 2011, only 10 countries had officially transposed the directive into national legislation, so in 2012 the EC issued reasoned opinions to several countries that did not implement the directive satisfactorily (Furter 2012, 27–28). Countries where offsets had been used as award criteria and countries that opened their offsets to the civil sector especially began to oppose the EC's efforts, and hoped for a clarification in their favour from the court (CTO 2011, 1).

There are two possible explanations for this hesitant reaction by the member states: First, during the consultation phase of the EC's 'Green Paper on Defence Procurement', some member countries stated that the issue of offsets should be discussed within the EDA, and that the activities of the EC should not lead to "prejudicially forestalling" (e.g. BKA, 2005: 5) the activities of the EDA. In 2007, an EC staff working document discussed the option of not mentioning offsets in a future DPD, as the topic of offsets would go beyond the objectives of the initiative and would (because of Article 346 TFEU) also concern areas exempted from EU law. "Expecting EC procurement rules to solve the offset problem would thus be mistaken and could even endanger the initiative [given the sensitivity of the issue]" (Commission Staff 2007, 48). One could say that maintaining silence about offsets in the EC's directive 'lulled' countries defending offset practices into a false sense of security, implying that only the EDA would be responsible for offsets. This could have led to a division of responsibilities within the countries, with public officials responsible for offsets focusing their attention on discussions of the CoC with the EDA, while officials responsible for the main aspects of defence procurement focusing their attention on the directive and the EC. Second, for the development of the DPD, the EC had several consultations with the EDA. The aforementioned structural

problem of the EDA, namely that decision-making processes happened almost exclusively within MoDs, possibly led to a situation where the representatives of MoDs were aware of the negative effects of the directive on indirect civil offsets, but were also aware that these same effects would lead to a concentration on direct offsets, thereby not misusing their own tight budgets for industrial promotion activities outside of the area of defence. Countries that tended to accept civil offsets were especially likely to have agencies responsible for offsets within their MoEs (Friedli, Neumüller & Platzgummer 2009, 52). This could mean that the reaction was not so much a hesitant one but that instead, due to an inter-institutional rivalry between ministries, government agencies responsible for offsets were either not informed enough or could simply not agree internally on a common stance. Also, the defence industry representatives involved in the consultation phase consisted mainly of large manufacturers who may have seen the DPD as an opportunity for limiting excessive use of offsets, especially in civil areas outside of their core businesses. Their initiation of counter measures on a national level would have, in this case, led to unfavourable outcomes.

While the EDA has seen itself as a "catalyst, … facilitating the coordination of Member States from the perspective of the Defence Ministries" (Alfonso-Meirino, 2010b, 200), its own initiatives have done little to accelerate the change process over recent years. Besides the development of the 'offset portal' and the important but less visible offset benchmarks for all member states, the main new initiative was a proposal for a European wide abatement process. Here, the objective was to facilitate the exchange of offset obligations between two or more countries, which would have led to an immediate decrease of individual obligations and would have been especially alleviating for large European suppliers with obligations in these countries (EDA 2010, 14). At least officially, the EDA has been very uncritical towards the EC and the DPD.

Except for Greece and (on paper) the United Kingdom, most countries did not abandon offsets because of the DPD, but in the future will instead ask for more specific offsets in the area of defence. Here, the EDA underestimates the negative effects of this change, as European vendors will on the one hand have to provide more defence related offsets (that often presume higher technological capabilities from the domestic defence industrial base than civil ones), and, on the other hand, large producers will still have to

provide offsets to countries outside of Europe without the advantage of receiving reciprocal offsets as part of the industrial base of a buyer country. A consortium of research institutions was awarded a study on the effects of this last point by the EDA in early 2013 but this study, as well as a study commissioned in the same year by the EC to measure the impact of the DPD, have not been made open to the public. According to CTO (2013b, 1-4) the authors struggled to measure the effects because of an unwillingness of the European defence industry to cooperate. Also, the study did not only reveal positive effects of the DPD but discussed inter alia the problems phasing out offsets some SME's from member states with a smaller industrial base could experience.

4.7 Conclusion

Since the creation of the EDA, national interests have been hanging like the sword of Damocles over one of Europe's main goals, the establishment of a common EDTIB. Offsets are one of the tools member states with decreasing defence budgets use to strengthen their domestic defence technological and industrial bases, but they can contribute to a further fragmentation of the European defence market. As offsets are often not part of EC legislation, due to exemptions based on Article 346 TFEU, it has been the EDA's task as an intergovernmental agency to deal with the use of offsets by its member states.

Offsets rose dramatically following the end of the Cold War due to decreasing military budgets and an increasing globalisation of defence procurement. With the constitution of the EDA, Europe had, for the first time, an agency responsible for coordinating these protectionist practices and the efforts of the EDA helped to increase (at least within the Steering Board) the transparency and information about offsets. Still, this paper comes to the conclusion that the EDA has had a rather marginal role in coordinating offsets so far. While offset practices have seen major changes, especially over the last few years, they have largely been influenced by the European Commission objectives to increase free trade. The main outcome of the EDA's efforts, the Code of Conduct on Offsets, became practically obsolete with the introduction of the Defence Procurement Directive

by the EC. By delimiting offsets to the area of defence, the Directive could have the (positive) effect that the responsibility for offsets will be within the realm of ministries of defence and could therefore be better coordinated by the EDA's ESI Directorate. But, while civil offsets at least had no negative effects on the fragmentation of the EDTIB, a focus on defence offsets could have a negative effect on the fragmentation of the defence industrial base. Offsets may change forms, but they will not disappear. In fact, the 17th Annual Report to Congress on the Impact of Offsets in Defence Trade (BIS 2013, 4) shows that more countries than ever before are asking for larger and larger offset contracts, and the EC sees its "bids to ban offsets failing" (CTO 2013a, 2). The change process, initiated with the introduction of the DPD by the EC, is not yet finished, and discussions of new opportunities, such as the shift from offsets towards subcontracting, or the introduction of "European offsets" (Weiner 2012, 18), are already beginning. While European offsets - offsets received by all EU members when requested by a single country, do not seem to be a viable future option since the purchaser would still have to pay additional transaction costs, demand for direct offsets and subcontracting requirements will probably continue to grow.

In May 2014, the EDA declared the working group on offsets "dormant, apparently on the assumption that Directive 2009/81 EC has made its work redundant" (CTO 2014a, 3). This seems to be a very questionable decision, as neither the national interests of member states and therefore protectionist practices such as offsets will vanish overnight. Nor will the DPD lead to an end of offset obligations of European producers requested by countries outside of Europe. Instead, the EDA should concentrate its own efforts on the provision of practicable tools in order for countries to use these protectionist practices in the best possible way for a common EDTIB. So far, this has not been the case, with the exception of the – momentarily closed – 'offset portal'. With the EC refusing to define 'national interests' indicated in Article 346 any further (CTO 2014b, 2), the EDA could step into the breach and clear up the confusion that member states, as well as the defence industry have at the moment. Also, the EDA could collect and offer best case practices that could not only be used to build up excellence centres within Europe, but also to support the European defence industry on how to deal with the increasing amount of offset obligations from abroad. If this were to come about, the

EDA could strengthen its own role as a facilitator between member states and the EC, instead of being the catalyst of a process not all member states agree on.

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5 Conclusion

Comparing performance management in arms trade offsets to other domains of public policy proves to be problematic though not impossible. This is not because the specificities of the different domains render them incomparable but because in contrast to health care or education where NPM models have been widely adopted, in the case of arms trade offsets, modern performance management tools are still in their infancy. While research on the former focuses on questions of improving performance management systems that have been used and continuously developed over the last 30 years such as balanced scorecards, research on the latter still has to introduce these concepts to the field. This gap cannot be attributed to the specificities of the field of arms trade offsets but to the tendency of scholars in public management to draw on established yet mainstream cases.

This research attempts to remedy this shortcoming by investigating how offset agencies use performance management to control, steer, improve and give account to the public for their objectives. To this end, three papers have examined different clusters of performance management. The major results of the dissertation are summarized in Table 6.

Table 6: Results of the dissertation project.

Dissertation results	To learn	To steer & control	To give account
Key question	Ho to improve policy or management?	How to steer & control activities?	How to communicate performance?
Focus	Internal	Internal	External
Paper	P3	P1 & P2	P2
Used instruments	Benchmarking to harmonize national offset policies and enhance control by the EDA	Output measures; no steering activity	Accountability as defense of organizational legitimacy; no transparency in the conduction of offsets

Note. Source: Own presentation, based on Van Dooren et al. 2010, 31.

5.1 Contributions and Limitations of this Thesis

The contribution of this thesis to the scholarly investigation into the use of performance management systems in arms trade offsets is methodological, empirical as well as theoretical. However, the thesis is at the same time subject to several limitations that can influence the outcome. As some are relevant to the interpretation of said outcome, they should be taken into consideration as well. The new input from the combined findings of the three articles comprising this thesis, as well the limitations from these papers will therefore be summarized in the following section.

5.1.1 Methodological Contribution and Limitation

Methodologically, the three contributions presented here draw on a variety of strategies to approach, elicit and analyse data in a field void of an abundance of data. Consistent with such preconditions, these studies aim to contribute to the empirical base available

to researchers through the historically inclined descriptive account of the trajectory of and influences on the practice of offset contracting since the 1970s. This body of work also supports the policy responses designed to reign in what is commonly perceived as ´the problem of offsets' with the systematic collection and structuring of incident data on allegations of corruption in the context of offset deals, as contained in the directed qualitative content analysis of major newspapers in Paper 2.

Where experiential data is available, as in the case of the performance evaluation practices of offset agencies in a specific institutional context, first incursions into the theoretically more ambitious ground of hypotheses development and testing were made with the help of an appropriately tailored plausibility probe (Paper 1).

The historic, descriptive account in Paper 3, however, was highly influenced by the expectation of the editors and the readership of the published book chapter to present a comprehensive overview of the activities of the European Defence Agency "in the form of a…issue related focus" (Karampekios & Oikonomou 2015, 3) during the first ten years since its inception. Therefore, this chapter takes a methodologically uninteresting approach for the benefit of the original intended audience.

From a pure public management point of view, descriptive approaches focusing on best case practices or content analysis may be a standard way of conducting research (Pitts & Fernandez 2009, 411). However, arms trade and specifically arms trade offsets are neither fields where data is easily available, nor areas where public management is as ubiquitous as for example in health care, education or local politics. The methodological contribution of this thesis to public management overall may be minor, yet, for the field of arms trade offsets a qualitative content analysis (Paper 2), for example, has never before been attempted and could represent a major addition to the field.

5.1.2 Empirical Contribution and Limitation

The descriptive approach in Paper 3 consolidates dispersed historical reports on offsets, highlighting the role of several interlocking factors in their rapid increase after 1990. Topics included such as the growing attention to interoperability, the desire to maintain a moderately self-sufficient military industrial base, and the decision by governments to increase the offset obligation from between 25 – 75% to over 100% of the contract

volume represent efforts to couple defence procurement with tangible national economic benefits.

Since the Commission, and Member States that have large defence suppliers, are well aware of the fragmenting defence industrial base and its negative effects on military capability building, it was possible to enquire about and document the process set in motion and geared towards launching initiatives to encourage the creation of a truly European defence market and the strengthening of the European Defence Technological and Industrial Base (EDTIB).

In the course of these observations, it became clear that the differentiated allocation of responsibilities for offsets is also of high importance. While countries that use offsets more as an overall industrial promotion tool tend to make decisions through their Ministries of Economics (MoE), only countries with a clear focus on areas of defence and security hold an agency within their Ministries of Defence (MoD) for this purpose. This lead to suspicion that different institutional logics are at play in the operational determination of offset efficiency with the ensuing practices of legitimation and outcome analysis.

Paper 2 went beyond consolidation by addressing the need for concrete data with an extensive international overview of corruption cases in offsets, that could significantly expand the range of examples used in (academic) discourse. In contrast to the speculations about the *potential* corruption risk claimed by most authors, a significant finding, which emerged in the course of this analysis, is that the lack of transparency in arms trade offsets leads to a relatively high amount of misunderstandings and wrongful allegations. An example is the suggestion that the very existence of a specialized offset office in a Ministry of Economics is in and of itself indicative of a case of corruption. This has immediate policy implications in the sense that promoting transparency will raise the perceived legitimacy of military procurements involving offsets, not least by documenting that, by and large, offset agencies have less to hide than is often assumed.

However, one needs to stress that this is not a statistical analysis, even though the number of press articles may make the readership believe that this is highly quantitative, as multiple examples of the same case have no impact on the severity or the corruption type and that a clear differentiation between cases was often not possible based on the

information provided in the newspaper articles. Another consideration was the sourcing of public press articles written or translated into English since it was a limitation of using sophisticated metadata database tools, as well as being the current international lingua franca for consistent data collection. Though it could be argued that including a selection of specialist sources should support a comprehensive data collection, there is obviously the possibility of missing outlying cases.

Moreover, the Swiss case study in Paper 1 has shown that even in countries with a considerable amount of knowledge and experience in offsets, an agency can still use different phrases (such as 'participation' instead of 'offset') which could make adequate sense from a domestic perspective, but adds to the challenge to include an exhaustive set of terms in a complex Boolean Search, as conducted in Paper 2. If this is a common practice in other countries, the chance of missing data is therefore a possibility. As qualitative content analysis relies heavily on the "readings" of the researcher (Macnamara 2005, 5), and media articles tend to be 'polysemic', the likely intentional meaning from the reporter may not be the same one analysed by this researcher.

In general terms, the analysis revealed that empirical cases of corruption in offset matters fall into two main categories: either, a civil servant is privately linked to a company and is therefore favouring it over other competitors, or, the civil servant receives a bribe from a company and is misusing his power, usually by misinterpreting or manipulating performance data. These findings underline factors commonly associated with incidences of corruption, such as the possibility to work within a network (private linkage) and the absence of accountability (misuse of performance data).

In this context, it is also interesting to see that companies tend to overestimate their offset obligations especially after a phase of underestimated obligations claiming. The reason for this is likely due to a company realizing that a country's generally weak defence industrial base can only handle a specific amount of offsets at the same time, and that the fulfilment is to be at risk overall. A foreign company is often put under pressure by severe penalties of up to ten percentage of the whole offset obligation which arguably increases the risk of corruption.

David Pitts & Sergio Fernandez (2009, 403-414) show in their study that public management scholars are not only focusing on qualitative methods, but equally focusing on questions of performance. One might argue that according to this study, the thesis presented here could be mainstream, yet, presumptuous to believe that nothing new can be added to the study of performance, and consistency in methods leads to better data. All three papers have shown that the management of performance in arms trade offsets is far from what one would usually discuss empirically. In fact, the studies showed that even in Western countries with a long tradition of New Public Management, the performance of arms trade offsets is practically unmeasured. The current state of processes is neither reliably comprehensible, nor in any way transparent. In fact, with the exception of a comment more than ten years ago by Jurgen Brauer (2004) "that each country needs an arms trade audit team" to measure economic costs (61), this thesis research is unique in this field by discussing aspects of performance management in defence procurement offsets.

The in depth case study conducted in Paper 1 additionally provides an unprecedented amount of data on an offset case. To the researcher's knowledge, it is novel that an empirical overview of all offset deals within a larger offset project is revealed, it is also one of the very few research papers on offsets focusing on a land system instead of the more commonly researched aerospace systems. As Paper 1 exhibited, a single offset project is unlikely to reach an entire industry due to the specific certifications, etc. needed for the domestic company to work with the foreign vendor. A comprehensive overview of the offset activities in a country would therefore only be possible by including a land as well as an aerospace case. The data provided will facilitate further studies accordingly.

However, empirical studies always have at least two sorts of limitations (Weibelzahl & Weber, 4): general errors in the study and pitfalls uncovered by a layered evaluation. The second limitation particularly might be a severe problem with Paper 1. While this researcher would consider the input data relatively reliable, for example, the selection of sample participants was a situation that was very much given to and not chosen by the author. The quality of the answers is accordingly diverging and lacking in some instances.

5.1.3 Theoretical Contribution and Limitation

Theoretically, this study can support expectations to the role that politics of institutional design play in swaying the balance of political forces on an issue. As Paper 3 indicated that one can interpret the Commission's silence on offsets in its directive as 'lulling' countries defending offset practices into a false sense of security, implying that only the EDA would be responsible for offsets. This led to a division of responsibilities within the countries, with public officials responsible for offsets focusing their attention on discussions of the CoCO with the EDA, while officials responsible for the main aspects of defence procurement focused their attention on the directive and the Commission. Thus momentum was generated through the split-up, or replication, of the topic in two institutional networks. Also here, it is important to note that a large part of the theoretical discussion was excluded from the text, in order to enable an "emphasis on theory" (Karampekios & Oikonomou 2015, 3) within the book by redirecting this content in a complementary separate chapter.

Moreover, while a focus on neo-institutionalism are well known, discussed extensively and a dominant logic it may have limited significance for large parts of public management (see, e.g. Kraatz & Zajac 1996; Hasselbladh & Kallinikos 2000; or Bell 2002). In Paper 1 it was used to provide an alternative explanation for a puzzle that has been existent for decades in economic discussions on arms trade offsets. However, the subject of Paper 3 on the European Defence Agency might focus too much on the EDA as an organization and not enough on the decision-making processes within the organization. With decisions usually being made within a group consisting of representatives of 27 member states with defence budgets ranging from three billion USD in 2011 to almost 60 billion USD (Wyss 2013, 31) it might insufficient to argue that all are bound by the same military logic. Also, while the argument with the dominant logic might fit for most of the agencies managing arms trade offsets, approximately 20% would not fall into one of the two defined main logics. As the assumption of this research is that these main logics derive more or less from a combination of all other institutional logics, it would almost be impossible to explain the behaviour of agencies which have more than one umbrella organization.

By developing a typology of cases of corruption in arms trade offsets, Paper 2 contributed to the overall literature on corruption, as well as the specific literature on corruption in arms trade. While several very general categorizations of corruption exist (e.g. Heidenheimer & Johnston 2001), a specific typology for corruption within offsets has not yet to be developed. Compared to existing frameworks, the typology in Paper 2 distinguishes itself by not only focusing on the proposal and contracting phase of a public procurement, but by also including a longer time span from the proposal far into the realization phase.

5.2 Policy and Management Implications

In terms of policy implications, Paper 3 argues that we can proceed beyond noting that most countries did not abandon offsets because of the DSP Directive designed to increase free trade, but will instead ask for more specific offsets in the area of defence in the future. And while civil offsets at least had no negative effects on the fragmentation of the EDTIB, a focus on defence offsets could have. Offsets may change forms, but will not disappear. The EDA underestimates the negative effects of this change, as European vendors will on the one hand have to provide more defence related offsets, which often presume higher technological capabilities from the domestic defence industrial base than civil ones. On the other hand, large producers will still have to provide offsets to countries outside Europe without the advantage of receiving reciprocal offsets as part of the industrial base of a buyer country. Offsets are one of the tools Member States with decreasing defence budgets use to strengthen their domestic defence technological and industrial bases, but they can contribute to a further fragmentation of the European defence market.

In May 2014, the EDA declared the working group on offsets “dormant, apparently on the assumption that Directive 2009/81 EC has made its work redundant” (CTO 2014a, 3). This seems to be a very questionable decision as neither national interests of Member States and, therefore, protectionist practices such as offsets will vanish overnight, nor

will the DSP Directive lead to an end of offset obligations of European producers requested by countries outside Europe.

A focus on the provision of practicable tools for performance management, as proposed in Paper 3, would first require in depth information on how industrialised countries use performance information. A major goal of Paper 1 was an attempt to provide this information. One could say that this is not only relevant to the European Defence Agency but to other countries as well, since this researcher was invited to provide expertise for the follow-up evaluation of the Swiss Federal Audi Office (SFAO) on how armasuisse manages offset projects.

According to the defence consultancy Avascent, between 2005 and 2016, countries will ask for offset agreements with estimated cumulative obligations accumulated by defence companies of 500 billion USD globally (Ungaro, 2012, 2). While this would imply that the annual cumulative volume of offset obligations is not larger than 2-3% of the 1,75 trillion USD for global defence spending in 2013 (SIPRI), it is still more than four times larger than the 10,8 billion Euro research and innovation budget of the European Union for the same year. A sum that was "expected to create around 174'000 jobs in the short-term and nearly 450'000 jobs and nearly €80 billion in GDP growth over 15 years" (European Commission 2012). Or to give another example, the global annual offset volume is approximately half the size of the expenses of all Swiss municipalities in 2003 (Seco 2007, 16).

Overall, this topic may not be the most pressing or exciting issue for classic performance management researchers, but in real-world terms, offsets are used by more than 70 countries, and their volume is large enough to have a long-term impact on the defence industry and on industry overall. Obtaining additional data on how these projects are steered, managed or measured is therefore highly important to this field.

The most important implication from Paper 2 is that, contrary to most other scholarly articles on corruption, there may be no need for new and stricter anticorruption policies in the area of offsets. The usage of basic performance management and already existing due diligence tools could be helpful. While an introduction of a specific strategy or the change of the audit system may have a positive effect on the fight against corruption, both are rather medium-term options for a governmental organization. Three already

existing anti-corruption tools, on the other hand could limit repercussions within governmental agencies: concepts of due diligence, performance management, and general aspects of transparency. Even with very basic performance evaluation tools that only provide an analysis of the claimed financial volumes, phases of achievements below the average could be detected very easily. Fighting the lack of even basic instruments of anti-corruption policies, governments could increase transparency and also encourage the use of performance management tools for offsets without the implementation of new tools and with relatively low costs. Yet, the governmental agency should not only have an overview of the already achieved volume. As a result of detected irregularities, it should also be willing to warn the foreign company in such cases. This could be accomplished through explicitly dedicated information portals, such as that of the European Defence Agency, which at least offers transparent policies and some basic information. It could also be provided through specialized education in the form of workshops for journalists or special interest groups who focus on defence and security topics.

Currently, this area of research is gaining more research attention with several studies on corruption in arms trade offsets being conducted. Not only is Transparency International revising its Government-Defence Anti-Corruption Index in 2015, but some industry associations such as the International Forum on Business Ethical Conduct for the Aerospace and Defence Industry (IFBEC) or the European Club of Countertrade and Offsets (ECCO) are launching initiatives in the field. In all cases, this study on corruption, respectively the data and the framework, have been used not only as a foundation for further discussions, but also as a starting point for benchmarking. The decision to publish this material in an electronic journal with a creative commons license that currently does not receive the merits of a Social Science Citation Index (which is still in the early stages of incorporating open source journals to the index) might be a temporary disadvantage from a scholarly point of view, yet from a policy perspective, due to this decision it has become a widely-read article outside of universities by practitioner audiences no longer restricted by expensive licensing costs. It is the hopes of this researcher that the momentum created by public insistence towards transparency, not only in defence procurement, but in all arenas will lead to a better understanding and

clearer focus to hone in and address issues where they actually occur rather than festering on areas where there are none.

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6 Curriculum Vitae

Peter Platzgummer, born 1981 in Feldkirch, Austria

EDUCATION

2008-2015	University of St. Gallen, Switzerland
	Doctoral studies in International Affairs and Political Economy (DIA
2006-2008	University of St. Gallen, Switzerland
	M.A. HSG in International Affairs and Governance
2004-2008	University of St. Gallen, Switzerland
	Graduate Teacher for Economic Education (dipl. Wipäd. HSG)
2002- 2006	University of St. Gallen, Switzerland
	B.A. in International Affairs
2005-2005	University of Geneva, Switzerland
	Swiss Mobility Exchange
2001-2006	Theresian Military Academy – Institute 2
	Logistics Staff Officer (S4)

WORK EXPERIENCE

2007-2015	University of St. Gallen, Switzerland
	Research Associate, Centre for Security Economics and Technology
2012-2013	U.S. Naval Postgraduate School – Graduate School of Business and Public Policy
	Visiting Scholar