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Compliance and Integrity in International Military Trade

Robert Beeres · Robert Bertrand · Jeroen Klomp · Job Timmermans · Joop Voetelink *Editors*

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Foreword

Traditionally the Netherlands Defence Academy (NLDA) each year publishes a volume in this series reflecting on a particular research topic. This year's topic is related to both research and the MSc programme on Compliance and Integrity in International Military Trade (CIIMT). They both focus on a wide variety of scientific ingredients like economics, export control, ethics, and legal aspects. With this point of view the volume distinguishes itself from what it is common in the literature on this subject, namely, a monodisciplinary approach. The same breadth of expert areas is also offered in the corresponding education programme at the NLDA.

A substantial number of contributions deal with Export Control, which is a subject of increasing interest for the Ministry of Defence (MOD). A violation of trade legislation may result in negative consequences like limited access to military-strategic items and financial claims. The strictest body of regulations is a United States regime for controlling and restricting the export of military technologies called the US International Traffic in Arms Regulations (ITAR), which will of course be considered in this volume.

Although it may seem a relatively new topic, regimes of modern export control date back to the "Trading with Enemies Act" (USA, 1917) and the "Import, Export and Customs Power Act" (UK, 1939). ITAR was enacted at a later date during the Cold War (1976). ITAR's prominence has increased over the years, leading to the implementation of export compliance programmes by US exporters. Also for the MOD this prominence and the possible negative consequences gave rise to the development of more research and education programmes by the NLDA.

Case studies of non-compliance are presented in this book, including its causes, consequences and ways of working around the control. I am convinced that besides the theoretical discussions these kinds of analyses provide a better understanding of the topic, making it more valuable for everyone dealing with the compliance and export control.

I am very pleased that the authors also included a chapter on the Dutch history of arms exports in which a historian elaborates on arms exports and arms export control in the Dutch Republic, from 1585–1621. By then there was already a strong

need for arms export control, far before the US and UK Acts were enacted in the last century. The interests and benefits yielded by the Republic are analysed in the last chapter.

Finally I want to congratulate all the authors and editors for this extensive and thorough overview of this very important topic, which will definitely serve as a very good background in compliance and integrity in international military trade.

Patrick Oonincx
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About the Editors

Robert Beeres holds a Ph.D. in administrative sciences from Radboud University Nijmegen, The Netherlands. Currently he is a professor of Defence Economics at the Faculty of Military Sciences, Netherlands Defence Academy. His research interests include economics of arms export controls, defence capabilities, performance management, and burden sharing within the EU and NATO. He published numerous articles in peer-reviewed journals and books and co-edited a number of books.

Robert Bertrand colonel Royal Netherlands Marechaussee, is associate professor of Accounting, Control and Defence Economics at the Faculty of Military Sciences, Netherlands Defence Academy. He joined the Royal Netherlands Air Force in 1995 and switched to the Royal Netherlands Marechaussee in 2009. He defended his Ph.D. on contract audits in 2016 at Maastricht University. His current research interests focus on auditing, compliance, internal control, ethics, and leadership.

Jeroen Klomp is full professor of arms export control at the Faculty of Military Sciences of the Netherlands Defence Academy and associate professor macroeconomics at the Section Economics of the Wageningen University & Research. He holds a Ph.D. in political economy from the University of Groningen. His current research involves the economic causes and consequences of strategic trade controls and has been published in numerous peer-reviewed journals.

Job Timmermans is an associate professor Business Ethics at the Faculty of Military Sciences of the Netherlands Defence Academy. His interests cover the philosophical and sociological issues arising from the intersections of ethics, integrity, and compliance within organisations. Previously, he has worked within

several projects on Responsible Research Innovation (RRI) at Wageningen University (NL), De Montfort University (UK), and Delft University of Technology (NL).

Joop Voetelink is associate professor of Law at the Faculty of Military Sciences of the Netherlands Defence Academy. He defended his Ph.D. on Military Operational Law at the University of Amsterdam in 2012. Currently, his research focusses on export control law in general with a specific focus on sanctions, extraterritoriality, and emerging technologies.

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Chapter 1
Introduction

Robert Beeres, Jeroen Klomp, Job Timmermans, Robert Bertrand and Joop Voetelink

Contents

Abstract This year's volume of the Netherlands Annual Review of Military Studies (NL ARMS) offers an interdisciplinary view on the domain of Compliance and Integrity in International Military Trade (CIIMT), integrating defence economics, international law, arms export control frameworks and policies, information management, organizational sciences and ethics. Although in academia, and from an interdisciplinary perspective, CIIMT constitutes a novel research domain, across private and public defence-related sectors, the subject evokes high levels of attention and interest, instigating a need for critical thinking, reflection and creativity to address ensuing multi-faceted issues and problems. From 2017, the Faculty of Military Sciences (FMS) at the Netherlands Defence Academy (NLDA) has offered an in-house MSc programme on CIIMT, which, by integrating practice-based and scientific-based

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knowledge, aims to contribute to this need. The NL ARMS 2021 comprises, amongst others, contributions from students and lecturers partaking in this programme.

Keywords Compliance · integrity · international military trade · (arms) export control · strategic trade control · strategic trade control frameworks

1.1 Introduction

Re-imposing United States (US) sanctions against Iran, the US-China trade war, US threats on account of high-technology exports to China from the European Union (EU), the termination of the US-Russian treaty on Intermediate-Range Nuclear Forces (INF), the political turmoil surrounding the Nordstream-2 pipeline project, or selling military-strategic items under the flag of humanitarian support constitute examples of recent events with potential geopolitical consequences.

The examples above hold another thing in common. To some degree, they are related to the arms trade. As compared to most other goods, commodities and services, the international arms trade is extensively controlled. The need to exercise effective control over international arms transfers is acknowledged, almost globally, and grounded in specific international regimes, arrangements and treaties, on national laws and regulations, as well as in standards and principles.

In research, varying concepts are applied to render meaning to control. For example, military strategists refer to arms control,[1] whereas lawyers employ export control[2] and economists arms export control[3] to express both similar as well as very dissimilar control notions, inherent to their domains. Moreover, next to these concepts of control, in literature, measures such as economic sanctions[4] and arms embargoes[5] serve as manifest forms of more or less effective controls, and the Financial Action Task Force, by imposing regulations to counter money laundering and terrorism financing, also aims to oppose the proliferation of weapons of mass destruction.[6]

To prevent possible quagmires springing from differences in terminology, NL ARMS 2021 on Compliance and Integrity in International Military Trade (CIIMT), in this introductory chapter, applies *strategic trade control* as an encompassing notion.[7] To us, the editors, strategic trade control relates to all efforts undertaken by countries and international organisations, such as the European Union, to design and implement measures to regulate international movements of military-strategic goods and dual use items that are able to exacerbate ongoing conflicts, contribute to destabilizing weapons build-ups, or can be used in violations of human rights. Moreover, the

[1] Gray 1992; Smith 2009, p. 87.

[2] Aubin and Idiart 2016.

[3] Smith and Garcia-Alonso 2006.

[4] Afesorgbor 2019.

[5] Brzoska and Lopez 2009.

[6] Joosten et al. 2019; Stewart et al. 2020.

[7] Dill and Stewart 2015; Salisbury 2013.

concept of *strategic trade control frameworks* is applied to clarify variations in the development, design and operational use of strategic trade controls across nations. Such clarification is considered necessary as national strategic control frameworks serve as the foundations underpinning multilateral frameworks.

Strategic trade controls imply strategic relationships between defence-related public and private sectors, comprising industries, firms, governments, universities and research institutes, and international institutions. Strategic trade control frameworks shape the business environment and regulatory contexts in which industries must operate, navigate and remain aligned to, both nationally and internationally, in order to conduct and sustain business relating to the transfer of controlled items. Due to its complex nature and evolving policy landscape, compliance with strategic trade controls can incur high levels of costs, additional resources, and ongoing commitments, both from industry and end-users.

Two significant trends have become visible over the last two decades. First, regulations to improve international security are regularly abused for economic purposes, as illustrated by the recent trade war between China and the US.[8] Second, dual-use items, in particular emerging technologies, are gaining importance. Both trends instigate novel monitoring issues, thereby rendering strategic trade policies subject to continuous change.[9]

Violation of strategic trade legislation may hold severe consequences, for instance, limited access to military-strategic items, loss of trade privileges, fines, reputational damage and even prison sentences. In this respect, and compounded by its extraterritorial effect, the US International Traffic in Arms Regulations (ITAR) is considered the strictest body of regulations.[10]

Compliance with trade control regulations is not only the responsibility of defence-related industries, but, instead, stretches to encompass end-users, such as the armed forces. It has to be noted, however, that, in striving to act compliant with trade control regulations the relation between *compliance* and *integrity* remains essential.[11] Integrity is the primary requirement in any compliance process, whereas acting 'in compliance with' is understood as an act associated with integrity. Likewise, when shaping an ethical culture based on integrity, such acting 'in compliance with' as well as the standards that are part of the object of compliance are to be incorporated. There is no recipe for constructing the best relation between integrity and compliance, for, as such relations are context-dependent, they are being shaped in actual organizational practices. In this regard, build-in mechanisms to gain insight and awareness on integrity-compliance relations will influence organizational decision-making processes on trading military goods or services to a suspicious country. Rather than responding reactively, when particular transactions are causing societal outrage, an ethical culture enables organizations to act pro-actively, by incorporating

[8] Heidenkamp et al. 2013, p. 105; PricewaterhouseCoopers 2005, p. 27.

[9] Brandt 1994; Kytömäki 2014; Jones 2020.

[10] Heidenkamp et al. 2013, p. 113.

[11] Achterbergh and Vriens 2009, pp. 376–377.

reflection on their principles in relation to what legal standards demand as part of their business processes (see Chap. 6 of this volume).

Strategic trade controls and -frameworks do not only derive their relevance from a strategic perspective. Rather, they challenge all organizations and their members that are partaking in the supply-chain of military-relevant or dual-use items. This constitutes the main focus of the interdisciplinary MSc programme on Compliance and Integrity in International Military Trade (CIIMT). As both lecturers and students contribute to NL ARMS 2021, the next section provides an overview of the CIIMT MSc programme.

1.2 The Compliance and Integrity in International Military Trade (CIIMT) Master Programme

The MSc programme on CIIMT is concerned with exploring, analysing, understanding, explaining, controlling and improving the military dimension in international military trade. More particularly, CIIMT studies managerial questions regarding strategic trade control of military and dual-use goods and services. These questions comprise defence economic, ethical, organizational, legal and strategic elements (e.g., human rights, international order and security).

1.2.1 Focus of the MSc Programme on CIIMT

The programme is primarily designed to cater to the needs of military and civilian defence personnel, including EU, NATO, from all services and commands and defence-relevant industries, agencies and research centres, active in the field. By integrating scientific based- and practice based knowledge, it aims to develop academic professionals that are able to generate and implement problem solving strategies and management decisions to further compliance and integrity in strategic trade control of international trade in military and dual use goods and services.

To this end, the CIIMT MSc ties in with the FMS-NLDA vision on scientific education, embedded in Schön's reflective practitioners' paradigm.[12] This paradigm unites both management and leadership skills needed to decide and operate in high-tension and high-risk knowledge intensive environments. FMS uses the reflective practitioners' paradigm to refer to critical thinking, reflection, and *Bildung* that characterize its thinking doers, the so-called Thinking Soldiers, either at the academic Bachelor's or Master's level.

In view of the complexity of international trade of military and dual-use goods and services, the rapid evolvement of strategic trade control and -frameworks, and

[12] Schön 1983; 1987.

their importance to procurement processes, defence organizations require innovative thinking doers, that, based on in-depth understanding, from an interdisciplinary perspective can be expected to find- and take responsibility for creative solutions.

1.2.2 Learning Styles and Structure of the MSc Programme on CIIMT

The part-time programme is taught over the course of two years, totalling 60 European Credit Transfer and Accumulation System (ECTS) credits and consists of 10 modules (see Fig 1.1). With the exception of the thesis, each module is structured in five independent learning weeks, one contact week and one experiential learning week. Independent learning takes place in preparation on the contact weeks. By means of 'guided' self-study, students study parts of literature and prepare assignments. Independent learning, as a working method, does not prevent students to consult their peers, teaching staff or their colleagues in the organization. As such, independent learning is related to experiential learning as wll. Key to experiential learning is

Module	EC	Title	Discipline	Leids Level
1	5	International trade in defence markets	Defence economics, international relations, political sciences	400
2	5	International business in defence markets and law	Law, defence economics, organization theory; international relations, political sciences	400
3	5	A legal perspective on strategic trade	Law, ethics, defence economics	500
4	5	Managing compliance and integrity in military organizations	Ethics, system theory, organization theory, defence economics	500
5	5	Designing internal compliance programs	Information systems, internal control	500
6	5	Monitoring and auditing internal compliance programs	Information systems, internal control, auditing	500
7	5	Research methods	Research methods	500
8	5	Managing relationships in non-compliance contexts	Organization theory, ethics, change management, management control	500
9	5	Integration project related to aspects of ICP in business environments	All previous modules	600
10	15	Master Thesis (including individual research proposal)	All previous modules	600
Total	60			

Fig. 1.1 Curriculum of MSc programme Compliance and Integrity in International Military Trade
Source Beeres et al. 2021

that students engage in a dialogue within their organization by sharing new insights and applying these to (e.g., problem identification, -analysis and solution) in their professional field. As such, experiential learning may not only benefit the student but the organization as well. Moreover, experiential learning contributes to the deepening of understanding and the integration of scientific- and practice based knowledge.

The programme derives its coherence from the following structure. First, by taking an outside-in perspective, modules 1–4 provide an interdisciplinary context from which strategic trade control in international trade of military and dual-use goods and services can be understood.

Next, building on this background, the program proceeds to deepen the students' understanding of particular control and information aspects within organizations by studying (the feasibility and boundaries of) re-designing, implementing, monitoring and auditing internal compliance programs (ICPs) within organizations. Students are involved in how to construct an ICP. To this end, modules 5 and 6 integrate practice-based knowledge and skills, stemming from experience in the field, with scientific-based knowledge on information systems and internal control. By sharing knowledge and experience, students and teaching staff learn from each other. Building on these modules and the module on research methods (module 7), it becomes possible to study and discuss problems, challenges and controversies, such as, managing non-compliant behaviour or conflicts of interest within and between organizations in international trade in military and dual use goods and services (module 8). The Integration Project (module 9), subsequently, draws from all previous modules, enabling students to conduct their own interdisciplinary research, based on their selection of ICP key elements in relation to a specific business environment and using appropriate research methods. The Integration Project can be seen as a stepping stone to writing the master thesis (module 10).

1.3 Outline of NL ARMS 2021

As elaborated on previously, due to our focus on specific managerial questions regarding the international arms trade, studying (the management of) strategic trade control requires an interdisciplinary approach. Although from the literature it appears that various disciplines contribute studies to either the international arms trade, export control, arms export control, or compliance and integrity, to date, research connecting and integrating these concepts, however, remains to be undertaken.

For this reason, as well as to add to this novel interdisciplinary knowledge domain and to underpin the MSc programme, the editors have chosen to provide the contributors to NL ARMS 2021 with as much leeway as possible to think creatively in adding their expertise to this multifaceted field. In fact, we have asked them to become reflective practitioners themselves! We want to express our gratitude to all the authors for delivering their contributions to this volume.

Despite our extending a free rein, all contributions could be grouped meaningfully into two categories. The first category consists of research we consider *basic* (i.e.,

underpinning the first four modules of the MSc programme on CIIMT), while within the second category, we distinguish chapters that apply knowledge to address specific managerial issues/questions, thereby integrating both scientific- and practice-based knowledge on strategic arms trade (frameworks).

Moreover, and to interconnect research and education, students of the CIIMT MSc programme have been invited to contribute to this volume also. As a result, NL ARMS 2021 in Chaps. 4, 10 and 14 presents its readers with three case-studies based on papers written by students (2019/2021). Students were asked to recognize, analyse and respond to non-compliant and/or unethical behaviour within and by organizations in the context of arms export control, in accordance with the Problem-Oriented Policing (POP)-guide template. Although designed for policing work, POP-guides offer a method to deal with deviant behaviour in general. Also, the focus on crime holds similarities to situations of non-compliance or breaches of integrity.

The template consists of four consecutive stages, *Scanning* (describing the case, particularly the salient individual, organizational factors motivating the deviant behaviour and the regulatory and (inter-) organizational context); *Analysis* (in-depth analysis of the underlying structural conditions and causes of the deviant behaviour including the micro-, meso- and macro-level origins and factors, e.g., psychological, organizational and (inter)national policy and regulation);[13] *Response* (designing a possible ad-hoc (crises management) and a systemic (internal control) manner of addressing the case's challenge); and *Assessment* (reflecting on the analysis and the effectiveness of the chosen response in relation to external (regulatory/ legal) and internal standards, and drawing lessons for future cases).[14]

In Chap. 2, van Lieshout and Beeres contribute to filling the knowledge gap by investigating why, how and to what extent economic motives and the international arms trade are interrelated. More in particular, the authors analyse the development of explicit sets of relationships between dependent and independent variables in the international arms trade, from 1995 onwards. Although an economic-based literature review results in a number of relevant studies on the international arms trade, the authors argue, as a research domain, CIIMT remains understudied and will benefit by connecting with insights from neighbouring economic fields. To this end, the authors offer a future research agenda.

De Bruin, in Chap. 3, investigates present-day challenges and opportunities within the system of export control regimes (i.e., the Nuclear Suppliers Group, the Australia Group, the Missile Technology Control Regime, and the Wassenaar Arrangement). The system of export control regimes is considered an important instrument to prevent both the proliferation of weapons of mass destruction and conventional weapons, as well as to control dual-use products. De Bruin favours a paradigm-based regime over the current weapon-based regime. In addition, the author recommends to revise the regimes' decision-making processes to respond more swiftly to developments in the field.

[13] Hodson and Jensen 2013.

[14] Braga 2008, p. 15.

The first case study, by Klappe and Keunen, in Chap. 4, discusses a case of non-compliance by Fokker Services. From 2005 to 2010, Fokker Services failed to comply with the economic sanctions the US Government had established against Iran and Sudan. Klappe and Keunen analyse how the company operated while evading export control, breaching sanction regimes and export control laws, thereby, paying attention to the roles of top and middle management during everyday activities.

In Chap. 5, Voetelink maps the field of international export control law. The author refers to export control as a set of domestic and international laws and regulations, policy rules and commitments, applicable to and regulating export, re-export, transit, and transfer, in any manner, pertaining to goods, technology, and software. Over time, domestic and international export control law has developed into a challenging and dynamic legal discipline. Although not being an established legal sub-discipline in its own right, Voetelink argues the critical importance of considering related parts of export control law comprehensively to understand their impact on international military trade.

Timmermans, in Chap. 6, explores the multifaceted relationship between compliance and integrity. The author constructs a framework to analyse how compliance and integrity concepts invoke each other at different levels. The framework helps to unearth and understand the often implicit (organisational) design choices, shaping this relationship in particular real-life situations. Besides offering a more detailed understanding, the framework aids to pinpoint the aspects in the relationship between compliance and integrity that currently remain underdeveloped. To this end, Timmermans argues for additional research to shed light on how integrity and compliance overlap and supplement each other in terms of content and/or process, both in theory and in organizational practices.

Splinter and Klomp, in Chap. 7, explore whether economic sanctions are able to trigger sudden economic growth collapses. Their results clearly demonstrate that economic sanctions hold a significant positive effect on the likelihood of a growth deceleration in the first three years after the first threat signals or actual imposition. In particular, trade sanctions, multilateral sanctions, and sanctions aiming at the business sector cause sudden negative growth accelerations.

In Chap. 8, Saitova and Beeres present the results of their search for data sources to provide insight in the characteristics, types and qualities of aircraft designed for combat purposes, the total market volume (entries, movements and exits), as well as each aircraft's financial equivalents, over a specific period of time. The authors conclude that to conduct their empirical investigation into the factors contributing to the worldwide demand and supply of fixed-wing combat aircraft, sufficient data can be availed of. However, this data comes at a price.

In Chap. 9, Klomp and Beeres investigate whether the legal origin of a country influences the likelihood of ratification of multilateral international treaties concerning arms control. The authors expect civil-law countries to be more likely to ratify treaties than common-law countries. The empirical results clearly confirm this expectation. In particular, civil-law countries have ratified about nine percent more treaties than common-law countries.

The second case study, by Türkalp and Dekkers, in Chap. 10, looks at a fictitious case of sharing parts and services among NATO partner nations. Although, NATO's goals require close cooperation between partner nations on operational readiness, interoperability of their systems, material supplies, transfer of technology and joint R&D projects, a common approach on the application and implementation of arms export controls appears to be largely absent. This case study, in the context of the material logistical support and services provided by the NATO Support and Procurement Agency (NSPA), investigates the lack of applying and implementing arms export controls.

In Chap. 11, Voetelink addresses the issue of extraterritoriality of US export control and sanctions legislation. The author discusses, *inter alia,* the notion that US export controls 'follow the part', thereby extending US jurisdiction over any item that has left US territory, even when this item has been incorporated into a new foreign-built object. As goods do not possess a nationality, the extraterritorial reach of these provisions cannot be based on the national principle or on any other principle of jurisdiction. Also, extraterritorial sanctions provisions have not given rise to coordinated foreign protests in general. The author concludes that "the need for the US to enact extraterritorial sanctions legislation will only be taken away when the US and its allied trading partners are prepared to better coordinate their foreign policy objective".

In Chap. 12, De Schryver and Demmink address the F-35 program's international defence supply chain. Multiple exports across the supply chain are subject to intricate licensing and export controls. Drawing on insights from governance and contract theory, the authors apply contract-boundary-spanning governance mechanisms as a theoretical lens to highlight important trade compliance challenges within the supply chain network. The authors find that while serious efforts have been made by various state actors and legislators to reduce the burden regarding trade compliance requirements in the F-35 program, the industry still faces a considerable number of compliance challenges. It is argued, that, to overcome these challenges, private parties in defence supply chain networks need to undertake contract-boundary-spanning initiatives.

In Chap. 13, Bogers, Beeres and Smetsers, using a four-level dashboard, offer both a quantitative and qualitative analysis on the effectiveness of the recent arms embargo against Saudi Arabia. The authors elaborate on the question as to how political, security and economic motives have impacted the (un)willingness of major arms selling states to join the arms embargo against Saudi Arabia.

The third case study, conducted by Nieboer and van Manen, in Chap. 14, discusses the fictitious case of an unauthorized transfer of a so-called Dronebuster under the US International Traffic in Arms Regulations (ITAR). Using the POP-guide as a framework, the authors investigate underlying causes and conditions. According to the authors, a mix of hard and soft controls used in a coordinated effort may turn out the best effects in preventing unauthorized behaviour.

In Chap. 15, Bertrand and van Riet investigate the process of developing an Internal Compliance Program (ICP) for the Royal Netherlands Airforce (RNLAF).

By combining a PESTL analysis, the legal framework and the selected ICP Frameworks, the authors have devised an 11-pillars ICP, which they consider the most adequate for the RNLAF.

Finally, in Chap. 16, taking a historical perspective, De Jong elaborates on arms exports and arms export control in the Dutch Republic, from 1585 to 1621. Nothing new under the sun, it would seem. The author discusses the need for arms export (controls) at the time, and the interests and benefits yielded by the Republic, in doing so.

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Chapter 2
Economics of Arms Trade: What Do We Know?

Jan van Lieshout and Robert Beeres

Contents

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Abstract Taking an economic perspective, and underpinned by a literature review, this chapter analyses the development of explicit sets of relationships between dependent and independent variables in the international arms trade from 1995 onwards. We distinguish five main categories within the markets of military and dual-use goods and services, comprising weapons of mass destruction, major weapon systems, small arms and light weapons, dual-use goods, and services. Per category, papers are ordered by research type and methodology. Based on our findings thus far, the final section of the chapter offers a research agenda for further studies.

Keywords Arms trade · weapons of mass destruction · major weapon systems · small arms and light weapons · dual-use goods and services · arms export control

2.1 Introduction

Over the years, either openly or covertly, weapons have been traded across borders, despite multiple domestic and international regulations aiming to control, forbid, prohibit or protect such arms commerce.[1] During the Cold War, arms trade and transfers were mainly considered and commented on from an ideological point of view.[2] After the fall of the Berlin Wall economic drivers gained importance in conferring meaning to the motives and consequences underlying arms transfers. From then on, access to foreign markets has been regarded essential for a thriving domestic arms industry in the long run.

In 1995, conducting a review on the relations between economic motives and arms trade, Anderton stated: "The end of the Cold War has increased the relative importance of economic causes and consequences of arms transfers. Unfortunately, there is surprisingly little theoretical and empirical development of arms trade".[3] According to the author, the main cause for this knowledge gap lies in the "failure, to date, to develop explicit sets of formal relationships between dependent and independent variables", which Anderton primarily attributes to "a lack of trying".[4]

Just over a quarter of a century later, this chapter aims to revisit Anderton's seminal research. More specifically, the question we ask in the title, 'What do we know?' refers to our interest in theoretical and empirical developments regarding explicit sets of relationships between dependent and independent variables in the international arms trade, over the past 25 years. To take stock of research findings to this effect, primarily, the literature review focuses on conjectures, refutations and/or confirmations instead of on "descriptive compilations of data, case studies

[1] Kempf 2016, pp. 4–29; Stohl and Grillot 2009, pp. 10–40; Voetelink 2017, p. 378.

[2] Kempf 2016, p. 30.

[3] Anderton 1995, p. 524.

[4] Anderton 1995, p. 535.

and journalistic accounts".[5] However, to achieve an overarching picture on state-of-the-art economics of arms exports, we have also included more descriptive findings in our review.

Within the scope of this volume, we will not redo Anderton's analysis fully. Instead, this chapter, as mentioned above, offers our initial findings regarding the progress made to fill the knowledge gap regarding why, how and to what extent economic motives and the international arms trade are interrelated.

The remaining part of this chapter is structured as follows. The next section outlines the research methodology, to be followed by the chapter's main body, entailing the results of the literature study. Next, these findings will be analysed, to be followed by some concluding remarks and an agenda for future research.

2.2 Research Methodology

Literature reviews require transparent processes, characterized by clear steps and considered decisions on the selection of papers.[6] In this section, first, we will define this research's scope, and the selection methods and criteria we have applied. Last, this section will offer a synthesized overview, based on additional research (from 1995 onwards) on the explicit sets of relationships between dependent and independent variables in the international arms trade.

Before proceeding with the remaining part of this methodology section, first, we elaborate shortly on the five categories, generally distinguished in the international arms trade, of military and dual-use goods and services.[7] These categories comprise weapons of mass destruction, major weapon systems, small arms and light weapons, dual-use goods, and services (e.g., training and maintenance).[8] Each category raises specific managerial challenges and controversies, requiring different market structures and control mechanisms.

Although widespread consensus exists as to the control of proliferation of chemical, biological, radiological and nuclear weapons, this cannot be said about general controls regarding the sales of conventional weapons. With respect to conventional weapons, it is useful to distinguish major weapon systems from small arms and light weapons. Compared to major weapon systems, the market for light weapons is more difficult to control, partly because major weapon systems are supplied by an oligopoly, whereas light weapons are competitively supplied by large number of producers. Dual-use systems raise unique difficulties, such as the spread of military-relevant knowledge via civil trade transactions. Services are becoming increasingly important in the transfer of military-relevant knowledge and technology.

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[5] Anderton 1995, p. 525.

[6] Kalkman 2020.

[7] Smith and Udis 2001, p. 82.

[8] Levine and Smith 1997, pp. 340–341; Smith and Garcia-Alonso 2006, p. 29; Smith and Udis 2001, p. 82.

2.2.1 Scope

Our literature review focuses on the ways in which economic motives and the international arms trade are (inter)related. The chapter's scope, therefore, remains limited to research that contributes to understanding the economic drivers prompting international trade of military and dual-use goods and services. Literature on international law and other adjacent domains, have not been included in the review. We do acknowledge these domains' important contributions to a broader area of expertise, as well as their attention to some economic parameters concerning the international arms trade. However, in general, these adjacent bodies of literature will not directly contribute to improved understanding of the theoretical and empirical developments regarding explicit sets of relationships between dependent and independent variables in the international arms trade over the past 25 years.

2.2.2 Selection

The literature review underpinning this research has been restricted to published and peer reviewed academic papers, in English. Books and book chapters have been used as supporting literature. Queries used in Google Scholar are "arms exports", "(international) arms trade", "economics of arms trade" and "economics of arms exports". These queries are chosen, based on relevance and coverage, as key words for papers regarding our actual research interests.

Table 2.1 provides an overview of our classification of the selected papers. For each category (i.e., weapons of mass destruction (WMD), major weapon systems (MWS), small arms and light weapons (SALW), dual-use technologies or goods (DUG), and (5) services (SERV)), papers are ordered by research type (theoretical or empirical) and methodology (analytical, descriptive, exploratory, testing). We added a sixth category, general (GEN), for research papers that discuss the market of military and dual-use goods and services in general -often analytical- terms.

As of yet, our dataset—in progress—consists of 30 papers (see Table 2.1). Two papers span more than one category (which is why the columns 'theoretical' and 'empirical' in Table 2.2 add up to 32 instead of 30). Berryman provides an analysis of both major weapon systems and weapons of mass destruction.[9] Fuhrmann researches the relationship between both dual-use and weapons of mass destruction.[10]

Table 2.2 aims to provide insights into the most important contribution the papers add to literature. Looking at research into the differing categories of weapon systems, it turns out most studies are conducted into markets for major weapons systems

[9] Berryman 2000, p. 85.

[10] Fuhrmann 2009b, p. 7.

Table 2.1 Selected papers on the economics of exporting arms

Paper	Market	Research type	Methodology
Akerman and Larsson Seim (2014)	MWS	Empirical	Exploratory
Berryman (2000)	WMD/MWS	Empirical	Descriptive
Blum (2019)	MWS	Theoretical	Testing
Craft (2000)	MWS	Theoretical	Testing
Dunne and Smith (2016)	MWS	Empirical	Descriptive
Fuhrmann (2008)	DUG	Theoretical	Testing
Fuhrmann (2009a)	DUG	Theoretical	Testing
Fuhrmann (2009b)	WMD/DUG	Theoretical	Testing
Fuhrmann and Tkach (2015)	WMD	Theoretical	Testing
Garcia-Alonso and Levine (2007)	GEN	Theoretical	Analytical
Golde and Tishler (2004)	GEN	Theoretical	Analytical
Holtom and Bromley (2010)	GEN	Empirical	Descriptive
Khanna and Chapman (2010)	MWS	Empirical	Exploratory
Killicoat (2006)	SALW	Empirical	Testing
Klare (1996)	MWS	Empirical	Descriptive
Levine et al. (1998)	MWS	Empirical	Exploratory
Levine and Smith (1995)	GEN	Theoretical	Analytical
Levine and Smith (1997)	GEN	Theoretical	Analytical
Levine and Smith (2000a)	GEN	Theoretical	Analytical
Levine and Smith (2000b)	GEN	Theoretical	Analytical
Martinez-Zarzoso and Johanssen (2019)	MWS	Theoretical	Testing
Moore (2010)	MWS	Theoretical	Testing
Pamp et al. (2018)	MWS	Theoretical	Testing
Pamp and Thurner (2017)	MWS	Theoretical	Testing
Sandler (2000)	GEN	Theoretical	Descriptive
Seyoum (2017)	DUG	Theoretical	Exploratory
Smith and Tasiran (2005)	MWS	Empirical	Exploratory
Smith and Udis (2001)	GEN	Theoretical	Descriptive
Thurner et al. (2019)	MWS	Theoretical	Testing
Thurner et al. (2020)	MWS	Theoretical	Testing

Source van Lieshout and Beeres 2021

(Row MWS; n = 15).[11] As to studies on dual-use goods (Row DUG; n = 4);[12]

[11] Akerman and Larsson Seim 2014; Berryman 2000; Blum 2019; Craft 2000; Dunne and Smith 2016; Khanna and Chapman 2010; Klare 1996; Levine et al. 1998; Martinez-Zarzoso and Johanssen 2019; Moore 2010; Pamp et al. 2018; Pamp and Turner 2017; Smith and Tasiran 2005; Thurner et al. 2019, 2020.

[12] Fuhrmann 2008, 2009a, b; Seyoum 2017.

Table 2.2 Papers on the economics of exporting arms

Categories	Theoretical	Empirical	Analytical	Descriptive	Exploratory	Testing
WMD	2	1	–	1	–	2
MWS	8	7	–	3	4	8
SALW	1	–	–	–	–	1
DUG	4	–	–	–	1	3
SERV	–	–	–	–	–	–
GEN	8	1	6	3	–	–
N	23	9	6	7	5	14

Source van Lieshout and Beeres 2021

weapon of mass destruction equals 4 (Row WMD; n = 3).[13] Last, and least popular, apparently, are studies on small arms and light weapons (Row SALW; n = 1).[14] Most theoretical papers test developed theories using empirical data collections. Two exceptions are to be made. Regarding the dual-use category, Seyoum develops hypotheses regarding export control that could be tested (for this reason we consider this study both theoretical and exploratory). Next, although all papers in the 'general' category are considered theoretical, they either develop analytical models (n = 6)[15] or deliver a general perspective on the most important theoretical issues concerning arms trade and export control (n = 3).[16] Empirical papers are either descriptive or exploratory.

2.2.3 Research Synthesis

Our analysis of the collected papers reflects a growing academic interest in the economics of arms trade over the last decades. The earliest papers develop analytical models. Researchers look for variables and parameters, that according to them, are important to map the field empirically. Next, they engage in systematic empirical descriptive research by actually collecting variables and parameters to be followed by an empirical exploratory phase, during which hypotheses are developed. Last, hypotheses are tested during the theoretical testing phase, when it is studied whether the relationships between dependent and independent variables that have been formulated, actually do appear. Researchers focused on finding reasons, motives and explanations for decisions to buy or sell arms, per category (e.g., Killicoat on SALW).[17]

[13] Berryman 2000; Fuhrmann 2009b; Fuhrmann and Tkach 2015.

[14] Killicoat 2006.

[15] Garcia-Alonso and Levine 2007; Golde and Tishler 2004; Levine and Smith 1995, 1997, 2000a, b.

[16] Holtom and Bromley 2010; Sandler 2000; Smith and Udis 2001.

[17] Killicoat 2006.

A majority of papers is built on quantitative analysis of a combination of datasets. Data on statistics per state and on procurement of arms are used for explanatory analysis throughout the years of relevant research. Few authors enrich quantitative projects with qualitative methods.[18] Due to legal reporting requirements, data sets on national defence expenditures became available and turned out to be useful sources for further research (e.g., Pamp and Thurner).[19] The availability of data resulted in a certain progress in gaining knowledge on arms exports, leading to the development of theoretical models, starting with a rather traditional supply and demand model,[20] ending (for the time being) with network modelling.[21]

In the next section, we will illustrate both theoretical and empirical developments regarding explicit sets of relationships between dependent and independent variables in the international arms trade, over the past 25 years. In doing so, we will focus on four out of six categories of military and dual-use goods and services identified (i.e., weapons of mass destruction (WMD), major weapon systems (MWS), small arms and light weapons (SALW) and dual purpose goods (DUG)). As we have not been able to identify any academic papers on the category services (SERV), we have decided to exclude this category. The same applies to the category 'general' (GEN), as, from literature, it appears no hypotheses testing is being undertaken.

2.3 Weapons of Mass Destruction

This section discusses two papers and offers a brief conclusion.

2.3.1 Spreading Temptation: Proliferation and Peaceful Nuclear Cooperation Agreements[22]

This paper's main question is: To what extent does civilian nuclear assistance raise the risk of the proliferation of nuclear weapons? Answers are provided both by qualitative analysis—showing the effect of nuclear assistance on proliferation—as well as quantitative analysis—to explain and test this effect. The study's dependent variables are 'the initiation of a nuclear weapons program' and 'the acquisition of nuclear weapons of the state receiving nuclear assistance'. The 'aggregate number of nuclear cooperation agreements' between two states and 'security threats' are the most important explanatory variables. The 'aggregate number of nuclear cooperation agreements' is operationalized using different data sets, spanning the years

[18] Fuhrmann 2009b.

[19] Pamp and Thurner 2017.

[20] Levine et al. 1994.

[21] Thurner et al. 2019, 2020.

[22] Fuhrmann 2009b.

1945–2000. The main results are: (1) states receiving civilian nuclear assistance are more likely to start a nuclear weapons program than states that do not and (2) states receiving nuclear assistance are more likely to acquire nuclear weapons. If and when "countries generally want to limit the spread of nuclear weapons and if nuclear cooperation agreements lead to proliferation", based on these findings another question pops up: Why (for what reason) should civilian nuclear assistance be extended to countries, that cannot yet avail of such capacities?[23]

2.3.2 *Almost Nuclear: Introducing the Nuclear Latency Dataset*[24]

In their paper, Fuhrmann and Tkach investigate the relationship between the capacity of building nuclear weapons (i.e., nuclear latency) and international conflict, using a dataset on nuclear latency that is introduced concurrently. The paper's main question is: 'Does having nuclear latency reduce the likelihood of being targeted in an armed conflict'? The dependent variable is 'initiation of militarized conflict between states'. The authors introduce four independent variables, 'target country has nuclear latency'; 'challenging state has nuclear latency'; 'target country has an active nuclear bomb program' and, last, 'challenging state has an active bomb program'. Fuhrmann and Tkach find that possessing nuclear latency as a potential target reduces the risk of conflict. However, if and when challenging states hold nuclear latency, there will be no reduction of the risk of conflict. This study's main finding is that trade in (nuclear) enrichment and reprocessing facilities should be monitored, as merely being able to *make* nuclear bombs appears (at least) as powerful as actually *possessing* nuclear weapons. For within this category, trade does not exist.

2.3.3 *Research on Weapons of Mass Destruction: What Do We Know?*

The papers discussed above increase our knowledge on the issue of nuclear proliferation. Both the decision to provide civilian nuclear assistance and the decision to obtain latent nuclear capabilities appear essential steps in the proliferation process. Further investigation into the motives for countries to provide and to obtain nuclear capabilities is warranted.

[23] Fuhrmann 2009b, p. 41.

[24] Fuhrmann and Tkach 2015.

2.4 Major Weapon Systems

As it turns out from our literature review, from 1995 onwards most studies have been conducted on the category of military goods and services. The following sections will discuss seven papers, offering a brief conclusion at the end.

2.4.1 The Gravity of Arms[25]

The main research question of this paper is: What are the determinants of international arms transfers? In answering this question, the authors show the impact of several economic, political and security factors on (1) the probability of trading arms and (2) the value of arms transfers. The SIPRI Arms Transfers Database, containing information on values of shipments between two parties, is used for quantitative analysis. Moreover, relevant sources are added to obtain data on economic and political factors. The main question is analysed by applying an economics based gravity model framework, augmented by political and security motives. Determinants of the 'probability of trading arms' and 'volume traded' are modelled and analysed. Results on the probability of arms transfers between two states as well as the value of such transfers, follow the theory of gravity (i.e., the probability increases whenever countries are closer to each other, whilst decreasing when there is more distance -both physically and politically). Economic factors (e.g., wealth) and security factors (e.g., the presence or absence of the threat of conflict) affect the value of arms transfers. However, most effects are quite small. The authors argue that the "end of the Cold War appears to have changed the impact of several political factors, especially those measuring the political and security factors".[26] However, the authors also conclude that upon the fall of the Berlin Wall "it is crucial to consider political factors, such as the level of democracy or the political orientation, as explanatory factors of the arms trade".[27]

2.4.2 Arming the Embargoed[28]

Moore asks: Why do states continue to transfer arms to embargoed states? The dependent variables being 'the occurrence of a violation of an U.N. arms embargo' and 'the volume of an occurring violation'. Moore's analysis takes different explanatory variables into account, such as 'arms dependence of embargoed states', 'common policy interests' and variables such as 'military expenditure', 'total arms imports'

[25] Martinez-Zarzoso and Johannsen 2019.

[26] Martinez-Zarzoso and Johannsen 2019, p. 3.

[27] Martinez-Zarzoso and Johannsen 2019, p. 3.

[28] Moore 2010.

and 'arms export dependence'. Results show that embargoes on arms transfers are not that effective as they are meant to be. Selling states violate arms embargoes mainly because of their own strategic interests. The volumes of arms exports to embargoed states are increasing whenever importing states sand arms exporting states share similar political interests. Regarding the dynamics of the international arms trade and exports, Moore shows that arms embargoes do not negatively influence arms exports. A weapons ban does not usually stop weapon sales.

2.4.3 *Arms Production, National Defence Spending and Arms Trade*[29]

The paper's main question is: How do national defence spending and arms transfers relate to sales of military goods? The dependent variable is 'total sales of arms and military services'. 'Total national spending on defence' and 'arms exports and imports' are added as explanatory variables. It turns out that defence spending has a positive effect on arms sales of the same country: a one per cent increase in defence spending results in a 1.2 per cent increase in arms sales. The export of arms generates a similar but however more modest effect on sales. Arms imports do not affect total arms sales of the importing country. Results show that importing weapons does not replace national arms production, but, rather, complements it. This paper's findings show how supply and demand for military goods and services are related. Confirmation is found in the relations between sales of arms and arms exports on one side and between sales and defence spending on the other. The finding that arms imports are complementary to homemade weapon systems, in our view, is the most important result of this research.

2.4.4 *Trading Arms and the Demand for Military Expenditure*[30]

Pamp and Thurner investigate the influence of the international arms trade on domestic military spending. Using SIPRI data on major weapon systems from 1949 until 2013, the authors apply regression analysis to establish the effects of the levels of arms imports and arms exports as independent variables on the dependent variable military expenditures, controlling for democracy and wealth and size of population. Results show that military spending increases when arms imports increase. The same effect is found with control variables measuring military conflict; more conflicts induce more military spending. In democratic states, increases in arms exports result

[29] Blum 2019.

[30] Pamp and Thurner 2017.

in decreased domestic military spending. The paper's main finding holds that "arms exports to allied countries could be used strategically to reduce the defence burden".

2.4.5 *Arm Your Friends and Save on Defence?*[31]

Elaborating on their former paper, Pamp, Dendorfer and Thurner proceed to further investigate the question: How do arms export decisions affect decisions about domestic military spending? To this end, the authors develop a formal model to explain suggested interactions or relations between both decisions. SIPRI data on arms trade and military expenditures are used in an extended model, derived from Levine, Sen and Smith.[32] The dependent variable is 'military expenditures' and the main independent variable is 'arms exports'. An interaction dummy variable is included in the form of positive security externality. If and when arms exports generate such positive security externality and, moreover, two aligned democracies are involved, countries appear motivated to spend less on their domestic defence budgets. The paper's main finding is that arms exports between friends offer the exporting country an opportunity to decrease domestic defence expenditures, thus, selling leads to savings.

2.4.6 *Network Interdependencies and the Evolution of the International Arms Trade*[33]

This paper aims to clarify the structure of international networks in the field of exchange of defence technology, and, to this effect, the paper takes a network-oriented approach. The existence of any arms export relationship between two parties (yes/no) serves as dependent variable. Additional explanatory variables are wealth (GDP), gravity model variables (distance, trade restrictions), regime similarity, defence agreement and intra-state conflict and path dependency. Main findings include that, as opposed to what would randomly be expected, countries actually maintain less export and import relationships with other countries, in combination with a low rate of reciprocation (due the fact the number of countries outranks the number of arms suppliers). Because of dependencies on arms supplying companies or states, relationships tend to linger, the same applies to relations between states which are politically similar to each other. Alliance memberships, transactional costs and GDP of exporting and importing states have strong (positive) influences on the probability of arms transfers. In the imperfect arms market, international relationships are not restricted to dyadic relations; two states trading arms with the same third party tend

[31] Pamp et al. 2018.

[32] Levine et al. 1994.

[33] Thurner et al. 2019, 2020.

to have a similar relationship with one another. Besides the corroborating these findings -in previous studies on network modelling, this paper contributes knowledge on more complex relations between arms exporting- and importing countries. Two states selling arms to the same friend, appear highly probable to also trade weapons with each other. The international arms trade should therefore be understood as a network, instead of one-to-one relations. This fundamentally adds to knowledge on the structure of the international arms market.

2.4.7 Research into Major Weapon Systems: What Do We Know?

We conclude international trade in major weapon systems is influenced by multiple factors. Based on the papers discussed above, from 1995 onwards the importance of economic motives underlying major weapon systems transfers has been increasing. Moreover, after the fall of the Berlin Wall, strategic and political factors in this segment of the international arms trade have remained influential. Also, in research, relations between national defence spending and the transfer of major weapon systems are increasingly gaining attention. Partly this may be due to the fact that the SIPRI database accommodates researchers with data at a low cost. However, hypotheses testing on strategic benefits to be gained (e.g., reduction of national defence burdens) by exporting major weapon systems remain understudied. To us, studies geared towards "describing, explaining and even predicting the structure of the international arms trade network" regarding major weapon systems is an interesting development, that should, in future, include export control laws and regulations, particularly ITAR.

2.5 Small Arms and Light Weapons

This section discusses one paper.

2.5.1 Weaponomics, the Economics of Small Arms[34]

The main question put forward in this paper is: What are the key determinants of assault rifle prices? To this end, over four time periods, the author has collected prices and related characteristics of the AK-47 assault rifle, and proceeded to test four factors, potentially determining the rifle's price, 'income'; 'motivation to buy'; 'regulation' and 'supply costs'. Based on this data, Killicoat constructs a weapon-price determinants model. Out of the four factors mentioned above, regulation and

[34] Killicoat 2006.

supply costs are the two significant factors determining the price of the AK-47. Two variables on the demand side, showing some evidence in affecting prices of SALW, are increasing income and government effectiveness. Based on the results Killicoat provides additional insight into the determinants of the price of the AK-47; the rifle most bought and used all over the world.

2.5.2 Research into Small Arms and Light Weapons: What Do We Know?

Besides finding that, as yet, theoretical research and testing on SALW remains scarce, we conclude that studies in this field provide determinants on prices of assault rifles. It appears interesting to conduct similar studies, applying additional determinants also, and, extending these investigations to include other weapon systems -and categories- as well.

2.6 Dual-Use Goods

In this section we discuss two papers.

2.6.1 Exporting Weapons of Mass Destruction?[35]

This paper sets out to find the determinants for dual-use trade in the post-Cold War era. Since data on the trade of dual-use goods itself are not available, the quantitative analysis is based on a data-set containing export licenses from the US to more than one hundred countries. The dependent variable is 'the volume of dual-use exports', which is operationalized as (1) the quantity of approved export licenses and (2) the total value of those licensed exports, in US dollars. Multiple independent variables (democracy, alliance sharing), indicator variables (military conflict, likelihood of conflict, states' pursuit of the acquisition of nuclear weapons) are selected. Effects of WMD acquisition and -pursuit on the trade of dual-use goods are tested by using two interaction variables (does a country own WMD and does a country pursue WMD). Main findings are that democracies received more dual-use exports than non-democratic states and dual-use goods are sold to countries that do not face security threats.

[35] Fuhrmann 2008.

2.6.2 *Taking a Walk on the Supply Side: The Determinants of Civil Nuclear Cooperation*[36]

This paper asks: 'Why and when do states transfer nuclear technology, materials and knowledge to other states, for peaceful purposes'? To address this question the paper provides a quantitative analysis using a database on nuclear production capabilities and a self-compiled data set with agreements on civilian nuclear cooperation, nuclear suppliers and potential recipients for all agreements, over the period 1950–2000. The dependent variable in the analysis is 'the probability of peaceful nuclear assistance'. Independent variables are 'shared enemies', 'superpower enemies', 'military alliances', 'joint democracy' and 'militarized conflict'. Control variables are 'economic variables' (i.e., GDP, distance), 'nuclear proliferation' and 'contagion' (i.e., whether or not a neighbouring state receives nuclear aid). From the analysis it appears that three independent variables hold negative effects on the probability of peaceful nuclear assistance, i.e., conflict, distance and having signed a non-proliferation treaty. All other independent variables hold significant positive effects, except the variable on shared enemy. The paper's major finding is that the market for nuclear weapons, as measured by the indicator civilian nuclear assistance, is determined by strategic interests of states, able to supply nuclear goods and services. Most evident, the paper finds that states offer nuclear assistance to render their allies, enemies of their enemies, alliances and other democracies stronger.

2.6.3 *Research into Dual-Use Goods: What Do We Know?*

To date, theoretical research and testing on dual-use goods remains scarce. More studies into the determinants of prices and volumes of dual-use goods and services seem required, especially regarding the demands and requirements posed by export control laws and regulations, to this end. Seyoum's paper offers an interesting, explorative theoretical framework to do just that.[37]

2.7 Analysis

Taking an economic perspective, and underpinned by a literature review, this chapter investigates theoretical and empirical developments regarding explicit sets of relationships between dependent and independent variables in the international arms trade over the past 25 years. All in all, we find that from 1995 onwards, relevant studies have been conducted on the international arms trade. However, although

[36] Fuhrmann 2009a, b.

[37] Seyoum 2017.

having outgrown its cradle, this particular research domain is still in the process of growing up and is in need of connecting with relevant and proven insights from neighbouring economic fields. The gravity model, for instance, featuring prominently international economic trade literature, is only recently being applied to studies on the international arms trade.[38]

A number of papers put forward rather generic hypotheses, which were statistically tested using 'free' databases, assembled by SIPRI or the researchers themselves. Although from Chap. 7 it becomes clear that far more databases are available, these are not generally being used. One reason may be that the use of these databases involves higher costs.

In addition, we have not found any research offering hard information on both price and quantity, simultaneously, although Killicoat's study comes close. Soft data are more commonly available (e.g., the number of licenses or probability data on the amount of transfers). As a consequence, our research tools are mainly limited to indicators or proxies. Compounding this lack of hard data, numbers and prices of major weapon systems are considered 'security information'. Although the categories small arms and light weapons and dual-use goods and services are subjected to less strict regulations, in both latter categories far less research is being conducted. Moreover, little attention to developments in the transfer of individual weapon systems is noticeable, again excepting Killicoat's study.

Finally, we find export control laws and regulations to be virtually absent in the economics-based theoretical and empirical development of arms trade, despite its major influence on the evolution of the structure of international defence technology frameworks. To us, it appears indicated to include this factor in future economic research on explicit sets of relationships between dependent and independent variables in the international arms trade.

2.8 Conclusion: An Agenda for Research

Based on our findings, this final section focuses on four interconnected research gaps and recommendations in the domain of the economics of the international arms trade.

From our literature review, it appears that from 1995 onwards, the main research effort has been geared towards the categories general and major weapon systems. Consequentially, characteristic methods and tools in research on the market of military and dual-use goods and services remain limited to modelling in general, often analytical terms and statistics. No distinctions are being made regarding individual weapon systems nor the quality thereof. We therefore recommend the conducting of research on the dynamics and determinants of prices and volumes in relation to the quality of individual weapon systems in the categories major weapon systems and small arms and light weapons.

[38] Akerman and Larsson Seim 2014; Martinez-Zarzoso and Johanssen 2019.

Second, it appears only minor research attention is paid to the category of dual-use goods, whilst there appears no academic interest to investigate the category services. As far as dual-use goods are concerned, this is striking, especially, given the fact that, from the perspective of (inter)national law and regulatory frameworks, dual-use goods are meticulously identified and listed. Although the category services is distinguished in literature, relevant journal papers could not be retrieved. Perhaps services should not be dealt with as a separate category, but, instead, be integrated as an element into the remaining categories.

Third, we recommend including the impact of arms export control laws and regulatory frameworks in economic based research, as these bodies appear to influence decision making in the international arms trade. A related question addresses what these ensuing effects on the international arms trade may be.

Last, we are convinced research on the economics of the international arms trade will be bolstered by designing a research programme, comparable to the defence economic programme devised for country studies in the journal Defence and Peace Economics.

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Chapter 3
Export Control Regimes—Present-Day Challenges and Opportunities

Esmée de Bruin

Contents

Abstract The system of export control regimes is an important instrument to prevent the proliferation of both weapons of mass destruction and conventional weapons. However, this system faces several structural and recent challenges. The regimes are informal, and consequently, their measures are non-binding upon states. Second, the regimes consist of a selective group of countries, excluding some dominant arms exporters. New technology is rapidly changing the military field, and it is difficult for the export control regimes to keep up with these developments. Further, most of the regimes were designed when states were the most important international actors while currently legitimate and illegitimate non-state actors play an ever-increasing role for export controls. In addition, it is unclear how the regimes will advance with the multipolar world order of the twenty-first century. All new developments could lead to the proliferation of weapons, making efforts to prevent proliferation more relevant than ever. There are several opportunities to reform and strengthen the export control regimes. Cooperation could help the regimes to remain relevant. The sharing

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of good practices can help the regimes to find the least disruptive and effective non-proliferation measures. Setting up a paradigm-based regime instead of a weapon-based regime may be more suitable for the future. In addition, a revision of the decision-making process would help the regimes to respond swiftly to developments in the field.

Keywords Export controls · export control regimes · weapons of mass destruction · non-proliferation · disarmament · arms trade · dual-use · Nuclear Suppliers Group · Australia Group · Missile Technology Control Regime · Wassenaar Arrangement

3.1 Introduction

Unrestricted trade of arms and dual-use products may lead to security threats and human rights violations. For that reason, states have come up with export controls. In a world with non-restricted trade, all products and services can move freely between countries. However, this would mean that dangerous goods, such as machine guns, chemical products, and nuclear weapons may be purchased by anyone. Also, this would mean that sensitive technology, such as cyber-surveillance technology, biotechnology, and weapon systems could fall in the wrong hands. Thus, states balance the benefits of free trade with their security objectives. As a result, the trade in military products and technology is restricted by treaties, counter-proliferation measures, and export control regimes.[1]

The system of export control regimes is an important instrument to prevent the proliferation of both weapons of mass destruction, conventional weapons, and to control dual-use products. There are four important regimes, the Nuclear Suppliers Group, the Australia Group, the Missile Technology Control Regime, and the Wassenaar Arrangement. The regimes are informal arrangements between a selective group of countries, often consisting of suppliers only. The activities of the regimes build on an international treaty. For example, the Nuclear Suppliers Group coordinates sensitive international trade in line with the Treaty on the Non-Proliferation of Nuclear Weapons.[2]

Several structural drawbacks of these regimes can be identified in existing literature. First, most countries are unwilling to give up some of their sovereignty by engaging in binding agreements on this matter. As a result, the regimes are informal, and their measures are non-legally binding upon states.[3] The regimes have no official organs or enforcement mechanisms. They have, thus, hardly any power to act if countries choose to ignore the guidelines set by the regimes. Second, the regimes consist of a selective group of countries, with this excluding some dominant arm exporting countries. On the one hand, a lower number of participating countries

[1] Achilleas 2017, p. 3.

[2] Achilleas 2017, pp. 5–6.

[3] Beck and Gahlaut 2003, p. 5.

eases the consensus-based decision-making. On the other hand, the non-universal character hampers the effectiveness of the regimes because only a restricted number of countries act by the principles established by the regimes.[4]

While the aforementioned challenges of the international export control regimes remain, this century raises new challenges for arms export control that are scarcely addressed in the literature. Since the beginning of this millennium, arms transfers have been increasing.[5] New technology is rapidly changing the military field; 3D-printing makes it possible to produce weapons from a distance; artificial intelligence is increasingly used in weapon systems; and advancing biotechnology creates possibilities for biological weapons.[6] Further, most of the regimes were designed in times when states were the most important international actors. Many regime measurements are aimed at states instead of individuals.[7] Currently, other actors, such as terrorist organizations, play an ever-growing role in the international field.[8] Another factor that raises a new challenge is the emergence of several densely populated countries, such as China and India, resulting in a slow shift in the world order.[9] The United States has often taken the lead since the establishment of the regimes.[10] It is unclear how the regimes will advance with the multipolar world order of the twenty-first century. All new developments could lead to the proliferation of weapons, making efforts to prevent proliferation more relevant than ever.

In this chapter, the challenges and opportunities that the regimes are currently facing are analysed. The chapter is structured as follows. First, the different export control regimes and their goal are explained to give a background on the regimes. Second, both structural challenges as well as contemporary developments in the field of arms trade and their implications on export controls are elaborated on. In addition, the opportunities for the regimes are discussed in the same section. The final section is used to conclude.

[4] Beck and Jones 2019, pp. 56–57.

[5] Wezeman et al. 2019, p. 1.

[6] Brockmann 2018, p. 8.

[7] Beck and Jones 2019, p. 58.

[8] Bailes 2013, p. 17.

[9] De Graaff and van Apeldoorn 2018, p. 113.

[10] Bailes 2013, p. 24.

3.2 Export Control Regimes

3.2.1 The Coordinating Committee for the Multilateral Export Controls

The first arms export control regime, the Coordinating Committee for the Multilateral Export Controls (CoCom), was established during the Cold War.[11] The Cold War was characterized by the (nuclear) arms race between the Eastern and the Western Bloc. Both sides were building their arms capacity to counter the threat from their opponent. At some point, the Western countries wanted to impede the flow of sensitive products and technology to the Eastern counties, and thus created the informal export control regime, the CoCom, to pursue this goal.[12]

In the remainder of the Cold War, it became clear that more cooperation was needed to prevent the proliferation of Weapons of Mass Destruction (WMD). For that reason, countries established several other regimes similar to the CoCom.[13] The majority of the multilateral export control regimes, the Nuclear Suppliers Group, the Australia Group, and the Missile Technology Control Regime saw the light during this period. The Wassenaar Arrangement was set up after the Cold War, but is seen as a direct successor of the CoCom. As a consequence, the Cold War perspective has influenced the export control regimes, and the literature on them.[14]

3.2.2 Regimes and Treaties

There are four major arms export regimes that have a different non-proliferation focus. Although the guidelines created by the regimes are non-binding, the regimes support legal binding instruments. Most regimes were established because states experienced a lacuna in the legal framework. However, usually the legal instruments have more member states than the regimes. As a result, it is possible for the regimes to have more specific provisions to fill the gap.[15]

The Nuclear Suppliers Group was one of the first regimes to be established after the CoCom. The Nuclear Supplier Group was formed by states that supply nuclear technology. Together, the 48 supplier states create two sets of informal guidelines to regulate and monitor nuclear trade, as well as to prevent dual-use items and technology from being used for nuclear proliferation. These guidelines do not stand by themselves; they are in line with the Treaty on the Non-Proliferation of Nuclear

[11] Gahlaut 2006, p. 8.
[12] Beck and Jones 2019, p. 59.
[13] Beck and Jones 2019, p. 61.
[14] Bailes 2013, p. 16.
[15] Gahlaut 2006, p. 10.

Weapons and similar regional legal instruments.[16] Also, the regime supports the efforts of the International Atomic Energy Agency.

Before the Nuclear Suppliers Group came into existence, the Zangger Committee was active in the field of nuclear non-proliferation. Similarly, it developed guidelines to prevent nuclear weapons from spreading. However, contrary to the Nuclear Suppliers Group, the Zangger Committee could only act 'within the mandate' of the Nuclear Non-proliferation Treaty. The work of the Nuclear Suppliers Group goes beyond that of the Zangger Committee. As of today, the Zangger Committee did not disappear completely. It is still active in the field, and it is an observer to the Nuclear Suppliers Group.[17]

The Australia Group focuses on two different types of WMD: chemical and biological weapons. Again, the regime is an informal group of 43 countries that controls the trade in items and technology related to chemical and biological weapons. Some civil-used chemical or biological materials can also be used to make weapons, hence the regime encourages responsible trade of these dual-use items. The Australia Group compliments the Chemical Weapons Convention and the Biological Weapons Convention.[18]

The third regime, the Missile Technology Control Regime, is also focused on the non-proliferation of WMD. With the inclusion of India in 2016, the regime has 35 partner countries.[19] The regime is set up to coordinate the 'unmanned delivery systems of WMD'.[20] Non-binding guidelines, the listing of sensitive items and the sharing of information are used to control the trade in missiles.[21] In 2002, the Hague Code of Conduct against Ballistic Missile Proliferation (HCOC) entered into force. The HCOC is intended to complement the regime, but its binding provisions are less specific.[22] Currently, 143 countries have become members of HCOC.[23]

The fourth and last multilateral export control regime is the Wassenaar Arrangement. In contrast to the other regimes, the Wassenaar Arrangement is not focused on WMD, but on conventional weapons such as small arms and rockets. As of today, the regime includes 42 partner countries.[24] The main goal of the regime is to advocate responsible trade in conventional weapons and related dual-use items.[25] Another goal of the Wassenaar Arrangement is to make sure that arms producing businesses do not move to the country with the most favourable law on the topic.[26] For these

[16] Achilleas 2017, p.6; Beck and Gahlaut 2003, p. 5.

[17] Gahlaut 2006, p. 8.

[18] Beck and Gahlaut 2003, p. 5.

[19] Missile Technology Control Regime 2016.

[20] Beck and Gahlaut 2003, p. 5.

[21] Missile Technology Control Regime 2020.

[22] Mistry 2003, p. 120.

[23] The Hague Code of Conduct 2020.

[24] The Wassenaar Arrangement 2020.

[25] Gahlaut 2006, p. 9.

[26] Herr 2016, p. 1.

reasons, the exchange of information and transparency between the partner countries are encouraged.[27]

3.2.3 Characteristics Regimes

These four export control regimes coordinate the trade in WMD and conventional weapons. WMD are weapons that are capable of doing grave harm, and kill a large number of people, such as nuclear, chemical, and biological weapons.[28] A chemical weapon consists of a chemical that could harm or kill people, animals, or plants. The effect of a biological weapon is comparable, however; biological weapons contain substances made from living organisms. Viruses and bacteria also fall under biological weapons.[29] All regimes try to prevent the proliferation of these WMD. Conventional weapons are all other weapons that are, in principle, legal for a country to produce and purchase.[30] Nevertheless, conventional weapons are often used for the wrong purposes. For example, over the last years, most wars in developing countries with a high number of casualties were fought with the use of small and light arms.[31] For that reason, there are also export controls in place to regulate the trade in conventional weapons. Here, the trade is not impeded per se, but the end-use of an item or technology plays a big role.

Often, the situation is not as clear as described above; most WMD are developed with the use of dual-use items.[32] For example, chlorine is used to kill bacteria in drinking water, but it was also used as a chemical weapon during the First World War,[33] and, more recently, in Syria.[34] The trade of dual-use products and services could also lead to human right breaches. For instance, cyber surveillance technology can be used to prevent terrorism, but can also lead to privacy infringement. The nature of dual-use products makes it difficult to prohibit all trade because this means that civil usage would be hindered as well. For that reason, trade is not prohibited, but the export control regimes are also applicable to the trade in dual-use products and services.[35]

The four regimes share three main characteristics. First, they are informal political arrangements that make non-binding decisions. Thus, there are no enforcement mechanisms in place and countries enjoy some freedom in the implementation of the guidelines. Second, the regimes make decisions based on consensus. As a result,

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[27] Gahlaut 2006, p. 9.

[28] Beck and Gahlaut 2003, p. 1; Tamada and Achilleas 2017, p. 5.

[29] Joyner 2009, pp. 79-80.

[30] Tamada and Achilleas 2017, p. 7.

[31] Greene and Marsh 2011, p. 3.

[32] Beck and Gahlaut 2003, p. 2.

[33] Joyner 2009, p. 80.

[34] United Nations General Assembly 2017.

[35] Bohnenberger 2017, p. 82; Joyner 2009, p. 30.

decisions often take time because they are only made when all countries assent to a proposal. Third, all regimes consist of a limited number of participants, most of which are suppliers of the items and technology of concerns.[36] Hence, contrary to the legal instruments they support, the regimes do not have universal support.

The regimes' norms are set out in guidelines and control lists. The participating countries have created broad guidelines that set out the purpose of the regimes as well as the commitments of the participating countries.[37] In addition, the guidelines inform on export procedures such as how non-proliferation measures should be applied. Further, it sets out the structure of the more detailed control lists. When the regimes decide that a product, service or technology should be subject to export controls in accordance with the guidelines, these items are listed in more detail. The Nuclear Suppliers Group, the Missile Technology Control Regime and the Wassenaar Arrangement work with two sets of lists. The two different lists give an indication of the sensitivity of the items and technologies. When there is a higher chance that a transfer will contribute to proliferation, there are stricter export controls applicable.[38] Also, the country of destination plays a role. For example, trade in sensitive products between two regime participants is more likely to take place than trade between a regime participant and North Korea or Iran.[39] However, this is different for the Wassenaar Arrangement because the regime is explicitly not 'directed against any state or group of states'.[40] The lists are regularly updated in accordance with the current developments.

The focus of export controls has shifted slightly over the years. Previously, the focus was on preventing the proliferation of WMD and conventional weapons falling into the hands of enemy states.[41] After 9/11, rival countries were no longer considered to be the only possible danger. Export controls started to be targeted at terrorism prevention.[42] Over the past years, the protection of human rights became a more important goal for export controls.[43] For example, the protection of human rights plays an important role in the Arms Trade Treaty.[44] As of 2013, the Wassenaar Arrangement also focuses more on the prevention of human rights violations when it comes to the trade in cyber-surveillance technologies.[45]

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[36] Beck and Gahlaut 2003, p.6; Gahlaut 2006, pp. 11–15.

[37] Achilleas 2017, p. 11.

[38] Gahlaut 2006, p. 9.

[39] Bailes 2013, p. 22.

[40] The Wassenaar Arrangement 2020.

[41] Gahlaut 2006, p. 8.

[42] Beck and Gahlaut 2003, p. 13.

[43] Bromley et al 2012, p. 1042.

[44] Coppen 2016, p. 365.

[45] Bohnenberger 2017, p. 83.

3.2.4 National Implementation and United Nations Security Council Resolution 1540

The regimes act on voluntary and informal basis, and as a result, its guidelines and lists do not bind the countries. Hence, for the export controls to have legal effect they need to be nationally implemented by the participating countries. The interpretation of the guidelines and lists varies between countries, and also there is some disagreement about what should be considered a sensitive destination.[46] As a result, different export controls can be applied in similar situations.

Nevertheless, this so-called 'national discretion'[47] of countries does not stretch too far: it is set out in United Nations Security Council Resolution 1540 that every country should have national law in place to prevent the proliferation of nuclear, chemical and biological weapons. The resolution was meant to impede non-state actors with terroristic purposes to obtain weapons of this kind. Contrary to the informal regimes, United Nations Security Council resolutions are binding upon countries.[48] Thus, when a participating country incorporates the guidelines from the regimes into national law, it shows its efforts to comply with the resolution. As a result, a considerable group of influential countries has implemented comparable national law on this matter.

3.3 Challenges and Opportunities

3.3.1 Structural Challenges

As previously explained, the export regimes have an informal nature, and often mainly consist of supplier states. In addition, they make decisions based on consensus, and states have national discretion. As a result, the regimes are facing multiple structural challenges.

3.3.1.1 Non-universal Character

Over the last years, the number of regime participants has increased, thereby putting pressure on the system of consensus-based decisions. Originally, the regimes consisted of like-minded supplier states.[49] As of today, however, numerous non-supplier states have joined the regimes. For instance, Denmark, Portugal and Luxembourg became MTCR participants while they had no related missile programs in

[46] Beck and Gahlaut 2003, pp. 8–13.
[47] Beck and Gahlaut 2003, p. 6.
[48] Gahlaut 2019, pp. 54–57.
[49] Beck and Jones 2019, p. 65.

place.[50] Consequently, the group of participating countries has become more heterogeneous with respect to security and trade interests.[51] Especially suppliers and non-suppliers may have divergent interests.[52]

The regimes balance their aspiration to establish universal norms, with their wish for uniformity between the participating states.[53] On the one hand, if more countries are part of the regimes, more countries act in accordance with the principles established by the regimes. At the moment, several countries with the capability to develop nuclear weapons, such as Israel, are not part of the Nuclear Suppliers Group.[54] Hence, these potential supplier countries have not committed themselves to adhering to the guidelines. On the other hand, adding these countries of strategic concern to the number of participating states might lead to a dilution of the norms and uniformity of the regimes. The increase in participating states has led to more internal disagreement. One important topic of discussion concerns what countries and products should be perceived as a threat by the regimes. For example, the United States and EU countries have controlled the dual-use trade with their fellow regime participant Russia.[55]

3.3.1.2 Consensus-Based Decisions

Especially because decisions are made based on consensus, decreasing homogeneity hinders the process of decision-making. A single country with divergent views is able to block the decisions of an entire regime. Regularly, a small group of countries is blocking advancements to the guidelines, or to the effectiveness of the regimes. As a result, the regimes struggle to make rapid decisions concerning new technologies, hereby failing to respond to possible proliferation risks.[56] Also, if decisions are made, they are more likely to be attenuated to conform to the wishes of every participant.

This raises questions about the efficacy of the regimes in their current form. In the past, the objectives of the participating countries were more aligned. However, this is no longer the case. The set-up of the regimes, characterized by consensus-based decisions and informal nature, was designed for a small group of countries with similar interests.[57] At the time of initiation, this indeed increased the efficiency of the regimes. Nevertheless, currently, the opposite holds.

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[50] Gahlaut and Zaborsky 2004, p. 76.
[51] Beck and Jones 2019, p. 70.
[52] Gahlaut and Zaborsky 2004, p. 79.
[53] Gahlaut and Zaborsky 2004, p. 83.
[54] Joyner 2009, p. 68.
[55] Beck and Jones 2019, p. 71.
[56] Beck and Jones 2019, p. 67.
[57] Beck and Jones 2019, p. 69.

3.3.1.3 Informal Nature

The enforcement of the guidelines is problematic as well because the guidelines are non-binding. Most states are unwilling to give up some of their sovereignty by entering into binding agreements on this matter. This has two reasons; states want to remain in control of their own foreign security policy as well as to remain flexible to act in accordance with their economic interest.[58] As a result, the regimes have no official organs or enforcement mechanisms. They have, thus, hardly any power to act if countries choose to ignore the guidelines set by the regimes. Other participating countries cannot hold a non-adherent country accountable as there exist no rules on violations of the regimes.[59] Officially, non-adherence to the regime guidelines is not even named a violation or non-compliance,[60] but 'export behavior inconsistent with the spirit of the arrangement'.[61] The only way to put pressure on a non-adherent participant is by diplomatic measures.[62]

3.3.1.4 National Discretion

For this reason, participants enjoy extensive national discretion in applying the regime guidelines. Some of the guidelines are somewhat indistinct, which means that countries have freedom for national implementation.[63] Consequently, countries can interpret the guidelines the way that they are most favourable to their own businesses. As a result, it is possible to have divergent interpretations. Gahlaut suggests that the regimes need to create enforceable common norms to meet this challenge.[64]

However, given the current international environment, it is unlikely that this will happen in the foreseeable future. The participating countries become more divergent, and as a result, it is probable that they are unwilling to adhere to binding norms that remove their room to manoeuvre. In addition, over the past years, there has been a tendency to move towards more informal approaches to prevent the proliferation of WMD.[65] An example of this development is the Proliferation Security Initiative. This informal understanding between countries encourages them to actively avert the overseas transport of WMD with the use of current international law.[66]

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[58] Pryor 2018, p. 46.
[59] Beck and Gahlaut 2003, p. 7.
[60] Beck and Jones 2019, p. 66.
[61] Gahlaut and Zaborsky 2004, p. 84.
[62] Gahlaut 2006, p. 18.
[63] Beck and Jones 2019, p. 66.
[64] Gahlaut 2006, p. 17.
[65] Daase 2013, p. 69.
[66] Black-Branch 2017, p. 204.

3.3.2 Recent Challenges

Next to the structural challenges, several present-day developments have caused new challenges for the regimes. Over the last twenty years, five developments that have an impact on the arms export control systems can be identified. Non-state threats and producers have emerged, there are suppliers operating outside the regimes, technology is rapidly evolving, the world order is slowly changing, and the UK decided to leave the EU.

3.3.2.1 Non-state Threats

Previously, states were the largest proliferators, currently, however, non-state actors have emerged as proliferators as well. When the regimes were established, states were the major actors in international law. During the Cold War, conflict was between states, and thus, states were seen as the most important proliferation threat.[67] In addition, the technology to develop WMD on a large scale had been out of reach for non-state actors. As of today, the international field has changed rapidly. Other actors such as international organizations, non-state actors, and sub-state actors play a substantial role. Non-state actors such as terrorist groups are increasingly interested in WMD.[68] Similarly, these groups have proven to be capable of breaching the principles of the export control regimes.[69]

The regimes have responded to the changed threat. After 9/11, the prevention of terrorism became an important goal for many countries.[70] States with different values and polities such as China, Russia and the United States started working together to pursue this common goal. At the same time, the export control regimes put more emphasis on non-proliferation measures targeting terrorist groups.[71] As of 2004, UN Security Council Resolution 1540 made these measures more substantial because it introduced an obligation for all UN members to have appropriate legal instruments in place to prevent proliferation of this kind.

Nevertheless, the threat from non-state actors demands additional efforts from the regimes for several reasons. First, the regime control lists are not primarily aimed at controlling out-dated products or technologies, while hostile non-state groups often prefer these as a means of attack. Many of such products are widely used by civilians, which makes them easier to acquire. Instead, the regimes are more focused on modern technologies used by the states. As a result, a substantial part of the control list is not useful in impeding this type of proliferation.[72] Second, countries are often focused on the detection of military quantities of a controlled item. For example, the Common

[67] Bailes 2013, p. 6.
[68] Black-Branch 2017, p. 202.
[69] Bailes 2013, p. 21.
[70] Anthony 2002b, p. 756.
[71] Bailes 2013, pp. 22–24.
[72] Beck and Jones 2019, p. 56.

Control List from the Australia Group lists precisely the quantity that is needed for an item to be controlled.[73] However, non-state actors with malicious intent might settle for smaller numbers.

Next to non-state groups that form a threat, other recent non-state security threats can be identified.[74] Climate change, for example, is one of the most important security issues the world is currently facing.[75] Also, pandemics pose a significant threat for states. As a result of these cross-border issues, states have become more interdependent. Therefore, multilateral solutions to security issues have become more important.[76]

3.3.2.2 Non-state Producers and Facilitators

Non-state parties play a more prominent role in the export-controlled trade. Beck and Jones point out that non-state parties are increasingly used to facilitate this type of trade, thereby increasing the need for timely transparency from regime participants.[77] In addition, research and development of weapons and dual-use products and technology is increasingly conducted by non-state actors. Previously, most sensitive discoveries were done by governmental agencies. From there, these inventions eventually found their way to the private sector. For example, nuclear technology was developed by states instead of private businesses.[78] As of today, however, a lot of discoveries or new technologies are (further) developed by the private sector. From there, they are implemented by defence organizations. Artificial intelligence, for instance, is produced in the private sector, but now has wide military application ranging from 'threat evaluation' to 'underwater mine warfare'.[79] The Wassenaar Arrangement participants have responded to these developments by, for example, including malware in control lists.[80]

While states make the norms by participating in the regimes, businesses have to comply with these norms. High technology industries perform in economies of scale, meaning that the businesses often have the incentive to grow beyond national borders. As a result, the interests of the industries, as well as the economic interests of a country, diverge from the security interests of a country.[81] Sometimes the states use the export controls to pursue their economic interest and not necessarily their security interests.

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[73] The Australia Group 2020.
[74] Ikenberry 2011, p. 65.
[75] Mobjörk et al. 2020, p. 1.
[76] Ikenberry 2011, p. 65.
[77] Beck and Jones 2019, p. 56.
[78] Sagan 1997, p. 54.
[79] Svenmarck et al. 2018, p. 1.
[80] Herr 2016, p. 2.
[81] Gahlaut 2006, p. 16.

3.3.2.3 Emerging Suppliers

New supplier countries have emerged that are willing to operate outside the guidelines of the export control regimes. Most export control regimes are effective because they provide suppliers of sensitive items and technology with guidelines to prevent proliferation. Now there are several countries with the ability to supply such items that are not part of the export control regimes. As a result, these new suppliers often conduct an export that was previously rejected by regime participants, hereby putting pressure on the export control system.[82] For example, China and Israel are the number five and number eight exporters of major arms respectively,[83] while both countries are not part of the Wassenaar Arrangement.[84] In addition, the Democratic People's Republic of Korea (DPRK) has conducted several nuclear tests, and there are worries that the DPRK is willing to export nuclear material.[85] Not only is the DPRK operating outside the Nuclear Suppliers Group, the country also (unofficially) stepped out of the NPT.[86] Hence, there are no international legal obligations that are preventing the country from trading in nuclear materials. Nevertheless, actions from the DPRK are impeded because of the numerous sanctions that are enacted against the country. There are also countries with sensitive (nuclear) military industries, such as Pakistan and India, that want to join the export control regimes but are not allowed access as a result of the veto power of current participants.[87]

3.3.2.4 New Technology

Evolving military and dual-use technology is challenging the export control regimes in several ways. First, the swiftness of the technology change pressures the regimes to change their control lists with a corresponding speed. Recent advances include 3D-printing that makes it possible to produce weapons from a distance, artificial intelligence that is increasingly used in weapon systems and advancing biotechnology that creates possibilities for biological weapons.[88] In addition, cyber surveillance can be used to commit human rights violations.[89] Most regimes publish control lists in which sensitive export products and services are enumerated. When technology changes, the lists have to be adjusted in accordance. The decreasing uniformity between the participating countries causes countries to hinder rapid decisions.[90]

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[82] Beck and Jones 2019, p. 56.
[83] SIPRI 2020, p. 13.
[84] The Wassenaar Arrangement 2020.
[85] Chestnut 2007, p. 80.
[86] Black-Branch 2017, p. 207.
[87] NTI 2020.
[88] Brockmann 2018, p. 8.
[89] Bohnenberger 2017, p. 82.
[90] Beck and Jones 2019, p. 67.

Thus, when technology evolves rapidly, it is difficult for the regimes to keep up with the pace.[91]

However, the informality of the international regimes could also be seen as an opportunity. Contrary to hard law instruments, the soft law nature of the regimes enables them to be more resilient to new proliferation threats because new lists are easier to establish than new international law instruments.[92] In addition, to account for the rigidity of the control lists, countries such as the United States, have a separate export control classification series that temporary lists emerging technologies. Nevertheless, when this is done unilaterally this could harm the international market.[93]

Second, various new technologies erase the need for physical trade, hereby changing the idea of trade. Software, such as cyber surveillance software, can be transferred electronically without the need for trading partners to meet in person. 3D printing can be used in future to print components of nuclear weapons.[94] However, as stressed by Bromley and Maletta, the proliferation risk is moderate for WMD because merely the transfer of technology is insufficient to develop that type of weapon.[95] The authors explain that additional education or training often is necessary to have appropriate knowledge to develop such weapons. For instance, in order to create a nuclear device, as well as a biological or chemical weapon, advanced knowledge is required.

Third, new developments cause separate technologies to become more intertwined. At the moment, every regime is focused on a different type of weapon: the NSG is focused on nuclear weapons, the AG is focused on biological and chemical weapons, the MTCR is focused on delivery systems, and the WA is focused on conventional weapons. Not only separately developed new technologies are integrated now, but existing technology is also combined with recent developments.[96] Artificial intelligence is combined with emerging biotechnology[97] as well as existing nuclear technology.[98] As a result, the functions of the various regimes become more overlapping.

3.3.2.5 Multipolar World Order

After the fall of the Soviet Union, the United States enjoyed hegemony over world affairs.[99] However, currently other populous countries such as China and India are

[91] Brockmann 2018, p. 10.
[92] Gahlaut and Zaborsky 2004, p. 84.
[93] Brockmann 2018, p. 20.
[94] Kroenig and Volpe 2015, p. 8.
[95] Bromley and Maletta 2018, p. 7.
[96] Bauer 2020.
[97] Brockmann et al. 2019, p. 12.
[98] Bauer 2020.
[99] Ikenberry 2011, p. 60.

becoming more influential in world politics. This can have several implications for the export control regimes. First, unlike India, that recently joined the AG, the MTCR, and the WA, China only participates in the NSG. Meaning that the number five main exporter of major weapons operates outside the export control regime applicable.[100] As explained by Ikenberry, the international system has been 'open and rules-based'. He expects the system to become more centred around 'exclusive blocs, spheres of influence, and mercantilist networks'.[101] Although the informal regimes do not perfectly fit in the rules-based international order, the exclusion of upcoming countries could result in an alternative market in which different export controls are applied based on capital and relationships between countries.

Second, the rising powers of mostly non-western states adds to the feeling of dissimilarity between countries. Western countries used to be in the lead when international norms were formed and the formation of the export control regimes was not an exception. This may other when countries become more influential. Countries such as China and India might perceive certain technologies to be more might see different countries as a threat than the current regime members. This makes it more difficult to form a common international export control system.

3.3.2.6 Brexit

On 24 December 2020, the UK and the EU reached an agreement on the cooperation between the two parties after Brexit.[102] Besides the four main export control regimes, the EU has set up its own EU-wide export control regimes, such as the regime governing dual-use items that finds its origin in Regulation 428/2009. Although Brexit has no influence on the participation of the UK in the export control regimes discussed in this chapter, Brexit could affect the field of export control in several ways. First, the Brexit may reduce the willingness of EU countries to cooperate in this field and slow down advancements to the EU export control regimes. As a result, the EU countries, as well as the UK, become more dependent on the four main export control regimes.[103] For the UK itself it has a similar effect because the country will no longer be basing its national regulations on the EU norms, but directly on the guidelines established by the export control regimes.[104] Thus, it could be said that Brexit increases the importance of the export control regimes. Second, the EU loses several means to influence global export control efforts. Not only its access to the Commonwealth is complicated, in addition, the EU loses one of its permanent Security Council members, hereby making it more difficult for the EU to influence international export control norms.[105]

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[100] SIPRI 2020, p. 13.

[101] Ikenberry 2011, p. 56.

[102] European Commission 2020.

[103] Bromley 2016.

[104] Osborne 2018.

[105] Bromley 2016.

3.3.3 Opportunities

While the regimes face several challenges, there are also opportunities for the regimes to improve and keep up with contemporary developments. First, they could improve by strengthening dialogue and cooperation. Second, the regimes could be reformed so that a diverge from the regimes' norms has more consequences for states such as introducing an enforcement mechanism. Third, the regimes can be more paradigm based, and the catch-all mechanisms may remain. Further, the decision-making process could be revised.

3.3.3.1 Dialogue and Cooperation

The export control regimes have a common goal: prevent proliferation by establishing control lists, encourage transparency and gather best practices.[106] Now every regime separately lists sensitive products and technologies.[107] Increased dialogue and cooperation between the export control regimes would help them to respond adequately to technology changes,[108] and changed threats.[109] Some authors go one step further and suggest that the regimes could be combined, or at least could have a combined assembly to improve efficiency and encourage cooperation. Nevertheless, a merger is unlikely because the regimes have different participants. Some countries are excluded from one of the regimes because of political reasons, while other countries do not feel comfortable in joining one of the regimes. Hence, combining them would cause difficulties. Instead, Beck and Jones suggest that the regimes can have their annual meetings during a shared assembly. As a result, the different plenaries with representatives and experts would be held at a single location to enable cross-pollination. The authors add that the combined assembly could be a breeding ground for new regimes to form in accordance with new developments.[110] This can help the international community to keep up with the rapid (technological) developments in this field.

In addition to increased cooperation between the regimes, increased information sharing between other parties involved can help the regimes face the aforementioned challenges.[111] Cooperation of regime participants with countries outside the regimes, exporting businesses, facilitators, as well as academia would help the regimes to signal threats at an earlier stage and create awareness.[112] Also, their input may help

[106] Beck and Jones 2019, p. 65.

[107] Achilleas 2017, p. 11.

[108] Brockmann 2018, p. 23.

[109] Horowitz and Narang 2014.

[110] Beck and Jones 2019, p. 75.

[111] Black-Branch 2017, p. 230 notes that at the moment cooperation concerning nuclear matters is lacking.

[112] Brockmann 2018, p. 7.

improve the enforcement mechanism and compliance instruments of the regimes.[113] Black-Branch recommends increased cooperation to discourage nuclear terrorism. Further, cooperation between regime participants themselves is important.[114] The regimes have a 'no-undercut' obligation which means that states have to inform other participants what exports they have denied.[115] This decreases the national discretion of participating states.

3.3.3.2 Binding Instruments or Enforcement Mechanism

The informal nature of the export control regimes causes challenges. However, it is unlikely that the regimes' norms will become hard law instead of soft law in the foreseeable future. The control lists and guidelines are not binding upon participating countries. The regimes lack an enforcement mechanism, and as a result, a diverge from regime norms has no consequence for a state except for when a country unilaterally decides to enact sanctions.[116] There have been some international attempts to establish binding non-proliferation instruments, such as the International Code of Conduct against Ballistic Missile Proliferation. Hence, states recognize the added value of an international legal system in this case.[117] States often do not want to give up their sovereignty by joining a binding international instrument when it concerns sensitive matters like security. Hence, one of the most feasible ways to set up an enforcement mechanism would not be by reforming the export control regimes, but rather by strengthening the Arms Trade Treaty that is already a binding instrument. In the case of the ATT states already gave up some sovereignty to reduce the proliferation of conventional weapons, and thus, there is a probability that they are willing to go one step further.[118]

Other measures might be more suitable than reforming the regimes to binding instruments. Although the regimes are not binding, participating states mostly comply with the guidelines and control lists. Thus, it could be said that the regimes are effective without an enforcement mechanism.[119] In addition, Byers points out that it is probable that states contributing to proliferation of WMD are unwilling to join an international system in which there is enforcement.[120] Hence, a binding system with enforcement likely only includes countries with no purpose of wrong-doing, and the remaining countries operate outside this system. Thus, a better alternative would be that the regimes strengthen the sharing of good practices. This encourages states to

[113] Bauer 2020.
[114] Black-Branch 2017, p. 216.
[115] Anthony 2002a, p. 473.
[116] Gahlaut 2006, p. 18.
[117] Anthony 2002b, p. 749.
[118] Lustgarten 2015.
[119] Anthony 2002a, p. 475.
[120] Byers 2004, p. 526.

respond swiftly to technology advances and find effective export control measurements that are least disruptive for the industries involved.[121] Another alternative outside the structure of the regimes would be a UN Security Council Resolution compelling states to make national export control law beyond UN Security Council Resolution 1540.[122]

3.3.3.3 Paradigm-Based Regimes and Catch-All Mechanisms

Bauer suggests that new regimes can be focused on a 'common paradigm' instead of a weapon type. These new regimes can establish guidelines in order to prevent, for example, human rights violations, or focus on the protection of civilians.[123] Another example of this is the definition of a chemical weapon found in Article II(1) of the Chemical Weapons Convention that focuses on the intended purpose of a chemical instead of the chemical itself. Shifting to a system based on a common paradigm could contribute to the prevention of illegitimate activity of non-state actors. This would reduce the risk of terrorist groups resorting to outdated, or dual-use substances to develop a weapon, because their intentions matter instead of their means. In addition, this would help the international community to keep up with developments in the field as this would erase the need to revise the lists parallel to technology developments.

Again, establishing a new regime would take a substantial amount of effort, hence other options might be more feasible. 'Catch-all mechanisms' can serve as a solution.[124] These mechanisms allow participating states to control items and technologies that are not specifically named on the control lists. Instead, they are controlled based on the suspicion that its end-use will contribute to proliferation. Thus, with the use of catch-all mechanisms any sensitive trade can be controlled to a destination that is, for instance, subject to an arms embargo.[125] Also, a solution could be to construct the control lists in such a way that they are prepared for expected (technology) developments. In this way, states do not have to debate the control lists as often, hereby risking that a single country can block a decision.[126]

3.3.3.4 Revise Decision-Making Process

In the current regimes, the regime participants are not as like-minded as before. This divergence of interests in combination with the consensus-based decision-making process causes the regimes to respond slowly to changes. When the regimes still consisted of a small group of like-minded countries, the decision-making process

[121] Brockmann 2018, p. 23.
[122] Black-Branch 2017, p. 230.
[123] Bauer 2020.
[124] Bauer 2020.
[125] Aoki 2017, p. 142.
[126] Brockmann 2018, p. 17.

was more suitable. Although it is unlikely that states will easily agree to a different decision-making process because means that they can be bound to a decision that they did not agree on, the change in composition demands critical thinking about the current process. For example, it would advance the export control regimes if they stepped away from consensus-based decisions. Gahlaut and Zaborsky point out that a 'contract-like agreement' is more appropriate for a large group of states that have various concerns such as is currently the case. This type of agreement would enable bargaining between different countries. In this way, countries can negotiate on terms so they can pursue their own security interests.[127]

3.4 Discussion and Conclusion

This chapter discussed the four main export control regimes: the Nuclear Suppliers Group, the Australia Group, the Missile Technology Control Regime, and the Wassenaar Arrangement. The regimes face several challenges. First, the regimes are informal, have a non-universal character and make their decisions based on consensus. As a result, states have national discretion in implementing national law. Second, this century raises new challenges for arms export control. New technologies emerge that are harder to control, non-state actors become increasingly important in the international field, and the United States has to share its leading position with countries such as China and India.

There are several opportunities to reform and strengthen the export control regimes. Cooperation could help the regimes to remain relevant. The regimes have similar characteristics, and cooperation between the regimes could thus improve the efficiency of their non-proliferation efforts. Further, a shared enforcement mechanism could give the export control regimes more power to act if countries choose to ignore the guidelines set by the regimes. However, this is probably difficult to accomplish because arms export controls became more informal over the last years. The sharing of good practices helps the regimes to find the least-disruptive, and effective non-proliferation measures. Setting up a paradigm-based regime instead of a weapon-based regime may be more suitable for the future. In addition, a revision of the decision-making process would help the regimes to respond swiftly to developments in the field.

In this chapter, non-proliferation was seen as the main purpose of the regimes. However, it is possible that the regimes are decreasingly equipped to prevent proliferation, but increasingly serve a different goal: the protection of domestic markets. For example, without consultation of the regimes, the United States sometimes temporarily controls the trade in some new technologies. Although this type of measures serves a security motive, it also protects companies in the US developing that new technology.

[127] Gahlaut and Zaborsky 2004, p. 83.

The chapter focused on export control regimes. To develop a full overview of the contemporary challenges and opportunities of arms export control, further research into different arms export control instruments such as sanctions is needed. Also, additional studies on the most recent export control measures such as the Arms Trade Treaty and the Proliferation Security Initiative would provide a better understanding of the current field of arms export control.

As discussed, this century raises new challenges and opportunities for non-proliferation measures. Unrestricted trade of arms and dual-use products could lead to security threats and human rights violations. From the Cold War until today, the system of export control regimes has been an important instrument to prevent the proliferation of both WMD and conventional weapons. Only time will tell whether the export control regimes are able to keep up with the rapidly changing world or whether new instruments are needed to prevent proliferation.

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Chapter 4
Case: Non-compliance at Fokker Services

Ben Klappe and Mark Keunen

Contents

Abstract From late 2005 through to late 2010, Fokker Services BV (FSBV) failed to comply with the economic sanctions the United States (US) Government had established against Iran and Sudan. By scanning the case, violations by FSBV came to light in a structured way, laying bare how FSBV operated to evade export control, breaching sanctions regimes and export control laws. Next, analysis stipulated that the cause and conditions of the violation of the export control regulations were mainly rooted in the tone at the top, the role of (intermediary) management and the absence of a Compliance Program. Subsequently, a short-term and a long-term response were formulated addressing the tone at the top, the development of an Internal Compliance Program, and the application of soft controls to promote an ethical culture.

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Keywords Non-compliance · Fokker · sanctions · export controls · tone at the top · Internal Compliance Program · soft controls

4.1 Introduction

In 2015, Fokker Services BV (FSBV), a Dutch aerospace services company, agreed to pay 21 million USD to settle US claims that it conspired to violate sanctions against Iran, Burma and Sudan by providing customers in those countries with aircraft parts, technology and services. From late 2005 through to late 2010, the company made 1,153 shipments of spare, repaired or exchanged parts to customers in the sanctioned countries. The company hid the transactions by withholding or providing false tail numbers to US-based repair shops and by avoiding transactions with US companies on its "blacklist" of companies that were vigilant about export controls.

The services that FSBV offered were subject to US export control regulations. FSBV failed to comply with the economic sanctions the US Government had established against Iran and Sudan. The sanctions prohibited, among other things, the unlicensed exportation or re-exportation, directly or indirectly, of any goods, technology, or services from the United States or any US person to Iran or Sudan. FSBV has violated export control rules by exporting and re-exporting of aircraft parts, technology, and services to US sanctioned countries, without first obtaining a license from OFAC. Research by various agencies such as OFAC, Immigration and Customs Enforcement's (ICE) Homeland Security Investigations, the Defense Criminal Investigative Service, and the US Attorney's Office for the District of Columbia has shown that FSBV has systematically tried to conceal the final destination of the parts.[1]

FSBV engaged in wilful and reckless alleged violations of US law because FSBV knew that it was shipping US-origin parts, and parts supplied from or repaired in the United States, to customers in Iran and Sudan. Therefore, FSBV caused significant harm to the objectives of the OFAC's Iran and Sudan sanctions programs given the volume and value of the transactions.

To design and recognize, detect and prevent the specific non-compliant behaviour in the case of FSBV export control violations, the Problem-Oriented Policing (POP) guide template will be deployed.[2] The first step involves scanning the facts behind the case, followed by an analysis of the root causes of what went wrong. Next, short-term and long-term responses necessary to remedy the non-compliant behaviour are developed. The chapter concludes with a brief assessment reflecting on the process and content of the case analysis.

[1] US Department of Justice 2014.

[2] Braga 2008.

4.2 Scanning

4.2.1 Macro-level: Sanctions and World-Wide Competition

Starting the review at the Macro-level, FSBV was operating in a highly sensitive part of the air and space industry, with international laws and regulations based on national security and economic policy. The industry is strongly regulated and the world-wide competition forces companies, in general, to operate vigilantly at all times, as national security and reputation are at stake. It is at this level where ambiguity and potentially conflicting norms and a perceived lack of (international) enforcement of the US Iranian and Sudan Sanctions regulations may have played a role, leading to the violations.

4.2.2 Meso-level: Intentional Non-compliant Behaviour

On 1,112 occasions, FSBV indirectly exported or re-exported aircraft spare parts to Iranian customers, which FSBV either procured or had repaired in the United States specifically to fill an Iranian customer's order, or which were of US origin and subject to export license requirements under US law, independent of the Iranian Transactions and Sanctions Regulations (ITSR), at the time of shipment. On 41 occasions, FSBV indirectly exported or re-exported aircraft spare parts to Sudanese customers or end-users, that FSBV either procured or had repaired in the US, specifically to fill a Sudanese customer's or end user's order, or that were U.S-origin and required the issuance of a license by a Federal agency at the time of shipment, violating the Sudanese Sanctions Regulations (SSR).

FSBV has exported and re-exported large numbers of shipments to Iran and Sudan for many years—from 2005 to 2010 without the necessary export licences. It has, therefore, the appearance that FSBV has made a cost-benefit analysis between the profits and expenses regarding obtaining the required export licenses or exporting without licenses. Exporting without the required export licenses can be considered as non-compliant behaviour and may be explained from a business-economic perspective because Fokker almost went bankrupt in 1996 and was taken over by Stork. Furthermore, it appears from public available sources, that the non-compliant or unethical behaviour of FSBV occurred while various individuals at all levels throughout the organization knew of various schemes to evade US sanctions.[3] Both senior corporate managers and individuals working for the compliance and legal department knew about and approved the various schemes to evade US sanctions.

[3] Kini et al. 2014.

4.2.3 Micro-level: Deliberate Evasion of Regulation

Absence a clear and convincing message from the FSBV top management to abide by export control rules and absence of a Compliance Plan, middle management complemented with specialists in the Maintenance and Export department developed and used several schemes to evade US sanctions and export laws, including the withholding of aircraft tail numbers, providing false tail numbers, deleting references to Iran in materials sent to the US and hiding activities and documents from the US Federal Aviation Administration during audits of FSBV's Dutch warehouse.[4] The use of the aforementioned combined actions, witness a well-thought-out and deliberate plan to evade export control rules. US export laws were perceived as inconveniences to be 'worked around' through deceit and trickery.[5] This behaviour also illustrates awareness and low conscientiousness at the individual employee level.

4.2.4 Aftermath

The illegal exports and their concealment are also evidenced by investigations by various authorities, such as BIS, OFAC and the FBI. In response to export control violations a settlement between FSBV and BIS and OFAC has been agreed, such as paying a fine of $21 million,[6] implement its new compliance program and policies, changing some of the workforce duties, training staff in US export control and economic sanctions laws,[7] and the dismissal of a board member.[8]

4.3 Analysis

To understand the nature of the problem and to develop various courses of remedial action, it is necessary to perform an in-depth analysis of the non-compliant and unethical behaviour of FSBV. For that reason, it is important to understand the underlying conditions and causes of the illegal exports to Iran and Sudan. In addition to the above-mentioned areas, we will provide a short overview of the sanction's regime.

[4] Kini et al. 2014.
[5] Kini et al. 2014.
[6] EuropaWire 2014.
[7] DiBianco et al. 2016.
[8] Broek 2015.

4.3.1 Tone at the Top

From the publicly available sources, it appears that the non-compliant or unethical behaviour of FSBV occurred while various individuals at all levels throughout the organization knew of various schemes to evade US sanctions.[9] Both senior corporate managers and individuals working for the compliance- and legal department knew about and approved the various schemes to evade US sanctions. This, combined with the overall number of 1,153 violations during the five-year period (end 2005 to end 2010) points to a culture where compliance with export control rules was deemed irrelevant. As the Department of State Undersecretary for Political Affairs (DPPA) included the demand for firing the president, it can be concluded that even top-level executives were aware of the ongoing violations during a long period, without taking action to stop the evasion of export control rules. Furthermore, it is relevant to include in the analysis the possibility of whether FSBV had made a cost-benefit analysis between exporting to Iran without a license and a possible fine or complying with the rules. For instance, data show that FSBV had generated in 2012 a revenue of 769 million euros and in 2014 a revenue of 758 million euros.[10] Given the amount of the fine and the annual revenues, it could be cautiously concluded that FSBV was in favour of complying with contracts and continuing exports to prohibited countries, instead of respecting the imposed sanctions by the US.

Leaders contribute to an ethical culture by influencing the organization's vision, mission, and strategy. Tone at the top is the atmosphere created by management to encourage employees to embrace a climate of high ethics when the behaviour is modelled by the top management.[11] As role models, company leaders have an impact on the moral behaviour of subordinates. When faced with an ethical dilemma, employees reduce the uncertainty of the dilemma by imitating their leaders' behaviour, which they observe daily. Felo and Solieri, experimenting with accounting professionals to test the theory that an employee will focus on the "tune in the middle" rather than the "tone at the top", indicated that signals from top-level executives appear to have more influence on accounting professionals than do signals from midlevel managers. For senior-level executives, the message should be clear: "Watch what you say and do, as people throughout the organization are paying attention".[12]

4.3.2 Absence of a Compliance Programme

FSBV had no formal OFAC compliance program in place during most of the five years when the alleged violations occurred.[13] The absence of such a program is an

[9] Kini et al. 2014.

[10] Aerospace Manufacturing and Design 2015.

[11] Tukamuhabwa 2012.

[12] Felo and Solieri 2020.

[13] Kini et al. 2014.

indication that leadership was not intrinsically motivated to follow or implement export control rules and regulations. In addition, an internal- and external control mechanism failed to discover the violations during a long period, while also soft-controls (see hereafter) seemed non-existent.

4.3.3 Role of Middle Management and the Maintenance and Export Department

Absence a clear and convincing message from the FSBV top to abide by export control rules and absence of a Compliance Plan, middle management complemented with specialists in the Maintenance and Export department developed and used a number of schemes to evade US sanctions and export laws, including the withholding of aircraft tail numbers, providing false tail numbers, deleting references to Iran in materials sent to the US and hiding activities and documents from the US Federal Aviation Administration during audits of FSBV's Dutch warehouse.[14] On one occasion, FSBV provided a US aerospace company with a work order that falsely represented that the aircraft part belonged to an aeroplane owned by a Portuguese airline when, in reality, the part actually belonged to an Iran Air aircraft. The US aerospace company fixed the part and returned it to Fokker Services, who then shipped the part to Iran.

Furthermore, FSBV constructed and constantly updated a chart called "the blacklist" that tracked which US companies were more vigilant about export controls, and directed their business to those US companies that were not on "the blacklist". FSBV also deleted references to Iran in materials sent to its US subsidiaries and US repair shops. FSBV changed an internal database that tracked parts to delete fields related to ultimate end-user information, and directed employees to hide activities and documents related to Iranian transactions when inspectors from the US Federal Aviation Administration audited Fokker Services' Dutch warehouse. The use of the aforementioned combined actions, witness a well-thought-out and deliberate plan to evade export control rules. US export laws were perceived as inconveniences to be 'worked around' through deceit and trickery.[15]

4.3.4 Conclusion

The findings of the in-depth analysis show that FSBV has systematically violated export control regulations by trying to conceal the final destination of the parts. The cause and conditions of the violation of the export control regulations are mainly rooted in the tone at the top, the role of (intermediary) management and the absence of

[14] Kini et al. 2014.

[15] Kini et al. 2014.

a Compliance Program. After all, corporate managers and individuals throughout the organization knew about the illegal exports. The Maintenance and Export department developed and used even several schemes to conceal the illegal exports. The number of exports and the length of the period seem to rule out errors in company procedures and policies and points more in the direction of a non-compliance culture.

4.4 Response

From the analysis, several shortcomings and weaknesses emerge that require an effective response to stop the non-compliant and unethical behaviour within FSBV. In order to stop non-compliant behaviour, it is necessary to consider which systematic responses can be applied in the short and long-term. It is important to note that a short-term response (i.e., crisis management) can also mean anticipating future events and thus having a preventive effect in the long run. After all, it is of great importance for the continuity of business processes and the continuity of the entire organization to respond effectively in the event of an (acute) threat in the event of a crisis, for example, utilizing institutionalized crisis management capacity.

4.4.1 Short-Term Response

4.4.1.1 Tone at the Top

As soon as possible a statement should be delivered by senior FSBV leadership, preferably the CEO announcing the urgent need to comply with EC, pointing to existing shortcomings and spelling out a time-phased plan to achieve a full-fledged implementation of an EC Internal Compliance Program. An obvious start for the top management level is to urge all staff to follow applicable laws, regulations, and company policies and to hold those violating laws and policies accountable. Without consequences, violations are likely to increase.

In addition, the executive level is to allocate appropriate funding for an EC compliance program. If FSBV allocates insufficient funds for initiatives to encourage ethical behaviour such as training programs, those initiatives are unlikely to promote a strong ethical culture. Those at other levels of leadership can also exert their influence by ensuring that their staff understand the importance of company training concerning conflicts of interest and other ethical issues. If a manager sends a signal that employees should view training as a distraction from their regular work and should be completed as quickly as possible, employees are not likely to internalize the material. Yet if top management sends a signal that the training is an integral part of their work, employees are more likely to take the training seriously.

4.4.1.2 Development of an Internal Compliance Program

FSBV should develop an Internal Compliance Programme (ICP) and implement all elements as soon as possible. To comply with EC and to stop deviant and criminal behaviour, FSBV may include the following measures[16] in its company policy or ICP: (1) increase regulations developing limited authority (e.g., implement rules regarding approval of export, such as a multiple signature requirement); (2) increase the effort that must be made to conduct the deviant or criminal behaviour (e.g., implement a data system targeting anomalies, such as exports to prohibited countries); (3) increase the chance of discovery (e.g., implement and increase guardianship by providing more or more effective surveillance controls by compliance officers); (4) reduce the rewards of criminal behaviour (e.g., implement a company policy that blocks promotions for a fixed period which will lead to a strong reduction in the incentives to conduct illegal exports); (5) decrease the motivation of the offenders (e.g., increase the public awareness about export violations, for example by shaming and blaming, implement a pyramid with informal and formal controls);[17] and (6) remove excuses (i.e., appealing to higher loyalties can be of significant importance for the potential excuse that contracts with prohibited countries must be respected. By including responsibility in the ICP and the code of conduct, and specifying who is responsible for which business process, the organization becomes more transparent and prevents officers from using other neutralization techniques, such as denying responsibility).[18]

4.4.1.3 Applying Soft Controls

In addition to these measures, it is strongly recommended to include soft controls in the management control system. Soft controls consist of informal, intangible practices to enhance and sustain proper and employee behaviour.[19] Practices may impact the ethical culture and climate of FSBV (meso-level), emphasizing business integrity. Trainers and managers may use workshops, video clips and flyers, thus generating self-regulating capacity (clarity and congruency, and congruency), self-providing capacity (feasibility and supportability) and self-correcting capacity (transparency, discussability and sanctionability).[20]

On the latter, the revised crime triangle[21] can be used. This is an extension from the crime problem triangle which derives from the routine activity theory and is used by the police to diagnose crimes.[22] By distinguishing between handler (offender), guardian (target) and manager (place), the triangle allows for a deeper understanding

[16] Goldstein 1990, pp. 102–147.
[17] Smith et al. 2007.
[18] Sykes and Matza 1957.
[19] Kaptein 2008.
[20] Bogers 2018.
[21] Clarke and Eck 2005, pp. 28–29.
[22] Sampson et al. 2010.

of the incentives and context of a violation. This way it enables preventing managers and employees of FSBV from reoffending and to assess what changes can be made available throughout the organization, especially in the departments where deviant and criminal behaviour occurred.[23] Besides, situational crime prevention can be added to reduce the chances of displaying criminal and deviant behaviour locally,[24] i.e., export departments.

4.4.1.4 Operational Resilience

To respond immediately to the illegal exports to prohibited countries, it is important to pay attention to various operational challenges. Potential challenges: (i) preparation for unpredictable situations, (ii) coping with crisis and (iii) back to normal.[25] FSBV can prepare for unpredictable situations, coping with crisis and go back to normal through implementing detailed company procedures and maintaining and monitoring an effective ICP. A contribution to this is to ensure that FSBV is resilient, which means "the capacity to cope with unanticipated dangers after they have become manifest, learning to bounce back".[26]

In a crisis situation, it could be useful to leave decision-making to managers at the lower-levels.[27] The latter can be particularly relevant, because they may have the expertise and knowledge to solve the problem locally. For that reason, it is relevant to give the local managers of export departments responsibility and the authority to make decisions, for example, approve an export using a multiple signature system within the export department.

4.4.2 Long-Term Response

4.4.2.1 Tone at the Top

It is necessary to remain involved and continue to pay attention at Board Level for EC compliance issues. Leadership should be willing to discuss the topic and status of remedial action during management board meetings and should press for sufficient resources (budget, manpower and IT-support means) leading to a full-fledged compliance programme.

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[23] Braga 2008, pp. 25–29.
[24] Braga 2008, p. 12.
[25] Boin 2004.
[26] Wildavsky 1988, p. 12.
[27] Boin 2004.

4.4.2.2 The Role of Middle Management

Following guidelines from top management, middle management should be tasked to develop and roll out EC awareness and training programmes. This should include workshops, flyers, e-learning materials etc. ensuring all relevant staff and personnel attend such programmes. Middle managers should also stand ready to discuss with staff the ongoing potentially sensitive EC cases using CRM techniques as discussed earlier.

4.4.2.3 Developing an Internal Compliance Program

An ICP should be evaluated and updated frequently, based on new international and national rules and regulations and should be brought in line with the compliance policy of FSBV. To aim for a systemic structural long-term response, it is necessary to focus on the barrel not only at the apple, respectively FSBV as a whole and not only the individual member who performs duties related to export control or compliance. Compliance is a matter for the entire organization and all its members. A longer-term, systemic response involves adjusting the organizational structure and procedures to accommodate the non-compliant/unethical behaviour structurally.

A suitable means to be compliant in the long-term is an ICP that focuses on EC, among other things. By designing and implementing an effective and efficient ICP throughout FSBV the organisation is enabled to recognize, prevent and/or detect specific types of non-compliant/unethical (counterproductive) behaviour.

Furthermore, to commit to the ICP, the code of conduct and company policies and to respond effectively in the long-term, it is necessary to change the deviant, unethical and criminal behaviour of the members within FSBV into compliant behaviour. When changing behaviour, it is relevant to note that the macro-level, i.e., the (international) economic and legal context, cannot be influenced by the organization itself. It is therefore important to assess how FSBV reacts to the environment and how this translates into the behaviour of individuals (trickle-down): in contrast to the macro-level, the interaction between individuals and the organization can be influenced.

The following protocol can contribute to changing behaviour: (1) specify the behaviour into a certain context so that it is clear to members what FSBV means with compliance; (2) measure the occasions that members within FSBV behave in a compliant way; (3) analyse the behaviour of the moments in which non-compliant and/or compliant behaviour is displayed; (4) feedback the data from the analysis to the members within FSBV, because seeing positive numbers in which complaint behaviour has occurred stimulates desirable behaviour; (5) set (sub)goals regarding compliance with EC within FSBV; and (6) reinforce when members within FSBV have succeeded in reaching (sub)goals, which ultimately leads to a change regarding the corporate culture within FSBV.[28]

[28] Bleker-van Eyk and Houben 2017.

4.5 Assessment

A deliberate violation of export control regulations of the magnitude as was witnessed in the case of Fokker Services during an extended period, caused a renowned firm to suffer a deep blow. A situation like that is worth a thorough analysis to learn valuable lessons and share these lessons with other companies that are faced with export control challenges and customer demands. Using the incremental process of scanning, analysis, response and assessment (i.e., the SARA framework) proved to be very valuable.[29]

During the first step of scanning, violations by FSBV came to light in a structured way, laying bare how FSBV operated to evade export control, breaching sanction regimes and export control laws concerning Iran, Sudan and Burma. At the time FSBV came forward, no government agency had initiated any investigation focused on the company. The next section, analysis, stipulated what role various actors (top and middle management) and instruments have played and what their role or impact was on the day-to-day activities leading to violations. More in particular, it was found that the cause and conditions of the violation of the export control regulations were mainly rooted in the tone at the top, the role of (intermediary) management and the absence of a Compliance Program. Analysing the response over the course of the next four years, FSBV instituted remedial measures to improve its sanctions compliance program, adopting a set of procedures to track export-controlled parts. Furthermore, FSBV bolstered its employee training requirements, fired its president and demoted or reassigned other employees who had been involved in the violations. The company's compliance efforts have been described by US government officials as "a model to be followed by other corporations".[30] Subsequently, a short-term and a long-term response were formulated addressing the tone at the top, the development of an Internal Compliance Program, and the application of soft controls to promote an ethical culture. By following the logic of the SARA framework, the root-causes of violations and misbehaviour within Fokker Services BV became clear.

Without structurally analysing root causes, it is impossible to adequately prevent and respond to violations.

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[29] Braga 2008.

[30] Kini et al. 2014.

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Chapter 5
International Export Control Law—Mapping the Field

Joop Voetelink

Contents

Abstract Traditionally, the control of the export of arms and other military material is a national concern that flows from the principle of state sovereignty. As international public law developed, national rules and regulations were increasingly affected by a growing body of international law. Together, these rules and laws constitute an emerging subdiscipline of law impacting the international trade in military and dual-use goods, technology, and software and can be referred to as export control law. This chapter explores various well-established disciplines of public international law that form the constituent parts of international export control law.

Keywords Export control · arms control · non-proliferation · disarmament · dual-use · extraterritoriality · GATT · international humanitarian law · human rights · sanctions · UN · security · weapons of mass destruction

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5.1 Introduction

Throughout history, states and other territorial entities have restricted the export of arms and related military equipment, including maritime supplies and equipment, for reasons of national security. For example, in ancient times the Roman Empire prohibited the delivery of weapons to other nations[1] and during the Dutch Revolt[2] the Dutch Republic subjected the trade in arms and maritime equipment to a strict licensing system (see Chap. 16).[3] Such restrictions in international military trade have been developed in domestic policies and laid down in national rules and regulations. Today, states continue to regulate the export of military equipment. The scope of contemporary legislation, however, has broadened significantly over time and now also encompasses goods, technology, and software (in this chapter together referred to as items) that are civilian by design but may serve a military purpose as well (dual-use). Moreover, security concerns are not the sole basis for these particular trade restrictions anymore, as other considerations, such as foreign policy, human rights, and economy, increasingly influence decision-making. Another striking element of domestic export control legislation is the increasing importance of public international law. All domestic and international laws and regulations as well as policy rules and commitments that are applicable to and regulate the export, re-export, transit, and transfer in any manner of goods, technology, and software can be referred to as export control law. Although a term like this suggests that a new branch of law has emerged, export control law is not an established field of law in its own right. Each state still has the power to enact its own set of domestic laws, regulations, and policy rules, whereas the international component of export control law draws heavily on various subdisciplines of public international law. However, as a consistent and comprehensive set of rules is rapidly developing with a growing impact on international trade, discussion of international export control law as a distinct subdiscipline of law is warranted.

Export control law is a rather broad field of law potentially encompassing a wide array of topics. In this chapter it is narrowly interpreted to include only two core areas of export control, namely the rules with respect to the control of the export of military and dual-use items, and economic sanctions. Consequently, related topics such as bribery of foreign officials, securities law, foreign direct investments, and trust law will not be part of the discussion.

The chapter's aim is to analyse international export control law by exploring the various areas of international law relevant to export control law. The chapter starts by introducing export control and analysing some key terms before exploring the subdisciplines of international law that are most relevant to export control law in general. These subdisciplines include the laws of armed conflict (also referred to as international humanitarian law), sanctions law as part of international security

[1] Krause and MacDonald 1993, p. 708.

[2] Revolt of the Republic of the Seven United Netherlands against the rule of the King of Spain; also known as the Eighty Years' War (1568–1648).

[3] De Jong 2005, p. 153.

law, the law of arms control, and human rights law. Finally, this chapter offers a brief synthesis and conclusion. Domestic and regional (i.e., European Union) export control law will not be discussed in detail but may be referred to where appropriate.[4]

As may be apparent from the table of contents of this volume, export control law is inextricably linked to other research and policy areas such as ethics, economics and trade, and politics and international relations, all of which influence the legislator's choices. Export control laws and regulations are, therefore, the result of trade-offs made in all these interconnected areas. Since the aim of this chapter is limited to mapping the legal terrain, it will not probe the non-legal aspects of export control. The audience should, however, keep in mind the relevance and impact of other research and policy areas.

5.2 Export Control Law in General and Terminology

Under modern public international law, states are prohibited from threatening to or using force against other states. This is a rule of customary law, as well as one of the founding principles of the United Nations (UN) as laid down in Article 2(4) of the UN Charter, "All Members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations".[5] The Charter states two exceptions to this rule. First, states are allowed to use force based on their inherent right of individual and collective self-defence against an armed attack (Article 51 of the UN Charter). Second, states can use armed force to maintain or restore international peace and security when mandated by the UN Security Council under Articles 39 and 42 of the UN Charter (peace-enforcement and peace-operations).

The right to resort to armed force in self-defence, implies that States can maintain the means to act on that right. Consequently, absent specific treaty limitation States are entitled to possess arms and other military equipment,[6] without restrictions on the levels or types of armaments,[7] and, as a corollary thereof, can produce and trade them unless prohibited under international law. The right to possess arms has been confirmed by the International Court of Justice in its landmark Nicaragua Judgment, "in international law there are no rules other than such rules as may be accepted by the State concerned, by treaty or otherwise whereby the level of armaments of

[4] For an excellent overview of domestic and EU export control law, see Aubin and Idiart 2016.

[5] Charter of the United Nations; San Francisco, 26 June 1945; entered into force 24 October 1945. https://treaties.un.org/doc/Publication/UNTS/No%20Volume/Part/un_charter.pdf Accessed 16 February 2021.

[6] For example, a Netherlands policy evaluation regarding non-proliferation, disarmament, and export control of strategic goods notes that conventional arms serve the legitimate right to self-defence in accordance with Article 51 of the UN Charter. Parliamentary Paper 2018/19, 33694, No. 38, p. 34.

[7] Coppen 2016, p. 22.

a sovereign State can be limited, and this principle is valid for all States without exception".[8] The international trade in arms as a legitimate exercise of the right to self-defence is reflected in the Preamble of the Arms Trade Treaty by its reference to a number of international principles, including the right to self-defence as recognized in Article 51 of the UN Charter and "(t)he respect for the legitimate interests of States to acquire conventional arms to exercise their right to self-defence and for peacekeeping operations; and to produce, export, import and transfer conventional arms".[9]

As states can legitimately trade in arms, it is reasonable to keep checks on these goods and related items leaving the territory destined for another state. The reasons therefor may vary but will include the protection of national security and economic interests. Also, export control can be a key foreign policy tool as well as a State's contribution to the maintenance of international peace and security. In general, national checks on the export of military and dual-use items will focus on items that can be useful for purposes that are contrary to a State's interests. Often, these items are included in elaborate lists and subject to a system of prohibitions, exemptions, licenses, or other forms of authorization. Yet, unlisted items can become subject to export control authorization as well through the use of 'catch-all' clauses. Clauses of this type provide that the export of unlisted items still require a national authorization when the end-use or the end-user of an item are of concern as specified in that clause; e.g. use related to weapons of mass destruction.[10] Whether or not an authorization for the export of an item is required will, in general, be determined by answering the 'what', 'where', 'who', and 'how' questions.[11] What are the product specifications of an item and do they correspond with a listed item (*classification*)? Where is an item heading (*destination*); is that State subject to a sanctions regime? Who is ultimately the user of the item (*end-user*)? And finally, how will the item ultimately be used (*end-use*)?

Today, international commerce is characterized by the economic principle of free trade.[12] Export controls and sanctions do not seem to fit this principle. Nevertheless, they can be justified under international economic law instruments.[13] Article XXI of the 1994 General Agreement on Tariff and Trade (GATT)[14] contains 'security exemptions' allowing States to take "any action it considers necessary for the protection of its essential security interests". The exception applies, *inter alia*, with

[8] ICJ 27 June 1987, Case concerning Military and Paramilitary Activities in and against Nicaragua, (Nicaragua v. United States of America), Judgement, Merits, [1986] ICJ Rep 1, para 269. Hereinafter: the Nicaragua Case.

[9] Arms Trade Treaty; New York, 2 April 2013; entered into force 24 December 2014 (Vol. 3013 UNTS, No. 52373).

[10] Haellmigk 2017.

[11] Cfm. Aubin and Idiart 2016, pp. 5–6.

[12] Trebilcock and Trachtman 2020, pp. 1–6.

[13] Aubin and Idiart 2016, p. 1.

[14] Annex 1A, General Agreement on Tariffs and Trade (GATT) of the Marrakesh Agreement Establishing the World Trade Organization; Marrakesh, 15 April 1994 entered into force 1 January 1995 (Vol. 1867 UNTS 1995, No. 31874).

respect to "the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of the supplying a military establishment" (Article XXI(b)(ii)).[15] Article 346(1)(b) of the Treaty on the Functioning of the European Union (TFEU)[16] includes a similar exception authorizing Member States to take "such measures as it considers necessary for the production of the essential interests of its security which are connected with the production of or trade in arms, munitions and war material; such measures shall not adversely affect the conditions of competition in the internal market regarding products which are not intended for specifically military purposes".[17]

As has been mentioned in the introduction to this chapter, export control law is not a self-contained or specialized[18] legal regime. Consequently, it lacks a single set of legal definitions of key export control terminology. So, the meaning of terms such as 'export' and 'military goods' may differ, depending on the applicable legal system and even, within that jurisdiction, on the specific statutory basis. For instance, under US law 'export' not only refers to the transfer of an item or a defense article out of the US but also to the release or transfer of technology or technical data to a foreign person even when that person is present in the US[19] The latter form of export is referred to as 'deemed export' in US export control law, but this expression is not used in EU export control law. Further, in the US legal system the terms 'item' and 'technology' are typical for the control of dual-use and less-sensitive military items (not including services) pursuant to the Export Control Act of 2018[20] and its implementing regulations: the Export Administration Regulations.[21] These terms are not used, however, in relation to military items which are regulated in the Arms Export

[15] A similar clause provision can be found in Article XIV bis, Annex 1B, General Agreement on Trade in Service (GATS) of the Marrakesh Agreement Establishing the World Trade Organization; Marrakesh, 15 April 1994 (Vol. 1867 UNTS 1995, No. 31874). Malloy 2003, pp. 379–380 points out that member States can invoke the security exception as a self-judging justification for the imposition of sanctions leaving States a wide margin of appreciation. In doing so, States must, however, observe the general principle of good; Para 7.132, Russia—Measures Concerning Traffic in Transit, WTO Panel report, Action by the Dispute Settlement Body, WTO Doc WT/DS512/7 of 29 April 2019.

[16] The Treaty on the Functioning of the European Union; Rome 25 March 1957; entered into force 1 January 1958. Consolidated version, OJ C 326, 26/10/2012, pp. 1–390.

[17] This provision is not applicable to dual-use items; V Randazzo (2014) Article 346 and the qualified application of EU law to defence. European Union Institute for Security Studies. https://www.iss.europa.eu/sites/default/files/EUISSFiles/Brief_22_Article_346.pdf Accessed 16 February 2021.

[18] Term as used in UN Doc A/CN.4/L.682 of 14 April 2006, Report of the Study Group of the International Law Commission on 'Fragmentation of international law: Difficulties arising from the diversification and expansion of international law, p. 81. Cf. Coppen 2016, pp. 25–26.

[19] 15 C.F.R. Sections 734.13 and 22 C.F.R. Section 120.17.

[20] Export Controls Act of 2018, Pub. L. 115–232, div. A, title XVII, subtitle B, part I (Sections 1751–1768), 132 Stat. 2209 (50 U.S.C. 4811 et seq.). Part of the Export Control Reform Act of 2018, Pub. L. 115–232, div. A, title XVII, subtitle B (Sections 1741–1781), Aug. 13, 2018, 132 Stat. 2208 (50 U.S.C. 4801 et seq.).

[21] 15 C.F.R. Sections 730 et seq.

Control Act of 1976[22] and its implementing regulations: the International Traffic in Arms Regulations.[23] Here, the preferred terms are 'defense article' and 'technical data'. For the purpose of this chapter, I will use goods, services, and technology in a generic way. Where appropriate, I will refer to the terms common to that jurisdiction.

5.3 International Law

As discussed above, the right of states to use force in self-defence and for peace-enforcement and peace-operations entails the right to possess and sell arms or otherwise transfer them abroad. The freedom of states to exercise the latter rights has been considerably limited as public international law developed over the past century. Currently, multiple subdisciplines of public international law increasingly impact the discretion of national legislators to control the export of military and dual-use items. The law of armed conflict prohibits and regulates the use of specific categories of weapons in armed conflict. Further limitations apply in peace-time where the law of arms control sets out rules on the production, testing, stockpiling, transfer, or deployment of certain types of weapons. In addition, sanctions law restricts the export of military and dual-use items to embargoed States and entities. Furthermore, human rights concerns increasingly are to be taken into account on every level of decision-making with respect to export control.

Most of the international rules on export control are laid down in international agreements (treaties) concluded between states or are part of international customary law. Additional non-legal commitments flow from informal arrangements, such as the export control regimes like the Wassenaar Arrangement (see Chap. 3). States are obliged to implement and enforce the rules as provided in the various instruments to which they are a party. Also, when a state does not comply with the provisions in the instruments, it may become subject to international sanctions, and it may cause other states to deny or restrict the transfer of military or dual-use items to the non-compliant state. For instance, the EU requires member states to take a number of criteria into consideration before granting an export license for military items.[24] The criteria include compliance with arms embargoes, obligations under non-proliferation treaties, commitments under the export control regimes, and respect for human rights and the law of armed conflict. This section provides an overview of these subdisciplines of public international law.

[22] Arms Export Control Act of 1976, Pub. L. 90–629, 82 Stat. 1320 (22 U.S.C. 2751 et seq.).

[23] 22 C.F.R. Sections 120–130.

[24] Council Common Position 2008/944/CFSP of 8 December 2008 defining rules governing control of exports of military technology and equipment (OJ L 335, 13.12.2008, pp. 99–103).

5.3.1 The Law of Armed Conflict

Perhaps the oldest subdiscipline of public international law relevant to export control is the law of armed conflict (or: international humanitarian law). This field of law is based on the idea that the horrors of armed conflict should be limited as much as is feasible by protecting the victims of armed conflict and restricting the means and methods of warfare. This body of law has expanded in its scope and application since World War II. Consequently, the scope of armed conflict is broad encompassing international armed conflicts between two or more states as well as internal (or: non-international) armed conflicts that take place between a state and organized armed groups or between such groups within its territory.[25] Warfighting has been subject to customary rules and religious norms for centuries (e.g., the prohibition of the use of slings and (cross)bows against Christians as stated in Canon 29 of the Second Council of the Lateran in 1139).[26] The codification of this field of law started in the second half of the 19th century and continues today. Two topics that are in particular relevant for international military trade are discussed below: neutrality law and weapons law.

5.3.1.1 Neutrality Law

States that do not participate in an international armed conflict are neutral and have the right not to be adversely affected by the hostilities.[27] This entails the right to continue international trade and maintain existing commercial relations with the parties to the conflict.[28] The principle of non-participation prohibits, however, neutral states to make available war materials to one or more of the parties to the conflict. The issue was addressed in the 1856 Paris Declaration, the very first treaty on the law of armed conflict. The Paris Declaration protects neutral maritime trade by prohibiting parties to a conflict from seizing enemy goods on neutral vessels or neutral goods on enemy vessels except for "contraband of war".[29] The 1906 Hague Convention XIII specifically prohibits neutral States to supply directly or indirectly "war-ships, ammunition, or war material of any kind whatever".[30]

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[25] "Armed conflict exists whenever there is a resort to armed force between States or protracted armed violence between governmental authorities and organized armed groups or between such groups within a State." 2 October 1995, International Criminal Tribunal for the Former Yugoslavia, Prosecutor v. Tadic, Case No. IT-94-1-I, Decision on Defence Motion for Interlocutory Appeal on Jurisdiction.

[26] Referred to by Boothby 2016, p. 9.

[27] Bothe 2013, p. 549. Neutrality rules are necessary to prevent escalation of a conflict.

[28] Subsequent changes in trade activities favouring one of the parties would be incompatible with the neutral status, however. Bothe 2013, p. 550.

[29] Point 2 and 3 of the Declaration Respecting Maritime Law; Paris, 16 April 1856. British State Papers 1856, Vol. LXI, pp. 155–158.

[30] Article 6 of the Hague Convention (XIII) Concerning the Rights and Duties of Neutral Powers in Naval Warfare; The Hague, 17 October 1907. https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Treaty.xsp?documentId=06A47A50FE7412AFC12563CD002D6877&action=openDocument Accessed 16 February 2021.

Closely related to neutrality law is the law of blockade. This part of the law of armed conflict deals with a method of economic warfare at sea aimed at preventing all vessels from entering or exiting enemy coastal areas or ports.[31] A historical example is the blockade by the Dutch Republic of Flemish port under the control of the Kingdom of Spain in 1584.[32] Initially, the Dutch activities were widely criticized as a violation of neutrality law because of their impact on the trade of neutral States with the Spanish held cities. However, as other naval powers were quick to follow suit the right to declare a blockade developed as a customary rule and was included in the Paris Declaration (point 4) in 1856.[33] Blockades are still relevant today[34] and are also mentioned as one of the actions the UN Security Council can take under Article 42 UN Charter to maintain or restore international peace and security (see Sect. 5.3.3).[35]

5.3.1.2 Weapons Law

Weapons law is the part of the law of armed conflict that essentially prohibits the use of certain weapons in armed conflict and restricts the circumstances in which other weapons may lawfully be used.[36] Moreover, States Parties to the Additional Protocol I to the Geneva Conventions[37] have to make sure that in the study, development, acquisition, or adoption of a new weapon international law does not prohibit its deployment (Article 36). Consequently, states considering importing new weapons must respect this obligation and incorporate it into their acquisition procedures.

Hague Convention (V) Respecting the Rights and Duties of Neutral Powers and Persons in Case of War on Land; The Hague, 17 October 1907. https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Treaty.xsp?documentId=71929FBD2655E558C12563CD002D67AE&action=openDocument Accessed 16 February 2021.

[31] Heintschel von Heinegg 2013, p. 532. Today, the law of blockade includes activities of aircraft.

[32] Drew 2017.

[33] Heintschel von Heinegg 2013, p. 533. In order for a blockade to be binding, it had to be effective, that is: maintained by a force sufficient to prevent access to the enemy coast.

[34] For example, the ongoing blockades of the Gaza Strip by Israel and Egypt and Yemen by Saudi Arabia and its allies.

[35] The law of blockade is also part of the non-legally binding San Remo Manual on International Law Applicable to Armed Conflicts at Sea of 12 June 1994. An important improvement are provisions on proportionality and the protecting of the civil population; para 96ff.

[36] Boothby 2016, p. 3; referring to the U.S. Department of Defense Law of War Manual of June 2015.

[37] Protocol additional to the Geneva Conventions of 12 August 1949, and relating to the protection of victims of international armed conflicts (Protocol I); Geneva 1977, entered into force 7 December 1978 (Vol. 1125 UNTS 1986, No. 17512).

Weapons law is based on the rationale that the means to conduct hostilities in armed conflict find their limits in humanitarian considerations.[38] The first international instrument in this field is the 1868 St Petersburg Declaration[39] prohibiting the use of certain explosive projectiles. Other instruments soon followed often concentrating on the codification of the customary prohibition of poisoned weapons (e.g., the Declaration concerning Asphyxiating Gases of 29 July 1899 and the Treaty of Versailles of 28 June 1919).[40] The use of various types of gases in World War I led to the adoption of the Gas Protocol in 1925,[41] prohibiting the use in armed conflict of "asphyxiating, poisonous or other gases, and of all analogous liquids materials or devices" as well "the use of bacteriological methods of warfare".

Building on this Protocol, that is still in force today, new agreements were concluded over the past few decades. In 1972, the Convention on the Prohibition of Biological Weapons[42] negotiated by the Conference on Disarmament[43] was opened for signature. The agreement prohibits the development, production, stockpiling, and otherwise acquiring or retaining of biological and toxin weapons,[44] making it the first multilateral treaty banning an entire category of weapons of mass destruction. By no longer focusing on the use of the weapons, an overlap has been created with the law of arms control, which will be further addressed in the next section.

The prohibition of chemical weapons was further developed in the Chemical Weapons Convention of 1993.[45] The agreement prohibits the development, production, stockpiling, and use of chemical weapons. In addition, States are required to

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[38] See the preamble of the St Petersburg Declaration of 1868, "that Commission having by common agreement fixed the technical limits at which the necessities of war ought to yield to the requirements of humanity".

[39] Declaration Renouncing the Use, in Time of War, of Explosive projectiles under 400 Grammes Weight; Saint Petersburg, 29 November/11 December 1868. https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Treaty.xsp?documentId=3C02BAF088A50F61C12563CD002D663B&action=openDocument Accessed 16 February 2021.

[40] Boothby 2016, p. 12 and p. 104.

[41] Protocol for the Prohibition of the Use of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare; Geneva, 17 June 1925. https://ihl-databases.icrc.org/ihl/INTRO/280?OpenDocument Accessed 16 February 2021. The document was adopted as a separate document together with the Convention for the Supervision of the International Trade in Arms, Munitions and Implements of War; Geneva 17 June 1925, which did not enter into force.

[42] Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction; London, Moscow and Washington, 10 April 1972; entered into force 26 March 1976 (Vol. 1015 UNTS 1994, No. 14860).

[43] The "single multilateral disarmament negotiating forum of the international community", https://www.unog.ch/80256EE600585943/(httpPages)/BF18ABFEFE5D344DC1256F3100311CE9?OpenDocument Accessed 16 February 2021. The Conference also negotiated a number of other agreements discussed in this chapter.

[44] The Agreement does not prohibit the use of these weapons but the Member States have expressly accepted the prohibition on the use of biological weapons at a number of Review Conferences; Lentzos 2019, p. 3.

[45] Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction; Paris, 13 January 1993; entered into force 29 April 1997 (Vol. 1974/1975 UNTS 2001, No. 33757).

destroy production facilities for chemical weapons as well as the weapons themselves (Article I). The Organization for the Prohibition of Chemical Weapons, established pursuant to Article VII, monitors compliance with the Chemical Weapons Convention.

Whereas the non-proliferation of nuclear weapons has already been addressed in various international instruments, as will be discussed in the next section, the threat or use of these weapons was not prohibited under international law.[46] This situation has changed with the entry into force of the Nuclear Weapon Ban Treaty on 22 January 2021, which prohibits the threat and use of nuclear weapons as well as other actions. Although none of the States currently in possession of this type of weapons is a party to the treaty, it signifies a further step towards nuclear disarmament.

In 1980, the Certain Conventional Weapons Convention[47] became the basis for restrictions to the use of certain conventional weapons as set out in protocols to the Convention. These Protocols cover weapons such as mines and booby-traps (Protocol II),[48] incendiary weapons (Protocol III),[49] and blinding laser weapons (Protocol IV).[50] The latter Protocol prohibits the use as well as the transfer of such weapons further strengthening the link between the law of armed conflict and the law of arms control. Outside the framework of the Certain Conventional Weapons Convention, States adopted several other agreements on conventional weapons, such as the Anti-Personnel Mine Ban Convention[51] and the Convention on Cluster Munition.[52] Parties to these treaties have agreed to neither use these weapons nor "to develop, produce, otherwise acquire, stockpile, retain or transfer to anyone, directly or indirectly" them. In the future, new and emerging technologies, such as artificial intelligence and nanotechnology, or items based thereon[53] may become subject of international agreements restricting their further development or use.

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[46] ICJ 8 July 1996; Nuclear Weapons Advisory Opinion, para 105.

[47] Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects; Geneva, 10 October 1980; entered into force 2 December 1983 (Vol. 1342 UNTS 1992, No. 22495).

[48] Protocol (II) on Prohibitions or Restrictions on the Use of Mines, Booby-Traps and Other Devices. Geneva, 10 October 1980; entered into force 2 December 1983 (Vol. 1342 UNTS 1992, No. 22495).

[49] Protocol on Prohibitions or Restrictions on the Use of Incendiary Weapons (Protocol III). Geneva, 10 October 1980; entered into force 2 December 1983 (Vol. 1342 UNTS 1992, No. 22495).

[50] Protocol on Blinding Laser Weapons (Protocol IV to the 1980 Convention); Vienna, 13 October 1995; entered into force 30 July 1998 (Vol. 2024 UNTS 2001, No. 22495).

[51] Ottawa Treaty: Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction; Oslo, 18 September 1997; entered into force 1 March 1999 (Vol. 2056 UNTS 2002, No. 35597).

[52] Convention on Cluster Munitions; Dublin, 30 May 2008; entered into force 1 Augustus 2010 (Vol. 2688 UNTS 2010, No. 47713).

[53] E.g., emerging technologies in the area of lethal autonomous weapon systems.

5.3.2 *The Law of Arms Control*

The ultimate goal of arms control is to preserve international peace and security by easing international tensions and reducing the likelihood of large scale armed conflicts. Therefore, the law of arms control not only prohibits the use of certain types of weapons, as the law of conflict does, but also covers the peacetime production, testing, stockpiling, or transfer thereof.[54] This field of law can be defined as "that part of public international law that deals both with the restraints internationally exercised upon the use of military force (in general) and on the use, transfer and/or the possession of armaments (in particular), including their component parts and related technologies, whether in respect of the level of armaments, their character or deployment and with the applicable supervisory mechanisms".[55] The definition casts the net quite wide, encompassing concepts such as disarmament and non-proliferation law.[56] As it is hard to keep these associated areas separated from one another, they will be discussed together under the umbrella term of arms control.

5.3.2.1 Development

As with export control law, the law of arms control has a long history. One of the early agreements includes the 1890 Brussels Conference Act,[57] the main purpose of which was to fight the slave trade. Part of the agreed measures was the restriction of the transfer of modern firearms to parts of the African continent. The agreement was not very effective and was supplemented and revised in the aftermath of World War I by the Convention of Saint-Germain-en-Laye.[58] The purpose of this treaty was to submit all members of the newly established League of Nations to the control of the trade in arms and ammunition pursuant to Article 23(d) of the League of Nations

[54] Boothby 2020, p. 372, quoting Roberts A, Guelff R (2000) Documents on the Laws of War, 3rd ed. Oxford University Press, Oxford, p. 37.

[55] Myjer and Herbach 2018, p. 209.

[56] In general, arms control is considered the broader concept whereas disarmament is aimed at reducing the number of arms or the eliminations of whole categories of weapons and non-proliferation deals with the prevention of the spread of weapons of mass destruction and conventional arms, such as missiles; North Atlantic Treaty Organisation 2020, Arms control, disarmament and non-proliferation in NATO. https://www.nato.int/cps/en/natolive/topics_48895.htm Accessed 16 February 2021.

[57] General Act of the Brussels Conference relative to the Africa Slave Trade (also known as the Convention Relative to the Slave Trade and Importation into Africa of Firearms, Ammunition, and Spiritous Liquors); Brussels, 2 July 1890; entered into force 31 August 1891. https://www.loc.gov/law/help/us-treaties/bevans/m-ust000001-0134.pdf Accessed 16 February 2021.

[58] Convention for the control of the trade in arms and ammunition; St. Germain-en-Laye, 10 September 1919 (8 LNTS 26; The American Journal of International Law, Vol. 15, No. 4, Supplement: Official Documents (Oct, 1921), 297–313)). https://archive.org/stream/jstor-2213279/2213279_djvu.txt Accessed 16 February 2021.

Covenant.[59] The agreement did not enter into force, however. Efforts to revive the Convention of Saint-Germain-en-Laye at a conference in Genève a couple of years later were unsuccessful.[60] Nonetheless, the conference was no total failure as it also adopted the Gas Protocol, discussed above.

The development of the law of arms control really took off in the post-World War II period. Key in its development were the rise and further development of nuclear weapons and missile technology.[61] It was, however, not until the end of the Cold War, when international relations became more balanced, that arms control matured and the law of arms control became a separate branch of public international law.[62] This field of law covers conventional weapons as well as weapons of mass destruction. Examples of treaties dealing with conventional arms and forces are the Treaty on Conventional Armed Forces in Europe[63] and the Treaty on Open Skies. Also, at this point, the Arms Trade Treaty may be mentioned which purpose is not to prohibit the international trade in arms, but to regulate the legitimate conventional arms trade.[64]

5.3.2.2 Nuclear Weapons

Today, attention is focused on the weapons of mass destruction. The previous section already discussed biological and chemical weapons. This section further focuses on nuclear weapons. The rules regarding nuclear weapons and technology are laid down in multiple multilateral treaties as well as bilateral treaties between the two leading nuclear powers of the past decades: the US and Russia. The cornerstone of international efforts to control the proliferation of nuclear weapons is the Non-Proliferation Treaty of 1968.[65] The five states in possession of nuclear weapons at the time of signing of the treaty (the nuclear-weapon states[66]) committed themselves to not transferring nuclear weapons or technology to any other State (Article I). The non-nuclear-weapon states, for their part, agreed not to manufacture or acquire

[59] The Covenant of the League of Nations; Versailles, 28 June 1919. https://avalon.law.yale.edu/20th_century/leagcov.asp Accessed 16 February 2021. Stockholm International Peace Research Institute 1971, p. 91.

[60] Stockholm International Peace Research Institute 1971, p. 95.

[61] Myjer 2020, p. 352.

[62] Myjer 2020, p. 354.

[63] Treaty on Conventional Armed Forces in Europe; Paris 19 November 1990; entered into force 9 November 1992 (Vol. 2442 UNTS 2007, No. 44001) limiting NATO and Warsaw Pact non-nuclear for forces in Europe. On 26 April 2007 Russia suspended its participation in the treaty, but did not withdraw; Woolf et al. 2020, p. 40.

[64] Conventional arms include: battle tanks, armored combat vehicles, large-caliber artillery system, combat aircraft, attack helicopters, warships, missiles and missile launchers and small arms and light weapons; Article 2(2) Arms Trade Treaty. Under the Treaty, States are not to authorize arms transfer that would violate a UN arms embargo or when they have knowledge that the arms would be used to commit war crimes.

[65] Grotto 2009. Treaty on the Non-Proliferation of Nuclear Weapons; London, Moscow and Washington, 1 July 1968; entered into force 5 March 1970 (Vol. 729 UNTS 1974, No. 10485).

[66] The US, the United Kingdom, France, Russia and China.

nuclear weapons (Article II) and to accept monitoring of their civil nuclear programs by the International Atomic Energy Agency, IAEA (Article III).

Article VI of the Non-Proliferation Treaty calls upon states to end the nuclear arms race and complete nuclear disarmament. As the nuclear-weapons states failed to make progress on nuclear disarmament, humanitarian initiatives led to the adoption of the Nuclear Weapons Ban Treaty in 2017. This instrument includes a set of prohibitions on participating in any nuclear weapon activities, such as developing, testing, producing, acquiring, possessing, stockpiling, using or threatening to use nuclear weapons (Article 1). Ultimately, it must lead towards their total elimination (Article 4).

Earlier treaties on nuclear non-proliferation, some preceding the Non-Proliferation Treaty, cover areas such as the prohibition of nuclear weapons tests and the establishment of Nuclear-Weapon-Free Zones. The Limited (or: Partial) Test Ban Treaty[67] restricts the testing of nuclear weapons in the atmosphere, underwater, and in outer space. It does, however, not prohibit nuclear test explosions underground. The latter issue is partly covered by the Threshold Test Ban Treaty between the US and Russia,[68] which prohibits nuclear tests having a yield exceeding 150 kilotons. Nuclear testing should definitely come to an end with the entry into force of the Comprehensive Test Ban Treaty which is to ban all nuclear tests world-wide.[69]

The prohibition on nuclear testing is also part of regional agreements on Nuclear-Weapon-Free Zones.[70] Their scope is much broader, though, and generally include bans on the development, manufacturing, control, possession, stationing or transporting of nuclear weapons in a given area. The first of such agreements was the Treaty of Tlatelolco signed by Latin American and the Caribbean States in 1967.[71] Other regional nuclear-weapon-free zones agreements cover areas in the South Pacific,[72]

[67] Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and under Water; Moscow, 5 August 1963; entered into force 10 October 1963 (Vol. 480 UNTS 1965, No. 6964). Nuclear-Weapon States France and China are not party to the treaty.

[68] Treaty on the Limitation of Underground Nuclear Weapon Tests (with protocol dated at Washington on 1 June 1990); Moscow 3 July 1994; entered into force 5 March 1970 (Vol. 1714 UNTS 1999, No. 29637).

[69] Comprehensive Nuclear-Test-Ban Treaty, New York, 10 September 1996; not entered into force. https://www.ctbto.org/the-treaty/treaty-text/ Accessed 16 February 2021.

[70] Such a regional approach to nuclear non-proliferation and disarmament is allowed under Article VII of the 1968 Non-Proliferation Treaty.

[71] Treaty of Tlatelolco: Treaty for the Prohibition of Nuclear Weapons in Latin America; Mexico City, 14 February 1967; entered into force 22 April 1968 (Vol. 634 UNTS 1970, No. 9068).

[72] Treaty of Rarotonga: South Pacific Nuclear Free Zone Treaty; Rarotonga, 6 August 1985; entered into force 11 December 1986 (Vol. 1445 UNTS 1996, No. 24592).

Southeast Asia,[73] Central Asia,[74] and Africa.[75] Also, treaties for Antarctica,[76] Outer Space,[77] the Seabed,[78] and the Moon,[79] include provisions on denuclearization of areas that do not belong to a particular State.

As early as the Cold War era, the two major nuclear powers, the US and Russia (formerly the Soviet Union) entered into a number of agreements significantly reducing the number of nuclear weapons. Under the Intermediate-Range Nuclear Forces (INF) Treaty,[80] both States agreed to eliminate their intermediate-range and shorter-range ground-launched ballistic and cruise missiles with a range between 500 and 1500 kilometres. The number of strategic nuclear weapons of both States was reduced under the START 1 (1991),[81] the SORT,[82] and the New START (2010) agreements. In the latter agreement the US and Russia limit the number

[73] The Bangkok Treaty: Treaty on the Southeast Asia Nuclear Weapon-Free Zone; Bangkok, 15 December 1995; entered into force 27 March 1997 (Vol. 1981 UNTS 2001, No. 33873).

[74] The Semipalatinsk Treaty: Treaty on a Nuclear-Weapon-Free Zone in Central Asia; Semipalatinsk, 8 September 2006; entered into force 21 March 2009 (Vol. 2970 UNTS, No. 51633). The UN General Assembly has recognized the self-declared nuclear-weapon-free status of Mongolia in Resolution 55/33S, "Mongolia's international security and nuclear weapon free status".

[75] Pelindaba Treaty: African Nuclear-Weapons-Free Zone Treaty; Cairo 11 April 1996; entered into force 15 July 2009. https://www.iaea.org/publications/documents/treaties/african-nuclear-weapon-free-zone-treaty-pelindaba-treaty Accessed 16 February 2021.

[76] The Antarctic Treaty; Washington, 1 December 1959; entered into force 23 June 1961 (Vol. 402 UNTS 1962, No. 5778).

[77] Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies; London, Moscow and Washington, 27 January 1967; entered into force 10 October 1967 (Vol. 610 UNTS 1970, No. 8843).

[78] Treaty on the Prohibition of the Emplacement of Nuclear Weapons and Other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof; London, Moscow and Washington: 11 February 1971; entered into force: 18 May 1972 (Vol. 955 UNTS 1983, No. 13678).

[79] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies; New York: 18 December 1979; entered into force 11 July 1984 (Vol. 1363 UNTS 1992, No. 23002).

[80] Treaty between the United States of America and the Union of Soviet Socialist Republics on the Elimination of their Intermediate-Range and Shorter-Range Missiles; Washington, 8 December 1987; entered into force 1 June 1988, ceased to be in force on 2 August 2019, after the U.S. withdrawal (Vol. 1657 UNTS 2001, No. 28521).

[81] START I: Treaty Between the Union of Soviet Socialist Republics and the United States of America on the Reduction and Limitation of Strategic Offensive Arms; Moscow, 31 July 1991; entered into force 5 December 1994. Start II, banning the use of multiple independently targetable reentry vehicles (MIRVs) on intercontinental ballistic missiles (ICBMs) never entered into force (Treaty Between the Union of Soviet Socialist Republics and the United States of America on the Reduction and Limitation of Strategic Offensive Arms; Moscow, 3 January 1993; expired 5 December 2009 with the entry into force of the Strategic Offensive Reductions Treaty.

[82] Treaty between the Russian Federation and the United States of America on Strategic Offensive Reductions; Moscow 25 May 2002; entered into force 1 June 2003 (Vol. 2350 UNTS 2008, No.

of nuclear warheads on deployed intercontinental ballistic missiles, submarine-launched ballistic missiles, and heavy bombers to 1,550 shored up by a robust verification mechanism.[83]

5.3.2.3 Multi-layered System

The law of arms control is conventional in nature. It is based on a series of bilateral and multilateral treaties rather than customary law. It is further strengthened and supplemented by binding decisions of international organizations, in particular UN Security Council Resolution 1540,[84] and several soft law instruments called the export control regimes (see Chap. 3).[85] The final layer of the law of arms control can be found in the national legal systems as States are obliged to implement and enforce the internationally agreed rules in their domestic legal system. Of course, states parties to an international agreement are obliged to implement and enforce the agreement in accordance with its terms. Moreover, Resolution 1540 creates a universal obligation for all states to "take and enforce effective measures to establish domestic controls to prevent the proliferation of nuclear, chemical, or biological weapons and their means of delivery, including by establishing appropriate controls over related materials".[86]

Consequently, an expanding multi-layered system of interconnected legal norms has been created covering weapons of mass destruction, as well as conventional weapons and forces that have to be incorporated in domestic export control law. Despite the high level of regulation, the system faces multiple challenges. Some states still have weapons of mass destruction, and some even do not shy away from using them, as, for example, the chemical weapons attacks in Syria show. The US has withdrawn from the INF-treaty and the Treaty on Open Skies.[87] Other treaties have not entered into force yet, such as the Comprehensive Test Ban Treaty and the Adapted Conventional Armed Forces in Europe Treaty. Furthermore, the

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42195). The treaty was superseded by the New START on 5 February 2011: Treaty between the United States of America and the Russian Federation on Measures for the Further Reduction and Limitation of Strategic Offensive Arms; Prague 8 April 2010, entered into force on 5 February 2011 (TIAS 11-205).

[83] The U.S. and Russia have agreed to extend the treaty through 4 February 2026: Agreement between the United States of America and the Russian Federation Amending the Treaty of 8 April 2010; Moscow 26 January 2021 (TIAS 21-203).

[84] UN Doc S/RES/1540 (2004), 28 April 2004.

[85] The politically binding coordinating arrangements within the framework of the current export control regimes include: the Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, the Nuclear Suppliers Group and the Zangger Committee (nuclear material and technology); the Australia Group (chemical and biological weapons), and the Missile Technology Control Regime.

[86] As the UNSC acted under Chapter VII of the UN Convention, this obligation is binding on all member States in accordance with Article 25 UN Charter.

[87] In May 2020 the U.S. announced its intention to withdraw from the treaty. The withdrawal took effect on 22 November 2010. Woolf 2020.

question arises whether the existing rules are sufficiently capable of dealing with emerging technologies, such as additive manufacturing, artificial intelligence, big data analytics, bio-technology, and nanotechnology.

5.3.3 Sanctions Law

Throughout history, states have used sanctions as a powerful political tool to exert influence on other states or even to coerce them into changing their behavior.[88] Typically, sanctions were imposed in the context of armed conflicts or disputes falling short of war.[89] Building on that practice, sanctions became part of the collective security system of the League of Nations as an alternative to the use of armed force.[90] One of the fiercest supporters of the sanctions paragraph in the League of Nations Covenant was US President Wilson. Addressing a House of Representative Subcommittee he stated, "Apply this economic, peaceful, silent, deadly remedy and there will be no need for force. It does not cost a life outside the nation boycotted, but it brings a pressure upon the nation which, in my judgment, no modern nation could resist".[91] The League invoked its authority to impose sanctions on several occasions with varying degrees of success, for example, after Italy had invaded Ethiopia in October 1935.[92]

5.3.3.1 UN Collective Security

The prohibition on the use of force as mentioned in Sect. 5.2 is the central element of the present system of collective security in which the international community has tasked the UN to maintain international peace and security (Article 1(1) UN Charter). Within the system, the UN Security Council plays a critical role. After determining

[88] Today, the reasons for sanctions range widely and include support for terrorism, narcotics trafficking, proliferation of weapons of mass destruction, and human rights abuses.

[89] Nevill 2016, p. 234.

[90] See Article 16 of the Covenant of the League of Nations, "Should any Member of the League resort to war in disregard of its covenants under Articles 12, 13 or 15, it shall ipso facto be deemed to have committed an act of war against all other Members of the League, which hereby undertake immediately to subject it to the severance of all trade or financial relations, the prohibition of all intercourse between their nationals and the nationals of the covenant-breaking State, and the prevention of all financial, commercial or personal intercourse between the nationals of the covenant-breaking State and the nationals of any other State, whether a Member of the League or not".

[91] Quoted in Elliott KA (1997) Evidence on the costs and benefits of economic sanctions. https://www.piie.com/commentary/testimonies/evidence-costs-and-benefits-economic-sanctions Accessed 16 February 2021. Padover 1942, p. 108.

[92] Fleming 1935 p. 22. Further League of Nations Sanctions: 1921 Yugoslavia, 1925 Greece, 1932–5 Paraguay and Bolivia, and 1935–36 Italy; Summary of economic sanctions episodes, 1914–2006, Peterson Institute for International Economics. https://www.piie.com/summary-economic-sanctions-episodes-1914-2006 Accessed 16 February 2021.

the existence of a threat to international peace and security (Article 39 of the UN Charter), the Council can take action and even authorize the use of armed force to restore peace and security. The use of force is, however, an *ultimum remedium* and the Council can refrain from military action and opt for less intrusive measures under Article 41 of the UN Charter, such as sanctions.

Modern sanctions can be described as "non-forcible (i.e., non-military) foreign policy measures adopted by states or international organisations and designed, possibly among other things, to influence other states or non-state entities or individuals to change their behaviour or take a particular course of action".[93] They generally take the form of financial sanctions, such as asset freezes and bans on the provision of financial services; trade and arms embargoes;[94] and travel bans.[95]

During the Cold War, the UN Security Council only managed to create two sanctions regimes.[96] The first was established in 1968, targeting Southern Rhodesia,[97] the second a decade later, targeting South Africa.[98] Right after the Cold War had come to an end, the Council became increasingly active. In 1990, it hit Iraq with a full trade embargo after the invasion of Kuwait,[99] followed in 1993 with sanctions on Haiti after the military coup in the country.[100] These comprehensive sanctions imposed by the UN turned out to be a 'blunt instrument'[101] and sometimes, as President Wilson had foreseen, a 'deadly remedy'. The sanctions had a disproportionate humanitarian impact of the civilian population contributing to increasing rates of infant mortality, disease, and malnutrition.[102] Consequently, the UN turned to more focused sanctions, now referred to as targeted or smart sanctions, aimed at specific groups and entities within the sanctioned State. Also, non-State actors, such as terrorist groups, have become subject to sanction regimes as the sanctions on Al-Qaida show.[103] Recently, sanctions programs have been established not so much targeting a particular state or actor, but rather a specific economy sector or topic, such as human rights[104] or cyber

[93] Gordon et al. 2019, p. 2.

[94] Usually preventing the sale, supply, or transfer of weapons to the sanctioned State; Gordon et al. 2019, p. 17.

[95] Gordon et al. 2019, pp. 2–3.

[96] A UN sanctions regime "is a particular package of sanctions measures adopted in relation to a particular state or situation"; Gordon et al. 2019, p. 6.

[97] UN Doc S/RES/253 (1968) of 29 May 1968.

[98] UN Doc S/RES/418 (197) of 4 November 1977.

[99] UN Doc S/RES/661 (1990) of 6 August 1990.

[100] UN Doc S/RES/841 (1993) of 16 June 1993.

[101] UN Doc A/50/60; S/1995/1 of January 1995, Supplement to an agenda for peace: position paper of the secretary-general on the occasion of the fiftieth anniversary of the united nations, para 70.

[102] Gordon et al. 2019, p. 29.

[103] UN Doc S/RES/1267 (1999); UN Security Council Resolution 1267 of 15 October 1999 establishing a sanctions regime to cover individuals and entities associated with Al-Qaida, Osama bin Laden and/or the Taliban.

[104] The UK Global Human Rights Sanctions Regulations 2020 of 6 July 2020 made under the Sanctions and Money Laundering Act 2018.

activities,[105] allowing for the sanctioning of persons and other entities regardless of their relationship with a particular State (horizontal sanctions).[106]

From a legal perspective, UN sanctions are a powerful instrument. As many of the sanctions regimes are established under Chapter VII of the UN Charter, the UN Security Council Resolutions imposing the sanctions are binding on all UN member states pursuant to Article 25 of the UN Charter. In addition, Article 48(1) of the UN Charter instructs the member states to take the necessary action to carry out the decisions of the Security Council. Last, but not least, Council decisions take precedence over other obligations of a member state under any international agreement (Article 103 UN Charter). Therefore, states will have to implement and enforce the UN sanctions in accordance with the terms of the relevant Resolutions and regardless of possible other arrangements the States have previously agreed upon.

5.3.3.2 Legality of Autonomous Sanctions

As the definition of sanctions mentioned above makes clear, the UN does not have the exclusive right to impose sanctions. Today, states, as well as international organizations, in particular the EU, have become very active in this field and have imposed sanctions in addition to or even absent a UN sanction as an alternative means of achieving their foreign and security policy goals. This type of sanctions is referred to as autonomous (or sometimes: unilateral) sanctions. Whereas the UN sanctions are part of the global collective security system and consequently firmly based on the provisions of the UN Charter, the legality of autonomous sanctions is less evident.

The starting point is that under international law, a sovereign state is not obliged to maintain economic relations with other states and, therefore, has the legal discretion to choose with which other states it will conduct business.[107] Consequently, it may unilaterally restrict or even terminate its international trade relations in the absence of a treaty commitment limiting that freedom. In international law, such a unilateral action can be qualified as retorsion. A retorsion does not violate any obligation owed to any particular state or the international community as a whole. Although it is often described as an unfriendly act of a state *vis-à-vis* another state, it is a lawful reaction to an unfriendly or unlawful act by that other state and therefore admissible.

As sanctions are coercive by nature they can be illegitimate on other grounds. Although typically they cannot be classified as use of force,[108] they may breach the principle of non-intervention[109] that denies states the right to intervene in the internal

[105] Council Regulation (EU) 2019/796 of 17 May 2019 concerning restrictive measures against cyber-attacks threatening the Union or its Member States (OJ L 129I, 17.5.2019, pp. 1–12).

[106] Portela (2019) The spread of horizontal sanctions. CEPS Commentary, 7 March 2019. https://www.ceps.eu/the-spread-of-horizontal-sanctions/ Accessed 16 February 2021.

[107] Ohler 2012, para 14; Joyner 2016, p. 193.

[108] The use of force or the threat thereof is prohibited under international law, as was discussed in Sect. 5.2. Use of force normally entails some measure of military force. Obviously, economic sanctions do not meet that requirement.

[109] Study European Parliament 2020, p. 54.

or external affairs of any state.[110] Regarding the principle, the UN Declaration on Friendly Relations holds, "No State may use or encourage the use of economic, political or any other type of measures to coerce another State in order to obtain from it the subordination of the exercise of its sovereign rights and to secure from it advantages of any kind."[111] Whether or not sanctions meet this fairly high threshold has to be decided on a case by case basis. In the Nicaragua-case, for instance, the Court held that it was unable to regard US economic actions with respect to Nicaragua, including a full trade embargo,[112] "as a breach of the customary-law principle of non-intervention".[113]

Sanctions may also be unlawful when issued in breach of a treaty obligation. Examples are trade provisions in bilateral 'treaties of friendship, commerce, and navigation' and 'bilateral investment treaties'.[114] With respect to the former, the International Court of Justice in the Nicaragua-case found that the US trade embargo of Nicaragua had violated Article XIX of the Treaty of Friendship, Commerce and Navigation between the two States.[115] Also, after the US had reimposed its sanctions against Iran following its withdrawal from the Iran Nuclear Deal[116] in 2018, Iran instituted proceedings against the US before the International Court of Justice.[117] In its application Iran claims that the re-imposition of the sanctions violates the Treaty of Amity, Economic Relations and Consular Rights between both states.[118]

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[110] Recently, China called US sanctions on Chinese officials over their alleged role in suppressing dissent in Hong Kong an interference with China's internal affairs and a violation of international law; Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference on 30 November 2020. https://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/t1836732.shtml Accessed 16 February 2021.

[111] UN Doc A/RES/2625(XXV) of 24 October 1970, Declaration on Principles of International Law concerning Friendly Relations and Cooperation among States in accordance with the Charter of the United Nations. The principle concerning the duty not to intervene in matters within the domestic jurisdiction of any State, in accordance with the Charter.

[112] Adopted by the U.S. President by Executive Order on 1 May 1985; ICJ 27 June 1987; Nicaragua Case, para 279.

[113] Nicaragua Case, para 245.
Ohler 2012, para 21.

[114] Treaties of friendship, commerce, and navigation were typically concluded in the post-World War II era whereas bilateral investment agreements, focusing on the terms and conditions for private investments, have become more common today; Ohler 2012, para 20.

[115] Treaty of Friendship, Commerce and Navigation; Manugua, 21 January 1956 (Vol 367 UNTS 1960, No. 5224). Article XIX provides that "Between the territories of the two Parties there shall be freedom of commerce and navigation". Nicaragua Case, para 279.

[116] Joint Comprehensive Plan of Action; Vienna, 18 October 2015; came into effect 16 January 2016; Annexed to UN Doc S/RES/2231 (2015). Signatories: Iran, China, France, Russia, UK, U.S., Germany and the EU.

[117] Application Instituting Proceedings Filed in the Registry of the Court on 16 July 2018, Alleged Violations of the 1955 Treaty of Amity, Economic Relations, and Consular Rights (Islamic Republic of Iran v United States of America).

[118] Treaty of Amity, Economic Relations and Consular Rights; Tehran, 15 August 1955 (Vol. 284 UNTS 1959–1959, No. 4132).

The most important limitations on a state's discretion to limit international trade relations can be found in the GATT and the GATS,[119] in particular the provisions such as the most-favored nation clause;[120] tariff concessions;[121] the principle of national treatment;[122] the prohibition of quantitative restrictions;[123] and market access rules.[124] However, exceptions are allowed under the general exceptions clauses[125] and the security exceptions clauses (the latter are discussed in Sect. 5.2).

Sanctions that are unlawful in principle can, however, be justified when imposed in response to a previous violation by the targeted state of its international obligations towards the sanctioning state (an internationally wrongful act). Pursuant to the Draft Articles on state responsibility[126] these countermeasures must be aimed at the target state's compliance with its international obligations (Article 49(1)) and must be proportionate (Article 51). The other side of the coin is that secondary sanctions (discussed hereinafter) or sanctions legislation promulgated to further other policy goals, cannot be based on the rules of State responsibility.[127]

Finally, one particular type of sanctions, the so-called secondary or extraterritorial sanctions, has raised broad concerns as they can violate international law. Typically, a national sanctions law or regulation targets the sanctioned state and regulates the behavior of the sanctioning state's nationals, foreign persons present on its territory, and companies incorporated in the state. There is, in other words, a nexus between the regulating state and the person subject to the regulation. Secondary sanctions cast the net much wider and can also subject foreign persons and corporations abroad to the sanction regulations, without any real nexus between the state and these persons. The US in particular has regularly imposed such secondary sanctions[128] causing fierce critique from their trade partners. Several states and the European Union have enacted legislation to block the effects of these secondary sanctions (see Chap. 11).[129]

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[119] Ohler 2012, para 21; Malloy 2003, pp. 378–379. For a detailed analysis see Ruys and Ryngaert 2020.

[120] Article I GATT and Article II GATS.

[121] Article II GATT.

[122] Article III GATT and Article XVII GATS.

[123] Article XI and XIII GATT.

[124] Article XVII GATS.

[125] Article XX GATT and Article XIV GATS.

[126] Draft Articles on Responsibility of States for Internationally Wrongful Acts, UN Doc A/RES/56/83 (2002) of 28 January 2002.

[127] European Parliament 2020, p. 55.

[128] The Cuban Democracy Act of 1992, the Cuban Liberty and Democratic Solidarity Act of 1996, the Iran and Libya Sanctions Act of 1996 (renamed: the Iran Sanctions Act), the Iran Freedom and Counter-Proliferation Act of 2012, the Iran Threat Reduction and Syria Human Rights Act of 2012, the Cuban Assets Control Regulations and the Iranian Transactions and Sanctions Regulations, the Countering America's Adversaries Through Sanctions Act of 2017, the Protecting Europe's Energy Security Act of 2019, Protecting Europe's Energy Security Clarification Act of 2020, and the Hong Kong Autonomy Act of 2020.

[129] EU Blocking Statute: Council Regulation (EC) No 2271/96 of 22 November 1996 protecting against the effects of the extra-territorial application of legislation adopted by a third country, and actions based thereon or resulting therefrom (OJ L 309, 29.22.1996, pp. 1–6), as amended.

5.3.4 Human Rights Law

The final subdiscipline of international law impacting national export control law is human rights law. Human rights refer to the basic rights and freedoms to which all humans are entitled, such as the right to life, freedom of expression, the right to work, and the right to education. Although human rights did not become an international law topic until the second half of the 20th century, the fundamental rights of individuals have been part and parcel of the constitutions of many democracies since the Enlightenment. Historic examples include the US Bill of Rights, passed by the US Congress in 1789 and the French Déclaration des droits de l'homme et du citoyen adopted by the National Constituent Assembly in the same year.

Traditionally, individuals were not a primary concern of public international law. However, some international agreements did attempt to protect the rights of groups of individuals, such as the 1890 Brussels Conference Act pursuing to end slavery. That attitude changed in the wake of World War II, although initially somewhat hesitantly. Article 1(3) of the UN Charter identifies "respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion" as one of the purposes of the new organization, without defining or clarifying the scope of the concept.[130] The UN Human Rights Commission took on the task to draft a document delineating the fundamental rights of all people, which the General Assembly adopted in 1948 as the Universal Declaration of Human Rights.[131] The Declaration covers two types of human rights. The first are the civil and political rights requiring the state to refrain from taking specific actions in order to respect the individual rights that include such matters as the right to life, the freedom of religion, the freedom of speech, the right to due process and a fair trial, and the prohibition of torture. The second type of rights are economic, social and cultural rights, which states are strongly encouraged to realize. These rights include the right to work, the right to education, and the right to health.

The Declaration is regarded as the foundation of international human rights law. Yet, as a resolution of the General Assembly, it lacks legal authority and does not create any legally binding obligations for the Member States.[132] Therefore, the Declaration was supplemented with two universal treaties: the International Covenant on Economic, Social and Cultural Rights and the International Covenant on Civil and Political Rights.[133] Together, the Universal Declaration of Human Rights and both Covenants are referred to as the International Bill of Human Rights. Soon, additional

[130] Further references to human rights are to be found in the Preamble and Articles 13, 55, and 56.

[131] UN Doc A/RES/217 (1948) of 10 December 1948.

[132] Today, the rights contained in the Declaration are considered to be part of international customary law.

[133] UN Doc A/RES/2200A (XXI) of 16 December 1966; International Covenant on Civil and Political Rights (ICCPR); New York, 16 December 1966; entered into force 23 March 1976 (Vol. 999 UNTS 1983, No. 14668) and the International Covenant on Economic, Social and Cultural Rights; New York, 16 December 1966; entered into force 3 January 1976 (Vol. 993 UNTS 1983, No. 14531).

international agreements followed, establishing a comprehensive network of interlocking human rights instruments. These include treaties covering specific human rights matters[134] as well as regional treaties.[135]

Human rights law has an increasing impact on export control law. The human rights situation in a state can be a ground to deny or restrict the transfer of specific military or dual-use items to that state. For instance, EU member states are obliged to assess an application for the export of military technology and equipment against several criteria, including the respect for human rights in the country of final destination.[136] Also, they may prohibit or impose an authorization requirement on the export of a dual-use item not listed in the EU Dual-Use Regulation.[137]

Also, human rights law affects other fields of international law relevant to export control law. In particular sanctions law is increasingly affected by human rights concerns. As mentioned above, human rights considerations caused the shift from comprehensive to targeted sanctions in the early 1990s. In turn, the new sanctions raised questions about the individual rights of the individuals who were designated under the sanctions regulations. Most targeted sanctions include measures such as assets freezes and travel bans which may affect the designated person's right to property,[138] right to family life, and the freedom of movement. Also, it is sometimes hard for an individual to legally challenge his designation and listing, which violates his right to effective judicial protection.[139]

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[134] Convention on the Prevention and Punishment of the Crime of Genocide; Paris, 9 December 1948; entered into force 12 January 1951 (Vol. 79 UNTS 1951, No. 1021); the United Nations Convention Against Torture; New York, 10 December 1984, entered into force: 26 June 1987 (Vol. 1465 UNTS 1996, No. 24841); and the Convention on the Rights of the Child; New York 20 November 1989; entered into force 2 September 1990 (Vol. 1577 UNTS 1999, No. 27531) just to mention a few.

[135] The European Convention for the Protection of Human Rights and Fundamental Freedoms; Rome 4 November 1950; entered into force 3 September 1953 (Vol. 213 UNTS 1955, No. 2889); the American Convention on Human Rights; San José, 22 November 1969; entered into force 18 July 1978 (Vol. 1144 UNTS 1987, No. 17955); and the African Charter on Human and Peoples' Rights; Nairobi, 27 June 1981; entered into force 21 October 1986 (Vol. 1520 UNTS 1997, No. 26363).

[136] Article 2(2) of Council Common Position 2008/944/CFSP of 8 December 2008 defining rules governing control of exports of military technology and equipment (OJ L 335, 13.12.2008, pp. 99–103).

[137] Article 8 of Council Regulation (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items (OJ L 134, 29.5.2009, pp. 1–296).

[138] Property rights are no universally recognized rights; it is however included in Article 1 of the Additional Protocol to the European Convention for the Protection of Human Rights and Fundamental Freedoms.

[139] The UN has established an Ombudsperson (the sanctions regime under Resolution 1276 (1999)) and focal points (other sanctions regimes) to challenge a specific listing/designation. Under EU law sanctioned persons can challenge their listing before the EU General Court.

Moreover, states and international organizations can issue sanctions in response to human rights violations. In 2012, the US enacted the Magnitsky Act,[140] targeting Russian officials who were held responsible for the death of Sergei Magnitsky, a Russian tax lawyer who was imprisoned while investigating a multimillion fraud involving Russian officials. In prison, he was severely maltreated leading to his death in 2009.[141] In 2016 the Global Magnitsky Act[142] was signed into law, allowing the US to target individuals anywhere in the world responsible for committing human rights violations or acts of significant corruption. The EU[143] and several states followed suit and have similarly enacted 'Magnitsky laws'.[144]

5.4 Synthesis and Conclusion

Export control law can be described as the set of domestic and international laws and regulations as well as policy rules and commitments that are applicable to and regulate the export, re-export, transit, and transfer in any manner of goods, technology, and software. It forms a nascent, still developing field of law consisting of a domestic part, which is the traditional basis of this field of law, as well as an international part. The latter is the focus of this chapter, which explores the various established subdisciplines of public international law contributing to domestic export control law. The relevant international norms and rules are laid down in international agreements (treaties), are part of international customary law, set out in decisions of international governmental organization, and non-legal commitments flowing from the membership of export control regimes.

The various fields of public international law that export control law draws on, together form a set of related rules and norms that complement and reinforce one another. The law of armed conflict protects the victims of armed conflict and restricts the means and methods of warfare. Parts of this field of law relevant for export control law include neutrality law, which protects the rights of neutral states to continue international trade in armed conflict, and weapons law, that set limits to the use of certain weapons. The latter subset of rules is connected with the law of arms control, another subdiscipline of public international law, that covers the deployment

[140] Russia and Moldova Jackson–Vanik Repeal and Sergei Magnitsky Rule of Law Accountability Act of 2012, Pub. L. 112–208, 126 Stat. 1496 (19 U.S.C. 2101).

[141] Parliament of the Commonwealth of Australia 2020, p. 38.

[142] Global Magnitsky Human Rights Accountability Act of 2016, Pub. L. 114–328, div. A, title XII, subtitle F (Sections 1261 et seq.), 130 Stat. 2533 (22 U.S.C. 2656).

[143] The EU Global Human Rights Sanctions Regime is laid down in Council Decision (CFSP) 2020/1999 of 7 December 2020 concerning restrictive measures against serious human rights violations and abuses (OJ L 410 I, 7.12.2020, pp. 13–19) and Council Regulation (EU) 2020/1998 of 7 December 2020 concerning restrictive measures against serious human rights violations and abuses (OJ L 410 I, 7.12.2020, pp. 1–12). The regime cannot be invoked with respect to corruption.

[144] Canada, Estonia, Latvia, Lithuania, and Kosovo: Parliament of the Commonwealth of Australia 2020, p. 41.

of certain types of weapons, as well the production, testing, stockpiling or transfer thereof.

The use of armed force by states, in general, is limited under the system of collective security in which the UN is the leading authority to maintain international peace and security. Upon determination of a threat to the international peace and security, the UN Security Council can decide to take far-reaching measures, including the imposition of arms embargoes or economic sanctions, which States have to implement and enforce when the Council has acted under Chapter VII of the UN Charter. The law of sanctions covers this type of coercive measures, also allowing States and other international organizations to impose sanctions in addition to or even absent an UN-imposed sanction. As international practice is growing steadily, new types of sophisticated sanctions, tailored to specific situations are developed,[145] raising questions about the legality of this practice. Also, sanctions may give rise to various human rights concerns and already have led to changes in the scope and application of sanctions and the development of human rights-focused sanctions.

(Member) States are obliged to incorporate the international rules in their national legal systems and subsequently implement and enforce them in accordance with the relevant terms of the international instruments. Over time, domestic and international export control law has developed into a challenging and dynamic legal discipline. Although it is not an established subdiscipline of law in its own right, it is critical to consider all mutual related parts of export control law together to understand its impact on international military trade.

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[145] Gordon et al. 2019, p. 3.

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Chapter 6
Exploring the Multifaceted Relationship of Compliance and Integrity—The Case of the Defence Industry

Job Timmermans

Contents

Abstract Over the years, compliance has come to be closely associated with integrity. Originally, compliance foremost had been understood as abiding by (financial) law and regulation as a prerequisite to pursuing an organization's operational goals. In response to societal developments and corruption scandals this perspective gradually has shifted. Despite the increased importance and consecutive academic attention of the seemingly self-evident relationship between compliance and integrity, a dedicated analysis of this relationship is still lacking. Such an analysis not only will increase our theoretical understanding of the underlying concepts and how they evoke each other, but practically its insights may also help to increase the effectiveness of managing compliance and integrity within organizations. This contribution, therefore, conducts a conceptual analysis into the relationship between compliance and integrity. First, the meaning of compliance and integrity as individual concepts is discussed, followed by a comparison of the two concepts. The commonalities and differences that come to the fore then act as a stepping stone to unpack the various ways the concepts of compliance and integrity invoke each other. Based on this discussion a basic analytic framework is drawn up that summarizes the different valuations of the relationship between compliance and integrity. To illustrate their

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practical relevance, the different valuations depicted by the framework are illustrated with an example drawn from the defence industry. It concludes by discussing the implications of the analysis and suggesting some possible routes for further research.

Keywords Compliance · integrity · management · defence industry · ethics · business ethics · conceptual analysis

6.1 Introduction

Over the years, compliance has come to be closely associated with integrity (or its synonym in this context 'ethics'). For example, on the websites of (large) companies such as Daimler and Boeing as well as on other formal outlets such as code of conducts, these two terms are discussed as a fixed combination. Also in academic discourse, the relationship between compliance and integrity has received ample attention. Starting with a seminal article by Paine in 1994, there have been several publications addressing these two terms.[1]

Notwithstanding the current obviousness of their association, the relationship between compliance and integrity has not always been self-evident. Originally, compliance foremost had been understood as abiding by (financial) law and regulation as a prerequisite to pursuing an organization's operational goals (i.e., business targets).[2] At that time, broader moral connotations identified with ethics and integrity thus still were largely absent.

In response to societal developments and corruption scandals this perspective gradually has shifted. Societal developments such as a raised awareness of environmental and sustainability and citizen empowerment have broadened the responsibilities of organizations to consider their societal impact.[3] Moreover, major corporate corruption cases such as the Enron scandal and more recently Dieselgate have made clear that legal compliance by itself is insufficient to prevent unacceptable/undesirable behaviours.[4] In response, governments and the organizations themselves have broadened their understanding of compliance to include rules and legislation that deal with societal and ethical issues. So, whereas compliance traditionally focused on financial accounting and auditing, nowadays it includes topics such as environment and sustainability, privacy and data security, and not in the least (organizational) integrity.

The defence industry has been no exception to these developments. Apart from being affected by the general societal developments just mentioned, the defence industry has had its own share of scandals and (resulting) societal and political

[1] Chun 2019; Kaptein 2015; Treviño et al. 1999; Weaver and Trevino 1999; Weber and Wasieleski 2013.

[2] Paine 1994; Pellizzoni 2004.

[3] Painter-Morland 2015; Schwartz and Carroll 2003.

[4] Bovens 2016; Windsor 2017.

pressure to (self-)regulate its behaviour. For instance, In the US, for decades, defence contractors defrauded the military and the Pentagon.[5] This led to an investigation and recommendations by the Packard Commission in 1986, which in turn led to the establishment of the Defense Industry Initiative (DII) on Business Ethics and Conduct to improve compliance.[6] In a similar vein, in the UK, a corruption scandal involving BAE Systems, Europe's largest armaments company, led to tightening up corresponding legislation.[7] Apart from particular cases, leading developments in trade export regulation also greatly affected the defence industry, such as the emerge of the International Trade in Arms Regulations (ITAR) in 1976[8] and in 2000 the European Commission's Dual-use Regulation.[9]

Despite the increased importance and consecutive academic attention of the seemingly self-evident relationship between compliance and integrity, a dedicated analysis of this relationship is still lacking. Such an analysis not only will increase our theoretical understanding of the underlying concepts and how they evoke each other but practically, its insights may help to increase the effectiveness of managing compliance and integrity within organizations. In this contribution, we therefore conduct a conceptual analysis of the relationship between compliance and integrity.

We start by discussing the meaning of compliance and integrity as individual concepts, followed by a comparison of the two concepts. The commonalities and differences that come to the fore then act as a stepping stone to unpack the various ways the concepts of compliance and integrity invoke each other. Based on this discussion a basic analytic framework is drawn up that summarizes the different valuations of the relationship between compliance and integrity. To illustrate their practical relevance, the different valuations depicted by the framework are illustrated with an example drawn from the defence industry. We conclude by discussing the implications of our analysis and suggesting some possible routes for further research.

6.2 The Concepts of Compliance and Integrity

In this section, the terms compliance and integrity are introduced and compared with each other. The similarities and differences that are brought forward will act as a stepping stone to further explore the relationship between the two terms in the following section.

[5] Biegelman and Biegelman 2008; Roberts 2009.

[6] Kurland 1993.

[7] Heissner 2015; Stohl and Grillot 2009.

[8] Nosanov 2009.

[9] Wetter 2009.

6.2.1 Compliance

In the business and management literature, the term compliance is widely used.[10] Still, apart from some specialist discussions among legal researchers,[11] there is a consensus about the meaning of the term. The basic meaning of compliance is a conformity of behaviour with legal rules.[12] Both an individual or a group of individuals such as the organization the individuals belong to may act as the subject of compliance. The regulation applying to a company, ultimately demand that the individuals working for that company conform to those rules. Although in its basic meaning compliance refers to legal rules, the object or content of compliance may be much broader, ranging from the adherence to laws, rules and regulations to standards and codes of conducts.[13] In the defence industry companies not only have to adhere to formal trade regulation but typically have a code of conduct in place to guide their conduct. As such the imperative standard that is being complied with, can be a regulatory requirement (law, or legal standard), or a normative requirement, that is, based on contractual, social, or cultural standards.[14]

Compliance is understood as referring to a state of being or status, as well as to an act or process. Compliance as a status refers to the state of being in accordance with rules, legislation or guidelines.[15] This state requires there to be a reasonable correspondence between legal rules or guidelines (i.e., the object of compliance) and the behaviour of those to whom they are addressed (i.e., the subjects of compliance).[16] The actuality of this state can be determined either internally (first-party) via self-assessment or externally by a second party audit on a customer or contracted organization, or third party audit, for example, by a certification body.[17]

Compliance as an act or process refers to what the subject of compliance does to attain or retain the state of compliance. In the first instance, compliance entails the subject's observance of relevant laws, regulations and corporate policies[18] by meeting their demands and procedures.[19] Subjects failing to obey legal and moral rules, then, are deviating from compliance.[20] Seen from a wider perspective, compliance also can be understood to entail detecting non-compliant behaviour and reducing the opportunity to display such conduct.[21]

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[10] Heissner 2015; Manning 2020.
[11] Howse and Teitel 2010; Kingsbury 1998.
[12] Kingsbury 1998.
[13] Silverman 2008.
[14] Manning 2020.
[15] Biegelman and Biegelman 2008, p. 2.
[16] Kingsbury 1998.
[17] Manning 2020.
[18] Biegelman and Biegelman 2008.
[19] Manning 2020; Rasche and Esser 2006.
[20] Windsor 2017.
[21] Verhezen 2010.

In sum, compliance refers to both the act and the resulting state of an individual or a collective such as an organization (the subject of compliance), behaving conform set regulatory or normative requirements (the object of compliance).

6.2.2 Integrity

Similar to compliance, integrity is a widely-used term both in business practice and literature.[22] However, unlike compliance, integrity is a more ambiguous term and there is far less consensus about its meaning.[23] Over the past decades, several authors have sought to address this and bring some clarity to the meaning of the concept. The first to take on this matter in a systemic manner are Audi and Murphy. Based on a review of the literature, they construct a framework to support making 'appeals to integrity clearer and more effective'.[24] Their paper concludes by suggesting that any discussion of integrity should start with a clarification of what one means by it. Following up on their suggestion, Palanski and Yammarino conducted a comprehensive review of the various meanings of integrity in management literature.[25] This resulted in a classification of integrity into five general categories. The most recent contribution was given by Orlitzky and Monga,[26] who elaborate on the five categories, among others by referring to seven conditions for integrity suggested by Maak.[27] For our current purpose of exploring the relationship between compliance and integrity, it is not necessary to rehearse the intricacies of the discourse on integrity. Instead, a summary of the main distinctions made by the authors suffices to get a general understanding of the different meanings that are being attributed to integrity in the literature.

Most discussions of integrity in the literature begin by reflecting on the Latin root of the term, *integritas*.[28] This term translates into wholeness or completeness, which corresponds with the common meaning of integrity as the quality or state of being complete.[29] Like compliance, the subject of integrity does not have to be an individual person but may also be an organization. This is referred to by the literature as organizational integrity.[30] Apart from having a different context, the meaning of integrity at a personal or an organizational level are considered to be very similar.[31]

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[22] Audi and Murphy 2006; Orlitzky and Monga 2017.

[23] Audi and Murphy 2006; Bauman 2013; Palanski and Yammarino 2007; Vandekerckhove 2010.

[24] Audi and Murphy 2006, p. 3.

[25] Palanski and Yammarino 2007.

[26] Orlitzky and Monga 2017.

[27] Maak 2008.

[28] Audi and Murphy 2006; Orlitzky and Monga 2017; Petrick and Quinn 2000; Verhezen 2010.

[29] http://www.merriam-webster.com/, accessed 23 November 2013; http://www.oed.com/, accessed 23 November 2013.

[30] Manning 2020; Paine 1994; Verhezen 2010.

[31] Verhezen 2010.

The wholeness-perspective on integrity ties in with the first of two constitutive understandings of integrity distinguished by Audi and Murphy in their framework.[32] They define integrity in the integrational sense as a certain kind of unity of character. It calls for disciplined adherence to moral standards and motivates and facilitates moral reasoning and ethical conduct. Although integrity in this wide, integrational sense is important in maintaining good character and conduct, it is by itself not sufficient as it lacks moral content. Content is provided by their second understanding of integrity, integrity in the *artaic* or virtuous sense. In this understanding, integrity is identified either with specific moral virtues such as trustworthiness or loyalty or to virtue in general, for example, when integrity is referred to as an overarching super-virtue. Together these two meaning of integrity offer a framework that supports both scholars and managers in making their appeals to integrity more clearly and effectively.

Building on this framework, Orlitzky and Monga construct a classification of integrity made up of five general categories.[33] The first category, integrity as wholeness, coincides with the common meaning of integrity and with the first meaning of the Audi and Murphy framework. This notion of integrity refers to the overall person, requiring overall consistency of behaviour, thoughts, and emotions across time and contexts. The next three categories offer a further refinement of what consistency should entail. The second category, consistency of words and actions, also known as behavioural consistency, calls for consistency across time and situations between espoused and enacted values. The third category, consistency in adversity, suggests that persons of integrity should stand for something and remain steadfast when confronted with adversity, (moral) challenge or temptation. It requires one to resist unethical temptations or choices even at a high personal cost. The fourth category, authenticity, adds further nuance to the former two categories, by requiring one to be true to oneself, which means understanding, owning one's deeply held values and acting accordingly. It thus adds to the second category that one's words must be consistent with one's deeply held values.

Again, these first three categories of integrity can be criticized for lacking moral substance. A Nazi, for instance, may always be acting in accordance with his words, which in turn may be in alignment with his inner convictions. This is remedied by the fifth category, integrity as moral or ethical behaviour, which is a precondition for the other four categories and ties in with the second meaning of integrity by Audi and Murphy, integrity in the *artaic* sense. This category requires one's actions to be in accordance with socially or morally acceptable behaviour. In line with Audi and Murphy, such behaviour may refer to particular virtues one must poses or the related values on which such behaviour needs to be based, such as justice, respect, fairness, trust and empathy, or virtue and moral standards or principles in general.[34]

An important addition to these five categories, referred to by Palanski and Yammarino, is offered by Maak.[35] In his discussion of integrity, he discusses seven

[32] Audi and Murphy 2006.

[33] Orlitzky and Monga 2017.

[34] Audi and Murphy 2006.

[35] Maak 2008.

conditions that need to be met to attain a state of being undivided or an integral whole: commitment, conduct, content, context, consistency, coherence, and continuity ('7 Cs'). Most of these conditions closely match the five categories discussed so far. Two conditions, however, shed further light on the concept of integrity. In his discussion of coherence, Maak distinguished between internal and external coherence. Whereas internal coherence coincides with the category of authenticity, external coherence refers to what others demand from a person in terms of getting one's principles and actions right. This way, Maak highlights the fact that integrity is not just a personal notion, but a social or relational notion as well.[36] This social dimension of integrity is reaffirmed by the condition of context. The integrity-condition of context draws attention to having consideration for all relevant others including stakeholders and relationships.

All in all, similar to compliance, integrity can be understood to represent a state, namely the state of being 'integer' or whole or being a person of integrity. Apart from an individual, also an organization can be the subject of integrity. Rather than being a state, integrity more commonly is referred to as an act or process. To act with integrity then denotes acting in accordance with high moral standards consistently even when confronted with adversity, or temptation, and at high personal cost. The five categories—integrity as wholeness, consistency of words and actions, consistency in adversity, being true to oneself, and moral/ethical behaviour—further clarify what acting with integrity may entail. Integrity not only is an individual notion referring to the state of the subject itself, but also a social notion that refers to what relevant others are demanding of the subject.

6.3 Comparing Compliance with Integrity

To understand how the concepts are related, we first need to look into what unites and what separates the two concepts. To this end, we turn to the literature on ethics management. In this literature compliance and integrity are discussed as two separate strategies to manage the behaviour of organizational members towards stable, acceptable and/or desirable behaviour.[37] In ethics management compliance and integrity thus find their common point of departure, namely a shared purpose in managing or governing organizational conduct.

Traditionally, the dominant way of managing ethics in organizations equates with the compliance or rule-based strategy. Dissatisfaction by legislators and scholars with this strategy gave rise to an alternative strategy, called the integrity strategy[38] or

[36] Kaptein 1999.

[37] Maesschalck 2004; Paine 1994; Roberts 2009; Treviño et al. 1999; Weaver and Trevino 1999.

[38] Confusingly, by some authors (e.g., Silverman 2008; Stucke 2014) and in organizational practice the term 'ethics' sometimes is used instead of 'integrity' to denote the principle-based strategy. Conform what is prevalent in the business ethics literature, in this chapter we employ the term 'integrity strategy'.

principle-based ethics management.[39] A myriad of reasons has been brought forward to underpin the suggested transition.

On the negative side, the compliance strategy has been accused of involving window dressing (i.e., being more directed at public relations and complying with regulations than at maintaining high standards).[40] Furthermore, it is associated with undermining an organizations' ethical culture. For instance, as an incentive-based approach, the compliance strategy also promotes incentives to violate the law when the costs of mitigating illegal behaviour outweigh promoting an ethical culture[41] and by its reliance on fear it may result in moral silence.[42]

Additionally, it engenders a minimalist approach to ethics management that does not encourage considering the full range of issues that individuals are confronted with nor the broader, longer-term implications of their actions.[43] Rather, organizations are focussed on meeting narrow legalistic requirements of effective compliance,[44] leaving little room for the individual conscience,[45] taking moral responsibility or creating passion and moral excellence.[46]

On the positive side, the integrity strategy is lauded for promoting ethical culture within organizations.[47] It motivates individuals to be aware of legal or ethical issues, increases their willingness to report ethical or legal problems or violations and raises their commitment to the organization.[48] What is more, it was found that under an integrity-based strategy individuals are more likely to refrain from unethical/illegal behaviour.[49] On the organizational level, the integrity strategy is associated with aligning the organization with societal expectations of relevant stakeholders, engendering the quality of life within organizations, and ultimately, providing new opportunities and increased organizational value.[50] Besides, integrity-based ethics programs are believed to improve decision making in organizations.[51] They stress the importance of thinking long-term and are better equipped to support dealing with complex problems or a new context where the rules are different.[52]

To be able to meet its aspirations and remedy the apparent flaws of the compliance strategy, the integrity strategy distinguishes itself from the compliance strategy on several accounts. In the first instance, the difference between the two strategies is best

[39] Calderón et al. 2018; Paine 1994; Roberts 2009; Stucke 2014; Verhezen 2010.
[40] Geddes 2017; Roberts 2009.
[41] Stucke 2014.
[42] Verhezen 2010.
[43] Roberts 2009; Stucke 2014.
[44] Stucke 2014.
[45] Roberts 2009.
[46] Verhezen 2010.
[47] Stucke 2014.
[48] Geddes 2017; Treviño et al. 1999; Verhezen 2010.
[49] Treviño et al. 1999.
[50] Verhezen 2010.
[51] Treviño et al. 1999.
[52] Verhezen 2010.

understood by comparing their underlying behavioural assumptions. The compliance strategy is part of the (neo)classic economic paradigm of the 'homo economicus', in which man is viewed as an autonomous, rational optimizer motivated solely by (material) self-interest.[53] This coincides with a cost-benefit approach to decision making on the individual as well as the organisational level in which the autonomous rational agent pursues its self-interest within the legal boundaries set by the state (or other types of standards of regulations within an organization). Hence, the emphasis in this strategy on monitoring, detection, and punishment.[54] The integrity strategy is part of the alternative economic paradigm, sometimes termed the extended approach,[55] that regards individuals as social beings who, next to self-interest are guided by peers, and values and ideals such as altruism, courtesy, civic virtue, conscientiousness, and sportsmanship.[56] Moving beyond the deterrence model prevalent under the classic paradigm, individual or collective behaviour is understood here to be driven by both extrinsic and intrinsic motivations. In addition to conventional cost-benefit thinking, behaviour then is guided by moral obligation and social influence.[57]

Under its basic assumptions, the compliance strategy's ethos entails conforming with externally imposed standards to govern organizational and individual behaviour such as laws, rules, regulations, standards, and codes of conduct.[58] It, therefore, has a coercive orientation towards control aimed at bringing individual behaviour into conformity with set (legal) standards by placing emphasis on adhering to rules, monitoring behaviour and disciplining transgressions.[59]

By contrast, and in line with its basic assumptions, the integrity strategy's ethos involves self-governance according to chosen, hence internal, standards, values or principles.[60] Control, in this case, therefore is internal or self-control resting on the individual and/or collective agent's moral character and judgment capacity.[61] Rather than on coercion, it is based on a commitment to and identification with shared (organizational) values and moral standards.[62]

Finally, the assumptions and ethos are reflected in the respective objectives of the two strategies. Whereas the compliance strategy only is aimed at preventing unwanted/criminal behaviour, the integrity strategy's aim is much broader by seeking to enable (socially) responsible conduct.[63]

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[53] Manning 2020; Paine 1994; Stucke 2014.

[54] Stucke 2014.

[55] Sutinen and Kuperan 1999.

[56] Manning 2020; Paine 1994; Roberts 2009.

[57] Sutinen and Kuperan 1999.

[58] Paine 1994; Silverman 2008.

[59] Maesschalck 2004; Weaver and Trevino 1999; Treviño et al. 1999.

[60] Geddes 2017; Paine 1994; Weaver and Trevino 1999.

[61] Maesschalck 2004.

[62] Silverman 2008; Weaver and Trevino 1999.

[63] Paine 1994; Roberts 2009; Stucke 2014.

The perceived necessity and subsequent development of an alternative strategy, does not mean that the compliance strategy is to be abandoned altogether.[64] Despite the stated advantages of an integrity over a compliance strategy, it is generally acknowledged that elements of compliance are still needed for effective ethics management. It is recognized that ethical talk needs to be supported with action.[65] By holding organizational members accountable for their behaviour through monitoring and disciplinary systems, an organization reinforces its standards, upholds a sense of conformity to shared norms, and maintains the perception of the organization as a just place.[66] Furthermore, even where an integrity strategy is effectively implemented, coercive enforcement measures remain essential to deal with chronic, flagrant violators that foremost are motivated by tangible consequences of their actions.[67] In a similar vein, the greater flexibility of a principled approach in comparison with a rule-based approach may tend to weaken the moral compass.[68] As a consequence, subsequent transgressive behaviour by some can affect others. This gradual erosion can only be reversed or prevented through effective enforcement of (moral) standards.[69] Conversely, it is also argued that an integrity strategy supports a compliance strategy. Compliance goals such as reporting misconduct, for example, benefit from the message of trust and support by a value orientation.[70] Besides, integrity may enhance the understanding of the purpose of compliance activities[71] and increase the perceived legitimacy of the authorities responsible for implementing the regulations.[72]

The compliance and integrity strategies, thus, are not regarded as mutually exclusive.[73] Instead of constituting a simple dichotomy, they are viewed as the opposite ends of a continuum. Within that continuum, a balance needs to be struck such that the strategies mutually reinforce each other and compensate for each-others weaknesses.[74] So, rather than moving away from a compliance strategy, organizations need to transcend and move beyond it. In this way, the (potential) tension between integrity and compliance can force deliberate thinking and better decision-making, for example, about the constraints set by compliance.[75]

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[64] Cf. Stucke 2014.
[65] Weaver et al. 1999.
[66] Treviño et al. 1999.
[67] Sutinen and Kuperan 1999.
[68] Windsor 2017.
[69] Sutinen and Kuperan 1999.
[70] Weaver and Trevino 1999.
[71] Ibid.
[72] Sutinen and Kuperan 1999.
[73] Paine 1994; Weaver et al. 1999.
[74] Calderón et al. 2018; Geddes 2017; Maesschalck 2004; Weaver and Trevino 1999.
[75] Verhezen 2010.

Table 6.1 Conceptual framework of the relationship between compliance and integrity

Type of relationship	Process	Content
Part of		
Against		
Beyond		

Source Timmermans 2021

6.4 The Relationship Between Compliance and Integrity

Based on the preceding sections, a three-fold characterization of the relationship between integrity and compliance can be deduced. In part, integrity emerges from the discussion as coinciding with compliance (Sect. 6.4.1). They have a shared overall purpose, and up to a point, have overlapping methods and content. In this sense, compliance can be understood as residing within or being part of compliance (and vice versa). At the same time, partly integrity can also be understood to be positioned outside of compliance. In a negative sense integrity then is in tension with, or even goes against, compliance (Sect. 6.4.2). In this sense, integrity involves acts and produces outcomes that are at odds with compliance. Conversely, in a positive sense integrity can be viewed as being complementary to compliance (Sect. 6.4.3). By going beyond compliance, integrity in this sense broadens the spectrum of ethics management, for example, by offering an ethos and methods that supplement those of compliance.

In addition, from the discussion thus far, two characteristics emerge that capture the variety of similarities and differences between integrity and compliance, namely: (1) process (or act) and (2) content (or object). The different activities and methods of compliance and integrity, for example, are covered by process, while the implied (moral, social or legal) standards fall under content. In this way, ethos can be interpreted to consist of both process, (i.e., mode of governance), and content (i.e., the 'imposed' or 'chosen' standards). In a similar vein, the aims of compliance and integrity discuss the type of conduct aimed for (content) and, in a broad sense, the manner that aim is to be attained (process). Also, the discussion of who needs to be involved in compliance and/or integrity activities can be framed in this way: the process and content of integrity and compliance denote particular skills and knowledge required by the individuals involved such as staff, leadership and education.[76] Together these three ways of relating compliance and integrity and process and content set up a framework that enables us to further explore the relationship between compliance and integrity systemically (see Table 6.1).

The remainder of the framework is explained more fully by describing the dimensions of process and content for each relationship-type. Building on the theoretic considerations brought forward by the literature each cell is briefly discussed and illustrated by a practical example relevant to the defence industry.

[76] Paine 1994.

6.4.1 Compliance as a Part of Integrity (and Vice Versa)

As shown in Table 6.1, the first way to characterize the relationship between compliance and integrity is in terms of two overlapping concepts. This characterization of the relationship can be discussed in two distinct manners, namely by regarding compliance be part of integrity, or vice versa, as integrity to be part of compliance. This and the subsequent subsection each discuss one of these two manners starting with compliance as a part of integrity. This way of understanding the relationship ties in closely with the views by Paine, which first sparked the literature on this subject.[77] Rather than as the ends of a continuum, in her discussion, compliance is depicted as a subset of integrity (i.e., to a large extent the process and content of compliance are also a part of integrity's process and content). Integrity in this view is an extension of the classical economic outlook of compliance.

At a minimum, in line with the (neo)classical perspective, the compliance's object/content sets the threshold (legal) standards an agent needs to comply with to be ethical, beyond that, agents are free to act as they see fit. Under the adage 'If it's legal, it's ethical.', integrity then may go beyond compliance, but not in a way that necessarily restricts the behaviour of an organisation or its members. In the field of military trade, this position can be illustrated by a case of the export of alleged military goods to Libya by the Dutch company Damen Shipyards Group. In the media, it was argued that this trade violated ethical standards (encoded in an EU commissioned code of conduct on arms trade) because the goods were intended and subsequently indeed used for military purposes.[78] The company responded to this allegation by pointing out that it did not do anything wrong as the trade had been submitted to and then permitted by the Dutch Ministry of Foreign Affairs because it did not violate any (trade) laws.

This raises the question of whether this trade, apart from being legally permissible, also counted as acting with integrity. An argument supporting the view of the Dutch ministry is provided by regarding integrity's content (or object) being a part of that of compliance. In this view, legislation (or formal standards) are regarded as solidified or codified ethics. Over time, social and moral values and norms have become engrained in the legislative body. For example, moral considerations about national and homeland security of countries,[79] have contributed to national and international law-making, for instance, national laws on dual-use goods and the small arms treaty by the UN.[80] What is more, over the last decades there has been a trend in which integrity has become part of formal standards or even legally required. Paradoxically, precisely because integrity is considered to be a way to strengthen compliance and remedy its flaws, integrity has become a part of compliance.

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[77] Paine 1994.

[78] Rengers M, Houtekamer C (2018) Gaddafi verdween, maar Damen bleef geliefd in Libië. NRC Handelsblad.

[79] Cornish 1995.

[80] Stohl and Grillot 2009.

The minimalist, (neo)classical view of economy also transfers to the overlap between compliance and integrity in terms of process. According to the classic view, the act of complying would suffice to behave ethically, because legal standards represent what is socially and morally required. Beyond that, an agent is free to act autonomously. Again, this can be illustrated with the Damen case. According to the Ministry of Foreign Affairs and the company, complying with applicable rules suffices to justify the trade of the boats.[81] Regarding the act of complying as part of integrity is in alignment with the understanding of integrity as wholeness or coherence, which requires an agent to hold on to its principles or norms persistently. The act of complying not only is a part of the process of acting with integrity, but compliance also strengthens it by supplementing integrity with accountability through monitoring and disciplining. According to the extended view, however, compliance by itself would not be enough for behaving ethically or may even be at odds with behaving with integrity. So, while the act of complying with a body of (legal, social or moral) standards is considered a part of the process of acting with integrity, it represents only one aspect of acting with integrity. In the Damen case, the media accused the other parties of a lack of consideration and reflection on the moral consequences of the trade beyond 'just' complying with the applicable law.

Conversely, the process of acting with integrity also has a place in the act of complying. Being compliant is not always straightforward. It may involve dealing with ambiguity and contradictions within or between different (legal) standards. For instance, the classification of trade under the Export Administration Regulations (EAR) commissioned by the US Commerce Department offers a different definition of a US person in different sections. Also, a set of rules such as the EAR or EU dual-use rules may be interpreted differently, for instance, in France and the Netherlands, offering difficulties when a dual-use transaction involves both countries. In addition, standards and legislation between different countries (or organizations) may be contradictory. A country such as Iran may be blacklisted by one country, while another country allows trading certain military or dual-use goods with Iran. Lastly, legislation and standards tend to evolve over time, for example, due to geopolitical development or technological innovation. The ITAR is known to shift its domain by either including items that before were considered dual-use or non-military (the so-called ITAR–creep) or vice versa, for example, a heat camera that was first considered a military item and became to be classified as a dual-use item. In these cases, integrity as standing for something and offering moral content such as values and principles offers a bedrock from which such challenges can be met. Also, by offering reflection and moral deliberation, integrity is well-suited to support the legal interpretation and decision-making that negotiating ambiguity within and between standards requires. Furthermore, integrity supports and enhances the effectiveness of compliance more in general, for example, by increasing the motivation and commitment to comply and by establishing an ethical culture.

[81] Rengers M, Houtekamer C (2018) Gaddafi verdween, maar Damen bleef geliefd in Libië. NRC Handelsblad.

6.4.2 Integrity Versus Compliance

Besides overlapping, integrity and compliance also can be in tension or at odds with each other, both in terms of their content and process. Although the content that is associated with the concepts in part is overlapping, the content of integrity also is considered to be broader and more encompassing. For example, integrity covers the ground where there is no legal or formal demand to act in a certain way yet there is also legal or formal restriction disallowing certain ways to act. Put in positive terms, the contents of the concepts can be understood to be complementary. This is addressed in the subsequent subsection. Put in negative terms, the content of the two concepts could also be pointing in opposite directions. Behaviour or actions may conform to formal or legal standards yet be at odds with morality or personal convictions. Conversely, what one considers to be moral or socially desirable may go against what is demanded by law or another formal standard.

This opposition corresponds with the idea that the content of integrity is held intrinsically, whereas that of compliance is imposed externally. The content that an agent identifies with and stands for, then, demands the agent to go against what is legally or formally required. Continuing the example about the trading arms to a suspicious country: Despite it being legally permitted by the national authorities and possibly resisting economic pressure, acting with integrity demands that those involved act according to their moral or social convictions and refuse to condone the transaction.

Dealing with this type of dilemmas is considered to be part of integrity, by some authors it is even regarded as a vital characteristic of integrity.[82] The act of complying or the decision of whether to comply or not becomes a matter of integrity. This decision is framed as an internal struggle dealing with the dilemma of conflicting norms or virtues which jeopardizes one's integrity (as a wholeness), for example, in terms of loyalty towards one's employer versus social justice or care for others. In the literature on integrity, this dilemma is analysed by way of conflicting demands set by different kinds of integrity, for instance, moral integrity versus personal integrity or personal integrity versus organizational integrity.[83] To resolve this dilemma, the agent has to go beyond the content of compliance itself and has to draw on morality and social standards.

At the same time, the process of complying involves activities associated with the process of integrity (i.e., deliberating and standing for something as well). Acting with integrity, for example, may either entail the decision to comply with the externally imposed standards or going against them. In the arms trade example, this would mean that those involved in the trade, be it on the government side or the company side, should reflect on the case at hand and explore internally whether carrying on with the trade equates with means acting on their conscience or not.

Nevertheless, the literature discussed above shows that strictly pursuing a compliance strategy makes it more likely that individuals make immoral decisions that

[82] McFall 1987.

[83] Orlitzky and Monga 2017; Vandekerckhove 2010.

go against their personal or organisational integrity. So, not only is the process of integrity at times a necessary part of the act of compliance, without having integrity in the mix, compliance is prone to motivate undesirable and unethical behaviour. In terms of the military trade example: without integrity being engrained into the organization's ethics strategy, it becomes easier for personnel to just justify their actions based on the minimal legal standards ('if it's legal it's ethical') without further reflection or deliberation.

6.4.3 Integrity Beyond Compliance

Following Paine, the relationship between integrity and compliance also can be conceived as complementary whereby integrity encompasses compliance and goes well beyond it.

As is discussed above, this is certainly the case for content or object of compliance such as legal or formal standards. By some, the content of compliance is regarded as setting a minimalist standard that is supplemented by integrity's moral and social content. Although legal and formal standards may be considered as a residue of moral deliberation (codified ethics), this residue is practically and principally limited. On the one hand, society and organizations are constantly evolving, for example, through (technological) innovation or (global) political developments. Legislation cannot anticipate these dynamics and therefore necessarily is lagging behind. The vacuum left is filled by integrity that through its aspirational nature is better suited to deal with new situations and cases. On the other hand, in practice, it is not desirable nor attainable to include all acceptable or desirable situations into standards. For example, in liberal democracies, what is considered to be the good life is left to individuals' judgment rather than imposed by (legal) standards. Likewise, the mission and vision of a company are stated in broad, abstract terms rather than detailed norms or guidelines included in corporate standards. So, the ground not covered by compliance, i.e. behaviour that is not legally or formally obliged yet not forbidden, falls into the domain of integrity. Continuing our example, trading military goods with suspicious regimes falls in this category. By not engaging in such a trade, albeit it is legally permitted, one could argue the company goes beyond compliance to act with integrity.

Not only in terms of content integrity and compliance are complementary but also in terms of their processes. In general, the processes associated with integrity are understood to strengthen the commitment and motivation to comply by organizational members and to improve decision making. In our example, integrity as wholeness or standing your ground offers an extra line of defence against pressure by the market or management to make a trade with a suspicious regime. Integrity helps to consider the long-term moral and social consequences beyond the shorter-term financial gains.

The complementary nature of the two concepts relationship in terms of process can be traced back to the difference in terms of the content of integrity and compliance. As discussed above, the standards that have to be complied with may be ambiguous

or contradicting. As a consequence, the act of complying may require interpretation, reflection and deliberation, activities associated with integrity. The (moral) content of integrity such as principles, virtues and values by its nature is more universal and hence abstract and requires reflection and deliberation when they come into play when confronted with a particular decision or dilemma. This way integrity covers ground that is not (yet) covered by compliance. Whereas compliance is acting according to pre-conceived, fixed standards (backwards-looking) integrity's process of reflection and deliberation allows to pro-actively encounter new situations and contexts that go beyond these standards (forward-looking). A weapons manufacturer, for example, may foreclose trading with suspicious regimes, even before national or international rulings formally forbid such transactions.

6.5 Conclusion

This chapter started by introducing the question of how to better understand the multi-faceted relationship between compliance and integrity. Although this relationship is often invoked, it is taken to be self-evident and lacks systemic attention. To this end, a literature review was conducted into integrity and compliance and the relationship between these two concepts. This learned that the variety of similarities and differences between these concepts is captured by two characteristics: their process or act associated with the concepts and their content or object. Next, from the analysis of the literature on the relationship between compliance and integrity, three archetypical valuations of this relationship emerged: (1) compliance as residing within or being part of compliance and vice versa; (2) compliance at odds/against integrity; and (3) integrity beyond compliance. Using these two typologies as its dimensions (i.e., characteristics and archetypical valuations), a preliminary conceptual framework was developed that re-constructs the relationship between the concepts in a systematic manner. The theoretical and practical relevance of the framework was then discussed, in particular to the domain of the defence industry.

The framework depicts how compliance and integrity concepts invoke each other at different levels. For instance, integrity is required as part of the process of compliance, while the act of complying can be understood as belonging to the activities associated with integrity. Due to this intricate relationship, in designing a compliance strategy, both the process and content of integrity need to be considered. And, likewise, when shaping an ethical culture based on integrity, the act of complying as well as the standards that are part of the object of compliance should be incorporated. Understanding integrity and compliance, either as the two ends of a continuum[84] or as one-sidedly depicting integrity as residing beyond compliance[85] as is common in the literature, does not do justice to the intricacies and multi-layered character of the relationship.

[84] Geddes 2017; Maesschalck 2004; Verhezen 2010.

[85] Paine 1994.

How this relationship pans out in actual organizational practice is context-dependent. The framework may help to unearth and understand the often implicit (organisational) design choices that underpin the shape the relationship takes in particular real-life situations. Furthermore, considering the dimensions outlined by the framework supports the conscious redesign of the relationship within organizations. For example, understanding how integrity and compliance interact may support the decision-making process of a company about trading military goods or services to a suspicious country. Rather than responding after the fact, when a particular transaction already has caused a public outcry, organizations may pre-empt such affairs by incorporating reflection on what they stand for in relation to what legal standards demand as part of their business processes.

Besides offering a more detailed understanding, the framework aids in pinpointing the aspects of the relationship between compliance and integrity that currently remain underdeveloped. Further research, for example, may shed further light on how integrity and compliance overlap and supplement each other in terms of content and/or process both in theory and in organizational practices. New insights thus gathered, would help to further populate, corroborate and fine-tune the conceptual framework.

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Chapter 7
Do Sanctions Cause Economic Growth Collapses?

Melody Splinter and Jeroen Klomp

Contents

Abstract This chapter explores whether economic sanctions are able to trigger sudden economic growth collapses. The primarily aim of economic sanctions is to cause a political or behavioural change by imposing serious restrictions on important economic activities undertaken by the target country. In particular, the basic idea is that sanctions cause a large adverse and sudden shock to the target's economy. It assumes that when this shock is severe enough, the target country is more willing to cooperate. The findings reported in this chapter clearly demonstrate that economic sanctions have a significant positive effect on the likelihood of a growth deceleration in the first three years after the first threat signals or actual imposition. It turns out that not all sanctions are equally successful in creating a sudden economic shock. In particular, trade sanctions, multilateral sanctions, and sanctions aimed at the business sector are the most harmful for the economy of the target country.

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7.1 Introduction

Since the end of the Cold War era, economic diplomacy started to play an increasing role in international affairs. Many great powers in the world, such as the US or Russia, appear to be less inclined to use armed force to resolve external disputes. Instead, they often adopt more smart alternatives, like the application of economic sanctions, to influence a state's political agenda.[1] In this way, they express their concerns or protect their interests without incurring the large adverse humanitarian costs of a major military intervention. Examples of such coercive policy measures are trade bans, suspension of economic protocols, seizure of assets, or the ending of diplomatic relations. The attractiveness of economic sanctions is extensively documented in the literature.[2] Despite their increased popularity in the last three decades, the debate on their success rate remains rather inconclusive.[3] One explanation for this disappointing result is that states are often reluctant to end or at least suspend an economic relationship as this can be both economically and politically costly. This conclusion induced a shift in the academic sanction literature from the question of "Do they work?" to "What they actually do."[4]

The adjective 'economic' in the term economic sanctions refers to the economic sphere. The basic idea behind economic sanctions is that it is expected that they create a major and sudden adverse economic shock. It assumes that when this shock is large enough, and the target country cannot anticipate or mitigate the costs, the target government is more willing the accept the demands of the sending country. Based on the existing literature, economic sanctions hurt the economic performance of the target economy through various channels including hampering international trade,[5] real exchange rate appreciations,[6] foreign capital flight,[7] or the limited access to certain technologies.[8] However, the complete economic impact of sanctions goes beyond these direct effects related to the future domestic production. For instance, sanctions also increase political uncertainty in a target country which, in turn, will be again reflected in the economic performance by influencing domestic investment and consumption.

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[1] Drezner 2011.

[2] Van Bergeijk 1994; 2009; Van Bergeijk et al. 2011; Kaempfer and Lowenberg 2007; Hufbauer et al.1990; 2007.

[3] Hufbauer et al. 1990; Pape 1997; Morgan and Schwebach 1997; Elliott 1998.

[4] Hufbauer et al. 1990; 2007; Allen 2005, 2008; Allen and Lektzian 2013; Cortright and Lopez 2002; Weiss 1999; Gibbons and Garfield 1999; Alnasrawi 2001; Wood 2008.

[5] Afesorgbor 2019; Kohl and Reesink 2019.

[6] Wang et al. 2019.

[7] Hatipoglu and Peksen 2018; Besedeš et al. 2017; Mirkina 2018.

[8] Hufbauer et al. 1990; 2007.

Although there exists a voluminous literature exploring the impact of economic sanctions on drivers of economic growth, it is quite surprising that there is a lack of empirical evidence on the direct impact of economic sanctions on economic growth. One exception is the paper by Neuenkirch and Neumeier,[9] who empirically estimate the effect of US and UN sanctions directly on economic growth. They find that the imposition of UN sanctions decrease the target state's annual real per capita GDP growth rate by more than two percentage points for the next ten years, while the effect of US sanctions is much smaller and less distinct as they decrease the target state's GDP growth by less than one-percentage-point.

Based on the existing empirical evidence, one can still question whether the economic shock created by economic sanctions is large enough to force a target state to comply with the sender's demands. Nevertheless, growth rates over time have become more unstable due to political events, especially in developing countries, and these breaks in growth rates lead to distinct patterns. Ignoring these structural breaks gives a distorted picture of the factors that play a role in a country's economic performance.[10] Using this insight, existing studies claim that the variability in exports, wars, sudden stops in capital flows, and political transitions are strongly associated with growth decelerations.[11] Economic sanctions, therefore, seem a good candidate in the list of factors that cause the observed patchiness in growth, but the economic growth literature has yet primarily ignored them.

The contribution of this chapter is twofold. First, to explore the effect of economic sanctions on the probability of a sudden economic growth collapse. Second, to reveal the mechanisms underlying the main results of this chapter and relate them to differences among sanctions including policy instrument used, interests threatened, and sender type and commitment. By modifying the methodological approach suggested in the previous literature, we are able to identify periods of major economic contractions.[12] Meanwhile, using the comprehensive Threat and Imposition of Economic Sanctions (TIES) dataset allows us to differentiate between different broad types of sanctions.[13] Based on the findings reported in this chapter, we can draw several conclusions. First, economic sanctions increase the likelihood of an economic growth deceleration by about nine percent in the three years following the first signals of a sanction. Second, it turns out that in particular, trade sanctions, multilateral sanctions, and sanctions aiming at the business sector are successful in creating a major economic shock.

The rest of this chapter is organized as follows. In Sect. 7.2, the theoretical foundation is described explaining the impact of economic sanctions on economic growth. Section 7.3 describes the methodology used. Section 7.4 proceeds with the estimation results. Finally, Sect. 7.5 follows with a conclusion and discussion on the most important findings.

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[9] Neuenkirch and Neumeier 2015.

[10] Pritchett 2000.

[11] Hausmann et al. 2006.

[12] Hausmann et al. 2005; Jong-A-Pin and De Haan 2008; 2011.

[13] Morgan et al. 2014.

7.2 The Economic Impact of Sanctions

7.2.1 Sanction Process

The definition of economic sanctions which will be adopted in this chapter reads, "coercive measures imposed by one country, an international organization or a coalition of countries against another country—the government or any group within the country—with the aim of bringing about a change in a specific policy or behaviour."[14] Thus, an economic sanction involves at least one sender state trying to make one target state comply with some political objective(s) by using economic pressure. Economic sanctions are utilized for different reasons, including cases of war, support of terrorism, nuclear weapons development, or only as an instrument of economic warfare.[15] Economic sanctions are intended to impose a serious restrain on the economic welfare of the target country—especially on the ruling elite and its supporters—and thereby make its leadership change its policy in order to avoid any further damage.[16] The target government will act according to a "straightforward cost-benefit calculus" and will want to comply with the sender's demands to avoid more costs.[17] Besides, it is assumed that the hardship endured due to the sanctions by the citizens in the target state will make them pressure their government to agree with the requirements and conditions of the sending states or organization.[18]

Sanction episodes may start with a threat by the sender(s), which, if not effective, maybe followed by implementation. Perhaps the sender and target come to a settlement without the need for the actual imposition of sanctions. If sanctions are actually imposed, a bargaining process will start. In particular, the outcome of this bargaining process can go in two opposite directions. First, the bargaining is successful, and a target country starts to cooperate. Consequently, 'carrots and sticks' may be provided by the sender state, like the partial lifting of sanctions or providing financial support. Second, the bargaining process is a failure, and the target nation does not cooperate at all. The theory of adaptation acknowledges that targets will not stand on the sideline when facing sanctions.[19] The target may find assistance in allies and seek ways to avoid the effect of the sanctions or even impose sanctions itself.[20] For example, target states can find alternative trading partners or alter consumption patterns.[21] Additionally, the costs incurred on the sender state might reduce its ability to bargain in a

[14] Escribà-Folch 2010, p. 2.

[15] Van Bergeijk et al. 2011.

[16] Galtung 1967; Porter 1979; Kirshner 1997; Kaempfer and Lowenberg 1988; 1999; 2007; Hoffmann 1967.

[17] Kirshner 1997; Farmer 2000.

[18] Galtung 1967; Renwick 1981; Lindsay 1986; Nossal 1989; Mack and Khan 2000; Marinov 2005.

[19] Galtung 1967.

[20] Drezner 2000; Hufbauer et al. 2007; Early 2009; 2012.

[21] Doxey 1972; Knorr 1975.

tough manner, and third parties may not provide cooperation to the sender, diminishing the effectiveness of the sanctions.[22] Thus, pending the bargaining process, other players may come along that change the political relations or complicate the bargaining. For instance, the previous literature concludes that a regime change was often not achieved because the target received moral and material support from a major superpower (the US or Russia). Therefore, it is possible sanctions may have no effect or even an enhancing effect on the welfare of the target country when other countries come to its assistance, and economic structures adjust.[23] Finally, a sanction episode comes to an end when either the target complies with all or some of the demands of the sender and sender and target come to a settlement, or the (threats of) sanctions are gradually lifted even though the target did not meet the demands.

7.2.2 Economic Impact of Sanctions

To be able to tell precisely how sanctions would influence economic growth, we must understand the channels through which these coercive policy measures affect the economic performance of a country. In the literature, there is a classical distinction between trade, diplomatic, and financial sanctions.[24] Trade sanctions are forms of import or export restrictions imposed on one or more specific goods, often including strategic items, by the sender that reduce the gains of trade of the target.[25] Using a global panel Kohl and Reesink demonstrate that sanction threats, while often much discussed in media and causing uncertainty to economic agents, do not have a significant impact on international trade.[26] Sanctions, once imposed, do have a detrimental effect on international trade. In particular, the imposition of a sanction decreases the international trade of the target country by about fifteen percent.

Trade sanctions influence the economic performance of a target country mainly in three ways. First, according to the export-led growth hypothesis, there exists a positive relationship between the volume of export and the growth of the economy. This implies that export restrictions will harm the economic performance of the target economy.[27] For instance, Elliot and Hufbauer conclude that moderate or limited trade sanctions could reduce bilateral exports by a quarter and a third, while they find extensive sanctions reduce bilateral flows by approximately 90 percent.[28]

Second, an import ban limits access to intermediate products, physical capital, and technology. Though, the economic consequences of an import ban are less straightforward compared to export restrictions. On the one hand, as import restrictions are

[22] Wagner 1988.

[23] Hufbauer et al. 2007; Dizaji and Van Bergeijk 2013.

[24] Kirshner 1997; Hufbauer et al. 2007; Morgan et al. 2009; 2014.

[25] Van Bergeijk 1989.

[26] Kohl and Reesink 2019.

[27] Evenett 2002; Dizaji and Van Bergeijk 2013.

[28] Elliot and Hufbauer 1999.

likely to hamper domestic production due to a shortage of inputs, it will also reduce the export performance of the target state. On the other hand, domestic import-competing firms may reap the benefits of an import ban due to higher production.[29] However, when imports are being replaced by less competitive domestic production, it will lead to higher domestic prices and, therefore, cause inflation. Consequently, the real exchange rate will appreciate due to a rise in the inflation rate of the target country and make goods more expensive to purchase by foreigners. This will reinforce the negative sanctions' effects on exports some further.

Third, in the past decades many sanctions, such as the ones against Iran and North Korea, have been aimed to decrease technology transfer. These technology sanctions often aim to hurt the target's military capacity or hinder it from developing nuclear weapons. On the grounds of the Nuclear Non-Proliferation Treaty, senders can initiate sanctions to hinder the exchange and development of arms-related technology by the target. In this light, a technology import ban may lower growth because the target country misses the benefits of foreign technology, including learning. A subsequent effect is that the target country will fall behind in technical efficiency compared to rival countries.[30] These rivals now exhibit a comparative advantage in the export product. The target cannot compete internationally and misses out on export returns.

The second broad group of economic sanctions are financial sanctions. Financial sanctions are primarily aimed to interrupt the in and outflow of capital to the target.[31] Financial sanctions compromise a wide set of coercive financial measures, including lending restrictions, restrictions on international money transfers, capital controls, or the withdrawal of foreign aid or foreign direct investments. The economic shocks caused by financial sanctions can be rather diverse. First, financial sanctions could also interrupt trade flows without explicit trade sanctions involved and thus have similar economic effects.[32] Second, the target's assets can be either frozen or vested, the latter meaning that ownership of the assets is transferred from the target to the sender.[33] Already the threat of sanctions may discourage new foreign investors as they create an uncertain business climate. Third, the removal of loans or aid hinders access to hard currency and can even increase the debt burden of the target government. Fourth, the prospect of sanctions may also shake consumer confidence and adversely affect stock market returns.[34]

The third broad category of sanctions is diplomatic sanctions. These policy measures are primarily aimed at decision-makers, the legislator or the political elite and its supporters. Diplomatic sanctions may take the form of seizure of assets, like physical property, securities, and bank accounts of diplomatic personnel or politicians,[35] travel bans on government diplomats, ordering diplomats of the target to

[29] Selden 1999.

[30] Ben-David and Loewy 1998.

[31] Dizaji and Van Bergeijk 2013; Torbat 2005.

[32] Hufbauer et al. 2007.

[33] Kirshner 1997.

[34] Biglaiser and Lektzian 2020.

[35] Kirshner 1997.

leave the territory of the sender government, recalling the sender's own diplomats to return from the target country, temporary closing of embassies, ending diplomatic contact, and the suspension of an economic agreement or protocol.[36] Since diplomatic sanctions precisely aim to hurt the ruling regime and its elite supporters, it has been frequently argued that they are more effective in reaching the end goal than other sanctions.[37] They have been imposed in preference to trade and financial sanctions, whose effects are regarded as more indiscriminate.[38]

Finally, the complete economic effect of sanctions goes beyond the direct effect on drivers of economic growth. The main end goal of a sanction is to enforce a change in political behaviour that often is preceded by political instability.[39] Political instability is especially apparent when sanctions are used as a tool to destabilize the target government. Political instability, in turn, affects international trade and foreign capital flows. For example, import flows are reduced because of low expected returns to investment[40] or because of increased import costs due to inefficient or suboptimal trade policies.[41] Additionally, an unstable macro-economic environment reduces production by firms and thereby their exports.[42] Moreover, economic deterioration caused by sanctions can also fuel a revolution of the public, adding to political chaos.[43]

Based on the literature review above, it is still not clear whether economic sanctions imposed by the sending state creates an economic shock in the target country that is large enough to force the target country to comply with de senders' demand. When the impact on the target economy is only modest, the target country will not be willing to cooperate. So, the main question dealt with in our empirical section, is whether economic sanctions are able to trigger an economic growth deceleration by creating a structural break. In particular, Pritchett broke new ground in the domain of economic growth empirics when he published his influential paper on 'Hills', 'Plateaus', 'Mountains' and 'Plains' and concluded that there is no single trend growth rate to be seen, especially in developing countries.[44] In fact, countries shift considerably in growth rates, which are mostly discernible in episodes. One thing that is particularly striking about these episodes is the appearance of enormous accelerations and deceleration of growth.

Using this insight, by looking at what happens before or at the start of a growth transition, one can gain insight into the determinants of successful transitions. In particular, they find that growth accelerations are significantly correlated to political regime changes, external shocks, and economic reforms. However, the authors also

[36] Kaempfer and Lowenberg 2007; Morgan et al. 2014.

[37] Kaempfer and Lowenberg 2007.

[38] Kaempfer and Lowenberg 1999; 2003; Drezner 2011; Wallensteen and Grusell 2012.

[39] Morgan et al. 2009.

[40] Aisen and Veiga 2013.

[41] Edwards and Tabellini 1991; Cukierman et al. 1993.

[42] Musibah et al. 2015.

[43] Rowe 1999.

[44] Pritchett 2000.

conclude that growth accelerations are for the largest part unpredictable and on the whole unrelated to standard determinants suggested in the economic growth literature.[45]

In the same trend, Hausmann and co-authors study episodes of deceleration using a representative sample of developed and developing countries.[46] Their objective is to gain a deeper understanding of growth collapses instead of accelerations. After identifying more than 500 episodes of output contraction, they study factors that determine the onset of crises and the duration of crises. In particular, variables found to be significantly related to the start of a crisis are the incidence of wars, export collapses, sudden stops in capital flows, high inflation, and political transitions, with some strong evidence for the change in exports, especially in developing countries, and somewhat less strong evidence for high levels of inflation predicting the onset of a collapse.[47]

7.3 Data and Methodology

7.3.1 Growth Collapses and Sanction Data

As our dependent variable, we use a binary choice indicator that takes the value one in the country-years when a growth collapse is identified and zero otherwise. In particular, a growth collapse or deceleration is defined as "an interval that starts with a contraction of output per worker and ends when the value immediately preceding the decline is attained again".[48] To operationalize this concept and identify the onset of a sudden growth collapse, a filter is applied. A filter is a set of constraints which together define a growth period. Such a filter should distinguish normal ups and downs in the growth rate from actual growth periods of contraction or acceleration.[49] In particular, a start of growth deceleration in the country i at time t recorded when the growth rate of real GDP per capita (g) fulfils the following criteria. First, the economic growth in year t should be lower than the growth rate in the previous year: ($g_{t+1} < g_t$). Second, the drop in the real GDP per-capita growth is at least 1.5 percent and lasting for at least four years ($g_{t,t-n} \geq -1.5$ ppa, $n = 3$). Third, the difference between the average post-deceleration growth rate and the average pre-episode growth rate (both including year t) must be at least 2.0 percent per year ($g_{t,t+n} \geq -2.0$ ppa, $n = 3$). This threshold value seems low enough to exclude normal fluctuations in the growth rate due to business cycles, but not too low to miss out on the start of a deceleration. Fourth, the level of GDP has to be lower at the end of the deceleration than in all years

[45] Jong-A-Pin and De Haan 2008; 2011; Hausmann et al. 2005.

[46] Hausmann et al. 2006.

[47] Hausmann et al. 2006; Reddy and Minoiu 2009; Berg et al. 2012.

[48] Hausmann et al. 2006, p. 5.

[49] Hausmann et al. 2005; 2006; Reddy and Minoiu 2009; Gupta et al. 2005; Dovern and Nunnenkamp 2007; Jong-A-Pin and De Haan 2008; 2011; Berg et al. 2012.

before the deceleration, including year t ($y_{t+n} < \min\{y_i\}, i \leq t, n = 3$). This ensures the post-growth rate is lower than the pre-episode peak and hence the economy is not in a recovery period yet. To calculate the growth rate of the economy, we use the growth rate of the GDP per capita in constant 2015 US dollars reported in the World Development Indicators published by the World Bank.

Our dataset consists of 187 countries spanning the years 1960 to 2010, of which 61 countries experienced one or more growth decelerations. Detailed results of the applied filter are displayed in Fig. 7.1, wherein countries are divided according to region. It is immediately apparent that decelerations are most common in Sub-Saharan Africa, Latin-America and the Caribbean and the Middle-East and North Africa (MENA), while nearly absent from the EU and most other developed countries.

The information needed to construct our economic sanction indicator is taken from the Threats and Imposition of Economic Sanctions (TIES) dataset. This dataset contains detailed information on both threats and impositions for a broad spectrum of sanctions for targeting more than 200 countries and send by about 150 countries and institutions between 1950 and 2005. In particular, the dataset includes data about starting and ending date, underlying issue, the type of sanction, aim of the sanction, target interest threatened, commitment by the sender and the estimated economic costs. In this chapter, we focus only on the four main senders of economic sanctions the last decades: the US, UN, EU, and Russia. In particular, we create a dummy variable taking the value one in the full years when a country is subject to an economic sanction by one of the primary senders in a particular year, and zero otherwise. In total, we consider more than 600 sanctions. As explained in the previous section, the entire sanction period consists of different stages. Of the considered sanctions, about three-quarters of the impositions of economic sanctions are preceded by a threat.

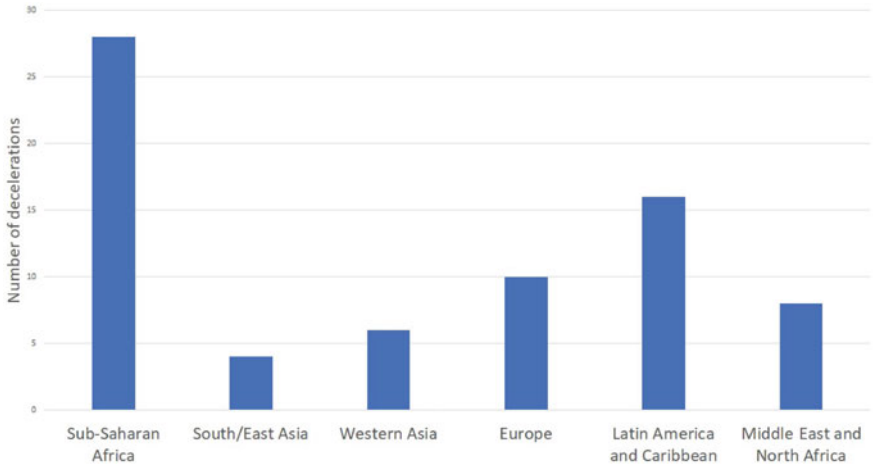

Fig. 7.1 Distribution of Growth Decelerations. *Source* Splinter and Klomp 2021

7.3.2 Empirical Model

In this section, we present the empirical model applied to examine whether sanctions are able to trigger growth decelerations. In particular, we estimate the following Linear Probability Model (LPM). One major advantage of this model is that countries do not drop out when there is no growth deceleration is identified in the period of our analysis. This is of particular importance since less than one-third of the countries in our sample have experienced a growth deceleration. As a result, this approach reduces the sample selection concerns that are related to, for instance, a conditional logit model. However, one drawback of this model is that the estimated coefficients can imply probabilities outside the unit interval.

$$\Pr[decel_{it} = 1] = \alpha_i + \beta_m \mathrm{x}_{it-1} + \gamma sanc_{it} + \delta_t + u_{it}$$

Where $decel_{it}$ is our binary dependent variable taking the value one when there is a growth deceleration identified in country i at time t based on the filter explained above, and zero otherwise. The vector **x** includes our set of control variables based on the previous literature.[50] In particular, we include real GDP per capita (in natural logarithm), degree of resource abundance, inflation rate, level of democracy, level of economic freedom. We include the control variables with a one-year lag to overcome the simultaneity bias with our sanction variable $sanc_{it}$ that is explained above. We hypothesize that the likelihood of a growth collapse increases after the threat or imposition of an economic sanction ($\gamma > 0$). The final variable u_{it} is the error term. The parameter α_i is a country-specific intercept controlling for unobserved and time-invariant country characteristics, while δ_t is a time-fixed effect represented by a series of year dummies. In particular, we test for the appropriate panel data model using the Hausmann test. The null-hypothesis of no country-specific effects is rejected at conventional levels of significance for all model specifications.

Before we proceed, we must deal with the potential endogeneity of economic sanctions as sending states do not randomly target other countries. Various factors potentially drive both the likelihood of an economic sanction and the economic growth of the target country. When we fail to control explicitly for these factors, our results might be spurious. To capture this endogeneity issue, we apply the two-stage least squares (2SLS) estimation technique.[51] In particular, we consider two instruments. First, one of the most important decisive reasons why sanctions are imposed against a particular country is the violation of human rights. To proxy the level of human rights protection, we make use of the Freedom House dataset, where countries receive a score based on their political rights and civil liberties. A higher value indicates fewer political rights or civil liberties. Second, the international status ranking, as reported in the Banks International dataset, is used as an instrument. The international status ranking is a composite score based on the diplomatic reputation of a country. For senders, it might be more costly to impose and enforce sanctions

[50] Hausmann et al. 2006; Jong-A-Pin and De Haan 2008; 2011.

[51] Newey 1987.

Table 7.1 Economic sanctions and economic growth decelerations

	Complete period	First three years only	
	(1)	(2)	(3)
All sanction periods	0.020 (0.016)		0.091* (0.055)
Threat			0.121** (0.033)
Imposition after threat			0.071* (0.040)
Imposition start without threat			0.145* (0.075)
Number of observations	3401	3401	3401
Sargan test (p-value)	0.320	0.414	0.428
Pseudo R-squared	0.048	0.049	0.051

Note **/* Indicating significance levels of respectively 5 and 10 percent; bootstrapped standard errors are shown between brackets
Source Splinter and Klomp 2021

that target countries that are politically and economically important.[52] Clearly, these instrumental variables do not directly affect the likelihood of a growth deceleration as the correlation with our dependent variable is close to zero.

7.4 Results

7.4.1 Imposition and Threats

Table 7.1 reports the results of our Linear Probability Model. The validity of the instrumental variables is formally checked by using the Sargan test under the null hypothesis that the used set of instruments is valid, i.e., they are uncorrelated with the error term in the structural equation. The Sargan test indicates that we cannot reject the null hypothesis, so our instruments are valid ($p > 0.05$). Alternatively, we apply the Wald test of exogeneity under the null hypothesis that the instrumented variables are exogenous ($p < 0.05$). The Wald test indicates that the sanction variable is potentially endogenous and that instruments should be used. To obtain robust standard errors, we use the bootstrap procedure with 1,000 replicators.

The results reported in column (1) of Table 7.1 indicate that economic sanctions have no statistically significant effect on the likelihood of a sudden growth collapse.

[52] Wezeman 2014.

However, a critical remark one can make about these first results is that they indicate it assumes that the impact of a sanction on the probability of causing a growth collapse is constant over the entire duration of the coercive measure. The average duration of a sanction in our period of analysis is about ten years. The question is whether the impact of sanctions is equal in these years? In particular, sanctions are believed to work as a major and sudden economic shock that cannot be anticipated. This implies that sanctions should in the first place have an effect in the first year of their imposition or when the first signals are observed, for instance, through a credible threat. To capture this issue, we adjust our sanction measure by only recording the first three years of a sanction. The results in column (2) point to a weak, but significant, positive effect of economic sanctions on the likelihood of a growth deceleration. In particular, economic sanctions raise the probability of a sudden growth collapse by about nine percent.

The sanction variable used so far combines both sanction threats and imposition periods. The previous literature suggests that if targets expect to comply, they will do so already at the threat stage, avoiding the additional economic costs of the imposed measures.[53] That is, a threat is effective when the outcome of the threat case is equal to the desired outcome. This debate implies that a sanction threat might be even more effective than the imposition itself. In particular, when there is a threat preceding an imposition, a target country might try to anticipate before the actual imposition. In column (3) of Table 7.1, we split the sanction variable into three stages: (1) threat stage; (2) imposition stage after a threat, and (3) imposition stage with no threats preceding. The findings indicate that although all three stages enter significantly the econometric model, the first and third situation have the most statistical and economic impact. This suggests that there is likely to be some kind of first-signs effect. In particular, expectations about the future imposition of sanctions can lead to a change in the behaviour of economic agents already long before the sanction is really implemented or even agreed on. Thus, foreign investors, in advance of the expected sanctions will try to withdraw their capital, and traders will search for alternative trading partners based on their own assessments of the likelihood of these coercive measures.

7.4.2 Different Types of Sanctions

To explore whether the impact of sanctions differs among the various types of sanctions considered, we have split up our economic sanction variable in three more homogenous groups: trade sanctions, financial sanctions, and diplomatic sanctions. The results in column (1) of Table 7.2 indicate that especially financial and trade sanctions are likely to create a severe economic shock. In contrast, we find no significant effect of diplomatic sanctions at common confidence intervals. One explanation might be that diplomatic sanctions are more tailor-made and usually aimed at the

[53] Drezner 2003.

Table 7.2 Sanction differences

	Instrument	Aim	Senders	Commitment
	(1)	(2)	(3)	(4)
Trade sanctions	0.142** (0.042)			
Financial sanctions	0.123* (0.071)			
Diplomatic sanctions	0.084 (0.139)			
Political and military interests			0.060 (0.044)	
Economic interests			0.148** (0.053)	
General interests			0.139* (0.074)	
Unilateral sanctions				0.091* (0.048)
Multilateral sanctions				0.161** (0.057)
Strong				0.161** (0.059)
Moderate				0.088* (0.051)
Weak				0.023 (0.037)
Number of observations	3401	3401	3401	3401
Sargan test (p-value)	0.361	0.421	0.452	0.380
Pseudo R-squared	0.048	0.049	0.051	0.052

Note **/* Indicating significance levels of respectively 5 and 10 percent; bootstrapped standard errors are shown between brackets
Source Splinter and Klomp 2021

ruling elite without hurting the general population. One alternative explanation is that diplomatic sanctions are usually accompanied by other economic bans within one package. This makes it difficult to perfectly distinguish between the effect of each specific type of sanction.

Usually, the aim of an economic sanction is to achieve a policy or political change by targeting important economic sectors. Thus, disturbing the economy is only an intermediate goal. To explore whether the target of a sanction (business sector, political system or general) matters for the economic consequences, we split the economic sanctions in accordance with their target audience. The results indicate that general economic sanctions or sanctions aiming specifically at the interests of the business sector raise the likelihood of a sudden growth collapse. In turn, sanctions aiming at the political and military interests have no statistically significant effect at common confidence levels. One possible explanation is that, although these sanctions might create political uncertainty, the coercive measures are mostly targeted at the ruling elite and do not directly have an economic-wide effect. In turn, trade and financial restrictions are more likely to affect the macroeconomic performance of a country.

A key element in this debate on the sanction effectiveness is whether sanctions are imposed multilateral or unilateral. On the one hand, broader participation in economic sanctions is generally hypothesized to lead to better and more effective implementation. However, on the other hand, because of the dominant and bureaucratic process of sanction initiation, a powerful state, may be able to make a formally

unilateral sanction effective. Due to these concerns, we split the total number of sanctions in multilateral (EU and UN) and unilateral (US and Russia) sanctions. One concern is that there is a significant overlap of some sanctions by their senders. For instance, the United States implemented most sanctions imposed by the UN. Simultaneous inclusion of different types of senders allows for isolation of the true effect of individual or multiple senders. The results in column (3) of Table 7.2 indicate that multilateral sanctions have the strongest significant effect on the likelihood of a growth deceleration. This finding supports the view that the multilateralization of sanctions strengthens the signal of dissociation sent to a target.[54]

Finally, we investigate the relationship between the sender states' commitment level and the likelihood of a growth collapse. Three different levels of commitment are employed: weak, moderate, and strong. The degree of commitment is based on the statements made by the sending government. The main objective is to test whether greater determination on behalf of the sender results in greater hardships to the target economy. The estimated results in column (4) of Table 7.2 indicate that in order for sanctions to exert a negative influence on the receiving economy, the sender state(s) need(s) to be at least moderately committed.

7.5 Conclusions

The aim of economic sanctions is to achieve a political change by imposing serious limitations on important economic activities in the target country. In particular, the basic idea behind economic sanctions is that they work like a major adverse and sudden shock to the target's economy. In this respect, one important question is whether economic sanctions cause a sudden growth collapse by creating a structural break in economic growth. Based on the findings reported in this chapter, we can draw several conclusions. First, an economic sanction increases the likelihood of an economic growth deceleration by about nine percent in the three years preceding the first sanction signs. Second, it turns out that, in particular, trade sanctions, multilateral sanctions, and sanctions aiming at the business sector cause sudden negative growth accelerations.

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[54] Drezner 2011; Neuenkirch and Neumeier 2015.

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Chapter 8
Datasets for Combat Aircraft

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Abstract As part of an empirical investigation into factors contributing to the world-wide demand and supply of fixed-wing combat aircraft, the authors have conducted a search for data sources providing insight in the characteristics, types and qualities of aircraft designed for combat purposes, the total volume on the market (entries, movements and exits), as well as the financial equivalents of each in a specific period of time. This chapter discusses both the various pathways embarked on to this end, as well as the research results.

Keywords Combat aircraft · datasets · data providers · type of data collected · language · formats · price · weapon system detail · financial information

8.1 Introduction

As part of a research project into the factors contributing to the world-wide demand and supply of fixed-wing combat aircraft, we were looking for empirical data sources providing an insight into the characteristics, types and qualities of aircraft designed for combat purposes, the total volume on the market (entries, movements and exits), and the financial equivalent for each within a specific period of time. This chapter presents the results of this research. The questions the chapter addresses are: which empirical data sources on combat aircraft are available; what are the general characteristics of these data sources; and which data are provided by the data sources?

Empirical research regarding specific weapon systems has developed only relatively recently. Earlier studies applied separate 'weapon system counts' as a measure to assess a country's military strength. At the time, Lambelet construed indices to assess the strategic power of the global power blocks using data on conventional and nuclear weapon stocks.[1] His ideas have gained many followers, especially concerning the arms race literature.[2] Ward shifted the methodology from 'counting nuclear weapon stocks' to 'counting conventional weaponry' only.[3] Diehl and Crescenzi, in their methodology overview on future arms races literature, express a strong preference for Ward's method.[4]

[1] Lambelet 1973.

[2] Bolks and Stoll 2000; Desai and Blake 1981; Luterbacher et al. 1979; Kugler et al. 1980; McGuire 1977; 1981; Stoll 1992; Taagepera 1979–80, p. 67.

[3] Ward 1984.

[4] Diehl and Crescenzi 1998, p. 116.

Just now, in literature on segmentation between different weapons systems, the focus seems shifting from effect research to process research. For example, Caverley and Kapstein have supported their market analysis by regional trade data (amounts and cost price reflection) and a qualitative analysis of traded weapons systems (including combat aircraft).[5] Johnson has been the first to disaggregate major weapon systems into categories reflecting their strategic capabilities. His consecutive studies demonstrated that arms categories constitute a factor influencing interstate policy, both regarding procurement decision, as well regarding the political effects depending on the end to which arms are used.[6] To forecast future developments regarding Russia as an exporting country, Chizhov has studied the trends on the global market for fighter aircraft during the period 1950–2007. He concludes that the geopolitical situation, the level of military threat, scientific and technical progress and the level of regional economic development are factors influencing the fighter market.[7] From 2000 to 2009, Tsalikov has investigated the role and perspectives for Russia with regard to the multi-role fighters market. Based on this study, the Russian Federation has been advised on how to maintain its role as a leading state on the market. Tsalikov advises on future geopolitical cooperation and investment in Research and Development (R&D).[8] Saunders and Souva chose an altogether different theme; by redesigning the earlier notion of weapon systems counts as a proxy for military strength, and introducing a new dataset combining both quantitative and qualitative data on fighter, attack and trainer combat aircraft possession.[9] Rounds III, in the similar timeframe, studied fighter transfers, for better understanding of state-to-state relationships in the demand and supply of combat fighter aircraft.[10]

Two sources in English literature allow for a connection between data and a specific weapon system—in our case combat aircraft (i.e., the IISS Military Balance and SIPRI Arms trade database) as well as one source in Russian literature (i.e., the Centre for Analysis of World Arms Trade (CAWAT) World Arms Trade Statistics). When scrutinizing their data sources, we find Lambelet, Ward, Johnson, Saunders and Souva use the IISS Military Balance as their main dataset, whereas Caverley and Kapstein, Chizhov and Rounds III base their inquiries on SIPRI Arms Trade data. Tsalikov uses CAWAT statistics.

We proceeded then to find out whether it might be possible to answer our initial research question based on the above-mentioned three datasets. Unfortunately this proved not to be the case. IISS is useful for an indication of market size, market entries and exits, but lacks financial information. The SIPRI Arms Trade dataset provides an overview on market transfers and a cost indication of goods on the market. However, it lacks information on total volume on the market and transfer prices. CAWAT includes financial data, but lacks data before the year 2000. Although

[5] Caverley and Kapstein 2016.

[6] Johnson 2017; 2019; Johnson and Willardson 2018.

[7] Chizhov [Чижов] 2010.

[8] Tsalikov [Цаликов] 2011.

[9] Saunders and Souva 2019.

[10] Rounds III 2019.

we have considered a combination of these three sources, this has been rejected due to the differences in definitions and methodologies and the probable requirement for additional data on market diversity and market prices.[11]

To theoretically underpin our research questions, we have, therefore, embarked on another inquiry for new data sources, containing: (1) information about the heterogeneity of combat aircraft, (2) the presence and numbers of aircraft available during a specific time frame, (3) aircraft entries to, movements on and exits from the market, as well as (4) any supporting financial data. This inquiry has resulted in an overview containing 16 data sources concerning combat aircraft supply and demand (including SIPRI, IISS and CAWAT).

The remaining part of this chapter is structured as follows. Section 8.2 discusses the research methodology. Section 8.3 provides an overview of the results. Section 8.4 contains an in-depth analysis of our findings. The chapter ends by putting forward concluding remarks and our suggestions for future research within this realm in Sect. 8.5.

8.2 Methodology

While searching for data sources, three pathways have been followed. First, data originators' (i.e., states and their defense industries) reports on arms production, weapon stocks, arms transfers or abolishment of weapon systems have been investigated. Second, peace research and literature on arms control agencies has been reviewed. To this, academic databases (Scopus and Google Scholar), the library and internet have been searched using the terms: 'military alliances'; 'security through transparency'; 'annual defense assessments;' and 'combat aircraft'. Last, we have turned to commercial sources specialized in collecting, validating and spreading data as their main source of business. All specialized periodic publications in the aerospace industry have been searched for original database owners and commercial offerings. Internet has been explored for market reports on combat aircraft, and offering parties have been included in the analysis. Upon identification, each data source was checked based on open source information, to be followed by a request for any missing information or fact checking. Sources were then asked to deliver their data in a computer analysis friendly format. Most sources were willing to answer to our requests.

Each data source has been analyzed on the following aspects: (1) data provider (i.e., state- or non-state based agency); (2) type of data collected (i.e., production, transfer, abolishment, combat aircraft inventory, combat aircraft characteristics); (3) accessibility of data (i.e., language, format, price); (4) time frame (i.e., period covered, specificity of data and periodicity of updates); (5) actors (e.g., states, industries, armed forces, armed groups); (6) combat aircraft detail level (i.e., individual

[11] Colgan 2011.

configuration, weapon system family, weapon system category); (7) financial information included in the data set (i.e., availability, levels of detail, e.g., currencies and exchange year).

8.3 Results

This section first summarizes each of the 16 datasets general characteristics (Table 8.1). Second, each of the datasets is briefly characterized.

8.3.1 United Nations: UN Register of Conventional Arms (UNROCA)

UN General Assembly resolution 43/75 of 1988 initiated a study on the ways and means of promoting transparency in international transfers of conventional arms on a universal and non-discriminatory basis, resulting in the creation of UNROCA starting January 1992. The UNROCA database is maintained by the UN Office for Disarmament Affairs, with the aim of creating transparency, building confidence and preventing conflict among governments, encouraging restraint in the transfer or production of arms, and ultimately contributing to preventive diplomacy. UNROCA's standardized format allows for information about military inventory, national production, arms exports and imports. Occasionally states tend to provide information on arms abolishment (in comments) as well. Collection of data takes place by a yearly request for self-reporting of countries; no additional pressure methods are used. Data is public and free—the institution is financed as part of the state's contribution to the UN. The dataset is available online.[12] Though visually very impressive, the format does not allow for easy (machine) analysis. Contacting the UN does not lead to receiving the data in a more conventional format.

8.3.2 United Nations: Arms Trade Treaty Annual Reports

In 2013, the UN General Assembly adopted the Arms Trade Treaty (ATT) to regulate the international trade in conventional arms by establishing the highest international standards, in order to prevent and eradicate the illicit trade in and the diversion of conventional arms. The ATT entered into force on 24 December 2014 and seems to have taken over the role of UNROCA regarding information on arms exports and imports: the coordinating agency, intended audience and reporting categories are identical. There are some major differences as well. Firstly, the ATT imposes a

[12] https://www.unroca.org.

Table 8.1 Overview datasets

Data provider		Type of data	accessibility		Time frame	Actors	Financial information
Organization	General name reports		Language	Price	Period covered		Availability/detail level
UN	UNROCA	P, T, A, I	Multiple	Free	1992–present	170 states	Not available
UN	ATT	T	Multiple	Free	2015–present	67 states	Optionally, usually excluded Single transaction, actual currency
OSCE	Arms exchange reports	P, T, I	Multiple	Free	1998–present	45 states	Optionally, usually excluded Single transaction, actual currency
EU	Arms exports reports	T	Multiple	Free	1998–present	28 states	Available Yearly transaction per product group
SIPRI	Arms Transfers	T	English	Free	1950–present	260 unique actors	Own method based on known (competitive) production costs
CAWAT	World Arms Trade Statistics	T	Russian	Priced	2000–present	173 states	Available; US$, single transaction
IISS	Military Balance	I	English	Priced	1959–present	171 states	Not available
IHS Markit	Jane's	P, T, I, C	English	Priced	1909–present	163 states	Generally excluded
Informa	Aviation Weekly	P,T,I,C	English	Priced	Multiple years	103 states	Generally excluded
RELX	Cirium	P, T, I, C	English	Priced	Multiple years	Not disclosed	Not disclosed

(continued)

Table 8.1 (continued)

Data provider		Type of data	accessibility		Time frame	Actors	Financial information
Organization	General name reports		Language	Price	Period covered		Availability/detail level
Rheinische Post	World Air Forces report	I	English	Free/priced	2007–present	162 states	Not available
Forecast International	Military information library	P, T, I, C	English	Priced	1989–present	Not disclosed	Available Single transaction, actual currency
TEAL Group	Military information library	P, T, I, C	English	Priced	1989–present ara>	130 states	Available Single transaction, actual currency
Simplify compliance	Military Periscope	I, C	English	Priced	Multiple years	165 states	Not available
GlobalData	ADS Solution	P,T,I,C	English	Priced	Multiple years	Not disclosed	Not disclosed
Frost and Sullivan	Aerospace and Defense content	P, T, I, C	English	Priced	Multiple years	Not disclosed	Available Single transaction, actual currency

Source Saitova and Beeres 2021

legally binding obligation to report, with the exception of commercially sensitive or national security information. Secondly, the reporting format has changed as well, putting more emphasis on small arms and light weapons, distinguishing between authorization and the actual transfer of arms, requesting an indication of the value of transfer, and allowing for a better insight into the logistical chain of arms transfers (the producing state, the reporting state, and—optionally—the importing state). Data available to the public is free, financed as part of the state's contribution to the UN. The reports are available online.[13] The format does not allow for easy (machine) analysis. Contacting the UN/ATT secretariat does not result in receiving the data in a more conventional format.

8.3.3 Organization for Security and Co-operation in Europe (OSCE): Arms Reports Following the Vienna Document and the Treaty on Conventional Forces in Europe

The OSCE's founding document, the Helsinki Final Act of 1975, sets out the need to contribute to reducing the dangers of misunderstanding or miscalculation of military activities, particularly in a situation where the participating states lack clear and timely information about the nature of such activities. Since 1998, participants exchange information about arms inventory, national production, import and exports among each other. In September 2016, OSCE members decided to share the information exchanged—concerning imports and exports—by the participating States through posting on the OSCE's public website. Initial analysis shows that 45 of the 57 member states provide consequent (but not always timely) reports. Interestingly, states that do not report to UNROCA or ATT (e.g., the Russian Federation or the Holy See) do provide information to the OSCE made public.

Data available to the public is free, financed as part of the state's contribution to the OSCE.

The reports are available online.[14] The OSCE secretariat is not able to provide the data collected in a more conventional format. Scholars interested in the full dataset, including the non-published reports for the period 1998–2015, should consider enrolling in the OSCE Researcher-in-Residence Programme.[15]

8.3.4 European Union (EU): Arms Exports Reports

The EU has adopted a Code of Conduct on Arms Exports in 1998 as a politically binding instrument that seeks to create high common standards for all EU members

[13] https://thearmstradetreaty.org/annual-reports.html?templateId=209826.

[14] https://www.osce.org/forum-for-security-cooperation/332441.

[15] https://www.osce.org/documentation-centre-in-prague/researcher-in-residence-programme.

to make arms export decisions and to increase transparency among EU states on arms exports. The code has been replaced in 2008 by the Council Common Position and implemented in the domestic legislation of member states.[16] Amongst each other, the 28 members exchange detailed information, compiled (but not crosschecked) by the European External Action Service. This full information is not publicly available.[17] Reports are available from 1998 to the present. Dissimilation in arms categories following the EU Common Military List has become common practice from the 2003 report.[18] Data available to the public is free, financed as part of the state's contribution to the EU. Per state and arms category data is shared over export licenses issued and refused (both numbers and value), and value of actual arms exported in euros. In 2019 the EU Council expressed the intention to develop a searchable online database on to allow all stakeholders to consult and to analyze the data on Member States' arms exports in a user-friendly manner. At moment of writing, this database is not yet available. An alternative presentation of the same data is published by the European Network against Arms Trade.[19] Unfortunately, it is still not possible to conveniently retrieve the information presented.

8.3.5 Stockholm International Peace Research Institute (SIPRI): Arms Transfers Database

SIPRI is an independent international institute aiming to contribute to an understanding of the conditions for peaceful solutions of interstate conflicts and for stable peace, through scientific research. SIPRI maintains multiple databases, though only one (Arms Transfers) provides an insight into the level of individual weapon platforms. The database contains information on all transfers of major conventional weapons from 1950 to the most recent full calendar year. Data on nearly every country and armed group in the world is included. Information is arranged in arms' categories based on capabilities. SIPRI provides additional details on each transfer, next to a statement whether the reported year is an estimate. Transfer value is covered through a reflection of the known (competitive) production costs, using their own compiled Trend Indicator Value (TIV). Weapon systems with similar physical characteristics (limited comparison) are expected to have similar prices. This means that the actual deal value is not shown. Data originates from the national reports (including the UN Register), arms producing company's reports, and (independent) news sources (both on internet and on mass information channels). SIPRI data is available freely to all

[16] Council Common Position/2008/944/CFSP, supported by directive 2009/43/EC. http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:335:0099:0103:EN:PDF.

[17] https://eeas.europa.eu/topics/security-defence-crisis-response/8472/arms-export-control-arms-trade-treaty_en.

[18] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ%3AJOC_2019_095_R_0001.

[19] https://www.eda.europa.eu/info-hub/defence-data-portal.

users. The Arms trade dataset is available online.[20] Upon request, a link is provided for easily retrievable data.[21]

8.3.6 *Centre for Analysis of World Arms Trade (CAWAT) (Центр Анализа Мировой Торговли Оружием (ЦАМТО)]: World Arms Trade Statistics*

CAWAT is a non-governmental independent research, information and publishing enterprise established in Russia in February 2010. CAWAT's main areas of interest include defense spending, the capacity of the defense industry, and the trade in arms and defense technologies. CAWAT produces both customizable projects (do mind that as a private person you receive no access—CAWAT deals with institutions only) and periodical editions for subscribers, including a Yearbook (in an electronic .pdf format) positioned as a full body catalogue and including several datasets on international *arms transfers*, covering 173 states and including transfer prices. The price of the yearbook is not published online, but it is estimated to range between €20.000 and €30.000. Universities and commercial sources are able to purchase information as part of an academic package. CAWAT publications are based on verifiable open source information, including national reports (including the UN Register), arms producing companies' reports, (independent) news sources and reports by international think tanks (e.g., SIPRI and IISS). Though acting as the main source for arms trade information within Russian media and academia, the organizational products are not generally known outside Russia, probably due to the orientation and language boundaries. The main information page is in Russian.[22] All periodic publications (weekly, monthly and yearly) are in Russian as well. An English webpage is available, but limited. Information about the yearbooks in English can be retrieved.[23]

8.3.7 *International Institute of Strategic Studies (IISS): Military Balance*

The Institute of Strategic Studies was founded in November 1958 in the United Kingdom to promote an informed debate on nuclear deterrence and arms control in the wake of the Second World War. Today the aim remains to conduct analyses on the issues of war and power for governments, the private sector and expert users. Its best-known publication—the Military Balance—provides an overview of states'

[20] https://www.sipri.org/research/armament-and-disarmament/arms-transfers-and-military-spending.

[21] http://armstrade.sipri.org/armstrade/html/tiv/index.php.

[22] http://armstrade.org/.

[23] https://armstrade.org/pages/en/magazines/yearly/report/methodics/index.shtml.

weapon stocks within their force structures. Currently, the Military Balance reports on more than 171 states. The IISS addresses defense policy and defense spending and includes detailed information on the organization and number of military forces. Datasets are available as part of the annual yearbook, in an electronic format and in print. Prices for a single copy start at £495. Recently, the IISS has started offering an additional online database: the Military Balance+, with data going back to 2014.[24] Full range and functionality are accessible with an Academic or a Corporate license (prices are not published, but are expected to range between €10.000 and €50.000). The Military Balance publications can be found online.[25]

8.3.8 IHS Markit: Jane's Publications

IHS Markit is a company providing information on a wide range of fields. With the purchase of Jane's retail group in 2006 (the brand name *Jane's* dates back to 1898 as a publisher of encyclopedia), IHS Markit has strengthened its grip on the aerospace, defense and security market. IHS Markit uses both first-hand and secondary information sources, including government and industry announcements, traditional and social media releases, extensive use of networks, freedom of information requests, (satellite) imagery and video analysis. The company maintains a specialized database, with digitalized data going back to 1988, available online and on alternative carriers. The price of full access is part of a commercial agreement between parties and is not disclosed; competitors estimate numbers reaching six digits. A request for access can be posted through the contact page.[26] Next to specialized data products, the company produces a wide range of periodicals (e.g., Jane's Defense Weekly, and the Defense Industry Newsletter). Within academia, IHS Markit is known for its yearbooks, which are often used as reference material. Three of those—concerning combat aircraft—are Jane's World Air Forces, which provides a yearly assessment of the airborne capabilities of global Air Forces. Arranged in a standardized way, the data covers fixed- and rotary-wing aircraft, UAVs and—to some extent—missiles, focusing particularly on upgrade information. Jane's All the World's Aircraft: In Service covers all aircraft from ultralights to multirole fighters, arranged by production company. Information on production and international trade is limited, prices of aircraft are occasionally provided, though generally for civilian aircraft only. Jane's All the World's Aircraft: Development & Production covers the production of 49 states with an aircraft industry, enlisting all (sub)contracting companies and their aircraft programmes. The price per yearbook is £915.[27]

[24] www.iiss.org/publications/the-military-balance-plus.

[25] www.iiss.org/publications/the-military-balance/the-military-balance-2019.

[26] https://ihsmarkit.com/about/contact-us.html.

[27] https://www.janes.com/products/yearbooks.

8.3.9 Informa: Aviation Week Network

Informa is a multinationally operating company in the field of information services, scholarly publishing, and international events, with a focus on business-to-business services. In the aviation field, Informa is known for its brand Aviation Week, covering developments worldwide and offering a portfolio of products across publications, data, market intelligence and events. The name dates back to 1916, when the first issue of Aviation Week magazine was published. After multiple name changes it is now known as Aviation Week and Space Technology. Aviation Week maintains a large amount of data including a constantly updated dataset on combat aircraft military inventory data. Extensive information on the various weapon systems is presented, including family groupings of aircraft types, specifications on weaponry, engines and contracts. Aviation Weekly has a strong focus on costs, including Maintenance, Repair and Overhaul cost data and unit cost information per aircraft. The Aviation Week data originates from the industry, specifically the original equipment manufacturer (OEM) government publications, specialized periodicals and think tanks. Moreover, the company maintains direct communications with military and government officials, as well as via freedom of information act requests and even occasionally open source satellite imagery. All information received is cross-referenced. The company serves both governmental and industrial clients. Individual information requests are possible. Depending on the request, customary commercial prices are agreed on.[28]

8.3.10 RELX: Cirium

RELX is a UK information and analytics company involved in intelligence and publishing, operating in 40 countries serving customers over the whole world. In its Risk & Business Analytics market segment, RELX provides its customers with data and analytics to improve operations and to manage risk. Since 2019, it has been brought under the umbrella of a new brand called Cirium (historically referred to as Milicas and Helicas, and before that it was known as Fleetsanalyser and ACAS Fleet database), focusing to serve the air travel industry. Through its focus on the commercial market, RELX serves clients in the field (e.g., OEM and aftermarket, airliners, airports, aircraft lessors, travel tech), financial specialists (e.g., banks and insurers), and governments.

The database combines both commercial and defense data, originating from industry relationships to producing and coordinating companies in the field. Over 2000 sources are combined with a sophisticated big data technology stack. No information is disclosed on access to the Cirium database.[29]

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[28] https://aviationweek.com/defense-space; https://aviationweek.com/products/awin-aerospace-defense.

[29] https://www.cirium.com/contact-us/.

8.3.11 Rheinische Post: Flight Global World Air Forces Reports

Rheinische Post Mediengruppe is a German medium-sized media and services company. In 2019, it purchased the historical weekly magazine Flight International, and its related information website Flight Global from RELX. Flight International—founded in 1909—is the world's oldest continuously published aviation news magazine. Flight Global, established in February 2006, maintains the heritage of Flight International and used to be the home base for initial databases on the aerospace industry. Since 2007, Flight Global annually offers a free insight into its databanks by publishing a global overview on military aircraft inventory and providing a short analysis of recent and expected developments. In 2007, data was published in multiple articles on the Flight Global webpage. Since 2008, each overview is compiled as a separate .pdf report in a standardized format. Despite a change of ownership, the company continues to publish the reports in the December edition of Flight International. The price of a single copy at a local shop or online is £4.99 per issue. Data includes information on ordered, but not yet received aircraft. And although the name suggests that only Air Force inventory is included, data on aircraft (both fixed and rotary wing) within the Navy and Army inventory is included as well.[30]

8.3.12 Forecast International: Military Information Library

Founded in 1973 by a former USAF officer, Forecast International is a provider of market intelligence, forecasting, proprietary research and consulting services for the worldwide Aerospace, Defense, Electronics and Power Systems industries; gathering and providing knowledge on Military Aircraft, Defense & Aerospace Companies (including subcontractors), international (military) markets and World's force structures. Forecast International specializes in long-range (15 years) forecasting in the most cost-effective way. The company collects and analyzes open, publicly available sources including government publications, industry, private companies, general and specialized press (following over 200 magazines, next to other paper- and online subscriptions), trade shows, seminars and conventions. The main customers include governments and industries at the supplier and subcontractor level. At full range, an annual access to the online library (dating back to 1989) including both historical and forecasted data on worldwide production, arms transfers, prices, military budgets, market (segment) analyses and reports containing information on weapons systems and geographical developments is offered starting from US$65.000. A more specific request can be covered separately (starting at approximately US$2.000).

[30] https://www.flightglobal.com/reports.

Next to its analytic products, Forecast International maintains major editorial support agreements with many key publishers and publications.[31]

8.3.13 TEAL GROUP: Military Information Library

TEAL GROUP (on the market since 1988) is a specialist provider of market analysis and forecasting services in the areas of international aerospace, with special interest in the field of defense electronics, engines, missiles and munitions. TEAL GROUP provides detailed information on military inventory of 123 states (accompanied with political and economic analysis and future forecast). A special section on US Defense Agencies provides an extensive insight into the budgets, capabilities and programs of the US Armed (and civilian) Forces. The Defense & Aerospace Companies Overview gives an insight into the capabilities of the (Western) industry. Weapon system reports cover production numbers, support chains and financial insights. Data is provided on the world's military aircraft systems, including aircraft, engines, military electronics, missiles and smart munitions, unmanned aerial vehicles, and space systems and -ports. TEAL GROUP analysts also contribute to a range of specialist publications. TEAL GROUP information reports draw on a wide range of sources: OEM information releases are intensively crosschecked using multiple (publicly available) data sources. The main customers are industry subcontractors, the financial community, prime contractors, and governments. Depending on the request, customary commercial prices are agreed on (no indication available). A(n) (online) demo of the data is free to use.[32]

8.3.14 Simplify Compliance: Military Periscope Datasets

Simplify Compliance is a provider of regulatory and business information, analysis, and tools. The company holds a general focus on US-based businesses in multiple industries, including healthcare, human capital management, and telecommunications. Military Periscope as a product is positioned in the latter one. Military Periscope, initially developed by the United States Naval Institute in 1986, is presented as a knowledge base for accurate open-source global defense information. The product is comprised of a daily news portal and three (online) databases providing information on weapon systems, nations' armed forces (air-, ground-, naval-, special warfare, paramilitary and strategic forces for 165 nations, including some information on deployment plans, programs and budgets), and terrorist organizations (per region known data are compiled on every international terrorist group including their

[31] https://www.forecastinternational.com/fistore/category.cfm.

[32] https://www.tealgroup.com/index.php/online-access-demo.

history and an annual chronology of terrorist activities). All information within Military Periscope is open source data. Multiple referenced sources are used to collect the weapons data. The data in Military Periscope is updated continuously and cumulatively. It is not possible to retrieve historical datasets, nor receive access to the raw data. Military Periscope serves a range of customers, ranging from individuals to governments, industries, and educational institutions. With an annual price starting at US$7.800 for a single-station single user access, Military Periscope is presented as an affordable library. Moreover, as a Federal Library and Information Network member, Military Periscope offers discounted prices for US users. A free 7-day trial is possible.[33]

8.3.15 GlobalData: ADS Solution/Strategic Defense Intelligence Database

GlobalData is a UK-based data analytics and consulting company with a heritage of over 50 years, covering multiple industries including Aerospace, Defense and Security. GlobalData provides intelligence on the world's largest industries helping clients to increase business value through growth. The company offers an extensive dataset known as ADS Solution, or sometimes referred to as the Strategic Defense Intelligence database. Data includes information on military inventory, production and transfer (including even the curated tracking of procurement portals for one third of the globe). Moreover, GlobalData includes tendencies analysis, by providing a real-time insight into the sentiment of the Top-100 global "influencers" in the Aerospace, Defense and Security industries, and unlimited access to its analysts.[34] A demo can be requested.[35] Prices are not published, but agreed between commercial partners. Next to data, the company offers a range of specialized forecasting reports, and a public website providing general analyses free to the public.[36]

8.3.16 Frost & Sullivan: Aerospace and Defense Content

Frost & Sullivan is a globally oriented, multi-industry business-consulting firm that helps companies to identify business opportunities and supports them in their growth strategies. Frost & Sullivan was the first company to offer its services on electronic tape media, delivering world military equipment market data in 1962, just a year after their establishment. Frost & Sullivan is often consulted by strategic departments, not only to retrieve information, but mostly as an expert and an advisor. The company

[33] https://www.militaryperiscope.com/join.

[34] https://www.globaldata.com/industries-we-cover/aerospace-defense-and-security/.

[35] https://www.globaldata.com/request-a-demo/.

[36] https://www.airforce-technology.com/.

provides a large number of in-depth standardized reports on various subjects forecasting future developments. To this end, Frost & Sullivan maintains a large database including information on the production, inventory, and trade in weapon systems, next to general information on aircraft characteristics. Data is retrieved from industrial and governmental partners. At the moment Frost & Sullivan offers access to their research reports (a single report starts at approximately US$4,000, licensed access to the full library is possible through a commercial agreement).[37] The report is accompanied by raw data used in the analysis. The company is also working on developing an interactive database in the Aerospace and Defense environment. This so-called iFrost platform is not available at the time of writing, but is expected shortly.[38] Frost & Sullivan analysts are known to contribute to IISS Military Balance.

8.4 Analysis

This section provides an analysis following the aspects collected in Table 8.1.

8.4.1 Data Providers

The basic presumption that there are two main origins for data (i.e., industry producing companies and governments producing or procuring weapon systems) seems correct. However, not all governments and industries are transparent on their actions on the combat aircraft market. A lot of data is retrieved through independent research. This is a difficult and time-consuming process that generally comes at a price. Table 8.1 (columns 1 and 2) present the organizations and the reports which disclose the results of this process.

We find that the peace research and arms control agencies (e.g., SIPRI, CAWAT, IISS) and the commercial parties sources (e.g., RELX, the TEAL Group, GlobalData) have one thing in common. Both aim to make the world a better place through data. The difference is in the focus and the customers. Commercial parties link data to opportunities and growth for their customers, usually other businesses; their focus is mainly on forecasting the future. Research agencies generally address governments and civil society, and provide a more explanatory focus on the geopolitical perspective.

Both research agencies and commercial sources also seem to follow a common data gathering methodology: starting at industrial or governmental publications, they add other sources such as (in)formal contacts within the industry or the government, usage of freedom of information requests, (social) media publications, and sometimes own intelligence as in image of video analysis, including owned satellite coverage

[37] https://store.frost.com/industries/aerospace-defence-and-security.html.

[38] https://store.frost.com/ifrost-databases.html.

(the latter is only available to the financially most solvable companies, such as IHS Markit and Informa). Data is crosschecked and enriched.

This means that although there exist substantial differences between databases (main focus, speed of incorporation, depth of details, and presentation of data), generally all sources are interconnected. Developments and findings are published—sometimes through specialized media (paid subscription, on- and off-line) or freely on internet (as a means of promotion and customer loyalty), meaning information will be picked up by other data collecting parties and reused.

Looking at the main customers for whom the data is collected, we see most often governments, research agencies, industrial partners in the field, sub-contractors, and (financial) investors. Commercial organizations most often collect data for other commercial parties, while research agencies' and governments' data is redistributed among other research agencies and governments. There are exceptions—Simplify Compliance's Military periscope is a commercial source, but its customers are individuals, governments and educational institutions.

8.4.2 Type of Data Collected

Table 8.1, column 3 shows that the "T" (transfer of combat aircraft) is best documented; both by direct states reports, peace research and arms control agencies and commercial parties. Reporting on "I" (combat aircraft inventory) is a close second, mostly covered by commercial data providers. However, 'inventory data' can mean the most up-to-date data only, thus lacking historic overview. This is the case with Informa's Aviation Weekly, and Simplify Compliance' Military Periscope. Within research agencies, IISS Military Balance is specialized in longitudinal data on conventional weapon inventory. UN's UNROCA also includes inventory data (60 states out of 196 are covered). OSCE-members, finally, do exchange inventory numbers amongst each other, but this data is not published. "P" (production data) is provided by commercial sources and UNROCA. The latter covers but a few of all aircraft producing states (e.g., Russian Federation and China are missing) and is not always detailed (US generally just puts a number, without distinction in combat aircraft type). OSCE-members do exchange production numbers against each other, but this data is not published. "A" (abolishment of weapon systems) receives no attention, except in some voluntary side notes within UNROCA reports. Multiple explanations are possible. First, abolishment of weapon systems may be of less interest to the industry—this is a reflection of a supply driven market. Second, data is difficult to master, since no standardized definition of abolishment is given (e.g., can 'stored' or 'cannibalized' aircraft be considered 'disposed'?). Finally, "C" (weapon system characteristics) is a specialization of commercial parties. Data on combat aircraft capabilities (e.g., speed, reach, ordnance) is not offered by research agencies or through direct reporting.

8.4.3 Accessibility: Language

Most datasets are in English (Table 8.1, column 4). The UN translates all documents into Arabic, Chinese, English, French, Russian and Spanish. The OSCE uses English, French, German, Italian, Spanish and Russian translations. The EU uses 23 official languages (i.e., Bulgarian, Czech, Danish, Dutch, English, Estonian, Finnish, French, German, Greek, Hungarian, Irish, Italian, Latvian, Lithuanian, Maltese, Polish, Portuguese, Romanian, Slovakian, Slovenian, Slovene, Spanish and Swedish). CAWAT's World Arms Trade Statistics operates in a niche, appealing to a Russian-speaking public only.

8.4.4 Accessibility: Formats

Recent data is to be found in a digitalized format. Older data (approximately before 1990s) is best found on a bookshelf. There is much variety in the digitalized formats and its usability for machine-aided analyses. States reports are usually nothing more than .pdf scans of the original report—if you are lucky, in a standardized format—however, that is only the case with ATT reports. The UN, for example, produces beautiful presentations allowing multi-state comparison for arms transfers reports, but allows no easy data retrieval. The EU is the only organization supporting the initiative to make its data easier to access. The IISS' Military Balance and CAWAT's World Arms Trade Statistics are in a .pdf format as well, and very difficult to convert to a database. Flight Global also offers its World Air Forces inventory data in .pdf format, but is much easier to convert due to standardized size. SIPRI online data (including details of the transfers made) is not transferrable either. It is however possible, upon request, to receive a link to almost the same data (lacking transfer details, but including deal-value in TIVs) which allows the retrieval of data in a .txt format, making it easily analyzable. Databases are the easiest for machine-aided analysis. These are offered by IHS Markit (Jane's), Informa (AviationWeekly), RELX (Cirium), Forecast International (Military Information Library), and GlobalData (ADS Solution). Databases seem to have become general around the beginning of the 1990s: a 30-year historical dataset seems to be standard for a commercial party, looking at IHS Markit, Forecast International and the TEAL GROUP. This relative peak can be explained by the increased availability of digitalized data storage capability, the relaxation of the superpower tensions, or to show the correlation between the age of organization and the length of its data trail. Detailed analysis falls beyond the scope of this chapter. Recently, the IISS also started to offer its data in a database format, as Military Balance+, with a history going back to 2014.

8.4.5 Accessibility: Price

All direct states' reports are free to all users (Table 8.1, column 5). Two other free sources are SIPRI (which is supported by Swedish government) and historic Rheinische Post Mediengruppe's Flight Global World Air Forces reports (provided as part of the Flight International December publication). All other data sources require (significant) payment. Priced sources, generally provide easily retrievable and up-to-date data. The price setting seems to be related to reproducibility and user-friendliness of data. Access to data is part of a package deal offered by the provider, including analysis added (usually in a form of standardized reports and analyst support) and a form of customization of data. There seems a relationship between the format and the price. Documents in print are most liberally priced. These are perfectly suitable for reference purposes but cannot be shared simultaneously, are less usable for analysis purposes, and exclude customized analyst support. Digitalized documents in a flat format (such as .txt or .pdf) – often placed in the same price range—make it easier to share with multiple persons, but remain less suitable for analysis. Databases (independent of platform) are the easiest to use, but usually the most expensive. Cheap solutions are limited in the amount of entrances, comparability, or the capacity to retrieve data. Data on arms transfers is commonly free. The exception is CAWAT, which charges for data on arms transfers. The explanation could be that CAWAT is the only data source providing deal values. Military inventory data is usually priced; exceptions are UN's UNROCA and historic Flight Global World Air Forces reports. All arms production data must be paid for. Possibly, this is due to the sensitive nature of the data: production and holding data provides a direct assessment of military and industrial capability. Another suggestion could be the expensive nature of data: coverage of information on 193 states is much more difficult to perform, than just looking at the transfers. The third explanation is that the market is commercialized and customers are willing to pay for this data. It is interesting to see that UN and OSCE initiatives to share this data are much less successful at collecting data on arms transfers.

8.4.6 Time Frame Addressed

Table 8.1 column 6 shows that most longitudinal data history can be provided by IHS Markit (weapon system data since 1909, military holding since 1913), SIPRI (trade since 1950), and IISS (military holding since 1959). IHS Markit Jane's data and IISS Military Balance cover most of the period in plain text (digitalized or on paper), while SIPRI provides a database for the whole period. As mentioned before, data organized in databases seems to have become mainstream since the beginning of the 1990s in the commercial branches. State transparency on the (changes in) conventional weapon systems inventories appears to have become more common after the 1991 UNROCA initiative, are by and large available online, but not easily

analyzable. Looking at the timeliness of reporting, there seem to be only two main speeds: either a yearly or continuous updates. Direct states' reports and research agencies SIPRI, IISS and CAWAT follow a yearly routine, updating and publishing their information once a year. Commercial parties update their datasets constantly. Timely information is apparently important to their customers. Most commercial parties also provide periodic reports (often on a yearly basis) covering the general trends and providing a forecast for the future.

8.4.7 Actors

Table 8.1 column 7 provides an overview of the number of actors in each dataset. Direct states' reporting to support transparency among members has been launched with the UN initiative (UNROCA) in 1991. This initiative has been followed by internal information sharing between multiple political and military alliances in the Western world. Despite some strong alliances in South America, Africa and in Eastern Europe, no internal reporting initiatives on weapon transparency have been found. This could be explained by fewer strong military threats perceived, or by the sufficiency of UNROCA (and later ATT as well) reporting initiatives. A true global reach is difficult to attain. Due to the nature of the subject, it is as a rule clear that small, geographically distant, non-conflicting states are excluded from the datasets, due to the lack of military equipment. Specific state alliances (OSCE and EU) cover just the data of their member states, or treaty ratifications (UN ATT). Other data providers generally aim for the global reach. State-level remains the reporting standard both between states and by third parties. Research agencies and commercial companies though are able and often willing to provide data on the level below state: armed grouping, armed force branch, or company name. Sometimes the information is intermingled within a database (e.g. SIPRI includes arms transfers to armed groups next to arms transfers between states, and most commercial sources remark on combat aircraft in the possession of companies next to state-owned combat aircraft) or is separated (e.g., Military Periscope separates information on non-state groups in a specialized database, and IISS excludes non-state-owned combat aircraft from their overviews).

8.4.8 Weapon System Detail

Commercial sources excel on this part, most probably due to the customer requirements, which call for a high detail level and technical data. Still, research agencies SIPRI, CAWAT and IISS do provide configuration data on combat aircraft (i.e. not only the family/platform data). There are though remarks to be made on the consistency of naming conventions, e.g. the same aircraft—even without substantial modifications over the years—can be named differently in consequential publications of

the same source: for example JSF, F35, F-35, F-35A, F-35A/B/C, F-35 Lightning II, F-35 Lightning II type A. This makes it difficult to apply a computerized time-series analysis. States reports are generally much less detailed and mention only the weapon system category or—if you are lucky—a platform family. It would be interesting to match the findings in the latter analyses, outside the scope of this chapter.

8.4.9 Financial Information Provided

Finally, Table 8.1 column 8 presents evidence that financial information is seldom included in the data provided and normally comes at a price. The stated (cost or market) price of combat aircraft– as a reflection of the production price—is by and large known. SIPRI uses its own method through calculated TIVs. The traded price is in the main not disclosed; both the exact size of the package traded and the price agreed are not shown. CAWAT seems to be an exception, because it includes financial information on every transfer. ATT reporting has the potential to disclose the traded price as well. Unfortunately, up till now (in the four-year reporting period) only five states have been willing to reveal the value of their weapon transfers.

8.5 Conclusion

In the slipstream of the different pathways we took to search for relevant data sources, we gained additional insights into the multi-layered market of weapon system data and its broad range of customers with varying requirements. There are two main origins for data (i.e., industry and governments). While industry seems to be much less transparent, governments have increased reporting over the last decades. Governments share data, but the data is not crosschecked internally, neither is it made user friendly. Accessible, timely and complete information on combat aircraft market transactions seems not to be possible without independent investigation by peace research and arms control agencies, and commercial sources. Independent data gathering takes place through (in)formal contacts at the industry or the government, usage of freedom of information requests, (social) media publications, and sometimes own intelligence as in image of video analysis, including satellite coverage. This is a difficult and time-consuming process that generally comes at a price. The price setting seems to be related to the format of data. A positive relation is found between the price and user-friendliness, and a negative relation between the price and the reproducibility. We observe a relation between the price and type of data collected as well. Trade data is generally free, but production and inventory data is priced. All financial information is priced as well. The market for weapon system data is multi-layered. There is a broad range of customers with varying requirements. Businesses and financial institutions look for best investment options; industrial subcontractors are looking for growth possibilities; and civilian institutions and governments are looking at the

geopolitical developments. Some require just data (more or less timely provided), others require specialist analysis, and yet others look for the cheapest market solution and seek to compare reports. This market deserves further analysis. For our empirical investigation into the factors contributing to the worldwide demand and supply of fixed-wing combat aircraft, we have found that there is a sufficient amount of data available. However, this data comes at a price.

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Chapter 9
Does Legal Origin Matter for Arms Control Treaty Ratification?

Jeroen Klomp and Robert Beeres

Contents

Abstract This chapter examines whether the legal origin of a country influences the likelihood of ratification of multilateral international treaties concerning arms control. We theorize that ratification of an arms control treaty signals a country's intention to avoid arms races and wars. We know only little about the variation in the ratification of such agreements. One possible element that may explain this variation is the legal origin or tradition of a country. Since treaties are legally binding agreements between two or more states and/or international governmental organizations, they cannot be adapted to local needs and circumstances. Treaties are therefore generally an uneasy fit with the gradual, organic evolution of law that is essential in the common-law system. By contrast, the civil-law tradition neatly distinguishes between legally binding obligations and non-binding guidelines or directives. Consequently, civil-law countries are expected to be more likely to ratify treaties than common-law countries. The empirical results clearly confirm this expectation. In particular,

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civil-law countries have ratified about nine percent more treaties than common-law countries.

Keywords Legal tradition · common law · civil law · arms control · soft law · international agreements · treaties

9.1 Introduction

In April 2013, the Arms Trade Treaty (ATT) was opened for signature after the adaptation by the United Nations General Assembly and entered into force in December 2014. Currently 110 countries have signed and ratified the ATT. Its roots can be traced back to the late 1980s and was a response to the growing concern on the unregulated nature of the global trade in conventional weapons in the preceding decades. Especially the rapid spread of arms in less democratic countries created a serious risk for human security in these countries. The aim of the ATT was to regulate the global arms transfers by establishing a minimal legal basis and improving transparency and cooperation among countries. It is not the first and will for sure not be the last international treaty to manage the international transfer of strategic goods. Currently, there are more than twenty international arms control and non-proliferation treaties in place that are open to all states to become a member. Some are used as ways to stop the spread of certain military technologies such as nuclear weaponry or missile technology (i.e., Non-Proliferation Treaty). Other arms control agreements are entered to limit the trade of conventional arms to state and non-state violent actors (i.e., Arms Trade Treaty).

One important broad question that still is largely unanswered is why some states join certain international treaties, but other states do not? This question is not only relevant from an academic but even more so from a political point of view when drafting new treaties. The typical answer to this question provided in the existing literature is that states join international agreements which are in accordance with their economic interests.[1] However, not all treaties provide obvious economic benefits to states. When there are no direct monetary gains from international cooperation, as it is the case in arms control treaties, there have to be other benefits of treaty ratification. An alternative motive to ratify arms control treaties builds on the argument that non-proliferation of conventional arms and WMD would bring substantial benefits in ending expensive arms races and redirect resources to more productive purposes.[2] Broadly speaking, these benefits can roughly be divided into two categories. First, signing an arms control treaty might provide some strategic benefits as state leaders benefit from peaceful international relations, increased gains from trade and from the ability to enforce their own policy goals in the international arena. Voters are likely to

[1] Congleton 2006; DeLeat and Scott 2006; Fredriksson et al. 2007; Fredriksson and Ujhelyi 2006; Hollyer and Rosendorff 2011; Mansfield et al. 2002; Miller 1984; Milner and Rosendorff 1997; Neumayer 2002; Rosendorff 2005; Vreeland 2008.

[2] Levine and Smith 2000.

reward this strategic policy. This will, in turn, increase the likelihood that incumbent officials will be re-elected during the next elections.[3] Second, state leaders face costs of arms races and escalation of international conflicts. The ratification of arms control treaties reduces the risk of war for certain countries and therefore reduces the costs of war and arms races. Thus, the conclusion of arms control treaties increases international security and stability, because these agreements have an important signalling function. They provide information about peaceful intentions and the willingness to employ offensive capabilities because they require all treaty partners to reduce their offensive weapons arsenal or to limit the range of weapons used.[4] With such a signal, states can escape or slow down arms races and prevent conflicts from escalation to war.

Additionally, many studies examine the institutionalization of treaties through ratification.[5] A possible key element that affects the decision of whether or not to ratify a particular treaty is the legal tradition of a country. This issue is mainly neglected in the current literature. The world's legal systems can roughly be divided between two major traditions: English common law and French civil law. Since treaties are legally binding agreements between two or more states, they cannot be adapted to local needs and circumstances. Treaties are therefore generally inconsistent with the gradual, organic evolution of law that is essential in the common-law system. As a result, common-law countries hold a distaste for treaties. In turn, treaties are a more comfortable fit with the civil-law tradition that neatly distinguishes between law and non-law. Consequently, civil-law countries are expected to ratify binding international obligations.

The aim of this chapter is to provide an insight into the relationship between the legal tradition of a country and the ratification of arms control treaties. For this purpose, an ordered logit model is estimated including 171 countries. The main findings of our study are in accordance with our expectations. Common-law countries ratify fewer arms control treaties compared to civil-law countries.

The remainder of the chapter is structured as follows. Section 9.2 reviews the literature relevant for explaining the relationship between arms control treaties ratification and legal origin. Section 9.3 describes the data and methodology used, while Sect. 9.4 shows our empirical results. Last, Sect. 9.5 offers a conclusions and discussion.

9.2 Legal Origin and Arms Control Treaties

The international transfer of sensitive and military-strategic goods, including nuclear weapons, conventional arms and dual-use goods, are subject to specific international treaties. This framework is designed to prevent weapons systems, technologies,

[3] Brender 2018.

[4] Kydd 2000; Müller 2000.

[5] Bernauer et al. 2010; Haftel and Thompson 2013; Hathaway 2007; Neumayer 2008; Schneider and Urpelainen 2013; Simmons and Danner 2010; Von Stein 2008.

knowledge and services, posing threats to international safety and security, from falling in the hands of violent state and non-state actors. International treaties are widely used as a common tool of global governance the last decades. A treaty is a legally binding agreement between two or more nations and or organization that is recognized and given effect under international law. One of the most important principles of treaty law is *pacta sunt servanda* (i.e., the pact must be respected), meaning that treaties are binding on the parties by consent and must be performed by them in good faith.[6]

The existing literature shows that the ratification of a particular treaty is mainly determined by political and economic interests. One important issue in this debate that has not been explored so far is whether the decision to ratify international treaties is affected by the legal tradition of a country, as this will shape the incentives of policymakers. Juridical scholars typically classify the legal tradition according to: (i) historical background and development of the legal system; (ii) theories and hierarchies of sources of laws; (iii) the working methodology of jurists; (iv) the characteristics of the legal concepts; (v) the legal institutions of the system; and (vi) the divisions of law employed.[7] Using this framework, legal origin theory formalizes the different perspectives about law and its purpose and classify the legal origin of a country into two secular principal traditions: common law and civil law, and several subtraditions—French, German, socialist, and Scandinavian—within the civil-law tradition. Generally, the two principal types of legal origins emerged from the different views of law developed in England and France centuries ago. These contrasting views yielded diverging ideas and strategies that are not only incorporated into specific legal rules and codes, but also into the organization of the legal system. Civil law encourages a centralized system where the government directly addresses market failures, whereas the more decentralized common-law approach favours contract and private litigation. The two principal legal traditions have been transplanted through colonization and conquests to the vast majority of the jurisdictions in the world by a group of European countries.[8]

The common-law legal tradition was developed in England first and later spread across the colonies of the British empire, including the United States, Canada, Australia, India, South Africa. English common law developed because landed aristocrats and merchants wanted a system of law that would provide strong protections for property and contract rights, and limit the crown's ability to interfere in markets.[9] The judge has a central role in the common-law system. The law is formed by appellate judges who establish binding precedents by resolving case-specific disputes. Dispute resolution tends to be adversarial rather than inquisitorial. Judicial independence from both the executive and legislature are central. The civil-law tradition is the oldest, the most influential, and the most widely distributed around the world, especially after so many transition economies after the end of the Cold War have

[6] Abbott and Snidal 2000; Guzman and Meyer 2010; Lipson 1991; Raustiala 2005.

[7] Glendon et al. 1982.

[8] David and Brierley 1985; McNeill and McNeill 2003.

[9] Mahoney 2001.

returned to it. It originates from Roman law and uses statutes and comprehensive codes as a primary means of ordering legal material. Dispute resolution tends to be inquisitorial rather than adversarial. In the civil-law system statutes and comprehensive codes serve as the primary means of ordering legal material, with a key role for legal scholars who ascertain and formulate rules.

It has been widely documented in the political science and economics literature that legal origin significantly influences the political decisions on implementing and enforcing various kinds of laws and regulations. For instance, empirical analyses demonstrate that common-law states are more market-oriented by having more economic freedom, stronger investor protection, more private ownership, more flexible labour markets, less burden of firm entry regulations and more developed capital markets than states with civil law, Islamic law, or mixed legal traditions. In contrast, civil law is associated with a heavier hand of government ownership and state-desired allocations. In other words, civil law is "policy implementing", while common law is "dispute resolving".[10] These economic outcomes are not only explained by the content or application of law, but also by the organization of the law system in countries. Subsequent studies have found that common law is associated with a lower formalism of judicial procedures and a greater judicial independence than civil law. These results are associated with better contract enforcement and greater security of property rights.[11]

The influence of legal traditions reaches beyond national boundaries into the realm of international commitments. A series of studies identify differences between civil-law and common-law countries in terms of their willingness to join treaties or accept the jurisdiction of international courts.[12] The main conclusion shared among these studies suggest that common-law countries are less likely to show such willingness compared to civil-law countries.

One essential element of common-law systems is their bottom-up evolution. Law is made by judges as a means to solve specific social problems. Legal rules evolve gradually and are sensitive to the social environment in which they operate and correspond with its values.[13] International treaties, however, are inconsistent with the notion of local, organic, and socially adaptive law. Foreign documents produced by international political deals are imposed top-down on the legal system and do not necessarily reflect its values. As a result, international treaties may not fit comfortably with its existing legal culture of rules and practices. These concerns lead common-law countries to greatly value the flexibility of nonbinding international rules and the liberty to modify or disregard provisions that are incompatible with domestic laws and policies. Additionally, given the power and independence of judges in common-law systems, governments feel uncertain about the consequences of treaty

[10] Botero et al. 2004; Djankov et al. 2002; 2003a; La Porta et al. 1997; 1998; 1999; 2002.

[11] La Porta et al. 2004; Djankov et al. 2003b.

[12] Chapman and Chaudoin 2013; Efrat 2016; Elkins et al. 2006; Goodliffe and Hawkins 2006; Mitchell and Powel 2011; Simmons 2009.

[13] Gennaioli and Shleifer 2007; Hutchinson 2005.

ratification and may find it difficult to escape treaty obligations.[14] To influence state behaviour, international agreements typically require incorporation into the domestic legal system and integration into domestic institutions. Implementation—the introduction of international rules and norms into formal legal and policy mechanisms within a state—is a key process in the translation of these rules and norms into changes in actual behaviour.[15] When incorporating a treaty into the domestic legal system, local law has to be brought into line with the treaty's legal obligations. In a common-law system, assessing the conformity of local law with the treaty—and making necessary changes—presents a challenge since the common law is not found in a single major code. Rather, law exists as an amalgam of statutes and legal precedents. Combing through the numerous legal sources and adjusting them to the treaty could be time-consuming and difficult.

Whereas common-law systems are less comfortable with legally binding agreements, the reverse might be true for civil-law systems as the flexibility of the legal rule comes at the expense of its certainty—and it is the latter that civil law values more. In contrast, nonbinding agreements do not easily fit civil law's emphasis on certainty, clarity, and formal legal sources, and its neat distinction between law and non-law. Civil law sees formal international rules as the preeminent means for governing interstate relations.[16]

To summarize the discussion above, common-law systems are more comfortable with nonbinding agreements than with treaties as they are less flexible and are an uneasy fit with the common-law legal tradition. By contrast, civil law's emphasis on certainty, the preference for formal, established sources and the separation of law and non-law will result in an inclination toward treaties and a distaste toward nonbinding commitments. Treaties fall neatly in the legal domain and are the international equivalent of the civil code that is a main pillar of the civil-law system.[17] Hence, civil-law systems feel more comfortable with treaties than with nonbinding agreements. Nonbinding international instruments are relegated to the non-law sphere and are not seen as an established source of international law. Overall, given civil-law's affinity for binding agreements and common law's aversion to them, we would expect a higher ratification rate of international arms control treaties among civil-law countries.

[14] McLean 2012.

[15] Betts and Orchard 2014.

[16] Jouannet 2006.

[17] Koch 2003.

9.3 Data and Methodology

9.3.1 Treaties and Legal Origin Data

We have developed a database on the membership status of states in international treaties concerning weapons based on the information provided by the United Nations Office for Disarmament Affairs (UNODA). The analysis here focuses on those treaties including the additional protocols that are open for all states to become member of the treaty. Including all treaties would inflate ratification for some countries, compared to others which have not the option to become a member of those treaties. Following Brender protocols of the Convention on Certain Conventional Weapons which require individual ratification of members will be dealt with as if they are a treaty of their own. These protocols are, for instance, land mines, blinding lasers, booby traps, and explosives.[18] The reason is that the control of certain weapons is governed by these protocols. The nineteen arms control treaties dealt with in this chapter can be roughly divided into two groups. First, there are those treaties specifying the terms of peaceful use of certain resources and areas.[19] Second, there are treaties prohibiting the development, trade, stockpiling and use of specific weapons.[20]

A country's legal origin is measured by its respective tradition using dummy variables. This classification is based on the differences between the highest legal source of law, because this predominantly defines the main characteristics of legal systems. Initially, the legal origin of a country is either classified as common or civil law. The highest source of law for common law is case law, while for civil law this is codified standards. Within the civil-law tradition, we are able to identify three particular branches, the French code (or Napoleonic code, that dates back

[18] Brender 2018.

[19] Specifically, these are the Antarctic Treaty, signed in 1959, guaranteeing that only peaceful, scientific missions will be conducted in the Antarctic; the Partial Test Ban Treaty from the year 1963, which restricts nuclear testing to the underground; the Outer Space Treaty from 1967, securing the peaceful use of outer space and celestial bodies and which prohibits the placement of weapons of mass destruction in the orbit and on celestial bodies; the Seabed Treaty, signed in 1971, which provides that no weapons of mass destruction should be placed on the seabed beyond territorial waters; the Moon Treaty signed in 1979, concerning the jurisdiction of the moon; and lastly the Open Skies Treaty from 1992, which allows for regular overflight of national territories on certain routes for verification purposes.

[20] The Geneva Protocol being the first international agreement to prohibit the use of biological and chemical weapons in war and therefore the first treaty which prohibits the use of a weapon type. It is followed by the Treaty on the Non-Proliferation of Nuclear Weapons in 1968; the Biological Weapons Convention in 1972; which bans not only the use, but also the production and stockpiling of biological weapons; the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques in 1977; the Convention on Certain Conventional Weapons in 1981 with Protocols I-V restricting the use of weapons with non-detectable fragments (Protocol I), landmines and booby traps (Protocol II), incendiary weapons (Protocol III), blinding laser weapons (Protocol IV) and Protocol V which governs the clearance of explosive remnants of war; the Chemical Weapons convention in 1993; the Anti-Personnel Mines Ban Convention in 1997 and the Convention on Cluster Munition in 2003.

Table 9.1 Distribution of the legal origin

Common law	32%
Civil law of which	68%
French law	52%
German law	11%
Scandinavian law	3%

Source Klomp and Beeres 2021

to the 1800s), the German code (enacted by Bismarck in the late 1800s) and the Scandinavian code (that dates back to the 1700s). The data is collected from La Porta, Lopez-de Silanes and Schleifer and Mitchell and Powell.[21] In Table 9.1, we report the distribution of the different legal systems across our global panel.

As a preliminary statistical test, we compute the number of arms control treaties for civil-law and common-law countries. On average, a common-law state has ratified about 6.3 treaties, while a civil-law state has ratified approximately 7.1 treaties. This difference is statistically significant at the ninety percent significance level. This finding implies that civil-law countries are associated with more arms control treaty ratification. However, this nonparametric test is only suggestive, as unobserved country heterogeneity, as well as other confounding variables, are not taken into account.

9.3.2 Empirical Model

To find out whether legal origin influences the ratification of arms control treaties, we employ an ordered logit model using a panel dataset including 171 countries over the period 1975–2016. Ordered logit estimation is appropriate when the dependent variable data is in an ordinal ordering. In this analysis, a higher number of treaties ratified correspond to a higher level of commitment intention than fewer treaties ratified.[22] However, one drawback of this approach is that we assume that all treaties are equally important for arms trade control. The model is given as follows.

$$treaty_{it} = \alpha_i + \beta^k x^k_{it-m} + \gamma legal_i + \varepsilon_{it} \tag{9.1}$$

The dependent variable $treaty_{it}$ is the cumulative number of treaties a country i has ratified at the end of year t. The vector x^k contains k control variables, while the variable $legal_i$ captures the legal origin of a country using a series of dummies indicating whether a nation has a common-law or civil-law origin and the various subdivisions. The parameter α_i is a country-specific intercept, while ε_{it} is an error term.

[21] La Porta et al. 2008; Mitchell and Powell 2011.

[22] Brender 2018; Neumayer 2002.

Table 9.2 Data used

Variable	Description	Source
Real GDP per capita	Real GDP per capita in constant US dollars of 2005 (in logarithm)	World Bank (2018)
Growth rate of real GDP	Growth rate of the real GDP per capita	World Bank (2018)
Military officer	Dummy variable taking the value one when the incumbent leader or Minister of Defence has a military rank, zero otherwise	Scartascini et al. 2018
Civil rights	Freedom House sub score on civil rights	Freedom House 2018
Democratic accountability	Polity IV score	Marshall et al. 2019
Foreign aid	Official Development Assistance as a share of GDP	World Bank (2018)
Trade openness	Sum of import and export as a share of total GDP	World Bank (2018)
Military trade	Total values in constant US dollars of the exports plus imports of military goods and services (taken in logarithms)	World Bank (2018)
Size of the armed forces	Total size of the military staff and personnel as a share of the adult population	World Bank (2018)
UNSC member	Dummy variable that is one if a country is a temporarily or permanent member of the United Security Council in a particular year, zero otherwise	https://www.un.org/securitycouncil/
Total population	Total number of inhabitants within a country (in logarithm)	World Bank (2018)
Number of veto players	Political constraint index: the number of veto players in the political system	Henisz 2017

Source Klomp and Beeres 2021

The vector of control variables is based on earlier literature on the ratification and implementations of international treaties in general and arms control treaties more specific.[23] These variables are required to avoid an omitted variable bias. The decision of whether or not to ratify a particular arms control treaty is generally based on different considerations including economic, political and security concerns. Table 9.2 provides an overview of all control variables, their definition as well as their

[23] Brender 2018; Congleton 2006; DeLeat and Scott 2006; Fredriksson et al. 2007; Fredriksson and Ujhelyi 2006; Hollyer and Rosendorff 2011; Mansfield et al. 2002; Miller 1984; Milner and Rosendorff 1997; Neumayer 2002; Rosendorff 2005; Vreeland 2008.

source. All explanatory variables are lagged to avoid simultaneity and endogeneity problems. The optimal number of lags m for each control variable is determined by using the Schwarz Bayesian Information Criterion.

Before estimating the model, we have to solve two further estimation problems that are related with the panel setting. First, the maximum number of treaties that could be ratified by a country differs between the start and the end of our period. To control this issue, we add a variable taking the value that is equal to the total number of treaties that are opened for signing and ratification. Second, we have to choose between a fixed-effects model and a random-effects model when estimating the model. However, since our primary variable of interest—the indicator for the legal origin—is time-invariant at country level, we are constrained to use the random-effects estimator. Our model cannot be estimated using fixed-effects because the legal origin dummy would be collinear with the country-specific dummies.

9.4 Results

Table 9.3 presents the baseline results of the ordered logit model. To obtain robust standard errors, we apply the bootstrap estimator with 1,000 replicators and cluster them on country levels. Since it is difficult to directly interpret the standard coefficients of a logit model as they are in log-odds units, we report the marginal effects in percentage-points.[24] Table 9.3, column 1 includes all control variables suggested in the previous section. To control for the legal origin, we include a dummy variable taking the value one when a state has a civil-law history and zero otherwise. This means that we use common-law countries as our reference category. The results suggest that there is no significant difference in ratifying arms control treaties between civil-law and common-law states.

However, one problematic concern is that the used classification of the legal system is rather rough, making it less informative. As a result, it reduces variation among countries and the explanatory power of the legal origin indicator. In particular, there is no general consensus on how this legal origin division should be made exactly.[25] According to the existing literature, there is some significant heterogeneity among the countries currently classified as civil or common law. According to Mitchell and Powell some countries that are initially recorded as common-law ones, should actually be considered as Islamic or Sharia Law (such as Pakistan and Sudan) or have a mixed law system (such as Israel or South Africa).[26] Mixed law also includes numerous countries of Africa as it is partly based on tribal or customary law. Likewise, China's system is largely civil mixed with principles of socialist law and traditional Confucian values.[27] Table 9.3, column 2 uses a broader classification. In more detail,

[24] Cameron and Trivedi 2009.

[25] David and Brierley 1985; Glenn 2014; Zweigert and Kotz 1998.

[26] Mitchell and Powell 2011.

[27] Schaffer et al. 2011.

Table 9.3 Legal origin and arms trade control treaties

	Dependent variable: Number of arms control treaties ratified									
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Civil law	0.121 (0.09)	0.087* (0.05)	0.087* (0.05)							
Islamic law		−0.103** (0.03)	−0.115** (0.06)	−0.155** (0.04)	−0.201** (0.09)	−0.150** (0.05)	−0.192** (0.09)	−0.199** (0.09)	−0.098** (0.04)	−0.180** (0.05)
Mixed law		0.116 (0.10)	0.119 (0.11)	0.140 (0.12)	0.120 (0.18)	0.084 (0.11)	0.101 (0.16)	0.100 (0.14)	0.059 (0.05)	0.183 (0.14)
French law				0.134* (0.08)	0.170** (0.06)	0.188** (0.07)	0.157** (0.04)	0.192** (0.07)	0.061** (0.02)	0.174** (0.05)
German law				0.163* (0.09)	0.157** (0.04)	0.112** (0.05)	0.115** (0.03)	0.142** (0.04)	0.113** (0.04)	0.216** (0.07)
Scandinavian law				0.044 (0.04)	0.048 (0.08)	0.040 (0.04)	0.029 (0.04)	0.026 (0.02)	0.005 (0.01)	0.050 (0.05)
Socialist law						−0.081* (0.04)	−0.098* (0.06)	−0.068* (0.04)	−0.015* (0.01)	−0.087* (0.05)
Country sample	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	Democracies	Autocracies
Lagged dependent	NO	NO	NO	NO	NO	NO	NO	YES	NO	NO
Control variables	ALL	ALL	GTS	ALL	GTS	ALL	GTS	GTS	GTS	GTS
Number of countries	127	127	171	127	171	127	171	171	61	124
Number of obs.	4572	4572	6156	4572	6156	4572	6156	5985	2318	3667

Source Klomp and Beeres 2021

Note **/*Indicating significance levels of respectively 5 and 10 percent; bootstrapped standard errors are shown between brackets; GTS refers to the general-to-specific approach

Islamic law is based on religious writings, while mixed systems combine elements of two or more different legal systems including customary law.

The findings point out that civil-law countries are more likely to ratify a particular arms control treaty compared to common-law countries. This difference is statistically significant at the ninety percent confidence level. In turns out that civil-law countries ratify about nine percent more arms control treaties compared to countries with a common-law heritage. Additionally, the results also indicate that Islamic countries are less likely to ratify arms control treaties than common-law or civil-law countries, while the impact of mixed law is the same compared to common-law countries as this legal origin variable is statistically insignificant.

Due to reasons of data availability, using all suggested control variables in one specification reduces our dataset substantially thereby increasing the risk that the results are driven by a sample selection bias. To balance the omitted variable bias against a possible sample selection bias, Table 9.3, column 3 presents our set of control variables by applying the general-to-specific method. This method does not rely on economic theory, but is a widely-used method in applied econometrics to decide on the model specification.[28] We first estimate a model including all control variables as outlined in the previous section, but without including our legal origin dummies. Next, we drop the least significant variable and estimate the model again. This procedure is repeated until only variables that are significant at the ten percent level remain. The results in Table 9.3, column 3 are rather identical compared to the findings in Table 9.3, column 2. This indicates that the results are quite robust to the econometric specification chosen.

In Table 9.3 (columns 4 and 5), we split the sample of civil-law countries a little further into countries of German, French and Scandinavian origin. The results indicate that although countries that have a civil-law tradition are more likely to ratify an arms control treaty than common-law ones, there is any statistically significant difference within the group of civil-law countries. On a similar note, earlier empirical studies indicate that socialist legal systems should be considered as a separate category. A socialist system is driven by the administration implying that there is no role for private law, the country is governed by one dominant communistic party, the law is predominately used to realize a political agenda and court rulings hardly settle disputes in private relations and have a limited role in public law. The classification used so far does not distinguish the socialist tradition. Instead, former socialist countries are reclassified as either German or French according to the main historical influence on their new legal system. For example, Russia is classified as having French legal origin. Of the 24 former socialist countries in our sample, 11 have French and 13 have a German origin. In Table 9.3 (columns 6 and 7), we include countries with a socialist legal origin as a separate category. The results show that socialist regimes are rather different from the other civil-law countries as they ratify fewer arms control treaties. In particular, they even ratify fewer treaties than common-law countries as the coefficient is significantly negative at common confidence levels. Furthermore, in the econometric specification in Table 9.3 column 8, we include the

[28] Hendry 1993.

number of treaties ratified in the previous year as an additional covariate. Although the magnitude and significance both drop slightly of the variables of interest, adding the dependent variable with a one-year lag does not dramatically affect our main conclusions as civil-law countries still ratify more arms control treaties compared to other systems.

Finally, leaders of democratic states face constraints autocrats do not have to take into account when making ratification decisions. According to the existing literature, regime differences play an essential role in treaty ratification.[29] One crucial assumption we made so far is that there is no difference between the *de jure* and *de facto* of the applied legal system in a country. The classification of legal systems is based on the source of law that is the highest in hierarchy including legal documents or written procedures. As a result, our indicator is not directly related with the execution or actual practice of law and legislation. For instance, in autocratic regimes laws and institutions are primarily built and shaped to promote the personal interests of the ruling elite, making the legal origin less important. This could for instance explain the negative effect found on socialist and Islamic legal origin as many countries with these legal systems can be classified as autocratic or at least democratic transition countries. Generally, autocratic regimes have ratified about six treaties, whereas democracies have ratified about ten treaties. To explore this issue some further, we split our data into democratic and autocratic countries based on the Polity IV score. Each country-year with a Polity IV score larger or equal to seven are recorded as democratic. As expected, the final columns of Table 9.2 indicate that the gap between common-law and civil-law countries is larger in democracies as in these countries the difference between de jure and de facto is less compared to autocratic states. This gap between common law and civil law is only weakly significant in autocratic countries as the legal origin is of less importance in these countries. Laws and policies are more shaped by the self-interest of the ruling elite than by the legal tradition.

9.5 Conclusion

The objective of this chapter is to explore whether the legal origin of a country influences the number of arms control treaties that are ratified. Given civil law's affinity for binding agreements and common law's aversion to them, we would expect a higher likelihood of ratification of international arms control treaties among civil-law countries. After testing for the robustness of the results, we can draw a number of conclusions based on the findings reported throughout this chapter. First, civil-law countries ratify more arms control treaties than common-law countries. In particular, civil-law countries ratify about nine percent more treaties. In practice, this comes down to about two arms control treaties. Second, within the broad civil-law category, we find no significant difference between countries with a French, German or Nordic

[29] Congleton 2006; Hollyer and Rosendorff 2011; Mansfield et al. 2002; Neumayer 2002.

legal heritage. Third, Islamic and socialist law countries ratify fewer arms control treaties compared to other legal traditions. Finally, the ratification gap between civil-law and common-law countries is larger for democracies than for autocracies. This can be explained by the fact that laws and policies in autocracies are shaped more by the self-interest of the ruling elite than by the legal tradition of a country.

These results imply that when drafting an international arms control treaty, politicians should take into account the legal tradition of a country. One way to make treaties more effective is by giving countries the opportunity to partly modify or disregard provisions on less important issues that are incompatible with domestic laws and policies.

Two major limitations regarding our study are, first, that we assume that all arms control treaties are equally important. This is not necessarily the case. Some treaties have a broader scope or are more stringent than others. So their implications differ as well as their importance differ. Second, we have only explored the incentives of ratifying an arms control treaty and have not looked at the implementation in the national law. Treaties often come with enforcement problems, raising considerable concerns about the actual implementation of treaty provisions. The existing literature has already shown there are serious concerns about arms control implementation and compliance.

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Chapter 10
Case: Sharing Parts and Services Among NATO Members

Semra Türkalp and Bastiaan Dekkers

Contents

Abstract NATO's goals require close cooperation of Member States on operational readiness, interoperability of their systems, material supplies, transfer of technology and joint R&D projects. A common approach on the application and implementation of arms export controls, however, is largely lacking. This chapter questions the absence of application and implementation of arms export controls in the context of the material logistical support and services provided by the NATO Support and Procurement Agency (NSPA). Three root causes of deviant behaviour of the Member States with the arms export controls are identified and analysed: (1) fragmentation of the arms export control laws and regulations; (2) a lack of leadership commitment and organisational culture of compliance; and (3) a combination of external

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and internal pressures leads to a forced prioritization of operational readiness above compliance. Next, a response is formulated to effectively counter deviant behaviour such as non-compliance with arms export controls by implementing a mixture of soft and hard controls. We advise the NSPA to create a culture of compliance within the NATO Partnership Program's community based on ethical values and virtues. This requires social consensus, leadership commitment and a common agreement on and formalization of the basic rules of export control.

Keywords Arms export controls · operational readiness · NATO · (non-)compliance · deviant behaviour · cooperation

10.1 Introduction

NATO is a political and military alliance whose principal task is to safeguard the freedom and security of all its 30 Member States by political and military means. Collective defence is at the heart of the Alliance and creates a spirit of solidarity and cohesion among its members. Today, the security environment is more complex and demanding than at any time since the end of the Cold War. NATO faces challenges and threats that originate from the east and the south, state and non-state actors, and military forces and terrorists.[1] Therefore, it is imperative for the survival of the Alliance to strengthen its deterrence and defence posture by bolstering its readiness, responsiveness and reinforcement to respond swiftly and firmly to the full spectrum of current and future challenges and threats from any direction, simultaneously. The goals set by the Alliance to enhance its deterrence and defence posture require close cooperation of Allied Member States on operational readiness, interoperability of their systems, material supplies, transfer of technology and joint research and development projects. At the same time, close cooperation among the Member States necessitates a common approach by the Alliance on the application and implementation of arms controls, more specifically arms export controls, to prevent illicit trade and the proliferation of conventional arms, weapons of mass destruction or arms technology to hostile nations or non-state actors such as terrorist organisations.

To this end, the Alliance declared to pursue an active policy in harmonising defence and arms control policies and objectives within NATO. As one of the harmonising policies, the Alliance stated to be ready to support the implementation of the Arms Trade Treaty (ATT) which establishes common international standards for the import, export and transfer of conventional arms.[2] However, various NATO civilian and military organisations and agencies that are assigned to assist, coordinate and support the Member States in the realisation of the Alliance's deterrence and defence goals such as the Defence Investment Division (DIV), NATO Science and Technology Organization (STO) and the NATO Support and Procurement Agency (NSPA)[3] do

[1] NATO 2020b.
[2] NATO 2020a.
[3] NATO 2020d.

not have a common arms export controls policy, an integrated program, regulations to assist and support the Member States to cooperate on operational readiness and training, i.e. transfer of controlled material supplies, services and technology among them and/or with commercial parties responsibly and arms export control compliant under the NATO umbrella.

In this chapter, we will question the absence of application and implementation of arms export controls in the context of the material logistical support and services provided by the NSPA. As NATO's appointed primary enabler, the NSPA's mission under the North Atlantic Council (NAC) Charter is to provide "cradle to grave" support and services to the Allied Member States in logistics, infrastructure, operations and systems.[4] To do so, the Agency procures supplies, repairs and maintenance services, demilitarization equipment, security items, repair materials and engineering/technical support from more than 10.000 companies across the world registered in the NSPA source file. These companies and the Member States are actively doing business with each other via the NATO Logistics Stock Exchange (NLSE) program, a secure and web-based e-Business application linking Armed Forces and Suppliers via a single electronic marketplace.[5] Yet in the from "cradle to grave" process no attention is paid to the arms export controls.[6]

Based on the Problem-Oriented Policing (POP) framework,[7] our chapter provides an in-depth examination of the Member States' deviant behaviour of not applying or of circumventing arms export controls in the context of the NLSE program under the NSPA's coordination and support, while the Alliance clearly stated as an objective to actively pursue a policy of effective arms controls in the light of collective defence. First, we will identify the deviant behaviour in a (hypothetical) case. Next, we will provide a root cause analysis of the deviant behaviour and formulate responses on macro-, meso- and micro-level to prevent the re-occurrence of the deviant behaviour. Finally, we will reflect on the analysis and the effectiveness of the responses, and assess the lessons learned for the future.

10.2 Scanning

As one of the NATO countries, a fictitious European NATO Member State (hereafter EUMS) is heavily dependent on the United States (US) government weapon systems and technology, which are in most cases acquired through the Foreign Military Sales (FMS) Program under the Arms Export Control Act. The arms export control regime of the US is mainly based on foreign policy and national security concerns which are subject to constant changes depending on the geopolitical environment of that moment and the dynamics within the US. Some of the NATO countries such as

[4] NATO 2020e.
[5] NATO 2020c.
[6] NATO 2020c.
[7] Braga 2008.

Cyprus, Albania and Turkey are under US scrutiny and subject to the US sanctions. If the EUMS violates the US arms export control regulations, the EUMS will be excluded from the US weapons program or receive systems based on lower US technology. Therefore, the EUMS has a firm US export control laws and regulations oriented Arms Export Control Compliance Organization (AECCO) and an advanced Internal Compliance Program (ICP) in place. Every re-export or transfer is registered in the internal Export Control Database and scrutinized by the AECCO accordingly the export control procedures and processes in the ICP, whether a re-export or transfer request of a defence article, service or technology to a third party can be authorized or not. Additionally, all third parties are checked on the US and EU sanction lists before the re-export or transfer requests are approved.

Yet during the NATO defence exercises, when parties are expected to share spare parts through the NLSE program with the participating Member States to maintain the availability of weapon systems, the EUMS material logistics personnel do not register the re-export or transfer requests in the internal Export Control Database. This is because the pressure to cooperate with the Member States and to act quickly on the NLSE requests to safeguard the readiness of the weapon systems for the NATO exercises gain the upper hand over the complexity of the arms export controls systems. Especially since the EUMS is one of the few Member States to implement and apply the related export control laws and regulations and has advanced procedures/processes in place, whereas most other Member States are not familiar or have a poor understanding of arms export controls and do not have the required procedures, processes and or qualified personnel in place.

So the complexity of the unilateral application and enforcement of arms export controls by the EUMS presents it with a dilemma. Either the EUMS clashes with the other Member States accusing EUMS of distrusting its Allies and not acting in good faith, thereby running the risk of being excluded from the NATO Programs or exercises, or the EUMS gives in to the pressure to act as a reliable and cooperative member by setting its own arms export controls aside and hence committing export control violations. Moreover, the NSPA as the primary assisting and supporting NATO agency to the Partnership Programs officially states that Member States themselves are responsible and accountable for whether they apply or implement the arms export controls.

Based on this, in the next section, we will identify a possible root cause for the deviant behaviour of the Member States such as the EUMS under the NATO Partnership Programs on the macro-, the meso- and the micro-level.[8]

[8] Elias 2013, p. 39.

10.3 Analysis

10.3.1 Macro-level: Fragmentation of the Arms Export Control Laws and Regulations

Arms export control laws and regulations are based on national, regional and international laws and therefore differ for each Member State. As sovereign entities, States are free to decide whether or not to adopt laws to regulate and limit the exports of arms, dual-use goods and technologies for national security purposes and/or foreign policy objectives. However, at the same time, as participants of the international system, most states are bound by International Treaties and/or the United Nation Security Council Resolutions which regulate arms Export or even impose arms embargoes on some States. For example, the ATT and United Nations Security Council Resolutions 1540 and 2420.[9]

Additionally, there are several Multilateral Export Control Regimes (MECR) such as the Wassenaar Arrangement (WA), and the Australia Group. Although not binding, these MECRs promote transparency and greater responsibility in the transfer of arms, dual-use goods and technology among its members.[10] The WA as one of the most influential regimes, produced two Control Lists: (1) the Munitions List and (2) the List of Dual-Use Goods and Technologies, to prevent unauthorized exports and re-exports of those items and technologies.[11] All NATO Member States, except Iceland, Montenegro, Albania and North Macedonia, are members of the WA and agreed to commit themselves to the two Controlled Lists.

On the regional level, the European Union (EU) has its own laws and regulations on arms export controls, although harmonized with international treaties, MECR and the UN Resolutions. The Dual-Use Regulation 428/2009, Annex I and IV (compatible with the WA) are directly applicable to all EU Member States. While allowing the Member States to export and re-export freely between them, the regulation imposes controls such as licensing for exports and re-exports to third parties outside the EU. Licensing and the enforcement of the regulation is delegated to each Member State to implement. Based on its shared competence on the matters of the Union's Common Security and Foreign Policy, the EU also introduces a Common Military List (again compatible with the WA) and several directives to harmonize the national arms export control regimes of its Member States.[12] Additionally, the EU has its own sanction regime alongside the United Nations and the US. The complexity of the EU's institutional framework and its related competencies to regulate or partially regulate export controls adds up to the already highly complex web of arms export control regimes.

[9] Aubin and Idiart 2016, p. 24.

[10] Aubin and Idiart 2016, p. 28.

[11] Wassenaar Arrangement Secretariat 2020.

[12] Aubin and Idiart 2016, p. 124.

As outlined above, it is very challenging for the Member States to understand and interpret the vague provisions of these layered and complex treaties, regulations, agreements and arrangements on arms export controls on their own, and to identify and implement those provisions properly into their national laws and apply uniformly among them. As argued by Tukamuhabwa,[13] knowledge of the law improves compliance while a lack of familiarity with the rules results in poor compliance levels. Yet, rules must also be clear. Lack of clarity of rules equally increases the possibility for unintentional and deliberate non-compliance.[14]

Based on this, we conclude that NATO Member States' poor knowledge and understanding of arms export controls due to the complexity and fragmentation of the laws and regulations, and the discrepancy in the implementation and enforcement, highly contribute to the deviant, non-compliant behaviour of the Member States.

10.3.2 Meso-level: No Institutionalised Compliance Culture Within the NATO

As mentioned earlier, the Alliance declares to remain committed to arms controls, disarmament and non-proliferation, and to pursue an active policy in harmonising defence and arms control policies and objectives within NATO. Yet, in practice, NATO's effort on arms control and non-proliferation remains limited to a general political declaration of its adherence to the International Treaties such as the ATT and a couple of small projects on disarmament of Small Arms and Light Weapons (SAWL) in the Balkans conducted under the supervision of the NSPA.[15]

Pursuing an active policy on arms controls and non-proliferation would require the highest level of the organisation, such as the NAC, to come up with an official statement and a clear working program tasking the NATO's organisations and agencies such as the NSPA as the primary enabler, support and service provider, to implement arms controls in practice within in the context of the NATO Partnership Programs. When top management initiates and supports compliance, it would spread in the entire organisation. The main goal is to have a NATO organisation with a culture of compliance that will motivate all stakeholders to comply with the rules. Studies have proven that culture plays a central role in the compliance process and associated outcomes if the culture is characterised by specific values such as openness, trust and honesty.[16] Moral obligation and social influence affect compliance. However, the NSPA's current approach to the implementation of the arms export controls is dismissive, declaring that each Member State is responsible and accountable for its own export, re-export or transfers of arms and technology.

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[13] Tukamuhabwa 2012.

[14] Tukamuhabwa 2012.

[15] NATO 2021.

[16] Tukamuhabwa 2012.

Even the standardization agreement (STANAG) 2034 on Standard Procedures For Mutual Logistic Assistance does not include any provisions or moral obligation referring to the arms export controls or any procedures or checks to act in compliance with arms export controls, e.g. embedded in the ATT. Furthermore, the organisation is not clear or transparent about its own procurement processes. The NSPA has more than 60.000 companies and partners registered in its source file, more than 10.000 of them already do business within the context of the NLSE Program.[17] Yet, no NSPA procedures or processes, internal or external are in place to make sure that these registered companies are checked and vetted against the arms export control regimes and/or sanctions and/or doing business in compliance with arms export control regimes.

Violations have consequences such as blacklisting, banning from the programs, blocking of further cooperation involving US technology and/or severe fines. Because of the ambiguous approach of the NATO to arms export controls and the Member States' reluctance towards arms export controls, the US pursues a very stringent export control policy concerning the NATO Partnership Programs. Each Member State is held responsible to request licenses or third-party approvals for every intended re-export or transfer of arms, dual-use goods or technologies. Member States such as the EUMS, which are highly dependent on US arms and technology, may encounter US restrictions when taking part in the NATO Partnership Programs, such as the NLSE.

We conclude that, as long as the NATO will not genuinely commit to the implementation of arms export controls at the highest level such as the NAC, and as long as the NSPA does not take the stage as an organisation imposing a culture of compliance, Member States will continue their deviant behaviour, hence noncompliance, or Member States will eventually abandon the NATO Programs because of the high pressure imposed by the US and its stringent export control policy.

10.3.3 Micro-level: Operational Readiness Versus Compliance

According to Tukamuhabwa,[18] cognitive dissonance is the feeling of uncomfortable tension that comes from holding two conflicting thoughts in the mind at the same time. When persons are forced to do something they do not want to do, dissonance is created between their cognition and their behaviour.

The material logistics personnel of the EUMS are under constant pressure from their counterparts to act as a reliable and faithful partner in the achievement of the common goal to strengthen NATO's deterrence and defence posture and form their own organisation to make sure that the readiness of the weapon system is achieved as soon as possible. At the same time, the personnel is very aware of the applicable

[17] NATO 2020e.

[18] Tukamuhabwa 2012.

arms export control laws and regulations and procedures that must be followed to get approval from the AECCO. Yet, combined, the external pressure and internal pressure incentivize the personnel to circumvent the export controls by not registering the items in the database and denying the AECCO. Moreover, there is no monitoring system in place to bring violations to the AECCO's attention.

In sum, high psychological pressure, externally and internally induced on the material logistic personnel of the EUMS to act as a faithful ally in pursuit of the common purpose, pushes the personnel over the edge to circumvent the arms export controls, and commit violations. The absence of a monitoring system or a whistle blow line makes it possible to commit violations without any consequences.

10.4 Response

In this section, we propose effective responses to the identified root causes of the non-compliant behaviour concerning the arms export controls at the organisational level in the context of NATO Partnership Programs. Our target for intervention is the NSPA. The responses are a mix of hard controls and soft controls with short- and long-term effects.

10.4.1 Leadership Commitment to the Implementation of the Arms Export Controls

As discussed in the previous sections, NATO declares to be committed to an active policy in arms control, disarmament and non-proliferation within NATO and refers to several international treaties and agreements on arms controls. However, although made at the NAC level, this declaration is more of a general political statement than a true commitment to the implementation of arms controls, hence arms export controls. The NAC's genuine commitment to arms control should firstly be demonstrated by a strong and clear institutional support to promote a culture of compliance,[19] and secondly by making available adequate resources to the NATO Agency delegated with sufficient authority and autonomy to deploy policies and procedures on arms export controls and to fully integrate into the day-to-day operations of the NATO. The NSPA as the primary enabler of the NATO and support and service provider of the NATO Member States should therefore be the appointed Agency with the delegated powers to effectively implement arms export controls. Additionally, the Agency possesses the necessary experience, knowledge and expertise and is already tasked with overseeing arms control and disarmament projects within the NATO.

[19] Tukamuhabwa 2012.

10.4.2 The NSPA as the Leading NATO Agency to Create a Culture of Compliance

According to Tukamuhabwa,[20] an organisation with a genuine commitment to compliance is evidenced by top leaderships' dedication to ethical behaviour. Ethical leadership promotes ethical conduct at various levels, not only directly influences immediate followers but also indirectly influences the ethical cognitions and behaviours of the followers at the lower levels by replication of ethical behaviours of the leaders and embedding of shared understanding that represents ethical culture.[21] The NSPA's mission statement, supported by the NAC, should promote the values the Alliance stands for by aligning itself with the commitment to the arms controls in the light of the collective security. An example of such a statement could be as follows: *As the primary enabler, the NSPA provides support and services to the NATO Nations in the light of strengthening deterrence and defence posture of the Alliance in order to be able to counter current and future threats, meanwhile being committed to the arms control, disarmament and non-proliferation.*

To create a culture of compliance within the NATO and among the Member States, it is imperative for the NAC and the NSPA to act as ethical leaders and promote: (1) clarity (e.g., adopt a normative framework such as a Code of Conduct which makes clear what is expected concerning arms export controls); (2) transparency (e.g., be transparent about acquisition processes and the suppliers by publishing its vetting and decision-making procedures; publish annual reports on arms exports per member state and commercial parties involved; encourage Member States to provide information, data and records of their annual transactions); (3) supportability (e.g., use social influence on compliance, and build social consensus among the community to be compliant; skilled personnel to assist the Member States to implement arms export controls and mediate between them where necessary); (4) discussability (e.g., create a forum to discuss openly the issues encountered with the complexity of the arms export controls); (5) accountability and sanctionability (e.g., implement a reward and punishment system to encourage compliant behaviour and discourage dismissive, deviant behaviour among the Member States).[22]

10.4.3 Common Agreement on the Basic Rules of Arms Export Controls

The fragmentation and the complexity of the arms export control laws and regulation are identified as root causes for deviant behaviour and discussed in the Analysis Phase. The NSPA should take the lead to reach a common agreement on the basic arms

[20] Tukamuhabwa 2012.

[21] Schaubroeck et al. 2012.

[22] Bogers 2018, p. 48.

export control rules to be applied among the Member States within the framework of NATO Partnership Programs.[23]

10.4.4 Formalization of the Implementation of Arms Export Control via STANAGs

Formalization of the commonly agreed arms export control rules should be incorporated in NATO STANAGs, specifically STANAG 2034 on Standard Procedures For Mutual Logistic Assistance, in order to be able to hold all Participating Nations formally accountable and responsible in case of non-compliance. As Tukamuhabwa states, sustained enforcement action instils a culture of compliance and has a direct effect on compliant behaviour.[24]

10.4.5 Periodic Arms Export Controls Training to Member States' Personnel

The NSPA should provide training on arms export controls to the Member States to increase awareness and to train Member States' personnel on how to apply arms export controls in their day-to-day practice without leading to any operational impediment. Via training, it is important to remove the presumed contradiction between operational readiness and compliance which eventually results in deviant behaviour. Training could also be a vehicle to bring the personnel (e.g., material logistics) of the Member States directly or indirectly involved in the Partnership Programs together to discuss their personal experiences and the dilemmas they face when they are put under pressure to prioritize operational readiness above arms export controls. Through this training, the arms export control procedures and processes of the Member States can be harmonized and aligned, which in the long term will have a positive effect on compliance.

10.5 Assessment

We have used the POP-framework to identify and analyse the root causes of deviant behaviour/non-compliance of the Member States with the arms export controls in the context of the NATO Partnership Program. Based on our analysis, we have proposed responses to target the root causes of deviant behaviour by Member States. Three root causes have been identified: (1) fragmentation of the arms export control laws

[23] Aubin and Idiart 2016, p. 10.

[24] Tukamuhabwa 2012.

and regulations; (2) a lack of leadership commitment and organisational culture of compliance; and (3) a combination of external and internal pressures leads to deviant behaviour by the individuals, such as the material logistics personnel of EUMS, forced to prioritize operational readiness above its own arms export control laws and regulations. We have formulated a response to effectively counter deviant behaviour and prevent the reoccurrence of non-compliance with arms export controls by implementing a mixture of soft and hard controls.

Yet our main focus has been the role of the NSPA, as the organisation appointed and delegated by the NAC to create a culture of compliance within the NATO Partnership Program's community based on ethical values and virtues. Because a shared understanding of values means that members recognize a particular feeling, experience or activity as normal. In such cases, they are expected to be more cognizant of ethical issues, to avoid unethical conduct and discourage unethical conduct in others. Furthermore, social consensus is formed in such a way that the unit penalizes unethical behaviour, rewards virtuous behaviour and maintains strong ethical norms.

However, strong and clear leadership commitment is required by the NAC towards arms export controls, supported by adequate resources to effectuate a culture of compliance. Meanwhile, a common agreement on the basic rules of arms export control and its formalization through STANAGs will positively contribute to the compliant behaviour and enable the NSPA and Member States to keep each other accountable in case of a violation.

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Chapter 11
Limits on the Extraterritoriality of United States Export Control and Sanctions Legislation

Joop Voetelink

Contents

Abstract The sovereignty of states is reflected in the notion of jurisdiction, empowering them to enact and enforce laws and regulations, and to adjudicate disputes in court. The jurisdiction of states and the exercise thereof is primarily territorial, limiting the exercise of state authority to their respective national territories except in specific situations. However, in an increasingly globalized and interconnected world, it would be hard to maintain that a state should be denied the right to exercise its sovereign powers beyond national borders when there are reasonable grounds for doing so. Consequently, the exercise of extraterritorial legislative jurisdiction has become more accepted, although it is limited to particular situations and circumstances. These have to do with the exercise of jurisdiction over nationals, vessels and aircraft registered in or pertaining to the legislating state, as well as certain activities aimed at undermining the state's security or solvency or which constitute crimes under international law. However, in principle it is not allowed to regulate activities

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of foreign nationals or entities operating wholly outside the legislating state's territory. One area where this has become increasingly prevalent is through the exercise of export controls over foreign nationals and legal persons. The United States (US) has long been engaged in the exercise of this type of extraterritorial jurisdiction and is, without doubt, the state that is most proactive in doing so. This chapter considers US extraterritorial claims with respect to its export control and sanctions legislation and explores the limits of this practice under public international law.

Keywords International law · export control · sovereignty · extraterritorial jurisdiction · sanctions · principles of jurisdiction · European Union · United States · Blocking Regulation

11.1 Introduction

On 1 January 2021, the US Senate, over President Trump's veto, passed the Protecting Europe's Energy Security Clarification Act (PEESCA) as part of the William M. (Mac) Thornberry National Defense Authorization Act for the Fiscal Year 2021.[1] PEESCA adds additional sanctions on Russian energy export pipeline projects, in particular, the Nord Stream 2 Project and the TurkStream Project.[2] US sanctions had already targeted both projects under the Countering Russian Influence in Europe and Eurasia Act of 2017 (CRIEEA)[3] and the Protecting Europe's Energy Security Act of 2019 (PEESA).[4] The latter directs the US President to impose sanctions[5] on any foreign person that knowingly provides pipe-laying vessels for the construction of Russian underwater pipelines, without coordination with allies of the US.[6] The mere threat of US sanctions led the Dutch-Swiss offshore company Allseas to suspend all its activities related to the Nord Stream 2 project almost overnight,[7] not much later followed by Norway's quality assurance firm DNV GL.[8] The examples show that

[1] President Trump vetoed the bill on 23 December 2020. The House of Representative voted to override the veto on 28 December 2020, followed by the Senate on 1 January 2021.

[2] The Nord Stream 2 Project is the nearly completed underwater natural gas pipeline between Russia and Germany. The TurkStream Project consists of two underwater pipelines between Russia and Turkey, one of which is already completed while the other is still under construction.

[3] Countering Russian Influence in Europe and Eurasia Act of August 2, 2017, Pub. L. 115-44, title II, 131 Stat. 898 (22 U.S.C. 9501 et seq.); part of Countering America's Adversaries Through Sanctions Act (CAATSA) of August 2, 2017, Pub. L. 115-44, 131 Stat. 886 (22 U.S.C. 9401).

[4] Pub. L. 116-92. part of the National Defense Authorization Act (NDAA) for 2020.

[5] Travel bans and blocking of assets.

[6] CRIEEA stipulates that the President may impose sanctions "in coordination with allies of the US", thus somewhat mitigating the extraterritorial impact of the statute (Section 232(a)). This phrase does not return in other secondary sanctions legislation.

[7] https://allseas.com/news/allseas-suspends-nord-stream-2-pipelay-activities/. Accessed 20 February 2021.

[8] Norway's DNV GL suspends Nord Stream 2 work over U.S. sanctions fear | Article [AMP] | Reuters Accessed 20 February 2021.

even the possibility of being the target of foreign sanction may deter a company from engaging in otherwise legitimate business.[9]

This type of sanctions is referred to as extraterritorial or secondary sanctions, as they are not aimed at the target state (as primary sanctions are) but instead subject foreign nationals and business entities to US legislative actions without a clear nexus with the US affecting the relations between third states and the target state. The US government has enacted secondary sanctions legislation repeatedly over the past few decades. The extraterritorial reach of US law is not restricted to sanctions, however.[10] US extraterritorial practice goes back to the 1940s when US courts exercised jurisdiction over foreign persons in antitrust cases. Also, legislation regulating the controls on the re-export of US origin military and dual-use goods and technology, introduced in the same period, included extraterritorial elements that are still part of US export control law. However, secondary sanctions go a good deal further than antitrust and export control legislation in that the actions of the foreign nationals or entities need not have any link with the US territory or legal order as is normally the case when exercising jurisdiction over foreign actions which originate outside a state's territory but are aimed at or have a significant effect on the legislating state's territory or legal order.

Although the extraterritorial application of domestic law has become an accepted practice in our increasingly interconnected and complex contemporary society, it is still a long-established principle of public international law that the jurisdiction of a state is primarily territorial in nature. Indeed, the unlimited exercise of a state's national jurisdiction beyond its national borders except where this is clearly accepted under international law may come into conflict with the sovereign equality of states, creating international tension and burdening foreign persons and business with regulations and penalties for engaging in activities which are often perfectly legal under the laws of their own state. Consequently, the extraterritorial US claims have been a recurring source of disputes between the US and its trading partners, notably the EU. As the French minister of Economy and Finance stated, "The European Union must be free to trade legitimately with the entities and countries it wishes, without extraterritorial provisions impeding its economic operators. It is a question of European sovereignty."[11]

The present chapter focuses on the extraterritorial aspects of US export control and sanctions legislation and explores the limits under customary international law of jurisdiction to lawfully impose obligations on foreign natural persons or corporations outside the US. By way of introduction, the chapter starts with an analysis of the

[9] Sometimes referred to as the chilling effect of secondary sanctions; Gordon 2016.

[10] Other fields of law not discussed in this chapter: that extraterritorial rules include securities law and foreign corrupt practices, in particular the Foreign Corrupt Practices Act of 1977, Pub. L. 95-213, title I, 91 Stat. 1494 (codified in: 15 U.S.C. 78a et seq.).

[11] "L'Union Européenne doit pouvoir être libre de commercer légitimement avec les entités et avec les pays qu'elle souhaite, sans que des dispositions extraterritoriales ne viennent entraver ses opérateurs économiques. C'est une question de souveraineté européenne", cited in: Court of Appeal of Paris, International Commercial Chamber, 3 June 2020, Judgement in *SA T v* Société *N,* No. RG 19/07261—No. Portalis 35L7-V-B7D-B7VDG, Section 66.

concept of jurisdiction as a corollary of the principle of State sovereignty. Also, it establishes to what extent states are allowed under international law to exert their jurisdictional powers beyond national borders. Next, extraterritorial aspects of US legislation on the control of the export of goods and services as well as on sanctions are analyzed. As these claims have sparked a number of disputes with other states and especially the EU over the past few decades, the international responses to US legislation with an extraterritorial effect are examined next. Building on the reasons for these responses and the arguments brought forward the legitimacy of extraterritorial US legislation is analyzed in more depth. Finally, this chapter offers a synthesis and conclusion.

11.2 Jurisdiction of a State

Sovereignty is the supreme authority of states which entails that states are equal and independent.[12] From a legal point of view, this implies that there is no hierarchical order between them and, therefore, no state can exercise power over another state. Stemming from the notion of sovereignty are the principles of territorial integrity and non-intervention, obliging states to refrain from any action that breaches the sovereignty of another state, including acts that interfere with the internal affairs or international relations of that state.

Within a state, the principle of sovereignty reflects the unique power and authority to make laws, subject people and property to legal processes based on these laws and to compel compliance with the rules where necessary.[13] These three powers are referred to as the legislative, enforcement, and adjudicative jurisdiction of a state, which, together with the exercise thereof, are an essential characteristic of a state. Legislative or prescriptive jurisdiction is "the authority of a state to make law applicable to persons, property, or conduct" whether by legislation, by executive act, or by determination of a court.[14] Enforcement or executive jurisdiction allows a state "to exercise its power to compel compliance with the law".[15] Adjudicative or judicial jurisdiction expresses the authority to, "apply law to persons or things, in particular through the processes of its courts or administrative tribunal".[16] In the

[12] Permanent Court of Arbitration, 4 April 1928, The Island of Palmas case (or Miangas), United States v the Netherlands, Award of the Tribunal, p. 8. www.pca-cpa.org. Accessed 20 February 2021.

[13] Voetelink 2015, p. 116.

[14] Restatement of the law fourth 2018, Section 401(a) and Introductory Note. 'Determination of a court' is in particular relevant in common law systems where courts can make generally applicable common law; cf. Restatement of the law fourth 2018, Part IV Introductory Note.

[15] Ibid., Section 401(c).

[16] Ibid., Section 401(b).

literature, the latter type of jurisdiction is not always recognized as a separate form of jurisdiction.[17]

With a few exceptions, a state has full legislative, enforcement, and adjudicative jurisdiction within its territorial borders.[18] The exercise of jurisdiction can be limited by international agreement to which the state concerned is a party or by a rule of customary international law. An example is the concept of immunity which prohibits a state from exercising its adjudicative and enforcement jurisdiction over natural and legal persons, or their goods, enjoying immunity in that State.

11.2.1 Extraterritorial Jurisdiction

The other side of the jurisdictional coin is that the extraterritorial reach of a state's jurisdiction is regulated and to a considerable extent restricted under international law. Any attempt by a state to exercise its legal authority beyond national borders finds its limits in "the sovereign territorial rights of other states"[19] as, in principle, jurisdiction and the exercise thereof is territorial in nature.[20] However, strict adherence to the territoriality rule can potentially hamper international relations as the interdependency of economies has become enormous today. Moreover, ongoing globalization entails that the scope of national interests transcends national borders and can include international elements. Therefore, it would be impossible to completely separate national jurisdictions from one another.

A distinction must be made between the various forms of jurisdiction. As the extraterritorial application of a state's enforcement jurisdiction (including adjudicatory jurisdiction) can have a significant impact on another state's sovereign rights, it is generally territorial. Without the consent of the other state, a state cannot exercise its enforcement jurisdiction in the other state's territory.[21] With respect to legislative jurisdiction, states are allowed to extend the scope of their laws to extraterritorial activities with the other state's "consent, invitation or acquiescence" or under a permissive rule of international law as set out in more detail in the next sections.[22]

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[17] Mann 1964. Bianchi, for example, regards adjudicative jurisdiction as an element of the enforcement jurisdiction, Bianchi 1992, pp. 372 and 373. Crawford views adjudicative jurisdiction as the actualization of legislation while the carrying out of a judgement or sentence is an expression of enforcement; Crawford 2019, p. 441, fn. 4. As adjudicative jurisdiction does not play a prominent role in the extraterritorial application of export control law, the present chapter will focus on legislative and enforcement jurisdiction.

[18] US Supreme Court, Schooner Exchange v. McFadden, 11 U.S. (7 Cranch) 116, 136 (1812).

[19] ECHR, 12 December 2001, Banković and others v. Belgium and 16 others, App no 52207/99, Section 59.

[20] PCIJ 7 September 1927, The case of the S.S. Lotus, Series A. No. 10, pp. 18–19.

[21] Restatement of the law fourth 2018 Part IV Introductory Note and Section 432.

[22] Banković and others v. Belgium and 16 others, App no 52207/99, Section 60.

11.2.2 Principles of Jurisdiction

Under customary international law, a state is allowed to exercise legislative jurisdiction extraterritorially when a genuine connection exists between the state seeking to regulate and the persons, property, or conduct being regulated.[23] That connection is reflected in a number of recognized grounds or principles of jurisdiction that provide for exceptions to the general rule that jurisdiction is territorial in character. These include the nationality principle allowing states to regulate the actions of persons and entities possessing its nationality, including vessels and aircraft registered in that state. Another recognized basis for exercising extraterritorial legislative jurisdiction is the right to criminalize actions aimed at undermining state security or the integrity of its currency and official documents. Finally, certain acts have become recognized as crimes under international law giving all states a right to criminalize them under its national law. The next sub-sections discuss these principles as well as the territoriality principle in more detail. Beyond these recognized situations the exercise of extraterritorial jurisdiction is widely considered to be impermissible in the absence of a territorial connection.

11.2.2.1 Territoriality

As state sovereignty and territory are inextricably linked, the principle of territoriality is the central element in the contemporary jurisdictional framework.[24] It reflects first and foremost the right of a state to enact laws applicable within its territory.[25] However, the principle is also relevant to cross-border events that partially take place outside the legislating state's border. Under the generally accepted principle of objective territoriality, the state where an essential element of an action that commenced abroad was completed, can assert its legislative jurisdiction over the event.[26] The classic example is the firing of a firearm in the territory of one state killing a person on the other side of the border.

Derived from this notion of objective territoriality, is the so-called 'effects doctrine', developed by US courts in antitrust cases.[27] This doctrine allows the assertion of legislative jurisdiction over acts committed abroad by foreign persons or companies that are in accordance with foreign laws but produce a substantial and

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[23] Restatement of the law fourth 2018, Section 407, comment.

[24] Ryngaert 2015, p. 36.

[25] A State's territory encompasses its land territory, internal waters, the territorial sea and the airspace over these areas; see Articles 1 and 2 of the Convention on International Civil Aviation; Chicago, 7 December 1944 (Vol. 15 UNTS 1948, No. 102) and Articles 2(2) and (3) of the United Nations Convention on the Law of the Sea; Montego-Bay, 10 December 1982 (Vol. 1833 UNTS 1994, No. 31363).

[26] Crawford 2019, p. 442.

[27] The 'effects doctrine' has been accepted as early as 1945 in the Alcoa case: United States v. Aluminum Corp. of America, 148 F.2d 416 (2d Cir. 1945).

intended economic effect on the regulating State's commerce. Today, the 'effects doctrine' remains in respects controversial[28] although it appears to have gained considerably more acceptance than when it was first asserted, in particular in antitrust law.[29]

11.2.2.2 Nationality

Historically, jurisdiction was primarily based on personality rather than territoriality.[30] Today, the nationality principle continues to play an important role in the jurisdictional framework. Generally, a distinction is made between the nationality principle (or active personality principle) and passive personality principle. The former is linked with the nationality of the person or entity performing an act abroad that need not have any direct relation with the territory of the legislating state. According to the principle, a state can assert legislative jurisdiction over its nationals outside its territory.[31] An example is Article 18(c) of the EU sanctions regulation on cyber-attacks that states that the Regulation shall apply "to any natural person inside or *outside* the territory of the Union who is a national of a Member State".[32]

The nationality principle is also applicable to the international activities of companies. Article 18(d) of the same EU Regulation holds that the Regulation also applies, "to any legal person, entity or body, inside or outside the territory of the Union, which is incorporated or constituted under the law of a Member State". This particular provision makes clear that the nationality of a corporation for application of the Regulation depends on the state where it was established.

Application of the active personality principle is well-accepted as opposed to the application of the passive nationality principle that focuses on the nationality of the victim of an act performed abroad. Under this principle, a state can apply its legislative jurisdiction to certain acts performed outside its territory harming its nationals. Although the passive personality principle is still controversial, its use has become more accepted with respect to certain crimes, especially terrorist-related crimes.[33] For instance, Article 6(2)(a) of the Terrorist Bombings Convention instructs

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[28] Crawford 2019, p. 447.

[29] Cohen-Tanugi 2015, p. 11. See for instance the Gencor case in which the Court of First Instance of the EU holds that application of a particular EU Regulation "is justified under public international law when it is foreseeable that a proposed concentration will have an immediate and substantial effect in the Community". ECJ 25 May 1999, Gencor Ltd v Commission of the European Communities, Judgment of the Court of First Instance (Fifth Chamber, extended composition); European Court Reports 1999 II-00753, Case T-102/96, ECLI:EU:T:1999:65, at paras 89–92).

[30] Ryngaert 2015, p. 49ff.

[31] Ryngaert 2015, p. 104.

[32] Council Regulation (EU) 2019/796 of 17 May 2019 concerning restrictive measures against cyber-attacks threatening the Union or its Member States (OJ L 129 I, 17/5/2019, p. 1/12).

[33] Crawford 2019, p. 445.

state parties to establish jurisdiction over acts set forth in the Convention when "the offence is committed against a national of the State.[34]

11.2.2.3 Protective and Universality Principles

The protective principle, also referred to as the security principle,[35] is an old and well-accepted foundation for legislation with extraterritorial effect.[36] It is not based on the status of the person over whom a state asserts jurisdiction, but instead on conduct in another state irrespective of the nationality of the perpetrator jeopardizing[37] the national security or solvency of the legislating state. The notion of national security is defined rather narrowly. Consequently, a state can only assert legislative jurisdiction based on this principle when key state interests are at stake. Examples include violence aimed at overthrowing its government or against key state officials and activities, espionage or the counterfeiting of its currency or national documents. As such an act does not necessarily affect the interests of the State where the act was initiated and, therefore, may not be subject to that state's laws, extraterritorial application of the legislative state's laws seems warranted.[38]

Universal jurisdiction is concerned with legislation criminalizing recognized crimes under international law, such as piracy, slavery, war crimes, genocide, crimes against humanity, and certain acts of terrorism. The jurisdictional principles discussed above either have a direct or an indirect link between an act and the state asserting jurisdiction. This is not necessarily the case with the principle of universality. This principle is based on the idea that the nature of the crimes, or of the circumstances under which they take place, are deemed to be offensive to the global community at large warranting action by any state, although in practice, most states require some link with the act or actor. The classical example of an act that allows the assertion of universal jurisdiction is piracy on the high seas. Following World War II, states have concluded various international agreements obliging all states parties to extend their jurisdiction over the international crimes included in these agreements, such as genocide and grave violations of the laws of war.[39]

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[34] International Convention for the Suppression of Terrorist Bombing, New York, 15 December 1997 (Vol. 2149 UNTS 2003, No. 37517), entered into force 23 May 2001.

[35] Crawford 2019, p. 446.

[36] Ryngaert 2015, p. 114.

[37] No actual harm needs to have resulted from the act covered by the extraterritorial legislation; Ryngaert 2015, p. 114.

[38] Ryngaert 2015, p. 114.

[39] Articles 49 and 50 Convention (I) for the Amelioration of the Condition of the Wounded and Sick in Armed Forces in the Field; Geneva, 12 August 1949 (Vol. 970 UNTS 1950, No. 970). Similar provisions are included in the other three Geneva Conventions and the Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I); Bern, 12 December 1977 (Vol. 1125 UNTS 1979, No. 17512) and Convention on the Prevention and Punishment of the Crime and Genocide; 9 December 1948 (Vol. 78 UNTS 1951, No. 1021).

Later, other crimes were made subject to universal jurisdiction as well, such as attacks on civil airliners, aerial hijacking and attacks on international officials. These acts are subject to multiple bases of jurisdiction and states have agreed either to prosecute or extradite suspects of such offences. As these acts are not of a universal character in the traditional sense, jurisdiction over the acts is referred to as quasi-universal jurisdiction.

11.3 United States Export Control Legislation

The US has long applied its laws extraterritorially, for example, in the field of antitrust law and securities law. The extraterritorial reach of US law is also felt in the field of export control law (see Chap. 5). Starting in the 1940s, the US has enacted laws controlling the export of commodities and services, partly having an extraterritorial effect in order to prevent goods from reaching destinations denied by US law. These provisions have been amended and extended over time and are still in force today, regularly leading to discussions about the legality of their reach. Even more questions were raised when the US included in its sanctions programs so-called secondary sanctions that as well as impacting the targeted foreign state or non-state entity, also subjects foreign nationals and business entities to US legislative actions without a clear nexus with the US affecting the relations between third states and the target state.

Extraterritorial legislation would be unwarranted when allied trading partners share exactly the same concerns and interests and are prepared to fully align domestic legislation in the field of export control and sanctions. However, even in the Cold War period, it proved to be impossible to fully align US security and foreign policy goals with the interests and economic defense policies of other Western states. Therefore, the US may have felt extraterritorial legislation to be a more viable option to manage national export concerns.[40] This section looks into these specific US rules, which can be roughly divided into four interconnected strands of legislation[41] of which the first three will be discussed below.

The first controls the export, re-export, and in-country transfer of most US origin commercial, dual-use, and less-sensitive military goods and technology. The second strand is concerned with the export, re-export, and retransfer of, as well as brokering in, military goods, services, and technology.[42] The third strand encompasses economic sanctions. Finally, the export of nuclear material, equipment and technology is subject to the Atomic Energy Act of 1954 (AEA).[43] Because of its

[40] Schaap and Ryngaert 2015, p. 10.

[41] Restatement of the law fourth 2018, Section 812, Reporters' Notes 2 and 4.

[42] In terms of the Arms Export Control Act and implementing regulations: defense articles (items, software and technical data) and defense services.

[43] Formerly the Atomic Energy Act of 1946, Aug. 1, 1946, ch. 724, 60 Stat. 755 (42 U.S.C. 2011 et seq.).

limited extraterritorial reach, this specific strand of legislation is not addressed in this chapter.

11.3.1 Dual-Use Export Controls

Traditionally, the US had put controls on exports in times of armed conflict or in special emergency situations only.[44] Consequently, at the onset of World War II, before it had actually entered the war, the US had enacted legislation to authorize the control of exports of munitions and other goods essential to the national defense effort,[45] extending the export controls to all commodities in 1942.[46] After the war had come to an end, the US continued to control these exports.[47] Today the Export Controls Act of 2018[48] (ECA) is the statutory authority for these controls providing the President with the authority to implement the export control on commercial, dual-use goods, and less-sensitive military goods and technology. The ECA is administered by the Department of Commerce Bureau of Industry and Security (BIS) and implemented by the Export Administration Regulations (EAR), which includes the Commerce Control List (CCL) listing all EAR-controlled items (Part 774).[49]

From the start, US export controls included extraterritorial elements. For example, the Export Control Act of 1949 and its implementing regulations were in part applicable "to "any person" within or without the United States".[50] In addition, the transshipment of US exports from one country to another as well as the release of technical data of US origin by persons and companies situated abroad were restricted by the Act.[51] These provisions were no dead letters and actually led to administrative action taken against foreign persons and companies for acts committed outside the US.[52]

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[44] Joint Resolution of April 22, 1898, No. 25 (30 Stat. 739) authorizing the President to "to prohibit the export of coal or other material used in war from any seaport of the United States until otherwise ordered by the President or by Congress"; enacted by Congress three days prior to the declaration of war against Spain. Berman and Garson 1967, p. 791.

[45] Act to Expedite the Strengthening of the National Defense, Act of July 2, 1940, ch. 508, Section 6, 54 Stat. 714. Silverstone 1959, p. 331.

[46] Act of June 30, 1942, ch. 461, 56 Stat. 463. As the statutes were intended to be temporary, they had to be extended every year.

[47] Initially, the controls were based on the Export Control Act of 1949. This statute was replaced by the Export Administration Act of 1969, which, in turn, was superseded by the Export Administration Act of 1979.

[48] Export Controls Act of 2018, Pub. L. 115-232, div. A, title XVII, subtitle B, part I (Sec. 1751–1768), 132 Stat. 2209 (50 U.S.C. 4811 et seq.). Part of the Export Control Reform Act of 2018, Pub. L. 115-232, div. A, title XVII, subtitle B (Sec. 1741–1781), Aug. 13, 2018, 132 Stat. 2208 (50 U.S.C. 4801 et seq.)

[49] 15 C.F.R Section 730 et seq.

[50] Berman and Garson 1967, p. 866.

[51] Berman and Garson 1967, p. 867.

[52] Although criminal proceedings under export control legislation are possible as well, Berham and Garson note that up until 1967 no foreign nationals were held criminally liable for a violation

An example is the 1953 case against a Dutch trade company and its partners. They were charged with having violated the Export Control Act of 1949 by unlawfully diverting and transhipping antibiotics and insecticides.[53] As a result, the US authorities revoked their licenses and denied them further trade activities with the US (denial of export privileges).

Additional rules with extraterritorial effect were introduced as export control legislation developed. A far-reaching step was made in 1982, after Polish military leaders had declared martial law on 12 December 1981 and suspended the operations of the free labor union 'Solidarity'. In response, the US unilaterally imposed a string of sanctions on Poland as well as the Soviet Union for its support of the repression in Poland[54] including the June 1982 sanctions targeting the construction of the Soviet Union's natural gas pipeline from Siberia to Western Europe (the Soviet Pipeline Regulations).[55] The latter sanctions had an unprecedented extraterritorial reach. Foreign subsidiaries of US firms were restricted from exporting wholly foreign-origin equipment and technology. Furthermore, foreign companies with no US connection were prohibited from exporting foreign-made products that were manufactured with technology acquired through licensing agreements with US companies, whether or not the technology had been subject to US controls at the time of export.[56]

When European companies pressed by their governments continued to export controlled pipeline equipment, honoring existing contracts, the US Department of Commerce issued temporary denial orders suspending the privileges of the companies involved to conduct business with the US in the future.[57] Industry was hit hard. Consequently, the European Community, member States, and Japan vehemently opposed the sanctions (see Sect. 11.4.1). Five months later, on 13 November 1982, international protest and subsequent negotiations led to the lifting of all export measures and the termination of administrative and court proceedings.[58]

The ECA of 2018, currently in force, does not specify its jurisdictional reach. There is no doubt though that certain parts of the Act and the EAR apply extraterritorially. Section 4812(a)(1) ECA authorizes the President to control "the export,

committed abroad which is entirely legal in the place where it is committed; Berman and Garson 1967, p. 866.

[53] 6 November 1953, Order of the Dept. of Commerce, Bureau of Foreign Commerce, Case No. 166, Johannes M.A. Klaasen; 18 Fed. Reg. 7179 (November 11, 1953). Silverstone 1959, p. 339.

[54] E.g. Moyer and Mabry 1983, p. 60ff. These measures were implemented in regulations issued pursuant to the Export Administration Act of 1978 (47 Fed. Reg. 141, 144 (1982)).

[55] The Soviet Pipeline Regulations amending the Export Administration Regulations, 47 Fed Reg 27250; Moyer and Mabry 1983, p. 69ff.

[56] Moyer and Mabry 1983, p. 70.

[57] Abbot 1984, p. 89. International Trade Administration, Department of Commerce, Orders to U.S. Foreign Subsidiaries in France, Italy, United Kingdom Concerning the Denial of Export Privileges for Soviet Gas Pipeline Equipment," International Legal Materials 21, no. 5 (September 1982): 1098–1105.

[58] 30 December 1982, Moyer and Mabry 1983, pp. 83–84.

re-export,[59] and in-country transfer of items subject to the jurisdiction of the United States, whether by United States persons or by foreign persons". As the term re-export includes activities abroad, this provision makes clear that export controls can apply to foreign nationals outside US territory. Moreover, the phrase 'items subject to the jurisdiction of the US' further extends the reach of the provision as US origin controlled commodities, technology, and services retain US nationality. Section 734.3(a) EAR lists the items that are subject to the EAR, which include, *inter alia,* "(2) All US origin[60] items wherever located; (3) Foreign-made commodities that incorporate controlled US-origin commodities, foreign-made commodities that are 'bundled' with controlled US-origin software, foreign-made software that is commingled with controlled US-origin software, and foreign-made technology that is commingled with controlled US-origin technology;[61] … (4) Certain foreign-made direct products of US origin technology or software, as described in Section 736.2(b)(3) of the EAR".

In other words, "US export controls 'follow the part'", meaning that a foreign national handling US origin EAR controlled goods abroad is subject to US export control legislation.[62]

Consequently, foreign nationals involved in re-export activities are subject to the EAR, in particular Section 736.2(b) which prohibits "the re-export of controlled items to countries for which a license would be required or to countries which are subject a general prohibition or embargo by the US".[63] Also, ECA and EAR will be applicable to foreign-made commodities if it contains a *de minimis* level of commercial or dual-use US origin components as set out in Section 734.4. EAR.

Provisions of ECA and EAR can be enforced. Section 4819 ECA makes it in general unlawful for 'a person' to violate ECA and EAR while 'no person' may engage in specific unlawful acts. Clearly, this provision does not exclude foreign nationals abroad. Section 764.2 EAR on violations uses similar language. As in the past, US authorities have enforced these rules against foreign persons. An example is the renewal of an order temporarily denying export privileges of a number of foreign companies[64] in the matter that involved the reexport of US-origin aircraft and aircraft parts.[65]

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[59] "The term "re-export" includes—(A) the shipment or transmission of the item from a foreign country to another foreign country, including the sending or taking of the item from the foreign country to the other foreign country, in any manner; and (B) the release or transfer of technology or source code relating to the item to a foreign person outside the United States" (50 USC Section 4801(9)).

[60] US origin is not defined in ECA and EAR.

[61] This subsection is subject to the *de minimis* level of U.S. content as set out in Section 734.4. EAR.

[62] Little et al. 2015, p. 1 and p. 4.

[63] Little et al. 2015, p. 8.

[64] The original denial order was signed in 2008 and was regularly renewed.

[65] 29 May 2020, Dept. of Commerce, Bureau of Industry and Security, Order Renewing Order Temporarily Denying Export Privileges, 85 Fed. Reg. 34405 (June 4, 2020).

11.3.2 Military Export Controls

The Arms Export Control Act of 1976 (AECA)[66] governs the export of defense articles and services. It is implemented by the International Traffic in Arms Regulations (ITAR),[67] which includes the United States Munitions List (USML) of ITAR-controlled items, and is administered by the Department of State Directorate of Defense Trade Controls (DDTC). The AECA also contains the statutory authority for the Foreign Military Sales (FMS) program. This program enables eligible foreign governments and international organizations to purchase defense articles and services directly from the US government instead of from a private contractor (the latter procedure is referred to as Direct Commercial Sales, DCS). FMS-sales are not subject to the ITAR but controlled by the Security Assistance Management Manual (SAMM).[68] This manual is an internal Department of Defense instrument supplemented by internal security assistance manuals of the various service branches covering details unique to their organizations.

Although the AECA, like the ECA, does not specify its jurisdictional reach, some of its provisions have a clear extraterritorial element. For instance, Section 2778(c) AECA penalizes any person who violates certain provisions of the Act or the ITAR. The term 'any person' allows prosecution of foreign nationals before US courts. Furthermore, some parts of the ITAR are applicable to foreign persons or to both US and foreign persons.[69] An example is Section 123.9(a) ITAR that, *inter alia*, deals with re-exports[70] and retransfers.[71] This provision does not refer to either a US person or a foreign person. As re-exports and retransfers by definition can take place abroad, the provision also affects foreign persons abroad.

ITAR includes various provisions on re-export that are applicable to foreign persons abroad and affect their control over ITAR controlled goods.[72] For instance, Section 123.10(a) ITAR holds that in order to get a license for the export of specific

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[66] Arms Export Control Act of 1976, Pub. L. 90-629, 82 Stat. 1320 (22 U.S.C. 2751 et seq.).

[67] 22 C.F.R Section 120–130.

[68] The electronic version, ESAMM. https://www.samm.dsca.mil/listing/chapters. Accessed 20 February 2021.

[69] 22 C.F.R. Section 120.14 states: "If a provision in this subchapter does not refer exclusively to a foreign person (Section 120.16) or U.S. person (Section 120.15), then it refers to both".

[70] 22 C.F.R. Section 120.19 Re-export means: (1) An actual shipment or transmission of a defense article from one foreign country to another foreign country, (2) Releasing or otherwise transferring technical data to a foreign person who is a citizen or permanent resident of a country other than the foreign country where the release or transfer takes place (a "deemed re-export"); or (3) Transferring registration, control, or ownership of any aircraft, vessel, or satellite subject to the ITAR between foreign persons. (b) Any release outside the United States of technical data to a foreign person is deemed to be a re-export to all countries in which the foreign person has held or holds citizenship or holds permanent residency.

[71] 22 C.F.R. Section 120.51 Retransfer means: (1) A change in end use or end user, or a temporary transfer to a third party, of a defense article within the same foreign country; or (2) A release of technical data to a foreign person who is a citizen or permanent resident of the country where the release or transfer takes place.

[72] Little et al. 2015, p. 6.

defense articles[73] a Non-transfer and use certificate (Form DSP-83) is required, to be executed by the foreign consignee, foreign end-user, and the applicant. The certificate stipulates that "the foreign consignee and foreign end-user will not re-export, resell or otherwise dispose of the significant military equipment enumerated in the application outside the country named as the location of the foreign end-use or to any other person unless authorized". Moreover, the notion that US export control legislation 'follows the parts' also applies to defense articles and services. Although not specified in either AECA or ITAR, DDTC applies the so-called 'see-through' rule.[74] This rule entails that if an ITAR controlled defense article is integrated into a larger system or end-item, the controls do not disappear and continue to apply to the defense article,[75] even if it has become part of a foreign commercial system or product.[76] So, as an example, an aircraft or missile designed, developed, and built outside the US containing one or more defense articles is not subject to ITAR itself, but the ITAR controlled parts are. As a result, the US can block or delay the sale of that foreign-built aircraft or missile.[77] In a study on the impact of US export control on the Joint Strike Fighter Project the reach of the ITAR was called "excessive" and frustrating international business.[78] Therefore, it may not come as a surprise that foreign governments sometimes seek to purchase military equipment that does not contain ITAR-control parts[79] and that foreign producers of military equipment seek to develop new products without US controlled parts;[80] the 'ITAR-free' movement.[81]

Approval for the export of the defense services as mentioned in Section 120.9(a) ITAR is subject to the conclusion of specific agreements, generally characterized as: Manufacturing License Agreements, Technical Assistance Agreements, Distribution

[73] I.e., "significant military equipment and classified articles, including classified technical data".

[74] Fergusson and Kerr 2020, p. 16. Some support for this rule can be found in AECA and ITAR, Little et al. 2015, p. 9.

[75] From 2013 on, some parts, including items like fasteners (e.g., screws, bolts, nuts) washers, spacers, etc. are excluded from the rule when they are not 'specially designed'; cf. Fergusson and Kerr 2020, p. 16.

[76] An example of the application of this rule can be found in the 2006 Consent Agreement between DDTC and The Boeing Company, 'Designation of Defense Articles', p. 3 file:///G:/printen%20of%20overzetten/Boeing_ConsentAgreement_06.pdf. Accessed 20 February 2021.

[77] In 2018 the U.S. initially blocked the sale of the French Scalp cruise missile to Egypt. https://www.defensenews.com/global/europe/2018/03/09/missile-sale-from-france-to-egypt-depends-on-us-permission-dassault-head-says/ Accessed 20 February 2021.

[78] Moore et al. 2011, pp. 35–36. One interviewee stated, ITAR is like "one drop of cyanide in a bucket of water. Once you've put the smallest drop in, everything becomes contaminated".

[79] A tender for a new assault rifle for the German Bundeswehr included an ITAR-free exclusion criterion. https://www.welt.de/wirtschaft/article213002794/Ruestungsindustrie-Europa-will-sich-von-den-Vereinigten-Staaten-emanzipieren.html Accessed 20 February 2021.

[80] The solar-powered Skydweller drone built by Italian Defense company Leonardo; https://www.defensenews.com/unmanned/2019/11/12/leonardo-invests-in-fully-electric-skydweller-drone/.

[81] The coming EAR-free era. WorldECR 11 March 2020. https://www.worldecr.com/archive/the-coming-ear-free-era/ Accessed 20 February 2021. Also: Rüstungsindustrie: Europa will sich von den Vereinigten Staaten emanzipieren—WELT Accessed 20 February 2021.

Agreements, or Off-shore Procurement Agreements (Section 124.1(a) ITAR). By signing the agreement, the contracting parties, including foreign licensees, agree to comply with all applicable sections of the ITAR.

Like the ECA, the AECA and the ITAR have been enforced against foreign persons abroad. In the 1987 Evans-case[82] the US District Court for the Southern District of New York in 1987 upheld the validity of the exercise of extraterritorial jurisdiction under the AECA. Also, in several other cases, the DDTC has taken administrative action against foreign persons. For example, in 2020 Airbus SE, a company organized under the laws of the Netherlands, was charged with, *inter alia,* unlawfully reexporting and retransferring ITAR controlled articles.[83]

11.3.3 US Economic Sanctions

In the US the immediate decision to impose a sanction is almost always laid down in Executive Orders issued by the President. Such Orders are based on one or more statutes. Traditionally, the Trading with the Enemy Act of 1917[84] (TWEA) was the principal statutory basis for US sanctions. After the enactment of the International Economic Powers Act of 1977[85] (IEEPA), this statute has taken over that role. Other statutes, such as CRIEEA, PEESA, and PEESCA mentioned in the Introduction, can provide an additional legal basis to impose sanctions.[86] Also, the Presidential Executive Orders can authorize the heads of departments, in particular the Secretary of the Treasury, to issue any regulation that may be necessary to implement the sanctions measures. Finally, the export control regulations discussed above, such as the EAR and ITAR, include requirements that overlap with OFAC's sanctions programs.[87]

US sanctions are organized into sanctions programs that are primarily administered and enforced by the Department of the Treasury's Office of Foreign Assets Control (OFAC). As part of its enforcement efforts, OFAC maintains a number

[82] United States v. Evans, 667 F. Supp. 974 (S.D.N.Y. 1987). https://law.justia.com/cases/federal/district-courts/FSupp/667/974/2158497/ Accessed 20 February 2021.

[83] Proposed Charging Letter Airbus SE, sys_attachment.do (state.gov). Accessed 20 February 2021.

[84] Trading with the Enemy Act of 1917 of Oct. 6, 1917, ch. 106, 40 Stat. 411 (50 U.S.C. 4301 et seq.).

[85] International Economic Powers Act of 1977, Pub. L. 95-223, title II, Dec. 28, 1977, 91 Stat. 1626 (50 U.S.C. 1701 et seq.). IEEPA is the statutory basis for most sanctions.

[86] Gordon et al. 2019, p. 109ff.

[87] EAR: 15 C.F.R. Section 744.10 and Section 744.21, and Section 746 (Embargoes and other special controls). ITAR: 22 C.F.R. Section 126.1 (Prohibited exports, imports, and sales to or from certain countries).

of sanctions list, including the Specially Designated Nationals (SDN) list[88] of individuals and companies whose assets have been frozen or 'blocked'.[89]

Over the past decades, the US has established an intricate web of sanctions programs.[90] The majority are primary sanctions that target other States, individuals,[91] groups,[92] and economic sectors by prohibiting US persons from engaging in sanctionable activities with them. Typically, a US person is defined to include: any US citizen or permanent resident alien, wherever located; entity organized under US law; or any person in the United States. However, US persons are sometimes defined much broader, pulling foreign companies within reach of US law, as will be explained below.

Moreover, primary sanctions and the rules that specifically apply to US persons can also affect foreign nationals and companies when they get involved in sanctioned transactions where there is a US nexus.[93] Such a situation can occur where such as a transaction in breach of a sanctions program involves US persons or US origin goods, services or technology, or is processed through the US financial system.[94] Thus, the foreign person violates US sanctions laws and can be held liable by OFAC.[95] The consequences can be quite severe as, for example, ING Bank NV experienced in 2012. The bank, incorporated in the Netherlands, agreed to a settlement of $619 million in forfeitures and fines with OFAC for illegally processing dollar transactions through

[88] Available at: https://www.treasury.gov/resource-center/sanctions/SDN-List/Pages/default.aspx, Accessed 20 February 2021. Other lists include the Non-SDN Menu Based Sanctions (NS-MBS) List; Correspondent Account or Payable-Through Account Sanctions (CAPTA) List; Sectoral Sanctions Identifications (SSI) List; and the Foreign Sanctions Evaders (FSE) List. The Consolidated List includes the parties on the SDN List as well as some of the other lists.

[89] "List of individuals and companies owned or controlled by, or acting for or on behalf of, targeted countries. It also lists individuals, groups, and entities, such as terrorists and narcotics traffickers designated under programs that are not country-specific. Collectively, such individuals and companies are called "Specially Designated Nationals" or "SDNs.": https://home.treasury.gov/policy-issues/financial-sanctions/specially-designated-nationals-and-blocked-persons-list-sdn-human-readable-lists Accessed 20 February 2021. As a result, these assets may not be transferred, paid, exported, withdrawn or otherwise dealt in. McVey 2019, p. 2.

[90] For an overview of US sanctions programs, see: https://www.treasury.gov/resource-center/sanctions/Programs/Pages/Programs.aspx. Accessed 20 February 2021.

[91] Such as supporters of terrorism, narcotic traffickers, and even associates of the International Criminal Court; Casey et al. 2020, p. 22.

[92] Including: political parties, corporations, and terrorist organization; Casey et al. 2020, p. 22.

[93] Sultoon and Walker 2019, p. 4.

[94] Gordon 2019, p. 14; McVey 2019, pp. 4–5.

[95] Note that a violation can be prosecuted under criminal law as well which is the responsibility of the Department of Justice. Both procedures can take place simultaneously.

financial institutions located in the US.[96] In 2014, the Paris-based BNP Paribas Bank reached a settlement of no less than $8.97 billion.[97]

Non-US persons outside the US can also violate US rules by 'causing' others to violate US sanctions as the sanctions programs generally prohibit transactions "...that evade or avoid, have the purpose of evading or avoiding, cause a violation of, or attempt to violate prohibitions imposed by OFAC under various sanctions authorities".[98] Further, non-US persons can violate US primary sanctions by providing material assistance and support or knowingly facilitating significant transaction to sanctioned parties, or act for or on behalf of a designated actor.[99] Also prohibited are transactions with parties listed on the SDN List. Primary sanctions can, therefore, have an extensive reach and may even have an extraterritorial effect. Some US sanctions, however, explicitly apply to US persons as well as foreign nationals outside the US but may not necessarily have a clear US nexus. This section will further focus on these so-called secondary sanctions.

The Foreign Assets Control Regulations of 1950[100] were the first of the US secondary sanctions. Based on the TWEA, the Regulations sanctioned trade with some Communist States[101] by any person within or subject to the jurisdiction of the US.[102] The term 'subject to the jurisdiction of the US' extended the meaning of US person to include foreign companies 'owned or controlled' by persons subject to US jurisdiction.[103] Other secondary sanctions specifically targeting Cuba followed, such as the Cuban Assets Control Regulation of 1963 (CACR),[104] the 1992 Cuban Democracy Act,[105] and the 1996 Cuban Liberty and Democratic Solidarity Act

[96] See: https://home.treasury.gov/system/files/126/06122012_ing_agreement.pdf Accessed 20 February 2021. ING Bank had violated: the Cuban Assets Control Regulations (CACR), 31 C.F.R. part 515, the Iranian Transactions Regulations (ITR), 31 C.F.R. part 560; the Burmese Sanctions Regulations (BSR), 31 C.F.R. part 537; the Sudanese Sanctions Regulations (SSR), 31 C.F.R. part 538 (now-repealed), and the Libyan Sanctions Regulations (LSR), 31 C.F.R. part 550 (now repealed).

[97] See Press release Dept. of Justice, 30 June 2014. https://www.justice.gov/opa/pr/bnp-paribas-agrees-plead-guilty-and-pay-89-billion-illegally-processing-financial Accessed 20 February 2021. Emmenegger 2016, p. 632.

[98] Gonzalez and Fiorill 2019, p. 153. Based on the penalties provision of 50 U.S.C. IEEPA Section 1705(a). Rathbone et al. 2013, p. 1111, see International Economic Powers Enhancement Act, Pub.L. No. 110-96, Section 2(a), 121 Stat. 1011 (2007), amending 50 U.S.C. Section 1705(a).

[99] Rathbone et al. 2013, p. 1059, 1102–1103, 1111–1112; McVey 2019, pp. 9–10; and Sultoon and Walker 2019, p. 4.

[100] 31 C.F.R. part. 500 (1981).

[101] Such as China, North Korea and communist-controlled parts of Vietnam.

[102] Marcuss and Richard 1981, p. 462.

[103] Berman and Garson 1967, pp. 867–868.

[104] 31 CFR Part 515; replacing the 1962 Cuban Import Regulations (Berman and Garson 1967, fn 8).

[105] Cuban Democracy Act of 1992, Pub. L. 102-484, div. A, title XVII, Oct. 23, 1992, 106 Stat. 2575 (22 U.S.C. 6001 et seq.); also known as the Torricelli Act.

(LIBERTAD). The latter, better known as the Helms-Burton Act,[106] provoked the fiercest reaction from US trading partners. The statute included several extraterritorial measures. Most significantly, Title III permitted US nationals to bring suit against domestic as well as foreign companies found to be 'trafficking' in property confiscated by the Cuban government after the revolution and claimed by US citizens.[107] Additionally, foreign persons were prohibited from selling goods in the US containing any parts originating in Cuba.

Another series of US sanctions targets Iran. The Iranian Assets Control Regulations of 1981[108] was the first of the secondary sanctions, followed by the Iran and Libya Sanctions Act of 1996 (ILSA),[109] the Accountability, and Divestment Act of 2010 (CISADA),[110] the Iran Freedom and Counter- Proliferation Act of 2012,[111] the Iran Threat Reduction and Syria Human Rights Act of 2012,[112] and the Iranian Transactions and Sanctions Regulations.[113] Initially, the extraterritorial applications of the US sanctions legislation did not lead to any conflicts with US trading partners as Iran became subject to almost identical UN and EU sanctions anyway.[114] In 2015, most nuclear-related sanctions were waived or lifted after Iran signed the Joint Comprehensive Plan of Action (JCPOA),[115] limiting its nuclear capabilities. In 2018, however, the US unilaterally withdrew from the JCPOA and subsequently re-imposed all sanctions.[116] Non-US companies that had initiated or resumed business with Iran after the secondary sanctions had been lifted, suddenly found themselves in the position that transactions allowed under domestic law could become subject to US sanctions.

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[106] Cuban Liberty and Democratic Solidarity Act of 1996, Pub. L. 104-114, 110 Stat. 785 (22 U.S.C. 6021 et seq.).

[107] Wrongful trafficking activities include: participating in the purchase, sale, transfer of confiscated property, as well as managing, leasing, possessing, using, or entering into a commercial arrangement using or otherwise benefitting from confiscated property 22 U.S.C. Section 6091(b)(2)(1996).

[108] 31 CFR pt. 535 (1981).

[109] Iran and Libya Sanctions Act of 1996, Pub. L. No. 104-172, Section 1, 110 Stat. 1541, 1541 (1996). Later renamed: Iran Sanctions Act of 1996. The act imposed, *inter alia*, sanctions on any foreign person or entity that invested more than $20 million in Iran or Libya to support the development of petroleum resources.

[110] Comprehensive Iran Sanctions, Accountability, and Divestment Act of 2010, Pub. L. 111-195, 124 Stat. 1312 (22 U.S.C. 8501 et seq.).

[111] Iran Freedom and Counter-Proliferation Act of 2012, Pub. L. 112-239, div. A, title XII, subtitle D (Section 1241 et seq.), 126 Stat. 2004 (22 U.S.C. 8801 et seq.).

[112] Iran Threat Reduction and Syria Human Rights Act of 2012, Pub. L. 112-158, Aug. 10, 2012, 126 Stat. 1214 (22 U.S.C. 8701 et seq.).

[113] 31 C.F.R Sections 560.101–904 (2013).

[114] Harvard Law Review 2011, p. 1251.

[115] Joint Comprehensive Plan of Action; Vienna, 18 October 2015; came into effect 16 January 2016; Annexed to UN Doc S/RES/2231 (2015). Signatories: Iran, China, France, Russia, UK, U.S., Germany and the EU.

[116] Executive Order 13846 of 6 August 2018, Reimposing Certain Sanctions with respect to Iran (83 Fed Reg 38939 7 August 2018).

Various States and the EU have vigorously opposed the secondary sanctions on Cuba and Iran, as will be discussed in the next section. International criticism has not, however, stopped the US from continuing its extraterritorial practice as recent secondary sanctions show, such as the sanctions targeting the Russian energy export pipelines to Europe, as referred to in Sect. 11.1.[117]

11.4 Analysis

This section will examine the legality of the broad territorial reach of US export control and sanctions legislation on the basis of the principles of jurisdiction. As discussed in Sect. 11.2.2, the principles reflect a genuine connection between the regulating State and the persons, property, or conduct being regulated.[118] In other words, US extraterritorial rules must demonstrate a clear link between the foreign person or corporation that is regulated and the US in order to be compatible with public international law.

The previous section may have given the impression that US legislation is predominantly extraterritorial. The opposite is true though as a canon of statutory construction called 'the presumption against extraterritoriality' limits the exercise of legislative jurisdiction.[119] The US Supreme Court reaffirmed this presumption in Aramco-case",[120] stating that, "It is a longstanding principle of American law that legislation of Congress, unless a contrary intent appears, is meant to apply only within the territorial jurisdiction of the United States". In Morrison v. National Australia Bank[121] the Court referred to this case and concluded, "When a statute gives no clear indication of an extraterritorial application, it has none." As established above, there is no doubt about the legislator's intent about the extraterritorial reach of US export control and sanctions legislation. Consequently, its extraterritorial application is lawful under US law. Another question is whether public international law, in particular, the principles of jurisdiction allow the broad extraterritorial reach of the US laws.

[117] Another example are secondary sanctions on Hong Kong; Hong Kong Autonomy Act of 2020, Pub. L. 116-149, 134 Stat. 663 (22 U.S.C. 5701).

[118] Restatement of the law fourth 2018, Section 407, comment.

[119] Dodge 2020, para 15ff; Restatement of the law fourth 2018, Section 04.

[120] US Supreme Court 16 January 1991, EEOC v. Arabian American Oil Co., 499 US 244 (1991), 248. https://supreme.justia.com/cases/federal/us/499/244/ Accessed 20 February 2021.

[121] US Supreme Court 24 June 2010, Morrison v. National Australia Bank Ltd., 561 U.S. 247 (2010). https://supreme.justia.com/cases/federal/us/561/247/ Accessed 20 February 2021.

11.4.1 Export Controls

The extraterritorial application of the export controls as set out in the ECA, the AECA, the EAR and the ITAR seem hard to reconcile with any of the principles of jurisdiction. For an important part, the relevant provisions are based on the US origin of the controlled items. The idea is that items that have left US territory keep the US nationality. However, the principles of jurisdiction that are based on personality or nationality refer to natural persons and business entities incorporated under domestic law. An item does not possess a personality and consequently, extraterritorial jurisdiction cannot be based on the nationality principle.

Some controls may be justified under the protective principle. After all, export control law deals with the export of military and sensitive items that could impact national security. However, export can also be controlled for other reasons than national security (e.g., protection of human rights, economy, or foreign policy). Moreover, the reach of US export control law is quite broad, especially of the ECA and EAR. They cover numerous items the export of which would not jeopardize US national security. Enforcing foreign policy preferences through sanctions does not fall within the recognized ambit of national security. Therefore, the protective principle does not provide sufficient ground to justify the majority of the export control rules.

Yet, the extraterritorial provisions of the ECA, the AECA, and their implementing regulations do not seem to trouble allied trading partners too much and, in general, are not a source of conflict.[122] Perhaps the best explanation is that the US does not rely on the direct application of export control laws vis-à-vis foreign trading partners. Instead, it can be argued that the extraterritorial rules apply to a foreign buyer or user because he has voluntarily consented to the application of the rules by submitting forms such as end-use(r) certificates or signing a contract in which the relevant extraterritorial provisions are incorporated.[123] Some rules would not even apply without the voluntary consent of a foreign person. The 'see through rule', for example, that the DDTC applies with respect to articles containing ITAR-controlled items, is policy based and not laid down formally. In my opinion, such a policy 'rule', cannot be regarded as exercise of extraterritorial jurisdiction by a State.

The 'submission clauses' or 'Export Control Clauses' can be very specific and cannot be modified.[124] For instance, service agreements concluded under the ITAR[125] contain a provision stating that the parties will comply with all applicable sections

[122] There are exceptions, such as the protest following the enactment of the Soviet pipeline regulations.

[123] It must be admitted that accepting the US terms and conditions can be a forced choice as foreign customers are often highly dependent on the US defense industry.

[124] Rosanelli 2014, p. 5. Lebedoff and Raievski 1983, p. 487, fn 27 provides an older example of such a clause.

[125] As Manufacturing License Agreements and Technical Assistance Agreements do not require a prior license, no submission by a foreign person is possible as part of the license application process. Instead, the submission is sought in the contractual documents.

of the ITAR. In addition, several ITAR-clauses are verbatim included in the agreement.[126] Thus, it can be said that the foreign person is directly bound by the terms of the contract or form he signed; through the provisions of these instruments, he is only indirectly subject to the extraterritorial rules.

Although the literature is sometimes critical about these 'submission clauses',[127] it must be noted that foreign governments are often also engaged in the process and sign these clauses on a regular basis. This is especially true for arms sales to foreign governments or international organizations under the FMS-program. The statutory basis of the program is the AECA, which is not implemented by federal regulations but a Department of Defense manual, the SAMM. In my opinion, this type of document cannot have extraterritorial effect, legally binding foreign persons, not to mention foreign States.

The design of the program clearly shows that this is not intended either. Foreign buyers and the US government have to conclude a unique government-to-government contract referred to as the Letter of Order and Acceptance (LOA).[128] The standard terms and conditions, which are an integral part of every LOA, stipulate that the foreign purchaser agrees not to transfer title or possession of the purchased items without the prior consent of the US government (Section 2.4). Also, the purchaser agrees to permit the US government to conduct end-use monitoring verification with respect to the use, transfer, and security of the articles and services transferred under the LOA (Section 2.7). These provisions merely restate the obligation under the AECA, the LOA itself, however, is the legal instrument that binds the parties.

That is not to say that US extraterritorial practice has not met any opposition at all.[129] Lowe, for instance, refers to formal objections to US legislation with extraterritorial effect that the UK and eleven other States raised in 1961.[130] In the UK, extraterritorial application of US antitrust laws, in particular with respect to the shipping industry, led to the enactment of the Shipping Contracts and Commercial Documents Act of 1964, which was superseded by the Protection of Trading Interests Act (PTIA) in 1980.[131] In general terms, the latter act enables the UK to prohibit compliance with orders of foreign authorities; mandates the non-enforcement of certain foreign judgements by British courts; and allows British nationals and companies recovery of the 'penal' part of multiple damage[132] awarded against them in foreign

[126] As required by Section 124.8 ITAR 'Clauses required both in manufacturing license agreements and technical assistance agreements' and Section 124.9 ITAR 'Additional clauses required only in manufacturing license agreements'

[127] Bianchi 1992, p. 394 and Michigan Law Review 1983, p. 1326.

[128] Defense Security Cooperation Agency 2020, https://www.dsca.mil/resources/publications Accessed 20 February 2021.

[129] On occasion, US export controls were challenged in foreign court cases; e.g. Polier 1970, early cases include: The American Presidents Line case (Hong Kong 1951), Moens v. Ahlers, North German Lloyd (Belgium 1964), and Fruehauf Corp. V. Massardy (France 1965).

[130] Lowe 1980, p. 260.

[131] Other States, e.g., Australia, Canada, and France, also enacted statutes rejecting another State's extraterritorial legislation; Coughlan et al. 2006, p. 59.

[132] So-called 'treble damages'.

courts ('claw back clause').[133] The PTIA thus aims to protect British citizens and companies from the extraterritorial reach of foreign laws[134] and raises the risks for private extraterritorial lawsuits for multiple damages. Although US antitrust laws prompted the passage of the PTIA, the Act has also been invoked in the field of export control and sanctions, e.g., in response to the Soviet Pipeline Regulations.[135]

Because of the unprecedented extraterritorial reach of these specific regulations, the European Community (EC), its member States, and Japan vigorously opposed the export controls. The EC concluded that the measures were unlawful "since they cannot be validly based on any of the generally accepted bases of jurisdiction in international law".[136] In particular the EC found the control theory, used to assert jurisdiction over foreign companies under control of US persons, not consistent with the Barcelona Traction case.[137] Consequently, the nationality principle could not serve as a basis of jurisdiction over these companies. Neither could this principle be invoked to assert jurisdiction over US goods and technology as it was generally accepted that they have no nationality.[138] The protective principle could not be applicable either as the extraterritorial provisions of the Regulations were adopted for the purpose of foreign policy instead of national security.[139] Finally, the EC considered the contractual submission clauses a misuse of the freedom of contracts in order to circumvent the jurisdictional principles.[140]

In the only recorded court case on the application of the Soviet Pipeline Regulations (Compagnie Europeenne des Petroles S.A. v. Sensor Nederland B.V.) the court also came to the conclusion that US extraterritorial exercise of jurisdiction "would not appear to be justified by the nationality principle". Consequently, the court ordered Sensor, a Dutch subsidiary of a US company, to comply with its contractual obligations notwithstanding the Soviet Pipeline Regulations.[141]

In general, the literature was rather critical about the extraterritorial reach of the Regulations as well and also concluded that generally accepted principles of jurisdiction impose limits on the exercise of jurisdiction to regulate conduct outside the regulating State's territory.[142]

The dispute over these extraterritorial Soviet Pipeline Regulations was settled by diplomatic means and led to the lifting of the measures that hurt the foreign

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[133] Lowe 1980, p. 273.

[134] The PTIA is not directed at the US, but is on almost all occasions invoked against U.S. extraterritorial laws.

[135] Kuyper 1984, p. 73.

[136] On 12 August 1982 the EC presented a Note to the U.S. Department of State together with the legal "European Communities: Comments on the U.S. Regulations concerning trade with the U.S.S.R."; European Communities 1982, para 30.

[137] European Communities 1982, para 7.

[138] European Communities 1982, para 8.

[139] European Communities 1982, para 13.

[140] European Communities 1982, para 11.

[141] District Court the Hague, 17 September 1982, Judgment in Compagnie Europeenne des Petroles S.A. v. Sensor Nederland B.V.; International Legal Materials 22, no. 1 (January 1983), pp. 66–74.

[142] Lowenfeld 2003.

trading partners most. Although this action eased international tensions, it could not take away all European concerns,[143] as US export control legislation continued to include the extraterritorial elements that were already part of the system before the enactment of the Soviet Pipeline Regulations. Nevertheless, the extraterritorial reach of US export control did not lead to further major disputes.

11.4.2 Sanctions

Attention shifted to the increasing extraterritorial reach of US sanctions. It must be noted, however, that the US is not under all circumstances a proponent of secondary sanctions. When the Arab League implemented a boycott of the newly established State of Israel in 1948, the US opposed this secondary boycott[144] and since 1977, prohibits US companies from complying with any (non-US approved) boycott.[145]

This policy has, however, not stopped the US from progressively expanding its extraterritorial sanctions which resulted in several disputes with its allied trading partners,[146] notably the EU. The first of the disputes arose over the extraterritorial reach of the ILSA and especially the Helms-Burton Act. After expressing its concern about the latter statute and its intent to defend EU's legitimate interests[147] the EU filed a complaint with the Dispute Settlement Body of the World Trade Organization (WTO).[148] Moreover, the EU adopted the 'Blocking Regulation' or 'Blocking Statute'[149] to provide EU economic operators "protection against and to counteract the effects of the extra-territorial application of the laws specified in the Annex" such as the Helms-Burton Act and the ILSA (Article 1).[150] The Regulation includes the requirement to report activities that are affected by extraterritorial

[143] Kuyper 1984, p. 76. Text delivered by Sir Roy Denman, Head of Mission, Delegation of the European Commission and Peter Hermes, Ambassador, Federal Republic of Germany; 28 April 1983 Aide-Mémoire. http://aei.pitt.edu/5477/1/5477.pdf Accessed 20 February 2021.

[144] Weiss 2017.

[145] 15 C.F.R Section 760.

[146] The UK invoked the PTIA again; Davidson 1998, p. 1425.

[147] Demarche, Delegation of the European Commission, International Legal Materials 35, no. 2 (March 1996): 398–400.

[148] The EU argued that the extraterritorial application of the Helms-Burton Act was inconsistent with the U.S. obligations under the 1994 GATT and GATS; Annex 1A, General Agreement on Tariffs and Trade (GATT) and Annex 1B, General Agreement on Trade in Services (GATS) of the Marrakesh Agreement Establishing the World Trade Organization; Marrakesh, 15 April 1994 entered into force 1 January 1995 (Vol. 1867 UNTS 1995, No. 31874).

[149] Council Regulation (EC) No 2271/96 of 22 November 1996 protecting against the effects of the extra-territorial application of legislation adopted by a third country, and actions based thereon or resulting therefrom, OJ L 309, 29/11/1996, pp. 1–6.

[150] Canada and Mexico passed similar legislation to counter the U.S. extraterritorial sanctions; e.g., Rathbone et al. 2013, p. 1073. Recently, the Chinese Ministry of Commerce adopted MOFCON Order No. 1, "Rules on Counteracting Unjustified Extra-territorial Application of Foreign Legislation and other Measures", which entered into force on 9 January 2021 (translation at: http://english.mofcom.gov.cn/article/policyrelease/questions/202101/20210103029708.shtml). Accessed 20 February 2021.

sanctions (Article 2) and provides for a non-recognition and non-execution of foreign judgements or orders giving effect to the sanctions (Article 4). More important, it prohibits compliance with the extraterritorial sanctions (Article 5)[151] and establishes a 'clawback' procedure (Article 6).

The WTO suit never went forward, however, as the US and the EU settled the dispute in April 1997 by Memorandum of Understanding (MOU).[152] Under the MOU, the US accepted to waive Title III of Helms-Burton Act. Furthermore, the US and the EU concluded the Transatlantic Partnership on Political Cooperation in May 1998 in which they agreed 'to resist' the passage of new extraterritorial sanctions.[153] Because of these arrangements, the Blocking Regulation, which remained in effect, did not have to be invoked.[154]

Things changed dramatically when the US withdrew from the JCPOA and subsequently re-imposed its sanctions on Iran which partially have extraterritorial reach. In reaction, the EU updated the Blocking Regulation by including in its Annex the re-imposed US extraterritorial sanctions.[155] Shortly thereafter, President Trump decided not to renew the waiver with respect to Title III of the Helms-Burton Act, fully activating the statute on 2 May 2019[156] much to the dismay of the EU.[157] A

[151] See also Commission Implementing Regulation (EU) 2018/1101 of 3 August 2018 laying down the criteria for the application of the second paragraph of Article 5 of Council Regulation (EC) No 2271/96 protecting against the effects of the extra-territorial application of legislation adopted by a third country, and actions based thereon or resulting therefrom (OJ L 199 I, 7/8/2018 L 199, pp. 7–10).

[152] Memorandum of Understanding Concerning the U.S. Helms-Burton Act and the U.S. Iran and Libya Sanctions Act, 36 International Legal Materials 36 (1997) 529–530.

[153] US/EU Joint Statement on Transatlantic Partnership on Political Cooperation May 18, 1998; in Clinton 1998. Public Papers of the Presidents of the United States, 1998, 804–806.

[154] As U.S. secondary sanctions remained in place the EU continued to protest them. Harvard Law Review 2011, p. 1249.

[155] Commission Delegated Regulation (EU) 2018/1100 of 6 June 2018 amending the Annex to Council Regulation (EC) No 2271/96 protecting against the effects of extraterritorial application of legislation adopted by a third country, and actions based thereon or resulting therefrom (OJ L 199 I, 7/8/2018, pp. 1–6. See also: Commission Implementing Regulation (EU) 2018/1101 of 3 August 2018 laying down the criteria for the application of the second paragraph of Article 5 of Council Regulation (EC) No 2271/96 protecting against the effects of the extra-territorial application of legislation adopted by a third country, and actions based thereon or resulting therefrom (OJ L 199 I, 7/8/2018, pp. 7–10).

[156] President Donald J. Trump Is Taking A Stand For Democracy and Human Rights In the Western Hemisphere | The White House. Accessed 20 February 2021.Consequently, the waiver came into effect again 2 May 2019.

[157] Council of the EU, 'Declaration by the High Representative on behalf of the EU on the full activation of the Helms-Burton (LIBERTAD) Act by the United States' (2 May 2019). www.consilium.europa.eu/en/press/press-releases/2019/05/02/declaration-by-the-high-representative-on-behalf-of-the-eu-on-the-full-activation-of-the-helms-burton-libertad-act-by-the-unitedstates/ Accessed 20 February 2021; EU External Action Service, 'Joint Statement by Federica Mogherini and Cecilia Malmström on the decision of the United States to further activate Title III of the Helm Burton (Libertad) Act' (17 April 2019). https://eeas.europa.eu/headquarters/headquarters-homepage/61183/joint-statement-federica-mogherini-and-ecilia-malmstr%C3%B6m-decision-united-statesfurther_en Accessed 20 February 2021.

new dispute is looming with the extraterritorial legislation impacting the European participation in the Nord Stream 2 Project. However, as the views of the EU Member States on the project differ widely, the EU has not yet been able to reach consensus on broadening the reach of the Blocking Regulation by including in its Annex the PEESA and PEESCA.

The EU and its member States have continuously stressed their position that the US extraterritorial sanctions are contrary to international law. In the words of the French Minister for Europe and Foreign Affairs: "the increasing use by the US of extraterritorial provisions … is unjustified, unjustifiable and contrary to international law".[158] Also, every year, the UN General Assembly calls upon States to "refrain from promulgating and applying laws and measures such as the Helms-Burton Act … the extraterritorial effects of which affect the sovereignty of other States, the legitimate interests of entities or persons under their jurisdiction and the freedom of trade and navigation".[159]

Indeed, the majority of the extraterritorial sanctions provisions do not have a sufficient nexus with the US to be consistent with the international law of jurisdiction. More specifically, the principles of jurisdiction, notably the territoriality, nationality, and protective principle, do not provide a sufficient basis to justify the broad extraterritorial reach of the sanctions.

ING, BNP Paribas, and many other banks were fined because they processed dollar transactions through the US financial system. The US asserted jurisdiction over the transactions because payments in US currency imply that the transactions pass through its territory because US correspondent bank accounts were used.[160] In addition, processing illegal transactions within the US caused the US correspondent banks to violate US laws. Both arguments rely on the territoriality principle. In the literature, such a broad interpretation of this principle has met with much criticism as the clearing of an amount of money through a US based bank on its way between two foreign accounts cannot be regarded as a sufficient jurisdictional nexus.[161]

A considerable number of secondary sanctions regulations extend the meaning of 'US person' to include companies incorporated abroad but 'owned and controlled' by a US person (the control theory). Such a claim is based on the nationality principle. As discussed above, under public international law, the nationality of a corporation is separate from its shareholders and is determined by its place of incorporation.[162] Therefore, the US cannot rely on the nationality principle to assert jurisdiction over foreign-incorporated companies 'owned and controlled' by a US

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[158] "le recours croissant, par les États-Unis, à des dispositions extraterritoriales … est injustifié, injustifiable et contraire au droit international", cited in: Court of Appeal of Paris, International Commercial Chamber, 3 June 2020, Judgement in SA T v Société N, No. RG 19/07261—No. Portalis 35L7-V-B7D-B7VDG, Section 64.

[159] UN Doc A/RES/74/7 of 12 November 2019: Necessity of ending the economic, commercial and financial embargo imposed by the United States of America against Cuba. Preamble and para.2.

[160] Emmenegger 2016, p. 654.

[161] Emmenegger 2016, p. 655; Ruys and Ryngaert 2020, p. 20ff.

[162] As the ICJ established in the Barcelona Traction case.

person.[163] International critique notwithstanding the US continues to rely on the control theory.[164]

Nationality also comes into play with respect to sanctions provisions that prohibit the reexport from a third country by non-US persons of US origin goods, technology, or services that are subject to US export controls. As mentioned earlier, under public international law, only natural and legal persons possess nationality. Therefore, the US cannot establish a jurisdictional link with a US origin item that has left country.[165] Of course, a foreign person involved in the reexport of a US controlled item may be bound by US rules through a submission clause in a contract or license form.

Nowadays, the principal statutory basis for US sanctions is the IEEPA. In order to impose sanctions under this statute the President first has to declare the existence of an "unusual and extraordinary threat ... to the national security, foreign policy, or economy of the United States".[166] Extraterritorial sanctions legislation based on the existence of a national security threat may be justified pursuant to the protective principle. This principle only applies, however, where the threat is quite severe jeopardizing key State interests (see Sect. 11.2.2.3). Most US sanctions imposed with reference to the national security threat do not meet this relatively high threshold.[167] Furthermore, the US employs sanctions for a variety of other reasons than the protection of national security, for instance, to achieve foreign policy or quasi-military objectives, for economic and commercial reasons, or to fight the proliferation of weapons of mass destruction or terrorism.[168] Therefore, a reference to the protective principle to justify US extraterritorial sanctions is not convincing in most situations.

In establishing the legality of US extraterritorial sanctions, some authors also take into account the consequences for non-US persons of violating these sanctions while abroad. They argue that absent a treaty provision to the contrary, it is within the discretion of the US to deny a foreign person access to its economic or financial system. There is no rule of international law requiring a State to grant a foreign corporation the right to conduct business within its territory (see Chap. 5, Sect. 5.3.3.2). Thus, the denial of privileges of doing business within the US in response to a violation

[163] Court d'Appel, Paris, 22 May 1965, Fruehauf Corp v. Massardy; in Marcuss and Richard 1981, p. 466; District Court the Hague, 17 September 1982, Judgment in Compagnie Europeenne des Petroles S.A. v. Sensor Nederland B.V.; International Legal Materials 22, no. 1 (January 1983): 66–74.

[164] Ruys and Ryngaert 2020, p. 19.

[165] Ruys and Ryngaert 2020, p. 20. Already in 1953 the Supreme Court of Hong Kong had held that goods imported from the U.S. and stored on Hong Kong soil were no longer 'subject to the jurisdiction of the United States' as defined in the U.S. Foreign Assets Regulations. To hold otherwise, the court said, 'would be to create an incursion into the sovereign rights of Hong Kong which … could never have been the intention of the draftsman'. American President Lines, Ltd. v. China Mutual Trading Co., Ltd. and the Hong Kong & Kowloon Wharf and Godown Co., Ltd. (19531 A.M.C. 1510.l), cited in: Marcuss and Richard 1981, pp. 466–467.

[166] 50 U.S.C. Section 1701(a).

[167] Ruys and Ryngaert 2020, p. 27 with respect to US sanctions on Cuba and Iran.

[168] Rathbone et al. 2013, pp. 1066–1067.

of extraterritorial US sanctions is a legitimate exercise of territorial sovereignty.[169] However, more far-reaching punitive measures such as civil and criminal penalties, are only allowed under international law where the sanctions have a sufficiently strong connection with the US[170] These arguments are certainly not without merit. It must be noted, however, that denial of privileges may have a punitive character as it can have a far more significant impact on a foreign company than a severe monetary penalty because of the scope of the US market and the dominance of its financial system. Moreover, the sanctions can still affect the sovereign rights of third states.

11.5 Synthesis and Conclusion

The sovereignty of states is reflected in the concept of jurisdiction which encompasses the powers of a state to make laws applicable to persons, property, or conduct (legislative jurisdiction), to exercise its powers to compel compliance with the law (enforcement jurisdiction), and to apply laws to persons or thing through the processes of its courts or administrative tribunals (adjudicative jurisdiction). Jurisdiction and the exercise thereof is in principle territorial as the extension of the reach of domestic laws beyond national borders may impact the sovereignty of other states. However, the ongoing globalization, including the increasing interdependency of national economies, make it impossible to keep national jurisdictions fully separated. Consequently, states can exercise their legislative powers extraterritorially based on the principles of jurisdiction, which express a genuine link between the legislating state and the subject of the legislation. The main principles of jurisdiction are based on nationality, vital state interests, and the universal character of certain acts.

US export control and sanctions legislation has long had extraterritorial effect, resulting in a number of conflicts with its foreign trading partners. The extraterritorial parts of the AECA, the ECA and their implementing regulations, notably the EAR and the ITAR, focus on the re-export and transfer of US origin items abroad by non-US persons. One of the key concepts is the notion that US export controls 'follow the part' extending the jurisdiction over such an item when it has left US territory, even when it has been incorporated in a new foreign-built object. As goods do not possess a nationality, the extraterritorial reach of these provisions cannot be based on the national principle or any other principle of jurisdiction. Still, these provisions have not given rise to coordinated foreign protests in general. The lack of foreign response may be explained by the perception that the extraterritorial effect of the rules is negated by the submission of foreign persons involved in the handling of US origin items abroad to the US rules through export control clauses in contracts and export permits and forms.

Much more controversial is the increasing use by the US legislator of a variety of extraterritorial sanctions provisions that extend the reach of certain statutes to foreign

[169] Ruys and Ryngaert 2020, p. 11ff.

[170] Ruys and Ryngaert 2020, p. 16ff.

persons and corporations abroad. In many situations, there is no, or at best a tenuous nexus with the US. Consequently, allied trading partners, notably the EU, vehemently oppose these extraterritorial rules. The EU strongly believes that the extraterritorial sanctions are contrary to international law, and EU officials have time and time again stressed this point. The primary legal weapon shoring up EU's opposition to the US sanctions is the Blocking Regulation which had been enacted in response to the 1996 Helms-Burton Act and updated after the US re-imposed its extraterritorial sanctions on Iran in 2018.[171] To date, the Blocking Regulation has not proved as effective as was hoped for and has only been applied occasionally.[172] Therefore, the EU is exploring ways to make better use of the Regulation as well as creating new tools, such as intervening in foreign proceeding in support of EU companies and individuals.[173]

The imposition of US foreign policy objectives on its foreign trading partners through secondary sanctions shows that "law cannot be divorced from politics or power" as the International Court of Justice once concluded.[174] However, one single state cannot change international law singlehandedly. Therefore, the EU must continue to resist US extraterritorial claims in close cooperation with like-minded states and international organizations.[175] Past experiences have shown that the concerted diplomatic efforts to reverse (the effects of) secondary sanctions can be successful.[176] However, the need for the US to enact extraterritorial sanctions legislation will only be taken away when the US and its allied trading partner are prepared to better coordinate their foreign policy objective.

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[171] The UK has retained the Blocking Regulation and the Commission Implementing Regulation (EU) 2018/1101 of 3 August 2018 laying down the criteria for the application of the second paragraph of Article 5 of Council Regulation (EC) No 2271/96 protecting against the effects of the extra-territorial application of legislation adopted by a third country, and actions based thereon or resulting therefrom (OJ L 199 I, 7/8/2018, pp. 7–10). Together with its domestic implementing legislation (*inter alia*, the Protection of Trading Interests Order), as amended (Protecting against the Effects of the Extraterritorial Application of Third Country Legislation (Amendment) (EU Exit) Regulations 2020), it forms the UK's 'Protection of Trading Interests Legislation'.

[172] Jennison 2020, p. 174; Ruys and Ryngaert 2020, p. 82.

[173] Communication from the Commission to the European Parliament, the Council, the European Central Bank, the European Economic and Social Committee and the Committee of the Regions, COM(2021) 32 final of 19 January 2021 The European economic and financial system: fostering openness, strength and resilience, p. 18.

[174] ICJ 20 February 1969, North Sea Continental Shelf, Judgement, I.C.J. Reports 1969, pp. 42–43.

[175] For an overview of (possible) EU responses, see Study European Parliament 2020.

[176] Lowenfeld 2003, p. 363.

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Chapter 12
Contract-Boundary-Spanning Governance Initiatives in the International Defense Supply Chain of the F-35 Program

Tom De Schryver and Gert Demmink

Contents

Abstract International cooperation in the American-led F-35 program inherently triggers national security concerns. Consequently, the multiple exports in the supply chain are subject to intricate licensing and export controls. Drawing on insights from governance and contract theory we introduce a theoretical lens that highlights some important trade compliance challenges in supply chain networks. In this chapter, contract-boundary-spanning governance mechanisms are defined as increasingly sophisticated hard or soft governance mechanisms in the private law

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sphere that can be deployed by any public or private stakeholder to govern international supply chains. We find contract-boundary-spanning governance initiatives by state and private stakeholders in the defense supply chain of the F-35 program. At the same time, we argue that while serious efforts have been made by various state actors and legislators to reduce the burden in trade compliance requirements in the F-35 program, the industry is still facing a considerable number of compliance challenges. We argue that more contract-boundary-spanning initiatives by the private parties in defense supply chain network are needed if these challenges are to be successfully overcome.

Keywords Global value chains · governance mechanism · contract theory · boundary spanning · duty of care · Memorandum of Understanding · security cooperation · technology transfer · export controls · F-35 · JSF

12.1 Introduction

The export of technology that is earmarked as being sensitive by the United States (US), is subject to intricate licensing and export controls. It concerns, for one, traditional exports in which controlled technology crosses a land border. Due to the extra territoriality feature of the American export controls, different national export controls may simultaneously apply when this technology crosses a land border outside of the US. It also involves deemed exports in which American knowledge is being transferred to a foreigner or a dual-nationality citizen. Deemed exports can take place without the technology having to cross a land border. All these types of exports are subject to strong and complex regulations. Failure to correctly observe these regulations can have serious business and legal consequences.

All these kinds of exports occur frequently in the F-35 program, in which national Departments of Defense (DOD) and defense companies from several friendly states participate.[1] Since the original aim in the nineties of the F-35 program was to achieve significant advances in the military capability, the program contains a lot of highly sensitive technology.[2] There has also been constant political pressure to develop this high-tech platform at affordable costs. Due to the extreme degree of product differentiation and technological complexity in the F-35 program, it was felt that no single company could manage this program successfully. Instead, the best resources had to be bundled across companies and across national borders.

In 2001, the contract for the development and the production of the F-35 has been awarded to the Lockheed Martin/Pratt & Whitney consortium. As Lockheed Martin is the ultimate system integrator in the F-35 program, it has outsourced certain areas of design and manufacture and has bought in many services, assemblies, components and parts. It has resulted in a complex US-led international operation, with

[1] Chapman 2019; Gertler 2020; Vucetic 2013; Vucetic and Nossal 2013.

[2] Gertler 2020.

approximately 2,000 partners involved over ten countries.[3] Clearly, the regulation of (re-)exports of goods, services and technology in the F-35 program is an important point of attention. These (re-)exports are addressed in a Memorandum of Understanding (MOU) framework between friendly states.[4] While this MOU framework allows the export of US-controlled technology in the F-35 program as efficiently as possible and in accordance with all international export laws and regulations, irregularities or compliance issues have regularly occurred in the past.

A real-life example, in which the names of the companies involved have been anonymized, illustrates the complex export control challenges in the F-35 program. A Dutch company has sent at a certain moment in time, a metallurgical component that needed to be produced according to very precise specifications, to a renowned laboratory in the Netherlands for calibration tests. The problem was that this Dutch laboratory was not known by the American system integrator. When the Dutch company subsequently sent the component and the calibration report that it had received from the laboratory to the US, the system integrator observed that an export control violation had occurred and reported it to the US authorities. This report has stress-tested the relationship between the American integrator and the Dutch counterpart. The system integrator has reacted by imposing a cordon sanitaire on the Dutch company until it was able to demonstrate the proper functioning of its internal compliance program.

In sum, the international cooperation in the F-35 program is fraught with multiple forms of complexity. Firstly, from a management and technology perspective, it is an enormous challenge to co-create the F-35s.[5] Secondly, there are national security concerns in all participating countries that make international cooperation even more demanding.[6] Conflicts of interest between business interest and national security concerns can create tensions in the value chain of the F-35 program. We will investigate in this contribution how the export control laws and regulations are embedded in the governance structure of the F-35 program.

The structure of the chapter is as follows. In the next section we introduce the most relevant theoretical insights for analyzing global supply chain governance. Thereafter, the theoretical framework is applied to the F-35 context. To this end, we will make use of interview data collected by Moore et al. about the collaboration between UK and US partners in the F-35 program.[7] We will also analyze one of the phase MOUs in the F-35 program. The chapter ends with conclusions and implications for future research.

[3] Service Logistics Forum 2020.

[4] Vucetic and Nossal 2013.

[5] Gertler 2020.

[6] Moore et al. 2011.

[7] Moore et al. 2011.

12.2 Theory

The innovative international cooperation in the F-35 program has led to new governance issues that we will map on contemporary business models and contract literature. More specifically, we draw on the taxonomy of Gereffi et al. to describe the governance practices at the level of transactions between network parties in a value chain.[8] This taxonomy will offer us a useful business perspective on micro governance practices in global value chains. We also draw on the concept of *contract-boundary-spanning governance mechanisms*, by which the imbalance between opportunities of international chain cooperation and threats of limited legal liability of the entire value chain can be addressed.[9] Whereas the business lens focuses on the transactions in a value chain, the legal lens will focus on the supply chain level. These two theoretical insights are first introduced and then combined into a theoretical framework.

12.2.1 Transaction Level: Governance as Bilateral Linking

There are different ways to regulate business transactions between network partners in a global value chain. Gereffi et al. have developed a taxonomy that orders the governance practices in global value chains along a dimension that reflects the power asymmetry between suppliers and system integrators. They argue that the choice for a governance type ought to depend on three contingencies. Firstly, it depends on the complexity of the technological information that is involved in a transaction between partners. Secondly, it depends on the extent to which this technology information can be codified in a transaction between parties. Thirdly, it depends on the importance of the required capabilities of any suppliers in the design or production of components. These three contingencies determine the power relations between network partners and the governance type. When there are extreme power asymmetries between suppliers and system integrator, the system integrator will dictate who gets involved or it can determine unilaterally which information is being shared in the network. The higher the power asymmetries the more likely that a captive governance mechanism applies. When the power is evenly distributed, like in a relational governance type, each party brings in unique and important competences. Therefore, suppliers and system integrator engage in a close dialogue.[10]

Although their model is intuitively appealing, we have to bear in mind that many different transactions are needed to design, build and deliver a technological complex product. While it is possible that certain types of governance mechanism are more frequently present in a particular value chain, we have to acknowledge the possibility that there will be different kinds of governance practices between network partners

[8] Gereffi et al. 2005.

[9] Salminen 2016.

[10] Gereffi et al. 2005.

in a global value chain. As such the typology of Gereffi et al. is a particular useful lens to be used at the level of the transaction; but it can be become theoretically challenging to apply the taxonomy at the level of the global value chain.[11] Since we need to acknowledge that different kinds of governance types can coexist at the same time in a global value chain, we will assume that a global value chains consists of a series of transactions with business partners that are governed in different ways. This chain of interrelated business transaction is an attempt to orchestrate resources in a complex program.[12]

12.2.2 Chain Level: Contract-Boundary-Spanning Governance Mechanisms

Modeling a global value chain as a series of linked bilateral contracts is consistent with Salminen's approach. Salminen notes that "supply chain actors have subscribed their individual contracts to the logic of the supply chain as a whole".[13] From this perspective, we can infer that some degree of rapport between network parties can be implied. To a certain extent, network partners will thus take into account the stakes of the companying network partners. Yet, it can also elicit defensive, boundary enforcing behavior.[14] Put differently, it cannot be assumed that a good working governance mechanism at the chain level, that automatically activates a duty of care in the chain, is present. Hence, the risk exists that not all network partners feel liable for any negative externality that may arise. As such these compliance risks cannot be quickly contained. So, whereas resource orchestration and governance theories focus on the most positive scenario of collaboration, we need a different perspective for analyzing (latent) problems in chain collaboration.

Salminen has researched solutions aimed at tackling the weak liability in clothing, automotive and nuclear plant construction supply chains.[15] He has selected these value chains because there exist initiatives in which network parties commit themselves to reduce the impact of compliance risks more quickly. He calls these initiatives *Contract-Boundary-Spanning Governance Mechanisms* (CBSGM) and defines them as "increasingly sophisticated mechanisms that are used by private actors to govern chains or networks of contracts".[16] Two dimensions are central to this new concept. Firstly, it concerns initiatives that are initiated in the private-law sphere. Secondly, it concerns initiatives that go beyond the bilateral contracts between contract partners and are thus "increasingly sophisticated".

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[11] Ponte and Sturgeon 2014.

[12] Gong et al. 2018.

[13] Salminen 2016, p. 737.

[14] Faraj and Yan 2009; Kwan 2019.

[15] Salminen 2016; 2018.

[16] Salminen 2016, p. 710.

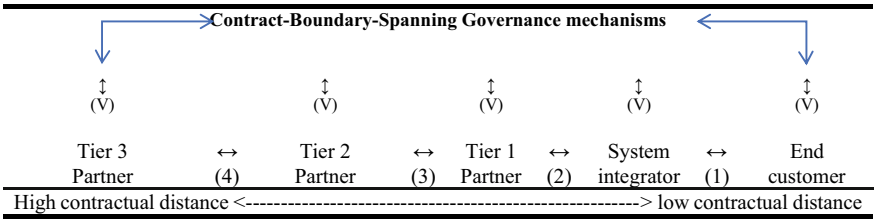

Fig. 12.1 Theoretical framework. *Source* De Schryver and Demmink 2021

Salminen has found two forms of CBSGMs. The first form consists of a dedicated governance contract signed by all private actors on top of the underlying chain of contracts. As such, the extra contract connects directly the two ends of a supply chain. The first form of CBSGM is based on the power of hard controls, because the extra contract can trigger for example audits and even court cases against network partners. The second form of CBSGM "blends in" the chain of contractual relations.[17] The second form of CBSGM focusses more on awareness-raising. Network partners are mainly approached in a positive way to assume their own responsibility. A high degree of trust and transparency and a lot of multilateral consultation between the parties are assumed in this blended form. We therefore argue that the second form relies more on the power of soft controls.

CBSGMs are no panacea. The effectiveness of the hard form of CBSGM depends on whether there is a willingness to take joint responsibility. Even though an overarching contractual layer exists, the risk of blurring liabilities remains due to a conflict of contracts. Network partners in the value chain might be tempted to take advantage of the confusion between the two layers of contracts to disclaim responsibility. The danger of the blended form of CBSGM is that it results in noncommittal diplomacy. CBSGMs should therefore be seen as a sensitizing concept; and not yet as a fixed concept with clearly defined antecedents and outcomes.

12.2.3 Theoretical Framework

We combine the insights of Gereffi et al. and Salminen into a theoretical framework (see Fig. 12.1). Because our unit of analysis is the complete value chain level, we limit the description of the value chain to a sequence of linked transactions arranged through bilateral contracts between different network parties. Given the fact that this is already a simplified representation of a value chain, we sort these bilateral contracts according to the distance to the end customer. We label it contractual distance.

The framework starts with an end customer signing a contract with a system integrator for the production of a technologically complex product; (1) in Fig. 12.1

[17] Salminen 2018, p. 425.

represents this transaction. There is no contractual distance between the two parties. The system integrator also maintains various bilateral contacts with Tier 1 partners for the execution of the initial contract. These transactions are represented by (2) in Fig. 12.1. There is a small contractual distance between the Tier 1 partner and the end customer because the Tier 1 partner has no direct contractual relationship with the end customer. If there would be any direct communication between the Tier 1 partner and the end customer, the contract with the system integrator will always be taken into account. It can further be assumed that these Tier 1 partners themselves must also start new contractual relationships with other partners; e.g. extra employment relationships or new investment relationships. When these partners enter the value chain, we refer to them as Tier 2 partners because of the increased distance to the end customer. They have no direct bilateral relationship with neither the system integrator nor the end customer. They are involved in the project by the grace of the Tier 1 partner. We represent these transactions by (3) in Fig. 12.1. In practice, this process can repeat itself indefinitely and give rise to many more ramifications. For conceptual clarity of the theoretical framework, we limit the representation in Fig. 12.1 to three Tier partners with four layers of transactions. The Tier 3 partners therefore maintain a contractual relationship with the Tier 2 partners; (4) in Fig. 12.1. There is contractual distance with the end customer, the system integrator and the Tier 1 partner.

All horizontal lines—(1) till (4)—in Fig. 12.1 represent the bilateral contracts that have been signed in order to deliver the high-tech product. There is rarely a central oversight of all contract relationships without central governance. And if there were, the oversight becomes more difficult for the system integrator and the end customer to maintain as the contractual distance increases. This was clearly the case in the example presented earlier. The laboratory was involved in the value process without the involvement of the system integrator. Hence there was contractual distance. Although initially the Dutch supplier benefited from signing a contractual relationship with the laboratory to get the calibration report, this contract, represented by (3) in Fig. 12.2, has raised trade compliance issues in the value chain. The US

Phase Memorandum of Understanding between state actors						
↕ (V)		↕ (V)		↕ (V)		↕ (V)
Laboratory	↔ (3)	Dutch network partner	↔ (2)	Lockheed Martin/ Pratt & Whitney	↔ (1)	(US) DOD
UK suppliers	↔ (3)	UK network partner/ (interviewees)	↔ (2)	Lockheed Martin/Pratt & Whitney	↔ (1)	(US) DOD

Legend horizontal lines: bilateral contracts; vertical lines: contract-boundary-spanning governance

Fig. 12.2 Theoretical framework applied to the F-35 program. *Source* De Schryver and Demmink 2021

administration and system integrator were not aware about the involvement of the laboratory and observed a security risk. It is clear from Fig. 12.2 that the distance from the laboratory to the system integrator and the end customer could have been shortened. Since there is a need for a better overview, CBSGM can be introduced. This is shown in Figs. 12.1 and 12.2 by adding an extra layer on top of the linked bilateral contracts. We represent these CBSGMs by the vertical (V) lines in Figs. 12.1 and 12.2.

Salminen has introduced CBSGMs because the different partners in the value chain are only loosely coupled. Loose coupling does not usually cause any problems if everything goes well in win-win situations; but is extremely fragile in case of problems or zero-sum games. Again, the practical example outlined in Sect. 12.1 of this chapter serves as a useful illustration. After they became aware of the compliance issue, the bilateral relationship between the Dutch supplier and the US system integrator came under pressure. The relationship was even temporarily frozen until the Dutch company had demonstrated to be in control again. Such breaches in the bilateral contracts are expressions of market power that provide local solutions at the transaction level. They are not to be considered as good system solutions for all stakeholders involved. There is a risk that in the event of negative externalities, each party will want to limit its own liability and abstain its responsibility. However, the damage from negative externality has occurred and may persist.

In the next section, we apply this theoretical framework to the F-35 program. In contrast to the previous research of Salminen where it was clear from the onset that CBSGM were present, the contract-boundary-spanning governance in the F-35 program has yet to be identified. Because there is a linked chain of bilateral contracts, we consider it likely that CBSGMs are to be identified. More specifically, we investigate which ones are (or should be) present in the F-35 program.

12.3 Methodology

Our analysis consists of two parts. Firstly, we have analyzed the perceptions of some suppliers in the F-35 program. Secondly, we conducted a text analysis of the phase MOUs.

In order to get a better understanding of the governance mechanisms in the F-35 program by means of the theoretical framework, we draw on Moore et al. who have provided us with a unique insight on the working relationships between international network partners in the F-35 program. Nine semi-structured interviews with UK industry representatives and seven interviews with UK government representatives on various topics related to working relationships between suppliers and the system integrator were held by the researchers. Moore et al. have intensively used quotes in their reporting of the findings as a respondent validation technique. These quotes are interesting because they often entail concrete examples of certain business transactions and metaphors about the context of these transactions. Even though the quotes are not verbatim due to anonymity editing, we decided to reinterpret these quotes in

the light of the theoretical framework of this chapter. In particular, we retained 26 quotes—based on perceived relevance—of the 16 interviewees. Three quotes from the UK government representatives were retained; the 23 other quotes are from the UK industry representatives. It is unfortunately not possible to give more details about the authorship of the quote since Moore et al. have disclosed only whether an industry representative or government representative is being cited.[18]

For the reinterpretation of the data, we applied deductive coding techniques. To each quote we assigned multiple codes in different pre-existing theoretical categories. We assigned codes when there was evidence of interlinked contracts, complexity of transactions, codification of transactions, supplier capabilities, market power, and hard or blended CBSGMs. We also created a unique identifier for each quote. The identifier combines the page number in Moore et al. with a code whether it was a government or industry representative. This combination is both unique and meaningful for each quote. Once each quote has been coded, we have made data matrices that link the quotes to the theoretical constructs of our model. Out of these data matrices, excerpts have been included in this chapter that according to us best highlight the extent to which the quote can be matched with the theoretical constructs. Since we are primarily geared towards understanding the case, our main focus is how these quotes manifest themselves to the theoretical framework. Therefore, we summarize by giving our interpretation about the patterns found in the columns of the data matrices.

12.4 Results

12.4.1 Perceived Supply Chain Governance

Salminen introduced CBSGM because there are governance weaknesses in the chain of interlinked contracts of global value chains.[19] We therefore first describe whether the UK representatives also frame the context of their working relations in the F-35 as a chain of interlinked contracts. As indicated from three different excerpts in Table 12.1, this is the case. The UK representatives clearly frame the supply network as a chain of interlinked contracts. The excerpts also show that their context is perceived as 'a complication' or a difficult situation.

As the first contingency in the Gereffi et al. taxonomy is the complexity of transactions, the next step was to assess the extent to which information and knowledge transfer is needed in order to contribute to the design and production of a part of the F-35.[20] The four excerpts in Table 12.2 illustrate that the interviewees perceive the transactions to be technologically complex. They need very precise

[18] Moore et al. 2011.

[19] Salminen 2016.

[20] Gereffi et al. 2005.

Table 12.1 Evidence of the chain of interlinked contracts

Identifier[a]	Excerpt
I.5p1.p18	The added complication is that the UK firm has to make the request to Washington through the US firm with which it is working on the JSF. So the UK firm is hindered in numerous ways from getting the best suppliers
I.11p28	When the UK firm works through a US firm and has a novel proposal which necessitates some sharing of information, the US firm is responsible for getting that approval from Washington
G.26p69	Within JSF[b], it is important to ask what Lockheed Martin as the prime contractor actually has done with any ITAR requests from UK firms. What exactly will Lockheed have proposed to the US government for approval?

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

Table 12.2 Evidence of HIGHLY PERCEIVED complexity of transactions

Identifier[a]	Excerpt
I.9p27	However, it is not possible to design a component in isolation, and it is necessary to obtain large amounts of relevant data. ITAR made it impossible to obtain this data, such as on operating margins and operating temperatures, so it was not possible to design the component in the most efficient way possible
I.10p27	Ultimately, the UK firm had to design around the US modified part, without knowing all the details. This generated difficulties with regard to testing the complete unit as well as how the entire system would operate, particularly with regard to certain performance scenarios. As a result, the solution was to send the whole system from the UK to the US for testing, and then return it to the UK. The interviewee's comment was that getting to 100% of the specified requirement was possible, but it took more time and effort, with additional design work necessary due to the barriers imposed by ITAR
I.12p28	While there were contractual provisions which addressed sharing of information, there were instances in which there were misinterpretations and errors which blocked exchanges of information
I.21p45	The firm has worked on JSF[b] under an arrangement that assumes it will not get source code access. This certainly generates difficulties resulting in the UK firm having to find complicated "workarounds" or simply having US firms do the work

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

product specifications in order to fulfill the demands. The industry representatives argue that intense information exchange about product specifications is a necessary condition for successful business transactions between network partners. Hence, we can infer that it involves complex transactions from an engineering and management perspective. The excerpts also show that the necessary technology information is not easily shared; which complicates the working relations. This is to us an indication of institutional complexity due to competing logics: network partners have to balance

Table 12.3 Evidence of MODERATE possibilities of codification in a transaction

Identifier[a]	Excerpt
I.9p27	ITAR made it impossible to obtain this data, such as on operating margins and operating temperatures […] this was not a restriction of information due to intellectual property rights (IPR), but restrictions imposed by ITAR
I.10p27	the UK firm was not authorized to know about any additions or modifications undertaken by a US firm to a particular JSF[b] component
I.12p28	There were instances in which there were misinterpretations and errors which blocked exchanges of information. However, there also were numerous instances where exchanges were completely blocked due to US requirements
I.22p45	The UK firm was never allowed near anything associated with the software, which has not helped the UK firm in understanding how the systems work
I.25p49	And sometimes the US puts in provisos that the company did not expect, or at times does not even know about. Much depends on the license, and a well-drafted broad scope in the license gives the firm the required flexibility. On issues such as hardware or technical data, the license may be silent, so the company has to work to find a solution

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

between information hoarding due to security concerns and information sharing due to resource orchestration. This balancing act leads to extra process steps complicating any transaction. Therefore, we argue that the complexity of the transactions is high.

The excerpts in Table 12.3 complement the previous analysis. It is not straightforward to meet contractual obligations without a minimal degree of information exchange between network partners. The excerpts in Table 12.3 highlight some of the attributions by the interviewees why codified information is not always shared. In particular, the excerpts illustrate their awareness of regulatory constraints to codify information. Hence while it is feasible from a practical point of view to codify and exchange technology information between network partners, the codification efforts of the technology owners are not leading to information exchange due to regulatory constraints. As a result, we conclude that the ability to codify necessary technology information in a transaction is only moderate.

Next, Table 12.4 clearly shows that both in and out the F-35 program capable suppliers can be identified by the interviewees who can contribute to the production and design of parts for the F-35. From these excerpts, we infer that not every supplier has the same set of unique competences. Instead, they have competences that are rare, valuable and difficult to replicate. The high level of supplier capabilities is perhaps best illustrated in the excerpts by their concerns over the protection of their intellectual property rights. Also, the apparent playfulness to redesign components without full technological information is according to us a clear indication that the capabilities of the network partners are high. The excerpts in Table 12.4 again show that technical competence is not a sufficient condition to be included in the F-35 program.

Table 12.4 Evidence of HIGH capabilities of suppliers

Identifier[a]	Excerpt
I.8p.25	The UK firm believed that a company from another European country was capable of filling a particular role on JSF[b]. Unfortunately, it took a significant amount of time and effort to get US approval to bring in that company
I.10p.27-28	The UK firm was not authorized to know about any additions or modifications undertaken by a US firm to a particular JSF component. The UK firm then had to produce items in which that component was used. Ultimately, the UK firm had to design around the US modified part, without knowing all the details. This generated difficulties with regard to testing the complete unit, as well as how the entire system would operate, particularly with regard to certain performance scenarios. As a result, the solution was to send the whole system from the UK to the US for testing, and then return it to the UK. The interviewee's comment was that getting to 100% of the specified requirement was possible, but it took more time and effort, with additional design work necessary due to the barriers imposed by ITAR
G.15p.33	While firms want to work on a major project like JSF, they are concerned about protecting their IPR
G.18p.36	The UK feels that UK technology is being "stolen" by the US under ITAR. Two examples are LED screen technology and night-vision goggles. If there is co-development and technology sharing with the US, the US then slaps on ITAR restrictions, and the UK cannot freely use the technology. However, added the interviewee, it is not clear if this is a result of a deliberate US policy or the lack of joined-up government in the US regarding ITAR

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

Based on the analysis of three contingencies, it is already possible to rule out the two classical governance types. It is clear that not every supplier in the institutional field is eligible to work on the F-35 program. There are other selection criteria besides price information. Hence the market typology of governance does not apply here. Nor does the hierarchical governance type apply to the F-35 program as the system integrator does not have all competences in place. Instead, the three contingency factors seem to suggest that a relational governance type, due to the highly perceived technological complexity, to the high capability base of the supplier's network and to the innate high possibilities to codify the information between network partners, could fit.[21] But we still need to take the power element in our analysis into account.

Since both network partners involved in a transaction have their own sources of power, we have presented the power sources by the suppliers and by the US system integrator in two different tables. Table 12.5 summons the perceived power sources of the UK industry. Table 12.6 lists the perceived power sources of the US system integrator. As the excerpts in Tables 12.5 and 12.6 illustrate, there are many forms of market power leading to substantial barriers to mobility. Regulation is an acknowledged barrier to mobility in strategic management literature.[22] The American

[21] Gereffi et al. 2005.

[22] Caves and Porter 1977.

Table 12.5 Evidence of LOW perceived market power by UK suppliers

Identifier[a]	Excerpt
I.4p17	Bearings for a component of the JSF[b] are made by one US firm. They could be acquired from a European firm at a lower cost and with a more secure supply chain. However, ITAR makes it easier to stay with the existing supply chain and deters any effort to drive down costs and obtain greater security
I.5 p1.p18	the UK firm is hindered in numerous ways from getting the best suppliers. As a result, the firm simply falls back on using old, approved suppliers, as it is difficult to conduct competitive tendering […] A fire at one of its suppliers made it impossible to get supplies, but the firm determined it was better to wait for the company to rebuild the facility, rather than seek clearance for a new supplier from the US
G.15p33	These concerns have led to difficulties with regard to integrating technology onto the JSF, as European partners have been reluctant to share information on METEOR or ASRAAM with the US
I.17p36	ITAR is like "one drop of cyanide in a bucket of water. Once you've put the smallest drop in, everything becomes contaminated." It makes it hard for the UK company because it may want to find other uses for its products. To cite one example, the individual noted that a civilian product that goes to the US and has something added that is ITAR-related (like special paint) becomes an ITAR-controlled item. A firm wants to avoid having to produce two lines of items, so the company would not go to the US and risk ITAR "contamination" for the whole product line. These are illogical decisions, and have no consistency on what is military and non-military. If a product is developed and applied on a civil project, there would be no problems whatsoever. But as soon as it is put on a military project, it becomes ITAR controlled

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

export regulation makes it hard for UK partners to get into the F-35 program; as it is hard to get out of the program. This is not as comfortable as it may seem for the UK partners, because the excerpts highlight that they perceive high market power asymmetry between them and the US system integrator. While UK network partners seem to have the power to rise prices and to determine their level of involvement—as for instance indicated in their efforts to protect some of their intellectual assets—there is no evidence from the interviews that the suppliers are aiming to scale up or to integrate forward. Hence, much of the incidences of power of UK network partners are a defensive tactical response to other more dominant forces. The bargaining power of the UK network partners is therefore relatively low.

It is clear from the excerpts in Table 12.6 that strongest power imbalance is in favor of the US side. According to the interviews, the system integrator might have used its US citizenship to create information asymmetries and to rationalize certain business decisions. As such they are able to control any potential switching costs. While the capabilities of the UK suppliers are high, their competences are substitutable and the system integrator has market power because there are enough suppliers worldwide to choose from. Hence, we conclude that market power asymmetry is high.

Table 12.6 Evidence of HIGHLY perceived market power by the US system integrator

Identifier[a]	Excerpt
I.11p.28	When the UK firm works through a US firm and has a novel proposal which necessitates some sharing of information, the US firm is responsible for getting that approval from Washington. The immediate response on the US side often is to simply reject the UK initiative, rather than undertake that onerous process
I.18p.36	If there is co-development and technology sharing with the US, the US then slaps on ITAR restrictions, and the UK cannot freely use the technology
I.19p.37	the US company it is working with on JSF[b] used the ITAR as an excuse to defend a particular decision. The example involved software developed for use in the JSF. The UK firm was informed by the US company that it was excluded from this work on the basis of security concerns, but never received a clear response from the US government or the US company. It was offered work on other systems, which it accepted, but the perception in the UK firm was that the US company appeared to have used ITAR to cover a business decision, and the UK firm could not challenge the outcome
I.20p.37-p.38	The US company eventually responded that the US government would not give access to the UK firm to work in those areas. However, it again was not clear about the rationale behind that US government decision, merely stating that for "reasons of affordability," it would be handled as a responsibility of the US company. The interviewee stated that, as there was no transparency in the process, it is not clear if that outcome was genuinely due to a decision by Washington, or if the US company was looking for an excuse to capture work in a strategic area and to change an informal agreement that the UK firm would have that line of work
I.21p.45	The firm has worked on JSF under an arrangement that assumes it will not get source code access
G.26p.69	Within JSF, it is important to ask what Lockheed Martin as the prime contractor actually has done with any ITAR requests from UK firms. What exactly will Lockheed have proposed to the US government for approval?

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

The perception of market power asymmetry is an important indicator in the Gereffi et al. model.[23] The higher the power asymmetries the more likely that a captive governance mechanism applies. The more even power is distributed, the more likely a relational governance type is suitable. Thus, while the analysis from the three contingencies suggests that a relational governance type would be the most appropriate governance form in the F-35 program, the extreme degree of power asymmetry seems to indicate that a captive governance type is—based on the interviews—a better classification of the actual governance type in the F-35 program.

The discrepancy between the desired and the actual governance type stresses the theoretical importance of CBSGM. In order to repair some of the misfit, namely a

[23] Gereffi et al. 2005.

Table 12.7 Evidence of blended contract-boundary-spanning governance activity

Identifier[a]	Excerpt
I.6p22	Compliance with US regulations is the third most important factor for the firm regarding JSF[b] participation (after production rate and affordability of the aircraft). That is indicated in the extensive training process undertaken in the firm for employees working on JSF
I.23p49	He has regular contact with US government officials on JSF, and there have been no major problems. […] The firm's personnel in the US have a good relationship with US counterparts. Certainly there are restrictions on UK personnel, but as they have been in the US for a long time, the arrangement works well. The working environment has developed over a lengthy period of time and, certainly in the JSF development phase, US regulations have not been an insurmountable impediment. […] Basically, US behavior is geared to helping the UK firm despite US regulations. But the UK will need to push the US for more dialogue
I.24p49	While agreeing that resolution of problems comes down to personal relationships, stated that when the firm works directly with Washington, things can get difficult. To a degree, the firm has reasonable relationships with US officials, and generally those individuals have been knowledgeable. The firm works with the JSF project office to resolve problems and issues

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

lack of communication, we expect to find some additional blended forms of contract-boundary-spanning governance initiatives.

The excerpts in Table 12.7 give clear manifestations of blended forms of contract-boundary-spanning activity. The UK representatives clearly engage in communication with the US administration (I.23p49; I.24p49) in an effort to comply to export regulations. The contract-boundary-spanning activities are also evident from their efforts to comply with the ITAR by means of training and tone at the top (I.6p22). These excerpts illustrate that the blended form of CBSGMs is present in the F-35 program.

We also suspect that UK and US network partners adjust their working relations because of fear the risk of (civil) penalties. While there is contract-boundary-spanning governance activity, it is not the result of a hard CBSGM as there is no contract that enforces them to do. Instead, the ITAR-frame of the UK representatives substitutes the contractual form of hard CSGGM. The fear arises from the fact that the US administration might impose sanctions.

These findings have potentially important implications for the theoretical framework of Salminen. Firstly, it suggests that hard contract-boundary-spanning activity do not have to be formalized in a contract between private network partners. In the next section, we will explain that contractual agreements that imply CBSGM exist at another level. Secondly, the analysis of the quotes indicates that not all network partners participate equally in the contract-boundary-spanning governance activities. From the excerpts in Tables 12.7 and 12.8, it seems that the system inte-

Table 12.8 Evidence of hard contract-boundary-spanning governance activity

Identifier[a]	Excerpt
I.13p30	At some JSF[b] meetings, non-US citizens were told to leave at certain points. In one instance, that meant that the firm had one US national remaining in the room while the rest of the UK team was asked to leave
I.24p49	In the early stages, however, the firm got little instruction on the regulations, and the US response was "just go read the ITAR."

[a]Legend: I = UK industry representative, G = UK Government representative; [b]JSF stands for Joint Strike Fighter, and is the previous name of the F-35
Source Moore et al. 2011

grator has been sidestepped in some of these contract-boundary-spanning governance initiatives. UK representatives invest directly in good relationships with the US governments. Much of the attributions by the interviewees, refer to regulatory contract-boundary-spanning governance efforts. Thirdly, it shows that contract-boundary-spanning governance activities do not always have positive effects. Due to the deterrence effect of export regulations, communication problems can paradoxically increase. One can also observe that the US administration and UK firms try to solve these problems once certain thresholds of mutual trust and familiarity have been reached. As a result, the US administration, with their outreach activities play a proactive role in promoting blended contract-boundary-spanning governance activity in defense supply chains.

12.4.2 An Interpretation of the Memoranda of Understanding

While the reinterpretation of the interview data at Moore et al. did only reveal implicit framing of contract-boundary-spanning governance initiatives, we argue that CBSGMs do exist in other areas of the F-35 program. In international law, it is common to use a Memorandum of Understanding (MOU) framework to set out the details of the development, testing, production, and delivery phase. A phase MOU expresses a convergence of will towards an intended line of action in each phase of the F-35 program. Since MOUs do not have the same legal status as international treaties, they can be put into effect without time-consuming legislative approval by national bodies. As such an MOU can be framed as a contractual agreement between state actors in a complex regulatory context. We will argue in this section that these phase MOUs contain features of CBSGMs.

In the context of export control and trade compliance, a raft of enforceable export regulations applies.[24] Security cooperation between states is regulated by a multitude of international agreements, treaties, national laws, regulations, and policies. Most

[24] Aubin and Idiart 2016.

governments, bound by these international treaties, also impose stringent security requirements on defense companies operating under their jurisdiction. In this highly regulated context, the ministries of defense of all the partner countries in the F-35 program have signed different phase MOUs to support the F-35 program.[25] For example, the DODs of Australia, Canada, Denmark, Italy, The Netherlands, Norway, Turkey, the UK and the US have signed a Production, Sustainment, and Follow-on Development MOU (PSFD MOU) concerning their intent to produce, and sustain the F-35 at Washington, Oslo, and Copenhagen between November 2006 and February 2007.[26] This MOU has entered into force on 31 December 2006 and is at the time of writing still in effect. In this PSFD MOU, these state actors express their desire to cooperate in the design, production and acquisition of the F-35 seeking to capitalize on the lessons learned from their previous experience in the previous phases of the F-35 program.

While the main aim of for signing a phase MOUs is to coordinate efforts to develop mutual defense capabilities of the state actors through international industrial collaboration, some articles in the phase MOUs also take into account national security concerns. We argue that in particular the articles in the phase MOUs that directly try to monitor any business transaction of private network partners in the defense supply chain could be considered as a CBSGM, even though the phase MOUs are signed by state actors. In order to support our argument, we need to revisit the two central dimensions in the definition of a CBSGM, namely the fact that it is an initiative taken by private partners and that it is a sophisticated governance mechanism.

12.4.2.1 First Dimension: "Used by Private Actors"

The phase MOUs of the F-35 are essentially contracts signed by the DODs of all states participating in the program. Since the DODs represent their states, they are more public actors than private actors. However, due to the fact that the MOUs qualify more as a soft law than as a legally binding enforceable law, such as the US International Traffic in Arms Regulation (ITAR) or the EC Directive 2009/43/EC (implemented in the Netherlands through the *Besluit Strategische Goederen*), we argue that state actors also make use of private contracts to govern supply chains.

12.4.2.2 Second Dimension: "Increasingly Sophisticated Mechanisms"

To show that the phase MOUs entail an increasingly degree of sophistication in the governance of value chains, we have included the most relevant articles of the PSFD MOU in an appendix (Sect. 12.6). While we restrict the analysis here on the most

[25] Chapman 2019; Gertler 2020; Vucetic and Nossal 2013; https://english.rekenkamer.nl/topics/joint-strike-fighter/the-netherlands-as-a-partner/the-international-jsf-programme/the-phases-of-the-jsf-programme.

[26] Source: purl.fdlp.gov/GPO/gpo36486.

recent phase MOU in the F-35 program, it equally applies to previous phase MOUs as well.

According to Section 6.8 of the PSFD MOU, state actors agree to take a pioneering role in the governance of compliance risks in the value chain. This is not restricted to their own responsibility. They also engage to sway network partners into compliance efforts. This is evident from the advisory and disciplining roles that state actors are expected to take towards private network partners in the F-35 program. It is important to emphasize that the MOU are not signed by these private partners. Nor does a MOU substitute the national laws and international regulations regarding export control, which obviously remain in effect to all parties concerned. Hence the MOU supplements both the existing regulatory framework and the chain of bilateral contracts; and, as such, is already indicative of a certain degree of sophistication.

In order to fulfill their contractual obligations, state actors resort to both types of CBSGMs. Articles 6.10 and 6.11 in the PSFD MOU are manifestations of hard CBSGMs that state actors are expected to implement. State actors are urged to use their existing legal and licensing power to make sure that the required technology information for business transactions is restricted to its intended end-use and registered end-user and otherwise kept confidential. These articles reveal a reason why some of the extreme knowledge hoarding activities have been observed between UK and US network partners in the Moore et al. study. On the contrary, in Article 7:5 we clearly find the spirit of blended CBSGM. By means of this article, state actors are encouraged to raise compliance awareness among network parties. This awareness-raising information may relate to information regarding generally accepted standards for the design of internal trade compliance programs.

All the articles in in the PSFD MOU indicate that it concerns a best-efforts obligation, not a results obligation for the state actors. How the states act upon these articles, is left to the individual states. In practice, the effort obligation has resulted in numerous initiatives to promote compliance in the value chain. For one, it has resulted in what the program participants have come to know as the 'contractual flow-down' in an attempt of participants to call upon the network partners to show proactive behavior. It has also resulted in many outreach activities. For example, the Nederlandse Industrie voor Defensie en Veiligheid (NIDV) and the Netherlands Aerospace Group (NAG) have organized seminars and workshops since 2007. This was done on the basis of an industry-led need for more information. Topics like industrial espionage, intellectual property, export controls, contracting and security have been covered in these workshops. These efforts have led to greater levels of awareness within the Dutch defense industry regarding the aforementioned themes. This required actively seeking out those parties and this was supported by NIDV and NAG with courses, presentations with invitations also being sent to US government officials, from the Commerce Department/BIS. NIDV also has representation (larger companies by Thales and smaller companies by an NIDV representative) on the export control committee of the Brussels-based ASD (European Aeronautics, Space, Defence and Security Industries), to which US government officers were also regularly invited. Feedback with respect to all this information—likewise between the ASD participants themselves—was shared with the Dutch defence industry.

In sum, by signing MOUs state partners commit themselves to take multiple initiatives towards achieving trade compliance in the supply chain. Instead of using laws, state actors resort to contracts to regulate trade compliance in the value chain. As a result, our analysis suggests a new dimension to CBSGMs. Not only private stakeholders or parties who are not directly involved with the development and production process can take on contract-boundary-spanning governance initiatives. State actors also make use of the two forms identified by Salminen. First, state actors can force private partners in the value chain to take on their trade compliance responsibility through contractual obligations and hard controls. They also can make use of soft controls via outreach activities. Therefore, in our opinion, the definition of CBGSM should be adapted to increasingly sophisticated hard or soft governance mechanisms in the private law sphere that can be deployed by any public or private stakeholder to govern value chains or networks of contracts.

The extension of the definition of CBSGM to public stakeholders is meaningful because state actors should be better able to set aside business interests and deal with the management of negative externalities.[27] It is therefore important to recognize that the initiative to regulate the duty of care does not have to lie in the chain itself. Instead, state actors can use their private instruments to govern value chains. At the same time, it raises questions about the contexts in which governments consider it appropriate to work with legislation instead of CBSGMs, and vice versa. In particular, it would be interesting to further investigate the enforcement effects of these CBSGMs.

In this chapter, we have only focused on the signing of the MOUs but we have not dealt with the actions of state actors when a business partner is falling short of expectations. The initial example in this chapter has indicated that the system integrator has taken corrective actions towards the Dutch supplier; but it is unclear whether the Dutch state has also been informed and, if so, what actions has been taken. Nor do the interviews in Moore el al. contain attributions for contract-boundary-spanning governance initiatives that are geared towards the phase MOUs. The focus is on the ITAR instead. While these attributions make sense from a business perspective because the phase MOUs do not address enforceable rules to companies, it remains to be seen how state actors will monitor whether the MOUs will be followed up in practice. Earlier on in this chapter, we already raised concerns about the effectiveness of CBSGMs. It is appropriate to repeat these concerns in this context, as state actors are only sporadically involved in the primary production processes of value chains.

12.5 Conclusions and Discussion

In this section we highlight the theoretical and practical contributions. In order to explain trade compliance governance in global value chains of the defense industry, we have combined governance theories with private contract theories. The fairly new theoretical concept of CBSGM, which indicates the extra efforts of private partners

[27] Heidenkamp et al. 2013.

in value chains to activate the duty of care across contract boundaries, was given the floor.[28] Based on our analysis, we have tweaked the definition of this new concept to: increasingly sophisticated hard or soft governance mechanisms in the private law sphere that can be deployed by any public or private stakeholder to govern value chains or networks of contracts. We have applied these theoretical insights to the F-35 program where, under strong regulatory pressure, network parties in the value chain commit to combatting inappropriate technology transfer. Moreover, from the analysis of the phase MOUs we have observed that also public parties engage in CBSGMs in order to pay more attention to compliance issues in the supply chain. Notwithstanding these contract-boundary-spanning governance initiatives, we argue that the F-35 program and by extension the defense industry is still facing a considerable number of compliance challenges. We argue that coordination by the private parties in the supply chain network itself is needed in order to successfully overcome these trade compliance challenges.

This chapter is only a start. More theoretical and empirical research needs to be performed on the impact of CBSGM in defense supply chains. This analysis, based on existing sources, should be seen as a first step. There are a number of limitations that are related to the use of secondary data. We had no control over how the interview data in Moore et al. was collected, nor can we engage in any respondent validation of our findings. Moreover, the interviews of Moore et al. served other purposes than ours. Since Moore et al. were mainly interested in the UK perceptions on the working relationships with the US in the F-35 program, no systematic data from the own compliance efforts by UK companies were collected. There was only sporadic evidence in the interviews of certain elements of an internal compliance programs in the UK firms, mostly related to compliance training and tone at the top. Although the research questions are different from ours, we share a common interest in explaining barriers in international collaboration. Also, the perspective in Moore et al. is restricted to the UK and is confined to the early stages of collaboration. Hence the data may not be indicative for the perceptions of all stakeholders involved, nor can it be assumed that the UK perceptions have remained the same over time. Finally, it is not clear from Moore et al. how the sample of industry and government interviewees were selected. Given that there are more than 1900 suppliers in 10 different countries, we cannot easily generalize findings from the interview data.

Despite these methodological limitations and even possible issues with the trustworthiness, the main findings of Moore et al. are consistent with other reports that have tackled the issue of production delays and cost overruns in the F-35 program (see for example various US GAO reports monitoring the progress in the F-35 program.[29] Hence, the data is a good start for an analysis. An advantage of our approach is that our source data, namely the quotes in Moore et al., are open-access. It allows anyone to replicate our analysis. Obviously, we clearly promote future research that includes a more diverse set of secondary sources and encourage collecting own data to test or apply the theoretical framework more rigorously.

[28] Salminen 2016.

[29] United States Government Accountability Office 2014, 2019, 2020.

Research on boundary spanning governance is clearly an emerging field.[30] The theoretical contribution of this chapter is that the new concept of CBSGM is applied to a new and relevant setting. If we compare the defense supply chain with the cases from Salminen, the F-35 supply chain combines features of the automotive and nuclear value chain. It has in common with the automotive value chain that in both cases chains were striving for efficiency gains through performance contracts. The value chain of the F-35 has in common with that of the nuclear plant that the government puts very strong regulatory pressure on the production processes and that the product is a specially designed, complex product.

It has also become clear that more theory development around CBSGM needs to be done. An interesting option is to combine the two forms of CBSGMs with the contingency factors from the Gereffi et al. model. For example, if the value chain is already familiar with codifying transactions, such as in a modular or captive governance structure, then it probably takes little effort to implement the hard form of CBSGM. On the other hand, if the value chain cannot simply codify transactions without consultation, such as in a relational or hierarchical governance structure, then the blended form of CBSGM will probably fit. A larger pool of network partners should be invited for exchanging experiences and engaging into discussions. According to this logic, fit is achieved when the CBSGM matches the existing governance structures. Although it can be easy to add an extra layer of governance in this way, this approach raises questions about the effectiveness of CBSGMs. It is unclear whether having more of the same is also better.

An alternative reasoning is to look for complementarity between the CBSGM and the primary governance mechanisms. Although it will be more difficult to achieve, the missing link in captive and modular governance mechanisms is the lack of consultation between network partners. After all, quite a lot has already been contractually determined and codified in such a context. The value chain needs multilateral consultation. Conversely, a hard CBSGM in a relational supply chain could be the perfect carrot-and-stick approach. In other words, in this line of research it would be appropriate to look at the combination of primary and more sophisticated governance mechanisms together in order to achieve more balance. Inspired by the levers of control framework,[31] it seems necessary to conduct research about these configurations in times of crisis situations in which negative externalities actually occur; and in calm periods of going concern, because the degree to which various governance mechanisms reinforce each other is significantly different in these two situations.

[30] van Meerkerk and Edelenbos 2018.

[31] Simons 1994.

12.6 Appendix: Export-Related Articles from the PSFD MOU

6.8 "Contracting Officers will insert into prospective Contracts (and require its Contractors to insert in subcontracts) provisions to satisfy the requirements of this MOU, including Section VII (Industrial Participation), Section IX (Disclosure and Use of Project Information), Section X (Controlled Unclassified Information), Section XII (Security), Section XIII (Third Party Sales and Transfers), and Section XIX (Amendment, Withdrawal, Termination, Entry into Effect, and Duration), including the export control provisions in accordance with this MOU, in particular paras 6.10 and 6.11 of this Section. During the Contracting process, Contracting Officers will advise Prospective Contractors of their responsibility to immediately notify the Contracting Agency, before Contract award, if they are subject to any license or agreement that will restrict their freedom to disclose Information or permit its use. Contracting Officers will also advise Prospective Contractors to employ their best efforts not to enter into any new agreement or arrangement that will result in restrictions."

6.10 "Each Participant will legally bind its Contractors to a requirement that the Contractor will not retransfer or otherwise use export-controlled Information furnished by another Participant for any purpose other than the purposes authorized under this MOU. The Contractor will also be legally bound not to retransfer the export-controlled Information to another Contractor or subcontractor unless that Contractor or subcontractor has been legally bound to limit use of the Information to the purposes authorized under this MOU. Information furnished by one Participant under this MOU may only be retransferred by another Participant to its Contractors if the legal arrangements required by this paragraph have been established."

6.11 "Each Participant will legally bind its Prospective Contractors to a requirement that the Prospective Contractor will not retransfer or otherwise use export-controlled Information furnished by another Participant for any purpose other than responding to a solicitation issued in furtherance of the purposes authorized under this MOU. Prospective Contractors will not be authorized use for any other purpose if they are not awarded a Contract. The Prospective Contractors will also be legally bound not to retransfer the export-controlled Information to a prospective subcontractor unless that prospective subcontractor has been legally bound to limit use of the export-controlled Information for the purpose of responding to the solicitation. Export-controlled Information furnished by one Participant under this MOU may only be retransferred by another Participant to its Prospective Contractors if the legal arrangements required by this paragraph have been established. Upon request by the furnishing Participant, the receiving Participant will identify its Prospective Contractors and prospective subcontractors receiving such export-controlled Information."

7.5 "In order to ensure that industrial opportunities are open to industry in all of the Participants' nations, the Participants will use their best efforts and encourage their Contractors to use their best efforts, to address export control issues in a timely

manner that promotes the maximum degree of industrial cooperation among the Participants' nations, consistent with their national laws and regulations."[32]

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[32] Source: purl.fdlp.gov/GPO/gpo36486.

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Chapter 13
Effectiveness of Arms Control: The Case of Saudi Arabia

Marion Bogers, Robert Beeres and Koen Smetsers

Contents

Abstract Using a four-level dashboard, this chapter offers a quantitative and a qualitative analysis of the effectiveness of an arms embargo against Saudi Arabia. The chapter elaborates on the question as to how political, security and economic motives have impacted the (un)willingness of major arms selling states to join the arms embargo against Saudi Arabia.

Keywords Arms embargoes · arms control · arms import · arms export · effectiveness · Saudi Arabia · Yemen

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13.1 Introduction

Arms embargoes can be imposed for different reasons and by various bodies, such as international organizations (e.g., the United Nations (UN)), or, collectively by states (e.g., the European Union (EU)) and even by an individual state. From literature, it appears, "arms embargoes are one of the most frequently used types of economic sanctions but they are perceived as one of the least effective".[1] Moreover, according to Moore, nearly "every international arms embargo has been systematically violated by arms exporting states".[2] So why bother with another analysis of its effectiveness? Grounded in the belief that arms embargoes ultimately strive for behavioral change of the target (i.e., the receiver of the embargo), this chapter argues that another analysis of effectiveness may indeed be valuable.[3] Building on literature, for measuring success,[4] a dashboard is constructed to assess the effectiveness of arms embargoes.[5] To illustrate the dashboard's use we reflect on the arms embargo against Saudi Arabia, imposed in 2018 by numerous EU member states sanctioning this nation's actions in the civil war raging throughout Yemen from 2014 onwards.

In Yemen, a conflict between Houthi rebels, supported by Iran, and Abd Rabbu Mansour Hadi's Yemenite government, supported by a military coalition from the United Arab Emirates, Kuwait, Sudan, Egypt and Morocco, commanded by Saudi Arabia is tearing the country apart, causing massive suffering and societal disruption. It has become clear, major arms industries supplying the Saudi-led coalition, predominantly stem from the United States (US) and the European Union (EU). Human Rights Watch has documented dozens of Saudi and Emirati-led coalition attacks in Yemen in violation of martial law and amounting to war crimes. Scores of indiscriminate and disproportionate airstrikes have killed and wounded thousands of civilians, including children, hitting civilian areas, such as, markets, homes, schools and hospitals.

The above provides ample motives for European countries to impose an arms embargo against Saudi Arabia. For, EU member states are to comply with an EU Common Position, adopted in 2008, holding there should be no arms exports if there is a "clear risk" that such weapons will be used to commit "serious violations of international humanitarian law". As to United Nations (UN) members, also, the above-mentioned violations and near-war crimes would provide grounds to decide to impose an arms embargo, as, a decision about arms sales to Saudi Arabia should be compliant with the UN/Arms trade treaty. This treaty stipulates that a state shall not authorize any transfer of arms if it has knowledge at the time of authorization that the arms would be used in attacks directed against civilian objects or civilians.

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[1] Erickson 2013, p. 159; also Brzoska 2009a, pp. 2–3.

[2] Moore 2010, p. 593.

[3] Baldwin 1999/2000, p. 87; Brzoska 2009a, p. 21.

[4] Brzoska 2009a, pp. 19–20; Giumelli 2011, p. 1.

[5] Baldwin 1999/2000; Brzoska 2009a; Brzoska 2009b; Brzoska and Lopez 2009; Giumelli 2011; Lopez 2012.

Finally, on 25 October 2018, after two earlier attempts by the European Parliament, some European countries do indeed impose an arms embargo on Saudi Arabia. This decision has been directly prompted by allegations regarding the Saudi government's involvement in- and accountability for the murder of the Saudi journalist Jamal Khashoggi. However, neither the UK, nor France or the US, counting, next to Germany, as main arms suppliers to Saudi Arabia, join the embargo. Moreover, in March 2019, Germany succumbs to the European arms industry pressure allowing German spare parts to be sold to Saudi Arabia.

Against this background, this chapter aims to contribute in two ways. First, based on our dashboard covering the period 2015–2019, we offer an analysis of the effectiveness of an arms embargo against Saudi Arabia. Second, we elaborate on the question as to how political, security and economic motives have impacted the (un)willingness of major arms selling states to join the arms embargo against Saudi Arabia?

The remaining part of this chapter is structured as follows. Section 13.2 introduces our dashboard for measuring the effectiveness of arms embargoes. Section 13.3 proceeds to operationalize the dashboard. Next, in Sect. 13.4, the results are presented, and Sect. 13.5 offers a conclusion and a discussion.

13.2 A Dashboard for Analyzing the Effectiveness of Arms Embargoes

The dashboard to assess the effectiveness of the arms embargo against Saudi Arabia is derived from the framework developed by Brzoska.[6] Brzoska's framework to assess the effectiveness of arms embargoes consists of three levels of effectiveness. Both Level-1 and Level-2 effectiveness are noticed in the domain of the embargo receiver, whereas Level-3 effectiveness takes place in the domain of the sender. Level-1 effectiveness is attained when the targeted state (i.e., the receiver of the arms embargo) changes its policy. Level-2 effectiveness is understood as "the degree to which deliveries of weapons to the target are stopped". According to Brzoska, Level-3 can be measured by "the expressed satisfaction of sender government with the operation of an arms embargo". In our opinion, within Level-3 states indicating they support the embargo as a "symbolic gesture of disapproval" can be distinguished from states actually imposing and implementing the embargo.

Grounded in Brzoska's work, we have proceeded as follows to construct the dashboard. The highest manifestation of effectiveness is related to the core objective of arms embargoes: influencing the behavior of target. The attainment of this goal is called Level-1 effectiveness. Level-1 is to be measured within the domain of the receiver of the embargo. Level-2 effectiveness is measured by the degree in which deliveries of weapons to the target are stopped. Level-3 effectiveness is measured

[6] Brzoska and Lopez 2009.

from the perspective of states delivering arms to the receiver of the embargo. Whenever most arms traders actually implement the embargo and stop their arms supplies to the target, Level-3 effectiveness has been reached. Finally, Level-4 effectiveness is attained in those cases when states supplying arms to the target, indicate they are joining the arms embargo.

An arms embargo is considered non-effective under the condition that none of the governments of arms-supplying states indicate their intention to join the embargo. At Level-4, an embargo will become more effective, if and when, at least one, some or all arms-supplying states communicate they intend to join the embargo. At Level-3, the embargo's effectiveness increases even more, if and when, at least one, some or all arms-supplying states put an end to their arms deliveries. Level-3 and Level-4 effectiveness apply to the domain of the embargo-senders. At Level-2, the arms embargo gains effectiveness the longer a targeted state (the embargo-receiver) is able to import less weaponry. Last, Level-1 effectiveness is reached when the targeted state actually changes its behavior, which is then attributed explicitly to the arms embargo. Both Level-1 and Level-2 effectiveness are to be reached in the domain of the embargo-receiver. The following section proceeds to operationalize the dashboard.

13.3 Research Methods

The findings presented in this chapter are the result of an exploratory study. Encouraged by Brzoska, we analyze the effectiveness of the arms embargo against Saudi Arabia on four levels.[7] To obtain insights into the attainment of Level-1 effectiveness, we investigated whether Saudi Arabia actually changed its behavior due to the arms embargo. To this end, we have selected proxies analyzing the shift in the number of attacks carried out by the Saudi-led coalition on civilian gatherings, educational facilities and medical facilities and the number of civilian casualties during the period 2015-2019. This is not to say that these particular measures are the only one worth considering. On the contrary, we acknowledge that these measures are meant to illustrate how Level-1 effectiveness can be measured. Level-2 effectiveness concerns the extent to which deliveries of weapons to Saudi Arabia have been stopped. We measure this from the perspective of the importing country, analyzing the shift in volume of arms imports by Saudi Arabia from 2015 until 2019. Level-2 effectiveness is obviously influenced by the behavior of the supplying states, as, arms suppliers have to cooperate to achieve Level-2 effectiveness. However, although a state can assure no arms are exported from its own country to Saudi Arabia, it can only partially influence other arms exporting states' export policies. For this reason, Level-3 effectiveness measures the volume of the arms exports to Saudi Arabia per supplying country. Due to the availability of data our research on Level-2 and Level-3 effectiveness only captures the reported legal arms trade. Last, Level-4 effectiveness analyzes states

[7] Brzoska 2009a.

Table 13.1 Summary of parameters

Effectiveness level	Parameters	Figure/Table	Source
Level-1	Number of attacks on (a) civilian gatherings and civilian casualties; (b) educational facilities and civilian casualties; and (c) medical facilities and civilian casualties	Figure 13.1; Figure 13.2; Figure 13.3	Yemen Data Project
Level-2	Volume arms import (TIV)	Figure 13.4	SIPRI
Level-3	Volume arms export (a) per country (TIV); and (b) as a percentage of total arms export	Table 13.2; Table 13.3	SIPRI; own calculations
Level-4	Qualitative interpretation	Table 13.4; Table 13.5	Political statements; news reports

Source Yemen Data Project 2020; SIPRI 2020a

motivated to implement an arms embargo, at once, versus those that needed additional convincing, by arguments, compensations, or other means. In doing so, we also consider states maintaining- or prematurely lifting the arms embargo as well as political statements expressing more or less political interest in achieving Level-1 effectiveness.

Table 13.1 summarizes the parameters selected to assess the effectiveness levels 1 to 4. Levels 1 to 3 are measured quantitatively. As, from early 2015, some European states (Austria, Germany, Sweden and Switzerland) started to ban exports of (heavy) weaponry to Saudi Arabia, this study's time horizon is fixed between January 2015 and December 2019. Level-4 effectiveness is examined by means of a qualitative interpretation of political statements, news articles and research reports.

13.4 Results

13.4.1 Level-1 Effectiveness: Influencing the Behavior of Saudi Arabia

From January 2015, this section presents data on the number of air raids conducted by the military coalition led by Saudi Arabia and the United Arabian Emirates on civilian gatherings, including data on the numbers of civilian casualties due to the attacks. Figure 13.1 shows fluctuations between 2015 and 2019. The number of civilian casualties due to attacks on civilian gatherings shows a decrease. Resulting from attacks on civilian gatherings, in 2015, 4,255 civilians died, whereas in 2019 the number of casualties was reduced to 515.

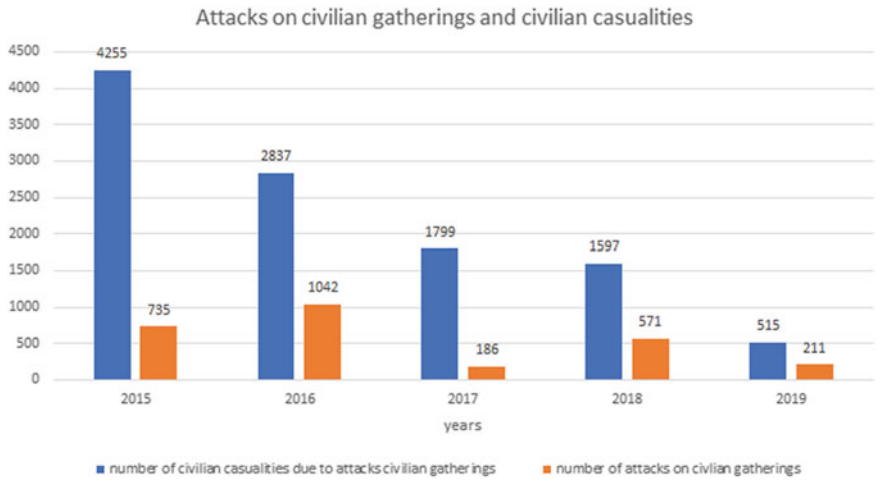

Fig. 13.1 Attacks on civilian gatherings and civilian casualties. *Source* Yemen Data Project 2020

From Fig. 13.2, there appears a decrease in the number of attacks on educational facilities from 2015 until 2019 and the number of casualties decreases accordingly until 2019. In August 2019, the attack on a community college in Dhamar City causes the number of civilian casualties to soar to 206.

From Fig. 13.3, it transpires that although, from 2015 to 2019, the number of attacks on medical facilities fluctuates, in 2019 it drops to zero. The same applies to the number of civilian casualties due to attacks on medical facilities.

Based on the data presented above, from 2015 until 2019 the numbers of attacks on civilian gatherings, educational- and medical facilities and civilian casualties have

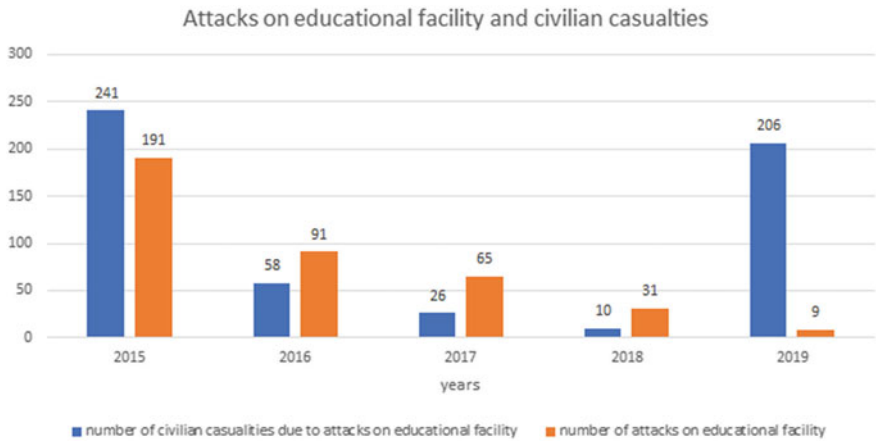

Fig. 13.2 Attacks on educational facilities and civilian casualties. *Source* Yemen Data Project 2020

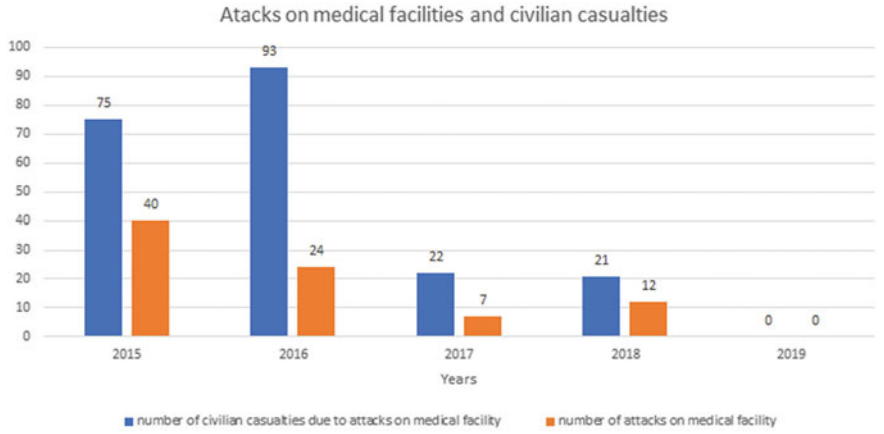

Fig. 13.3 Attacks on Medical Facilities and Civilian Casualties. *Source* Yemen Data Project 2020

decreased, excepting the 206 people killed as a result of the attack on a community college in Dhamar in August 2019. However, according to us, the numbers of attacks on civilian gatherings remain high and, moreover, it is questionable whether these decreases have indeed resulted directly from the arms embargo. In February 2016, the European Parliament already started to call on the European Union to impose an arms embargo against Saudi Arabia, however, most European governments adopted restrictions on their arms export to Saudi Arabia not earlier than 2018. According to the Trump administration, US involvement in Yemen and US support to the Saudi-led coalition, amongst other reasons, aims to prevent more civilian casualties,[8] and, so, supporting Saudi Arabia with intelligence and advanced weapons could be supposed to actually help lessening the numbers of civilian casualties. However, the UN Group of Eminent International and Regional Experts in Yemen (GEE), in their research report, concludes that a series of airstrikes conducted from June 2019 to June 2020, appear to have been undertaken without proper regard to principles of distinction, proportionality and precaution, necessary to protect the Yemen population.[9] Based on this report and the fact that the number of attacks on civilian gatherings, in 2019, remains high, we find the arms embargo at Level-1 is not effective.

13.4.2 Level-2 Effectiveness: The Volume of Weapon Imports into Saudi Arabia

Level-2 effectiveness examines how the volume of weapon imports of Saudi Arabia fluctuates from 2015 until 2019. Figure 11.4 shows Saudi Arabian weapon imports

[8] The Guardian 2019a.

[9] UN 2020.

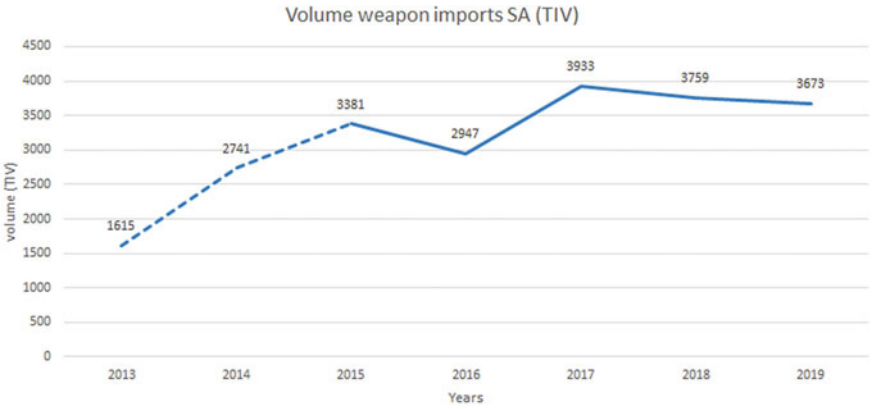

Fig. 13.4 Volume weapon imports to Saudi Arabia. *Source* SIPRI 2020a

have increased. According to SIPRI, during this period, Saudi Arabia counted as the world's largest arms importer, its imports of major arms accounting for 12 per cent of global arms imports in 2015–2019.[10] Despite wide-ranging concerns of the EU Parliament and US Congress about both the Saudi Arabia's military intervention in Yemen and the ensuing humanitarian situation, Saudi Arabia apparently succeeded in increasing its weapon imports.[11] Although US Congress considered and passed proposals to reject some US arms sales and to end US military involvement in operations related to the anti-Houthi campaign, no one voted to overrule presidential vetoes of related legislation.[12] The same applies to the EU. Despite various calls of Members of the European Parliament (EP) to find a political solution for the conflict in Yemen and to impose an EU arms embargo against Saudi Arabia, the largest arms exporting countries, France and the UK decided not to follow suit. However, a court ruling in June 2019 forced the UK government to suspend new arms sales to Saudi Arabia until its decision making process was reconsidered and lawful.[13] Figure 13.4 presents an increasing trend of Saudi Arabian weapon imports, and, thus, we consider the arms embargo—at the second level of analysis, as not effective.

13.4.3 Level-3 Effectiveness: The Volume of Arms Exports to Saudi Arabia per Country

Table 13.2 sheds light on the arms export volumes to Saudi Arabia per country from 2013-2019. We have decided to add 2013 and 2014 to Table 11.2 to find potential

[10] SIPRI 2020b.

[11] EU 2020; CRS 2020.

[12] CRS 2020.

[13] Court of Appeal 2019a; 2019b.

Table 13.2 The volume of arms exports to Saudi Arabia (2013–2019)

Country	2013	2014	2015	2016	2017	2018	2019	2015–2019	Rank
Austria	0	0	4	4	0	0	0	8	17
Belgium	21	10	0	0	0	0	38	38	11
Bulgaria	0	0	8	1	15	0	0	24	13
Canada	34	45	111	11	10	46	107	285	5
China	0	0	35	15	35	40	40	165	9
Finland	4	7	7	0	0	0	0	7	18
France	53	169	161	76	115	197	209	758	3
Georgia	0	0	0	6	7	0	0	13	16
Germany	80	63	2	16	121	140	0	279	6
Italy	0	0	89	89	48	0	0	226	7
Netherlands	25	25	25	0	0	0	0	25	12
Russia	0	0	0	0	0	0	6	6	19
Serbia	0	0	4	11	2	0	0	17	14
Slovakia	1	0	3	3	0	0	0	6	20
South Africa	0	1	5	4	6	0	0	15	15
South Korea	0	0	0	0	0	3	0	3	21
Spain	0	98	208	0	15	70	0	293	4
Sweden	0	160	0	1	0	0	0	1	22
Switzerland	0	83	142	44	0	0	0	186	8
Turkey	44	39	52	39	13	0	0	104	10
UK	746	615	751	858	425	61	135	2230	2
US	607	1426	1774	1769	3121	3202	3138	13004	1

Source SIPRI 2020a

differences in arms exports of supplying states, comparing the two years *before* the start of coalition attacks in 2015 to the period from 2015 until 2019.

Between 2015 and 2019, the US, the UK, France, Spain and Canada were the five largest arms exporting countries to Saudi Arabia. Together, these five countries accounted for 94 per cent of the arms exports. The US, counting as the main arms contributor, contributed over 5 times more than the second largest arms exporting country, the UK. From 2017, the US almost doubled their arms exports to Saudi Arabia. This increase is, amongst others, the result of the May 2017 arms deal, worth $110 billion, by which the US commits to supply military equipment to Saudi Arabia.[14] Starting from 2017, UK arms exports figures decrease, partly because of a court ruling in June 2019, forcing the British government to reconsider and adjust its decision-making processes before approving new weapon sales to Saudi Arabia

[14] US Department of State 2017, 2021.

Table 13.3 Volume of arms exports to Saudi Arabia as a percentage of total arms exports per country (2013–2019)

Country	2013	2014	2015	2016	2017	2018	2019	Volume (TIV) 2013–2019
Austria	0	0	40	25	0	0	0	7
Belgium	38	100	0	0	0	0	90	68
Bulgaria	0	0	11	2	50	0	0	24
Canada	18	22	32	9	14	41	57	365
China	0	0	2	1	3	4	3	165
Finland	5	8	35	0	0	0	0	18
France	4	10	8	4	5	11	6	979
Georgia	0	0	0	100	100	0	0	13
Germany	10	4	0	1	6	13	0	422
Italy	0	0	13	14	6	0	0	226
Netherlands	7	4	5	0	0	0	0	75
Russia	0	0	0	0	0	0	0	6
Serbia	0	0	11	48	100	0	0	17
Slovakia	100	0	100	17	0	0	0	6
South Africa	0	2	9	5	8	0	0	16
South Korea	0	0	0	0	0	3	0	3
Spain	0	9	18	0	2	7	0	391
Sweden	0	48	0	0	0	0	0	161
Switzerland	0	25	30	21	0	0	0	270
Turkey	28	24	21	17	8	0	0	187
UK	46	37	64	62	35	9	14	3,590
US	8	15	18	18	26	31	29	15,037

Source SIPRI 2020a

as well as to reconsider already existing arms deals.[15] As to France, the third main supplier of arms to Saudi Arabia, from 2017, reaching its apex in 2019, French arms exports increase. Canada ranks fourth, caused by major supplies in 2015 and 2019. The bulk of these exports were light-armored vehicles, large caliber artillery and heavy machine guns. Spain comes in as the fifth largest arms exporting country as, in 2015, Spain delivered two Airbus A330-200 MRTT in-flight refueling jets to Saudi Arabia. In the same year they sold the Saudis two Transport aircrafts and two MP aircrafts, whereas, from 2017 to 2018, 100 Alakran 120 mm were delivered.[16]

Table 13.3 presents the volume of weapon exports to Saudi Arabia as a percentage of a country's total weapon export and offers additional insights into the size and the financial importance of the arms sales of arms exporting countries. As Saudi Arabia

[15] Court of Appeal 2019a; 2019b.

[16] SIPRI 2020c.

Table 13.4 Overview of national decisions regarding the arms embargo

Early adopters (action taken in 2015)	Countries officially imposing an arms embargo or suspended (future) approvals of military equipment.	Countries opposing an arms embargo
Austria; Germany; Sweden Switzerland	Belgium; Canada; Denmark; Finland Germany; Italy (June 2019); the Netherlands; Norway; South Africa (November 2019); Sweden; Switzerland; UK (2019-2020)	France; Spain; US

Source Bogers et al. 2021

counts as one of their largest buyers, Belgium, Canada, Georgia, Serbia, the UK and the US may be expected to be less willing to impose an arms embargo. For, as compared to other countries, a discontinuity of arms sales will impact their domestic arms industries heavier. Unfortunately, we have no information on foregone revenues of countries that did put their arms sales on hold.

Based on the data in Table 13.3, we consider the arms embargo—at the third level of analysis, as -partly-effective. In 2015, seventeen countries exported arms to Saudi Arabia. Since then, the number of arms supplying countries has decreased. In 2019, only seven countries were still supplying weapons. However, it should be noted that, over recent years, arms exports from the US, France and Canada have expanded substantially.

13.4.4 Level-4 Effectiveness: The Political Will to Implement an Arms Embargo

At this fourth level of effectiveness, the analysis takes stock of the countries that officially imposed an arms embargo or suspended future approvals of military equipment to Saudi Arabia. Next, the analysis reflects on which countries have been directly motivated to take actions against Saudi Arabia in 2015, the ones that needed further prodding, by arguments, compensations, or other means. Last, the analysis at Level-4 considers the countries that either maintained the arms embargo or prematurely lifted the arms embargo as well as any political statements expressing more or less political interest in achieving Level-1 effectiveness.

As early as in 2015, some European countries decided to end their arms supplies to Saudi Arabia (see Table 13.4). According to Austria's Foreign Minister Kneissl, Austria already stopped sending military equipment to Saudi Arabia in 2015.[17] In January 2015, Germany decided not to sell Leopard tanks to Saudi Arabia.[18]

[17] Reuters 2018a.

[18] The Japan Times 2015.

Sweden decided not to extend a military cooperation agreement.[19] Also, Switzerland imposed strict export restrictions for all countries involved in the Yemen War.[20] Next, Belgium,[21] Denmark,[22] Germany,[23] Finland,[24] Italy,[25] Norway,[26] the Netherlands,[27] South Africa,[28] Sweden,[29] Switzerland,[30] and the UK[31] officially imposed an arms embargo or suspended (future) approvals of military equipment (see Table 13.4).

Germany is numbered among the main arms exporting countries imposing an arms embargo. In March 2018, Germany's political parties CDU/CSU agreed in their coalition contract to ban arms exports. On account of German national history, Chancellor Angela Merkel saw good reasons to adhere to strict arms export guidelines, "Germany should not compromise for the sake of profits and dissatisfaction of its defense community."[32] Although the country initially pursued a total arms export ban, later Germany eased restrictions to enable the supply of components and spare parts for completed contracts.[33] Under pressure from France and UK, Germany allowed for more leeway regarding systems developed jointly with other European countries. It appeared that, as Germany was heavily involved in the production of components exported by others, the German arms ban on Saudi Arabia held disastrous consequences for lucrative European projects. According to Merkel, "we have just as good reasons in our defense community to stand together in a joint defense policy. And if we want to develop joint fighter planes, joint tanks, then there's no other way but to move step by step towards common export controls guidelines."[34] Despite the country's initial total arms export ban, in the end Germany was left with an agreement containing numerous exceptions and even allowing some exports of German weapons to the Gulf State.

Table 13.5 provides an overview of countries, that although initially agreeing to impose an arms embargo, at a later stage reverted to new export orders to avoid hurting their defense industry's commercial reputation or, even, European defense industry

[19] The Local 2015.

[20] Swissinfo 2015.

[21] Iran Press 2018; MPNnews 2016; ParsToday 2018.

[22] Reuters 2018b.

[23] The Japan Times (2015); Financial Times (2018); The Defense Post (2019).

[24] Middle East Monitor 2018a.

[25] Politico 2018.

[26] The Defense Post 2018.

[27] Independent 2016; Middle East Monitor 2018b.

[28] Middle East Eye 2019, Reuters 2019a.

[29] The Local 2015.

[30] Swissinfo 2015.

[31] BBC 2019; Castle 2020, Sandle and Faulconbridge 2019, Brooke-Holland and Smith 2021; Court of Appeal 2019a; 2019b.

[32] Human Rights Watch 2019.

[33] Defense Security Monitor 2020.

[34] The Guardian 2019b.

Table 13.5 Countries that imposed an arms embargo and allowed new export orders to Saudi Arabia

Country	New orders 2015–2019	Description	Year	Comments
Germany	2 IPV-60	OPV	2015	Delivery suspended as part of temporarily German halt on arms deliveries in 2019
	23 EC145	Light helicopter	2016	EUR500m deal; ordered via France
	4 TRS-4D	Radar	2017	For 4 MMSC frigates from the US
	24 OM-366	Diesel engine	2018	For 24 CAESAR self-propelled guns from France
Sweden	71 MD5	Diesel engine	2015	For Bastion APC from France
Switzerland	5 GDM-008 35mm	CIWS	2018	For 5 Avante-2200 frigates from Spain

Source SIPRI 2020c

goals. Despite several resolutions of the EP to impose an embargo on military arms export to Saudi Arabia and United Arab Emirates, Italy and the UK refrained from following suit until June 2019. Italy had economic reasons to not impose an arms embargo, as appears for instance, from the situation of RWM Italia, an arms producer, counting Saudi Arabia as its main client. RWM Italia is owned for 100 percent by Rheinmetall, Germany's largest arms firm. Due to Germany's arms ban, Rheinmetall was not allowed to deliver weapons to Saudi Arabia, but, as a company registered in Italy, RWM Italia was not restricted by the German arms regulations.[35] Come June 2019, on account of a campaign instigated by non-governmental organizations (NGOs), the Italian Parliament eventually agreed to change their arms exporting policies to Saudi Arabia and the United Arab Emirates. Consequentially, RWM Italia suffered substantial financial losses and staff unemployment.

Table 13.3 shows that from 2015 until 2019, arms exports to Saudi Arabia represent on average 41 per cent of the UK's total arms export, providing the country clear economic reasons to abstain from any arms embargo. Moreover, security, is also mentioned as a reason to continue the arms trades with Saudi Arabia.[36] The phrase "Gulf security is our security" is repeatedly mentioned by the UK government, for instance, for countering Iranian actions in the region.[37] The slogan "Global Britain" emphasizes the UK's foreign and trade policy to re-establish and strengthen bilateral relations.[38] However, there are also opponents of the UK arms exports to Saudi Arabia. During 2015–2019, the UK government resisted pressure from opposition

[35] Politico 2018.

[36] Van Rij and Wilkinson 2018.

[37] Arab News 2016; Devanny and Berry 2021; Ministry of Defence 2019; Reuters 2016.

[38] Van Rij and Wilkinson 2018.

parties and campaign groups to suspend arms sales. The campaign group Campaign Against Arms Trade, which opposes arms exports to Saudi Arabia, took the UK government to court. Although the High Court rejected their claim in 2017, in June 2019 the Court of Appeal concluded the government must reconsider the decision-making-process for approving export licenses and reconsider existing licenses. Until then the UK was not allowed to grant new arms export licenses to Saudi Arabia. In 2020, the UK government resumed granting licenses after reconsidering and adjusting its process and concluded there was no clear risk British arms exports to SA might be used in the commission of a serious violation of International Humanitarian Law. Security, economics and the UK's trade-/foreign policy seem the main reasons for the UK to continue their arms sales to Saudi Arabia.

Saudi Arabia is one of the main buyers of Canadian arms (see Table 13.3). Over the years 2018-2019, Canada delivered 250 Light Armored Vehicles (LAV-700) to Saudi Arabia, a $14 billion deal contracted in 2014.[39] After media reports on the involvement of the Saudi government in the murder of journalist Jamal Khashoggi, in October 2018 the Trudeau administration promised to suspend approvals of new arms export permits during the review of the LAV-700 arms deal. However, this decision did not affect the delivery scheme. In 2020, Canadian Ministers of Foreign Affairs, François-Philippe Champagne and of Finance, Bill Morneau explained why the government did not cancel the arms deal. "The cancellation of the $14 billion contract -or even the mere disclosure of any of its terms- could have resulted in billions of dollars in damages to the Government of Canada, with potential damages amounting to the full value of the contract. This would have put the jobs of thousands of Canadians at risk, not only in Southwestern Ontario but also across the entire defence industry supply chain, which includes hundreds of small and medium enterprises." To ensure that, in future, the Canadian government will be able to uphold high standards with regarding Human Rights, the government has improved the agreement. "We have ensured that Canadian's exposure to financial risk will be eliminated where future export permits are delayed or denied if there is an infringement of the permit's end use assurances—which ensure that the vehicles are used only for the stated purpose".[40]

Other main arms exporters to Saudi Arabia—such as the US, France and Spain—did not implement the restrictions (see Table 13.4). In 2016, France sold, amongst others, three patrol vessels (Combattante FS-56) to Saudi Arabia, a €250 million deal.[41] As the Saudi-led coalition is known to have used boats for a naval blockade of ports, thereby aggravating an already existing humanitarian crisis, this arms sale has been debated intensely. Asked about the continuing arms sales, President Macron stated, "Saudi Arabia and the United Arab Emirates are allies of France and allies in the fight against terrorism. We accept responsibility for that." Security appears the main reason for France to continue their arms sales (see Table 13.3). According to the French Minister of Defence, Florence Parly, "To my knowledge, French weapons

[39] SIPRI 2020c.

[40] Global Affairs Canada 2020.

[41] SIPRI 2020c.

are not being used in any offensive in the war in Yemen. I do not have any evidence that would lead me to believe that French arms are behind the origins of civilian victims in Yemen".[42]

Since 2015, the US has provided limited military support to the Saudi-led coalition, including intelligence sharing, logistics support and, until 2019, in-flight refueling of non-US aircraft. As a result of the civil casualties in Yemen, President Obama decided to halt some arms sales at the end of his term, but these were minor in relation to the total arms exports to Saudi Arabia.[43] During the Trump administration, relations with Saudi Arabia have been tightened. In 2017, Saudi Arabia agreed to spend and invest $450 billion in the US of which $110 billion were to be spent on military equipment. In 2019, President Trump vetoed several resolutions of the Senate to withdraw troops and limit weapon exports to Saudi Arabia. According to President Trump the US would be foolish to cancel these contracts because Russia and China would be the enormous beneficiaries.[44] He also stated that the US is not engaged in hostilities in or affecting Yemen. Main arguments not to impose an embargo or to limit weapons exports are to protect Americans in the region from rebels, to maintain good bilateral relations, to prevent civilian casualties by limited support, prevent the spread of terrorism, to discourage the malign activities of Iran in the region and several economic reasons e.g., to maintain the competitive position of the US.[45] The economy and the balance of power in the region seem the main reasons for the US to continue their arms sales.

Based on Table 13.4, we consider the arms embargo—on the fourth level of analysis—partially effective. Most Western States used the arms export restrictions to send out a clear signal condemning the offensive actions of Saudi Arabia in Yemen and their alleged involvement in the killing of Khashoggi. However, dissociation of the Western world would be more credible if the largest arms exporting countries, France, the US and Spain, were also willing to implement arms export restrictions and when states would have directly imposed an arms ban putting human rights above economic stakes.

13.5 Conclusions

Literature offers no comprehensive nor accepted definition of what constitutes an effective arms embargo. However, we find an arms embargo can score differently on four levels of effectiveness. Since the restrictions did not impact Saudi behavior, and neither resulted in reducing arms flows, we consider the arms embargo ineffective on Level-1 and Level-2. Level-3 and Level-4 effectiveness are not about influencing the behavior of the targeted state and measures the political decisiveness of governing

[42] Reuters 2019b.

[43] Stewart and Strobel 2016; Hudson 2016.

[44] The Observer 2018.

[45] Landler and Baker 2019.

parties. The analysis allows for better understanding national reasons to follow certain strategies regarding arms export to Saudi Arabia. As the number of states, imposing an arms embargo or suspending (future) approvals of military equipment surpasses the number of states opposing the arms embargo, at Level-3 and Level-4, we find the arms embargo partially effective.

According to us, the chosen parameters in combination with the qualitative interpretation provide an interesting view on the effectiveness of the arms embargo and the behavior of the various states concerned. The quantitative analysis allows for better understanding why nations adhere to specific strategies regarding the export of arms to Saudi Arabia. The qualitative interpretation provides an interesting perspective on the behavior of arms exporting countries in the complex labyrinth of political and economic stakes. As Saudi Arabia has become a major arms buyer and is seen by some nations as a bulwark against Iranian influence in the Middle East, understandably the political and economic stakes are of great significance.

Some states seem to struggle to effectively act upon Saudi Arabia's airstrikes in Yemen. Most nations consider these actions as serious violations of international humanitarian law. However, economic interests seemingly keep them in a strangle hold. Some nations continued weapon supplies, because a cancellation of contract would have resulted in enormous losses. Other nations put a hold on their arms supplies, but, facing pressure of their European allies, needed to end their strict arms export ban to avoid hurting their defense industry's reputation and undermining their ambition to develop a common European Defense industry.

This study suggests that if the core objective of the arms embargo is to achieve Level-1 and Level-2 effectiveness, a collective approach of the international community is of paramount importance. There will be little chance of success at either level unless the embargoes are imposed collectively. The effect of states' actions that did impose the embargo has remained limited, due to the unwillingness of some major arms exporting countries, opposing the arms embargo. As Level-3 and Level-4 effectiveness take place in the domain of the embargo senders, success at these levels will be easier to achieve. Although the core objective of the arms embargo—influencing the behavior of Saudi Arabia- has not been reached, this has not seemed to deter most governments to invoke an arms embargo or suspend future arms sales. Governmental decisions are linked to internal politics and domestic pressure. Opposing an arms embargo may cause political damage to some governing parties.

One limitation in regard to our investigation is that we were only able to study the period 2015–2019. Most European governments adopted restrictions on their arms export to Saudi Arabia not earlier than 2018. Due to a lag effect the effectiveness of the arms embargo may become apparent after 2019 which makes our results preliminary. Further research is needed.

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Chapter 14
Case: Dronebuster; Handling Non-compliance to ITAR

Wim Nieboer and Dik van Manen

Contents

Abstract This chapter analyses the unauthorized transfer of a Dronebuster for testing in a fictitious European NATO member state (EUMS). As the Dronebuster had been purchased in the US, it remained subject to US export control regulations, and, prior authorization was warranted. As there had been no requests for prior authorization, this transfer is considered non-compliant behaviour. Using the Problem-Oriented Policing framework, we investigate the underlying causes and conditions. We argue that a coordinated operation of a mix of hard- and soft controls is the optimal response to prevent such behaviour.

Keywords Arms export control · awareness · Dronebuster · (non-)compliance · ITAR · NATO

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14.1 Introduction

This chapter describes and analyses a situation of non-compliance in relation to the US export control regulations, more specific the International Arms Trade Regulations (ITAR). We consider an unauthorized transfer of a so-called Dronebuster from the Army to a National Research Institution (NRI) for research purposes in a fictitious, non-existent European NATO member state (hereafter named EUMS).

Some years ago, the Ministry of Defence (MoD) of the EUMS purchased a number of Dronebusters to serve in missions against drone threats. In the slipstream of an investigation on drone threats and a range of counter measures by Dronebusters taking place in the vicinity of EUMS airports, it was deemed necessary to investigate the impact of Dronebusters on other electrical and electro-magnetic systems present. Without much ado, the Army proceeded to submit one Dronebuster for closer testing by the NRI, specifically with regard to the Dronebuster's electro-magnetic impact on other systems.

By the time the MoD's Export Control Compliance Team (ECCT) became aware of the Dronebuster's transfer to NRI, the item had already been tested and returned to the Army. However, as the Dronebuster, an export controlled item under the International Traffic in Arms Regulations (ITAR) had been purchased in the US by the MoD's Direct Commercial Sales (DCS), handing it over to NRI—outside the MoD—would have required prior authorization by the US. As it turned out, the Army was neither aware of the Dronebuster being an export-controlled item nor that prior authorization for the transfer should have been mandated.

Based on the Problem-Oriented Policing (POP) framework, our case-study serves as an investigation into the underlying causes and conditions of this unauthorized transfer.[1] We ask what causes and conditions have resulted in the unauthorized transfer of the Dronebuster. Section 14.2 introduces non-compliant behaviour in this (hypothetical) case study. Section 14.3 analyses the causes at the macro-, meso- and micro-levels. Derived from information gathered in the third section, in Sect. 14.4 we develop an appropriate response. In the final section, Sect. 14.5, we discuss our findings.

14.2 Scanning

A Dronebuster is an efficient tool for preventing drones to approach secured areas or own troops. A Dronebuster operator can jam the drone command link causing it to hover or return home. Also, the signal can be jammed to the extent a drone will crash or land. The operator only needs to pull and hold the trigger of the Dronebuster. Dronebuster Block 3 is an export controlled item under US export control regulations, specifically, ITAR. Furthermore, Dronebusters have been classified as Significant Military Equipment.

[1] Braga 2008.

EUMS MoD acquired Dronebusters to serve in missions, either domestic or abroad, against drone threats. When it became necessary to investigate the impact of Dronebusters on other electrical and electro-magnetic systems at airports, the Army offered one Dronebuster to NRI for testing. Additionally, NRI requested to be allowed to open the systems for further investigations. However, this request was denied by the MoD, on the grounds that, re-transfer of a Dronebuster, its data, software etc. to parties outside the EUMS MoD is not allowed without prior authorization by the US government. At the time the Army's Export Control officer was notified of the transfer to NRI the item had already been tested and returned.

Previous investigations into this case have clarified that officers and staff involved in this Dronebuster transfer to NRI were unaware of the requested prior authorization, both in case of transferring as well as testing export controlled items. The main issue here appears a lack of awareness among all involved personnel.

This raises several questions for further analysis. First, as export control was already relatively well known within the EUMS MoD why were these officers and staff not informed on the export control implications of a Dronebuster transfer to NRI? Second, information on the export control classification is available and visible whenever employees attempt to transfer export control items outside the MoD. Why did the personnel involved fail to react to this information? Why were they not aware of the implications of the export control references? Why did the internal control system not operate as expected?

14.3 Analysis

14.3.1 Macro-level: Export Control Laws and Regulations for the MoD

Export control laws and regulations; international as well as national have been in place for a substantial period of time, starting with treaties on weapons of mass destruction after World War II. In modern warfare, export control frameworks have become more comprehensive and influential. For many years the EUMS MoD did not fully appreciate their relevance for daily business and operations, although a fair number of EUMS' weapon systems and equipment were acquired in the United States, and, consequentially, remained under US export control regulations.

In 2011, both an investigation into the relevance of export control regulations regarding the EUMS MoD, as well as the (non-)compliance situation, at the time, made clear export control still was not very high on the agenda. This all changed, as it transpired that some serious violations of export control regulations had taken place within the EUMS Airforce. Voluntary disclosures were brought to the attention of the US government, thereby turning into a sensitive political issue for the EUMS government and parliament. As at the macro-level the political and regulatory consequences became increasingly clear and explicit, at the meso-level, the

organizational level of the MoD, actions were required. As a result, commands and instructions started cascading down the Operational Commands (Navy, Army, Air Force) requesting commanders to implement export control regulations and to install and execute internal compliance programs.

14.3.2 Meso-level: The EUMS Army

From 2014, the Army started implementing export control regulations. At the time, the Army's slogan was they were using 'a raincoat and a sharp pocket knife' instead of any technologically advanced equipment. At all Army levels, knowledge on Export Control was limited, and personnel largely remained unaware of any legal, moral or ethical issues involved.

In 2016, it became clear that something had to be done about this awareness and knowledge gap as the Army increasingly acquired advanced equipment and specific technology from the US and therefore subject to ITAR. The Commander of the Army started their internal compliance program in 2016. At unit levels, serious handling of export control regulations did start from 2016 by describing an internal compliance program and by introducing a dedicated organizational unit within the organization. By the end of 2018, this organizational unit has turned into a standing unit (i.e., the Export Control Compliance Team).

Amongst others, internal compliance programs (ICPs) are to raise organizational awareness on the relevance and importance of export control laws and regulations. And this is where the Dronebuster case went askew, for, as it turned out, involved personnel were completely unaware of export control implications of their actions. Looking back, it seems obvious that, when starting with the construction and implementation of an ICP, awareness will not be raised throughout the organization immediately.

However, four years later, in the EUMS Army, the Export Control Compliance Team is still on the road, regularly spreading the export control news. A lot has been invested in these roadshows on behalf of commanding officers and relevant staff in security and logistics, as well as the organization of training and publishing on intranet. Education and training is one of the Key Performance Drivers for a Defence Organization. Export Control was a relatively new feature within the EUMS MoD, and lacking appropriate training/education has led -and sometimes still does- to non-compliant actions. Familiarity with Export Control regulations increases compliance (e.g., by training and information sessions) and will contribute in Export Control compliance in general.[2]

Communication and training have undoubtedly contributed to an increased awareness at the organizational level. However, as the Army is a large, multi-layered organization, awareness levels are expected to vary across the organization and its various units. As it is possible, bureaucratic rules and regulations can facilitate non-compliant

[2] Gelderman et al. 2006.

activities, transparency and accountability at all organizational levels should be aimed for. Obviously, the MoD's export control organization is still 'under construction', progressing towards maturity.

14.3.3 Micro-level: Awareness of Individuals

At the micro-level, the level of the individual employee (commander, staff, soldier), actions taken at the macro- and meso-level appear to induce increasing levels of awareness. Personnel directly involved in security and logistics, in general, are both knowledgeable when it comes to export control as well as experienced in using ICT systems and in cooperation with export control support teams. Nevertheless, as the non-compliant behaviour regarding the Dronebuster has made clear, there is still work to be done in this respect.

At the micro-level, one important characteristic of the EUMS MoD is vital when planning to increase employee awareness. This regards the fact that military staff rotates every three years, and sometimes even faster. Consequentially, raising knowledge and awareness knowledge and awareness within the various units of the organization has to be undertaken as a continuous endeavour, deserving constant attention.

It is clear that introducing measures (e.g., ICP) at an organizational (meso-)level does not automatically imply compliance at a (micro-)individual level. Because all three organizational levels are intertwined, a problem and a solution at one level will always need additional analyses at the other levels. Therefore, serious investments in staff and personnel will be required, also considering other specific characteristics of military personnel (e.g., can-do mentality).

In the Dronebuster case, export control regulations were not lived up to because employees were unaware of export control implications of their actions. On top of this, however, it appeared the implications of this neglect were underestimated and even disregarded. One of the EUMS Army's paramount guidelines is the mission must be fulfilled, no matter what. 'Make it happen, no matter what' may be considered an Army maxim professing a positive organizational culture, although it comes with a serious downside, regarding its potential to instigate non-compliant behaviour in the workspace.[3] At the micro-level, such maxims can result in employees believing that, in order to fulfil the mission, laws and regulations may be avoided or even circumvented. Although such behaviour may be considered adequate during missions and other operational situations, in peace situations, concerning export control regulations, this will thwart and even obstruct the effectiveness of new rules or reforms.[4]

As it turned out, employees rationalized their unawareness and breaking of relevant export control regulations by pointing at the organization, that did not 'educate'

[3] Griffin 2013.

[4] Interligi 2010.

them sufficiently in this respect. The fact that the system of internal control was not fully functional may have added to this feeling. Furthermore, Army employees, mandated to execute actions within their own work field in combination with not fully operational internal controls (e.g., an ICT system not blocking transactions when proper authorizations are lacking) opens the possibility to violate, either knowingly or unknowingly, export control regulations. A process which excludes *all* possible mistakes or deviance seems unfeasible (opportunities continue to exist for those who want to be deviant/non-compliant). According to cognitive dissonance theory forced Export Control compliance can culminate into cognitive dissonance or non-compliant behaviour.[5] Therefore, constant control and monitoring remain necessary.[6]

14.4 Response

According to the definition of the Association of Certified Fraud Examiners,[7] the EUMS Dronebuster case can be defined in terms of fraudulent reporting or fraud on behalf of the organization, aiming to make the organization look better than it is. This sounds somewhat harsh, and one may argue whether this constitutes actual 'fraud'. In almost all Defence cases bearing resemblance to this one, there is no motive for personal gain (nothing is taken away), instead, the main driver for non-compliant behaviour appears to be to create an image of an organization functioning properly. Employees, not considering the appropriate regulation, appear to want to fix an issue. Thus, instead of fraud, we refer to this kind of behaviour as non-compliant or deviant behaviour.

Building on Braga's[8] problem-oriented policing and crime prevention, and to induce potential novel ways for proper behaviour, we have applied a model presented by Cornish and Clarke.[9] The authors use the idea of situational crime prevention as a starting point, and, from here, have developed a related list of techniques and specific programs. To us, this model has been useful because it urged us to think more in-depth instead of aiming for short term success.

In a reflection on Cornish and Clarke, we suggest the following responses. First, introduce controls to complicate deviant behaviour (i.e., clear procedures; working internal controls in IT systems; no manoeuvre or escape possibilities; and access authorizations in accordance with one's role). Second, increase the risk of exposure of deviant behaviour (i.e., extend action responsibility from one officer to two or more officers; separate duties, roles, and responsibilities; four eyes principle; peer reviews and audits focussed on export control). Third, reduce rewards for deviant

[5] Festinger 1962.
[6] Huberts et al. 2008.
[7] Murdock 2019.
[8] Braga 2008.
[9] Clarke 1995.

behaviour (i.e., clearly communicate rewards for correct export compliant behaviour as well as disciplinary actions following from non-compliance).

Fourth, clarify stressful situations and procedures. Often, employees experience a sense of operational urgency when handling items with export control regulations. The lack of an optimized controlled process induces uncertainty and anxiety, causing them stress. Clear procedures and training as well as adequate support by an export control compliance team, would take away stress and frustrations. Internal controls by ICT systems would support this. Fifth, prevent any excuses for deviant behaviour. Neither procedures nor the system should allow for deviant behaviour. So the parts/items should be identified, and applicable sets of regulations should be implemented in the systems. An Internal Control System should be implemented and periodically audited. HRM involvement could improve recruitment, initial screening/selections and background screening, which in their turn may improve the quality of new personnel intakes. Training allows employees to acquire new skills, improve on existing ones, perform better, increase productivity and to become better leaders. As an organization is made up of the sum total of what its employees achieve individually, organizations should do everything in their power to ensure that employees perform at their peak.

14.5 Assessment

In this chapter we have used Braga's POP-guide as a lens to look at an export control problem. We have analysed the occurrence of non-compliant behaviour in a fictitious case, entailing an unauthorized transfer of a Dronebuster from the Army to a National Research Institution (NRI) for research purposes within a fictitious European NATO member state, EUMS. Based on our analysis, we have suggested a number of responses. In sum, these responses add up to a coordinated mix of hard- and soft controls. As a short-term response, soft controls (e.g., training, education, development and communication) have to be priorities. In the long run the internal control system (including a proper audit plan) should be in place and development, training and communication on export control is to be secured in the organization. The internal control system should minimize the possibility of deviant actions (e.g., registration and obligated process flows with blockages).

During the analysis of the EUMS Dronebuster case, it was interesting to investigate both actual deviant behaviour as well as possible solutions. A question that remains to be answered is why the NRI did not react on reception of the items. For NRI also should have been aware of export control implications as well as of the fact there was no US authorization of the item received for investigation. We would like to recommend this question for further study.

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Chapter 15
Developing an Adequate Internal Compliance Program for the Royal Netherlands Air Force Command

Robert Bertrand and Hans van Riet

Contents

Abstract This chapter examines how an adequate Internal Compliance Program (ICP) for the Royal Netherlands Airforce (RNLAF) was developed. In order to create an adequate ICP, it is essential to determine which legal and other aspects should be incorporated in the ICP framework. To deduct these relevant aspects of the environment the RNLAF operates in, a Political, Economic, Social, Technological and Legal (PESTL) analysis is used. Furthermore, the different ICP frameworks are compared in order to make a combination of them to create the most adequate ICP for the RNLAF. We conclude that this should be a combination of mainly US ICP Frameworks as of the fact that the RNLAF is mostly US orientated. The COSO model as an internationally widely used best practice framework is the core. The combination of the PESTL analysis, the legal framework and the chosen ICP frameworks

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together result in an 11 pillars ICP, which we consider is the most adequate ICP for the RNLAF. Leading principle in combining all the aforementioned elements, is that the ICP has to be tailored to its organizations' characteristics (e.g. nature of items, size of the organization, national, regional and global footprint). We understand that there is no one-size-fits-all approach, but one needs to design an ICP that specifically fits the given organizational structure, its size and daily operations.

Keywords COSO Model · export control · Internal Compliance Program · control frameworks · trade compliance · Royal Netherlands Airforce

15.1 Introduction

This is a chapter on the business case of the Royal Netherlands Air Force (RNLAF) Command involving the handling of military and dual use items, technical data, technology, software and defense services. More specifically, this chapter examines how an adequate Internal Compliance Program (ICP) for the RNLAF was developed. This is relevant for RNLAF in particular, but also for other organizations that have need of an ICP or might be involved in developing one.

In order to understand the importance of this research, both the historical background for the need of an adequate ICP and the environment the RNLAF operates in will be described. These topics will be handled in Sect. 15.2. Next, the legal aspects with regard to an adequate ICP for the RNLAF will be elaborated on in Sect. 15.3. Furthermore, the concept of an ICP will also be presented in this section. Thus, the third section focuses on the main legal regimes the RNLAF has to comply with in its operations. When one understands and implements these legal aspects, one is able to put an adequate ICP for the RNLAF in place as it covers all operational activities. Only then can the RNLAF conduct its operations in an export control compliant matter. Of course, it is obviously not solely a matter of legal aspects when designing an ICP. However, when the goal is to adequately achieve compliance, legal aspects are core. This is inherent to our topic: compliance. Generally, compliance means adhering to a rule, such as a policy, standard, specification, or law. Regulatory compliance defines the goals companies want to achieve to ensure that they understand and take the necessary steps to comply with policies, laws, and regulations. We will, when relevant, also discuss other aspects of compliance, however. Finally, a conclusion is presented in the final section, Sect. 15.4, of the chapter.

15.2 Setting the Scene

In order to provide the reader with a historical context and to understand the types of relevant environmental influences affecting compliance on export control of the RNLAF, we present a brief historical analysis of the RNLAF with regard to the

importance of developing an adequate ICP, as well as a Political, Economic, Social, Technological and Legal (PESTL) analysis.

15.2.1 Historical Context

With a so-called *Voluntary Disclosure*[1] the RNLAF, in June 2015, started a path to improve on the compliance on export control laws and regulations. The Voluntary Disclosure was answered in January 2017 by the US government and the RNLAF was strongly advised to become in control. And although the it concerned one specific regulatory regime, the activities in the compliance domain thereafter covered all export control activities that the RNLAF is conducting. The ratio behind this is simple; throughout the world there is a great variety of export control laws and regulations and the RNLAF, an organization that operates internationally (e.g., contractual, on mission, training), is confronted with all these types of legal constraints. Therefore, the ICP must cover all these compliance aspects.

Becoming and remaining compliant with all these export control laws and regulations can only be achieved by setting up an adequate ICP that embeds control measures in the RNLAF daily business. Therefore, the RNLAF tasked itself to build an ICP. On 24 December 2019, the first version of the RNLAF's ICP was posted on the intranet of the RNLAF.[2] It seems a little bit late for the RNLAF to finish its ICP. However, from the start of the Voluntary Disclosure, the RNLAF took all corrective actions to resolve all the past violations, but also took measures to prevent future violations. Thus, on an operational level, both corrective and preventive actions were taken, such as conducting risk assessments on the numerous Air Bases the RNLAF operates, building an export control database, creating management commitment (which resulted in embedding a Unit Export Control Compliance in the RNLAF's organization structure), starting a licensing process and writing policies and procedures. In fact, the RNLAF already started with designing the pillars of an ICP at an early stage, although it was not written in a formal document.

At the start of the operational process, the RNLAF swiftly had to make personnel available to start doing the export control tasks. However, very logically there was a lack of personnel with knowledge about these specific laws and regulations. Until August 2019, the operational course of action took place. The positive effect thereof that was realized: while conducting three years of operational export control compliance corrective and preventive actions, the RNLAF to a certain degree became an export control compliant organization. Now, it was time however to become export

[1] A Voluntary Disclosure is a notification to a US federal agency that an export control laws and regulations violation may have or has occurred. If it is found that an export violation did occur, the Voluntary Disclosure will be seen as a mitigating factor (in most cases) when determining penalties and/or sanctions.

[2] Royal Netherlands Airforce 2019.

control compliant on a strategic level. Only by designing an adequate ICP and maintaining it with dedicated capacity, the RNLAF would become fully aware how all relevant export control laws and regulations affect its operations and enable it to implement measures to make sure that it remains export control compliant, this time on a strategic level.

15.2.2 PESTL Analysis

As stated before, it is important to understand the RNLAF's relevant environmental influences affecting compliance in general. Every single day, the RNLAF sends all kinds of military and dual use items and technical data and delivers services to external parties (e.g., Northrop Grumman International Trading Inc., Meggitt Inc. and Teledyne Defense Electronics LLC) for testing, repair and maintenance, and overhaul. These items are most of the time classified on either the United States Commerce Control List (US CCL)[3] or the United States Munitions List (USML).[4] However, sometimes the items do not have a US classification, but are classified on European or national control lists. The fact, however, that they are classified, means that compliance aspects are at stake. The type of classification determines the level and type of export controls that apply.

US defense companies have two main avenues for selling on the international market: Foreign Military Sales (FMS) and Direct Commercial Sales (DCS). Under FMS, the US government procures defense articles and services with defense industry on behalf of the foreign customers. DCS allows US defense companies (in possession of a commercial export license) to negotiate directly with foreign customers. Most of the RNLAF's items have been acquired from the US through several FMS cases (i.e., F-16, AH-64 Apache, MQ-9 Reaper), some through DCS (i.e., C-130, NH-90) and some through a combination thereof (i.e., CH-47 Chinook). Therefore, in order to effectuate the envisaged re-exports, the RNLAF needs prior US Department of State, Office of Regional Security and Arms Transfers (RSAT) authorization or authorization of other offices (US, EU or other). Understanding the importance of strict adherence to US export controls and other regulatory regimes, the RNLAF all the time requests authorizations for these envisaged re-exports. Furthermore, the RNLAF urges the regulating offices of these re-exports to swiftly process these requests on their part, as it is crucial for maintaining the operational readiness of the RNLAF.

In order to fulfill all export control compliance conditions (legal, regulatory or other), the RNLAF needs to have an adequate ICP. Only then, the RNLAF is able to strictly adhere to US export controls and other regulatory regimes, while requesting for authorizations for these envisaged re-exports. The ICP is the core instrument to be in control and compliant.

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[3] US Department of Commerce Bureau of Industry and Security 2020.

[4] Electronic Code of Federal Regulations 2020.

The RNLAF is a military organization, and therefore has specific requirements and needs, to stay in control and compliant. These specific requirements and needs are highly dependent on trade laws and regulations that affect its re-exports of the items, services and technologies. In this business case, an ICP Framework was build, based on the existing ICP Frameworks, that fulfills all the needs of the RNLAF in its daily business (see Sect. 15.3).

The PESTL analysis considers five dimensions that should be taken in consideration in the business case: the Political, Economic, Social, Technological and Legal dimension. Below, we will elaborate on how these dimensions affect the RNLAF, and more specifically an ICP.

15.2.2.1 Political and Legal Environment Analysis

The reason we describe the political and legal environment together is because they are highly intertwined. Politics to a large extent shapes the legal environment, since politics in most Western countries have the authority under constitution to make laws and to alter or repeal them. Most of the weapon systems the RNLAF has, are bought through FMS cases or DCS contracts from the US. Only a small percentage of all the RNLAF weaponry is bought from the EU market. Therefore, the RNLAF has to comply with various US laws and regulations (see Chap. 11 of this volume), but also sometimes with EU or the various national laws and regulations. Furthermore, because of the fact that most weaponry is bought from the US Department of Defense and the US defense industry, the RNLAF is highly dependent on the US defense industry complex as a whole: US government, Army, Air Force and industry. Therefore, the scope in building an adequate ICP should consider all US political and legal aspects (which are subject to frequent change). Nonetheless, EU and various national politics and legal aspects should likewise be taken into account. And these aspects affect not only the domain of export controls. As national and supranational political fora tend to intervene in more and more areas of procurement, trade, labor market, environment, and so on, compliance becomes a chief priority for doing and staying in business. The impact of the legal aspects, as can be expected, is large and affects the daily business of the RNLAF. Its importance reflects in the legal framework of an ICP (see Sect. 15.3).

15.2.2.2 Economic Environment Analysis

The RNLAF is a defense organization and therefore depends on the economic environment, national as well as international. The RNLAF is doing its business in an environment of mostly government to government deals (FMS Cases) and industry to government deals (DCS and other commercial contracts). Its funding is provided by taxpayers' money. The RNLAF is a governmental organization, which makes it an economically atypical organization, compared with the defense industry. On the other hand, the RNLAF is highly dependent on the economical maturity of the various

defense industries it deals with (e.g., Northrop Grumman, BAE Systems, Raytheon). Furthermore, the RNLAF is highly dependent on the relationship between the defense industry and its governments abroad. In short, the economic environment can at best be described as imperfect markets of goods and services. Investment selection in these markets cannot be made under competitive conditions (e.g., by public tender) because there are only one or a few suppliers (monopolies or near monopolies) for specific products or services. In addition, the number of buyers in these markets is often limited, especially in cases of government procurement.[5] All this makes contractual relations of the utmost importance. All these considerations should be envisaged when designing an adequate ICP for the RNLAF.

15.2.2.3 Social Environment Analysis

Monitoring the public opinion, both nationally and abroad is essential for the RNLAF for maintaining the operational readiness. Especially a change of the public opinion in the US concerning the defense industry or spending can harm its operations, but also enable the RNLAF to import new weaponry and re-export it. Again, most of the RNLAF's weaponry is bought and repaired in the US, thus, an adequate ICP should consider the most relevant actual and future social factors in the US as well as its national and EU social changes. Of special interest is also the effect of public opinion on topics as accountability and corporate governance.

15.2.2.4 Technological Factors

The RNLAF is highly dependent on US military and dual use items, technical data, technology, software and defense services. If the RNLAF complies with all US export control laws and regulations and does not commit violations like re-exporting items or technology to 126.1 International Traffic in Arms Regulations (ITAR)[6] embargoed countries, there will be no reason to negatively affect the RNLAF in, for instance, receiving less than the state-of-the-art technology. With this technology, the RNLAF is able to maintain its older weaponry (e.g., repair, overhaul), but also able to constantly improve newly bought weaponry such as the MQ-9 Reaper and the F-35 Joint Strike Fighter to US Standards of Technology. Not surprisingly, specifically for the project F-35 a complete ICP Framework was built in order to entirely comply with all relevant US Laws and regulations.[7] Therefore, the focus of an adequate ICP for the RNLAF should be on building walls around US technology; thus: prohibiting re-exports to embargoed countries. Screening of RNLAF personnel and embedded contractors and physical and IT security should be considered to prevent the leaking of technology to unauthorized persons/countries. In short, technology is of the utmost

[5] Bertrand 2016, pp. 7–8.

[6] US Department of State Directorate of Defense Trade Controls 2020b.

[7] US Department of State 2002.

importance for the RNLAF and everything must be done in the field of compliance, to secure its future use.

15.3 The Development of an Internal Compliance Program

In this section we examine how an adequate ICP for the RNLAF was developed. After a short introduction (Sect. 15.3.1) of the method used, we first describe the legal framework. This contains the main legal regimes the RNLAF has to comply with in its operations. With this legal framework (Sect. 15.3.2), by using relevant ICP guidelines, frameworks and standards (Sect. 15.3.3), an adequate ICP for the RNLAF is put in place (as described in Sect. 15.3.4).

15.3.1 The Need for an Internal Compliance Program

According to Tamada and Achilleas, export control regimes are developed and implemented by a method combining an international approach and a national approach.[8] The development and implementation of an export control regime consists of a two step-method. This comprises the establishment of a legal framework on the basis of national law and applicable international law. Thereafter the other elements of the regime are defined and modified to the organizational needs.

The above-mentioned concept for developing and implementing export control regimes, can apply to designing an ICP for any organization, thus also for the RNLAF. In fact, the first step the RNLAF should take to become export control compliant is to understand the export control laws and regulations that affect its daily operations. Thus, the first question the RNLAF has to answer is: With which parties from which countries do we do business with?

Thereafter comes the question: What kind of ICP Framework or combination of ICP frameworks available do we need to apply for building our own ICP Framework? Over the years, many ICP Frameworks were developed by different organizations. One should examine which ICP Frameworks are the most relevant for the RNLAF's operational environment. By comparing, combining and applying these ICP Frameworks, the RNLAF is able to design a tailor-made and adequate ICP.

[8] Tamada and Achilleas 2017, p. 11.

15.3.2 Legal Framework

Since the RNLAF is mostly US-orientated, the RNLAF should gain a thorough understanding of at least the US ITAR,[9] the Export Administrations Regulations (EAR)[10] and the Security Assistance Management Manual (SAMM)[11] (for the FMS cases the RNLAF is party to). The most important section of the latter document is SAMM, C8.7, third party transfers, as it describes the licensing process for third party transfers. Since the RNLAF is involved in many FMS cases, every time re-exports take place, the RNLAF has to apply for a third-party transfer authorization before the re-exports actually happen. Therefore, the ICP of the RNLAF should incorporate these US laws and regulations.

Furthermore, the RNLAF is part of the Kingdom of The Netherlands, which is member of the United Nations, the European Union, and the RNLAF also does business with several EU member states. Therefore, the UN, EU and the Dutch export controls, and other import, anti-bribery and anti-corruption laws and regulations should be incorporated in the ICP. In fact, it is to be expected that all these export control laws and regulations be applied in the daily operations of the RNLAF. Finally we mention sanctions law, as the RNLAF needs to secure that every time re-exports take place they comply with sanctions law, for example by checking that no companies are involved that violated UN, EU and US sanctions law earlier.

Further, an interesting aspect one should understand is that the EU Export Controls and the Dutch Laws and regulations are civil law systems, which means that these regulatory regimes are driven by codified standards. Wernaart defines a civil law system as, "The idea behind a civil law system is that a society can be organized in a coherent way by adopting written codified standards".[12] However, as mentioned before, the RNLAF is mostly involved in deals with the US government or the US defense industry. US Laws and regulations are based on a common-law system, which is a case law driven system. With regard to the essence of a common-law system, Wernaart describes it as, "A common law system is case law driven. The law is therefore predominantly developed by judges, rather than a legislator or academics".[13]

The impact of the difference between the civil and common law-based origins is however not as big as one would expect at first sight, because U.S. Export Controls are codified in federal laws and regulations (such as ITAR and EAR). The majority of the changes in the US thus find its origins in changes of these laws and regulations and not so much in new jurisprudence. In general however, one can observe that U.S. Export Controls, take the ITAR for example, tend to change more frequently than the EU and Dutch Export Controls, which is important to keep in mind.

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[9] US Department of State Directorate of Defense Trade Controls 2020b.

[10] US Department of State Bureau of Industry and Security 2020.

[11] US Defense Security Cooperation Agency 2020.

[12] Wernaart 2017, p. 58.

[13] Wernaart 2017, p. 58.

Also, between the EU and Dutch regimes, a specific relation must be mentioned. One has to understand that the laws of the EU have a supranational character, which means that to become in force, these laws need to become part of the national legal system of the EU Member States.[14] Another legal aspect that needs to be addressed is that some export control regimes have an extraterritorial character. This is the case with the US export control regime. In practice, this means that the US Laws and regulations follow the goods. Thus when, for example, the RNLAF buys F-16 aircraft through FMS-cases, every time the RNLAF wants to re-export, re-transfer or import these defense articles, US Laws and regulations need to be applied on these transactions, which results in the application for authorizations (such as a third-party transfer) with the US Department of State. Thus, in order to design an adequate ICP for the RNLAF not only all the above-mentioned laws and regulations must be incorporated into the different pillars of the ICP, but also the relationships between them must be embedded.

15.3.3 Internal Compliance Program Frameworks and Guidelines

As has been said, there are many models available for designing ICPs. However, for US oriented businesses and organizations, such as the RNLAF, the most applied models are the Committee of Sponsoring Organizations of the Treadway Commission Internal Control—Integrated Framework (COSO Model),[15] the US Department of Commerce/Bureau of Industry and Security Compliance Program Guidelines (BIS Guidelines)[16] and the US Department of State/Directorate of Defense Trade Controls, Compliance Program Guidelines (DDTC Guidelines).[17] Furthermore, there are lots of additional frameworks and guidelines for developing an adequate ICP: the Coalition for Excellence in Export Compliance Best Practices for Export Controls (CEEC Best Practices),[18] the Common Industry Standards for European Aerospace and Defense (CIS Standards),[19] the Framework for IT Governance and Control (COBIT Framework)[20] and many more. In addition, the EU recently presented a recommendation on ICPs[21] as did the Dutch Ministry of Foreign Affairs.[22]

All the aforementioned ICP guidelines, frameworks and standards (hereinafter together summarized as 'ICP frameworks') consist of a combination of pillars that

[14] Craig and De Burca 2003, pp. 3–4.

[15] Committee of Sponsoring Organizations of the Treadway Commission 2013.

[16] US Department of Commerce Bureau of Industry and Security 2012.

[17] US Department of State Directorate of Defense Trade Controls 2020a.

[18] Coalition for Excellence in Export Compliance 2011.

[19] Aerospace and Defence Industries Association of Europe 2012.

[20] IT Governance Institute 2007.

[21] European Union 2018; 2019.

[22] Ministry of Foreign Affairs 2019.

need to be elaborated on in the 'perfect ICP'. Furthermore, most ICP Frameworks take the five COSO Model components as a starting point: (1) control environment; (2) risk assessment; (3) control activities; (4) information and communication; and (5) monitoring. The COSO Model is a very flexible ICP framework that can be used for businesses as government organizations and non-governmental organizations. In fact, the COSO Model is just a starting point and not a ready to use ICP. It is literally a framework that should be supplemented with other pillars specially designed for an organization such as the RNLAF. Since most of the time the RNLAF deals with DDTC and BIS, it is understandable that their ICP Frameworks will be examined as a surplus to the COSO Model and an opportunity to achieve best practice. The guidance on ICPs provided by the EU and the Dutch Ministry of Foreign Affairs have not been taken into consideration when developing an ICP for the RNLAF, first, because the RNLAF focused primarily on ICPs for US-oriented businesses and organizations, second, because they have only become available recently. They will be considered in the near future however.

Examining the above-mentioned ICP Frameworks, results in a combination of a maximum of ten separate components that are considered relevant to be incorporated in an ICP:

(1) Management commitment (CEEC, BIS, COSO, COBIT, CIS and DDTC);
(2) Compliance organization (CEEC, COSO, CIS and DDTC);
(3) Risk assessment (BIS, COSO and COBIT);
(4) Policies and procedures (CEEC, BIS, COSO, COBIT, CIS and DDTC);
(5) Contract management and authorization applications (CEEC, BIS and DDTC);
(6) Screening (CEEC, BIS and DDTC);
(7) Training and communication (CEEC, BIS, COSO, CIS and DDTC);
(8) Physical/IT security (BIS, COSO, COBIT and DDTC);
(9) Compliance reviews/audits (BIS, COSO, COBIT, CIS and DDTC);
(10) Handling violations and voluntary (self-) disclosures (CEEC, BIS and DDTC).

The DDTC and BIS Frameworks both combine 9 pillars together, which make them the most detailed and complete ICP Frameworks. The difference between them is that DDTC includes the pillar Compliance Organization and lacks the pillar Risk Assessment, while for BIS the opposite counts.

The COSO Model defines internal control as a process effected by an entity's board of directors, management and other personnel designed to provide reasonable assurance of the achievement of objectives in the following categories: (1) operational effectiveness and efficiency; (2) financial reporting Reliability; and (3) applicable laws and regulations compliance. Obviously, the last category is most relevant when designing an ICP. Bearing in mind the original five COSO Model components, we consider the longlist of 10 separate components a natural refinement logically following the needs of the specific application in export control compliance. And although in different organizations the names and number of ICP components might

be slightly different, in general they will not be essentially different from our ten components' longlist.

15.3.4 The Internal Compliance Program of the Royal Netherlands Air Force Command

Now that the ICP frameworks that are most relevant, as well as the laws and regulations the RNLAF is obliged to comply with, have been elaborated on, these elements are combined in order to design the most adequate ICP for the RNLAF. The RNLAF's ICP consists of 11 pillars, which are distilled from the COSO-, BIS-, and DDTC-frameworks:

(1) Introduction and management commitment;
(2) Legal and regulating framework;
(3) Compliance organization;
(4) Policies and procedures;
(5) Contract management and authorizations and authorization applications;
(6) Screening;
(7) Training and communication;
(8) Physical and IT security;
(9) Recordkeeping;
(10) Compliance audits;
(11) Violations and voluntary (self-)disclosures.

Most ICP frameworks contain a maximum of nine pillars. The RNLAF added two extra pillars (i.e., (2) legal and regulating framework and (9) recordkeeping). Also, we see that risk assessment is not a pillar, as conducting risk assessments is considered inherent to evaluating all pillars of the ICP and is a continuous process. Below, we will shortly explain the relevance and content of each pillar.

15.3.4.1 Introduction and Management Commitment

The most essential pillar that provides the fundament of an ICP is that the senior management of the RNLAF commits itself to all the other pillars of the ICP. Therefore, a management commitment letter from the Commander of the RNLAF is included. This letter contains a strong and durable commitment to exercise control compliance for the RNLAF, and all its approximately 6000 employees. In the COSO Model commitment is an essential part of the control environment, which is defined as "set of standards, processes and structures that provide the basis for carrying out internal control across the organization".[23] This component comprises the tone at the top, communication about ethical behavior and internal control within all levels of

[23] Committee of Sponsoring Organizations of the Treadway Commission 2013.

staff, and the overall integrity and values of the organization. These elements provide the overall basis for a successful system of internal control. Not directly in the ICP, but in the control environment as a whole, resources to develop and implement the ICP are provided and assigned.

15.3.4.2 Legal and Regulating Framework

As important as the first pillar is the component of all the export control laws and regulations the RNLAF has to comply with while conducting its operations. This pillar incorporates the legal framework. The primary focus in this pillar is on the US laws and regulations (ITAR and EAR, as well as the SAMM for FMS Cases). The EU export control regime and the Dutch strategic goods regulation,[24] and other import, anti-bribery and anti-corruption laws and regulations are also included. Furthermore, the difference between the legal essence and implications of FMS and DCS bought articles is explained. This pillar affects all other pillars of the ICP, as it constitutes the core of compliance. Therefore, the RNLAF explicitly chose to include the legal framework as the second chapter of the ICP.

15.3.4.3 Compliance Organization

In this pillar the compliance function is set up and the staff is assigned to the compliance function to ensure there is capacity, so the ICP can do its work to achieve the organization's strategic goal of compliance. Furthermore, the staff compliance officers and the compliance officers at the Air Bases are cited. Thus, all the RNLAF personnel is able to reach out to their specific point of contact, when they have export control compliance questions. As such, the senior management of the RNLAF has ensured that there is a sufficient number of personnel dedicated to the export control compliance functions. Furthermore, back-up personnel is assigned that can maintain the compliance function in the absence of the key compliance officers.

15.3.4.4 Policies and Procedures

Policies and procedures are the operational elements of an adequate ICP. In fact, the policies and procedures of the RNLAF translate the strategic ICP goals into operational control measures. Here, the policies go into processes, which relate to procedures on such a detailed level that work instructions are touched upon, that contain the specific internal controls. These work instructions are vital considering the fact that the 6,000 employees of the RNLAF need to understand and apply these work instructions in their daily business.

[24] Government of the Netherlands 2020.

15.3.4.5 Contract Management and Authorizations and Authorization Applications

Contract management deals with the processes and requirements applicable when the RNLAF deals with external parties. For being (and staying) export control compliant, it is essential to incorporate the applicable laws and regulations into all contracts in the whole supply chain. Furthermore, this pillar contains all the agreements the RNLAF is involved in with external parties, such as the Technical Assistance Agreement (TAA), the Warehouse Distribution Agreement (WDA) and the Manufacturing License Agreement (MLA) and the implications thereof.[25] Moreover, this pillar covers the licensing processes for the application for third party transfers and general correspondences. Because of the complexity of these export control contracts, agreements and authorizations, guidance by the Unit Export Control Compliance is given to the RNLAF personnel on all the above-mentioned procedures.

15.3.4.6 Screening

The RNLAF personnel, suppliers, customers and embedded contractors the RNLAF does business with must be screened on the proper security level, to make sure they are of proper conduct and good standing. In this pillar, all the RNLAF's requirements for an adequate screening are elaborated on, to make it a sufficiently preventive control.

15.3.4.7 Training and Communication

Without proper communication and training on export control compliance, the RNLAF's ICP would be ineffective. Therefore, to ensure that the RNLAF personnel complies with all the export control laws and regulations in its daily business, the RNLAF developed communication strategies and several training programs, such as e-learning modules export control compliance designed to create awareness at all levels of the RNLAF, as well as export control training provided to focal points, who are appointed to answer export control related questions of the RNLAF personnel on the ground. These strategies and programs are elaborated on under this pillar.

15.3.4.8 Physical and IT Security

The RNLAF took measures to ensure that export control compliance is incorporated in the security environment. It covers for example controlled access to certain RNLAF locations (physical security) and IT procedures that need to be applied (IT controls incorporated), such as the (semi-)automated SEC database that controls all re-exports of items and technical data. The SEC database is continuously developed

[25] US Department of State Directorate of Defense Trade Controls 2020b, part 124.

and upgraded according to the latest export control regulations. Without an approval of the requested re-exports of transfers in the SEC database, the items cannot be shipped or technical data not transferred to third parties. Regarding the latter, the focus is laid on the re-exports of technical data.

15.3.4.9 Recordkeeping

A properly functioning documentation and recordkeeping system is essential for an adequate ICP. In case of, for example, an external audit by DDTC, the RNLAF must be able to show the records of the past transactions, to establish an audit trail. The RNLAF has different systems for recordkeeping, such as the X-Post system. The different legal requirements for periods of recordkeeping are also covered in this pillar.

15.3.4.10 Compliance Audits

An inclusive audit system is an indispensable element for the RNLAF's ICP. In fact, this audit system allows the RNLAF to evaluate if its ICP is designed properly, is actually implemented and is working effectively to achieve its strategic goal. Therefore, operational and compliance audits need to be performed. These audits help the RNLAF to improve its ICP when gaps are found. This pillar focuses on internal and external audits and the audit tools the RNLAF uses as part of the Three Lines of Defense model.[26]

15.3.4.11 Violations and Voluntary (Self-)disclosures

All companies and organizations, including the RNLAF, sometimes commit violations. The US authorities consider a clear procedure of how to handle violations—a procedure in which is explained how the RNLAF handles voluntary (self-)disclosures—a mitigating factor. Therefore, a clear procedure of the handling of violations and voluntary (self-)disclosures is designed and presented. Furthermore, examples of non-conformities and violations are elaborated on, this in order to instruct and educate the RNLAF personnel.

[26] In the Three Lines of Defense model, management control is the first line of defense in risk management, the various risk control and compliance oversight functions established by management are the second line of defense, and independent assurance is the third. Each of these three "lines" plays a distinct role within the organization's wider governance framework.

15.4 Conclusion

This section summarizes our research and sets out some further topics for consideration.

15.4.1 Summary

In this chapter we examined how an adequate ICP for the RNLAF was developed. We described the historical context that triggered the need for an adequate ICP. In order to create an adequate ICP, we then examined the PESTL environment the RNLAF operates in. This is essential for the determination which environmental aspects should be incorporated in the ICP framework. Thereafter, the legal framework was established. This is based on scrutinizing the RNLAF's daily business (with which countries and continents does the RNLAF conduct business) and thus which laws and regulations need to be complied with. Furthermore, the different ICP frameworks were compared in order to make a combination of them to create the most adequate ICP for the RNLAF. We concluded that this should be a combination of mainly US ICP Frameworks as the RNLAF is mostly US orientated. The COSO Model as an internationally widely used best practice framework is the core which was built upon. The combination of the PESTL analysis, the legal framework and the chosen ICP Frameworks together resulted in an 11 pillars ICP, which we conclude is the most suitable ICP for the RNLAF. The steps taken and elements included in the ICP of the RNLAF and the development process in general, can be of use to any other organization that has need of an ICP and/or might be involved in developing one.

15.4.2 Consideration

For an ICP to be adequate and truly state-of-the-art, it has to be tailored to the situation (e.g., nature of items, size of the organization, national, regional and global footprint). We have seen that there is no one-size-fits-all approach, because there are no ICP (frameworks) that are ready to use instantly. Because of its flexibility, the COSO model has been used as a framework starting point for the RNLAF. Besides, other ICP Frameworks were combined with the COSO model, which enabled to design an ICP that specifically fits the organizational structure of the RNLAF, its size and daily operations. For a good development (process) of an adequate ICP it requires time (years), in depth knowledge, effort and experience as we can learn from the RNLAF. And the job is never finished, the ICP is a living program. When changes occur in laws and regulations, structure of the organization, or personnel the ICP is updated in real-time and communicated throughout the organization.

Another topic of consideration is the following: the native tongue of the RNLAF personnel is Dutch. Although on average they have a fair knowledge of English, for an adequate implementation of the ICP, the RNLAF chose to document the original version of the RNLAF ICP in Dutch. Its availability in the personnel's native tongue is a requirement for the ICP to be embraced at all levels, so that the procedures and working instructions can be understood and applied. It is also imperative for the RNLAF to establish a culture of compliance within the RNLAF. Therefore, training is provided throughout the organization to create awareness, working procedures in chart are published on the intranet, rules and regulations elaborated for their proper application and focal points are created on all levels for questions and support.

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Chapter 16
Arms Exports and Export Control of the Dutch Republic 1585–1621

Michiel de Jong

Contents

Abstract The Dutch Republic underwent a process of state formation, accelerated economic growth and military reforms during the Eighty Years War. In particular between 1585 and 1621, Dutch merchant-entrepreneurs built up a burgeoning arms industry and sector of arms exports. These exports required a system of passports, still an under-researched theme in current literature, organized by the States-General and admiralties in order to support exports to neutral and allied states, but to forestall these did not fall into enemy hands. In particular, the system of passports shows how merchants, acting as intermediaries between allies and the States-General and the admiralties, could meet the volatile demand of war materials. As a result, the supply side of the export market was oligopolistic, but the composition of the group of oligopolists varied depending on the region and the prevailing market conditions in question. From this study it can be concluded that the system of export control had only a limited effectiveness regarding the creative arms exports to Spanish Habsburg destinations, due to divergent central and local interests. However, the major part of the Dutch arms exports flowed to allies such as France, Venice, Sweden and the German protestant states. Dutch merchants provided them with batches of strategic materials and total package-deals of armaments for entire army and navy units. From

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1621, the States-General supported these transactions by supplying war materials from the state arsenals fostering timely and largescale deliveries, meeting volatile demand conditions.

Keywords Arms · export · control · Dutch Republic · Eighty Years War · The Netherlands

16.1 Introduction

The current post-Cold War world and Early Modern Europe share two geopolitical and -military conditions: multipolarity among major powers and the significant role of entrepreneurs in the supply and service of their armed forces. One will also observe that the majority of the current European states, including The Netherlands, were founded in Early Modern Europe. After the start of the Dutch Revolt a burgeoning arms industry and trade sector was built up in a young Dutch Republic in the middle of interrelated processes of economic growth, military reforms and state formation between 1585 and 1621. Although this arms industry and trade managed to serve a domestic market on which the Dutch state army, the admiralties, and the Dutch East India Company formed important factors of demand, the arms export rapidly developed too. The arms exports of the Dutch Republic underwent an enormous growth supported by the import, processing and transit of raw materials, semi-finished and finished products and the building of the domestic industry. Parallel to the growth of this sector, the state authorities of the young Republic, in particular the States-General and the admiralties, tried to control it by means of a system of passports and sureties in order to regulate the flows of export.

Starting out from this context, this chapter aims to determine the origins and effects of the Dutch state policy to control arms exports in relation to the development of the Dutch arms market between 1585 and 1621. Firstly, this chapter explains how this system worked and what goals the States-General and the admiralties aimed to achieve. Secondly, the significance of arms exports for allies, neutrals and opponents of the Republic is discussed. From a broader strategic perspective, armaments and a number of goods for dual use, civil and military use, were also a matter of concern for the Dutch authorities, in particular regarding the army and naval campaigns of the Spanish Habsburg Empire and their allies around the Republic. The States-General not only perceived Habsburg threats in the campaign theatre of the Netherlands, but also within European and overseas theatres, and took threats towards their allies into account too. The first two topics lead to a third one: to what extent was the Dutch state policy for arms export control effective? In order to assess its effectiveness, the arms exports on France, the biggest ally, and those on the Spanish-Habsburg territories, the enemy of the Dutch Republic, are discussed. These examples illustrate how far government regulations on arms exports extended and influenced these. The divergent interests of the States-General and the admiralties also had important implications for these government regulations and thus for the development of the Dutch arms

exports. Finally, this chapter aims to determine the effects of the development of the Dutch arms exports and system of export control on the market organization of entrepreneurs on the supply-side. In doing so, this chapter determines whether opportunities occurred for monopolies and oligopolies on the supply side and which significance the arms export and the state authorities attempts to regulate it, had on the development of the Dutch arms industry.

16.2 Regulation of Arms Exports

The government of the Dutch Republic set the boundaries within which the Dutch arms exports developed. The States-General decided quite early on to control and regulate the export of arms. After the establishment of the admiralties in 1586, these councils and the States-General gradually created a system for the issue of passports by resolution for the export of armaments, shipbuilding materials and victuals.[1] Kernkamp was the first historian to write about these exports and this licensing system in his study of the contraband trade between the Republic and the Southern Netherlands, Spain and Portugal. However, he focused on the trade in victuals and shipbuilding materials, but not specifically on the arms trade. In more recent contributions Vogel has provided more insight in the Dutch arms exports and government regulations during the Eighty Years War.[2]

How did the arms export passport system work? The granting of passports was linked to the payment of export duties on enemy (license fees) and neutral destinations (convoy fees). Depending on the port of departure, merchants of arms had to submit requests to one of the admiralty colleges.[3] In 1597 five admiralties each controlled a district of seaports and rivers in order to tax the riverine and seaborne trade for the equip a part of the state fleet and to protect convoys of merchant vessels *en route* to European ports. Consent or permission was then granted on such a petition by the Councils of Admiralty, after which the specified goods could be exported. Clauses were added to the consents that were intended to regulate legal arms exports.

As example I take the petition of Pierre de Jourdaen, a Middelburg merchant. On 21 July 1590, he requested to export three dozen muskets and arquebuses, and armour and forks to Caen. The Admiralty of Zeeland granted him permission, provided that he would pay the convoy duties on these arms and a deposit for their market value. Within two months he had to rejoin the Admiralty College in Zeeland, with

[1] The admiralties and the States-General were the most important institutions that issued passports. To a lesser extent the Council of State and the Stadholder held the right to issue passports. Before 1586 also the States of Holland and the States of Zeeland issued passports for the exports of war materials. For example: ZA ASZ 469: Resoluties Staten van Zeeland (Res.SZ) 08.08.1584, f.110v, 18.09.1585, f.127.

[2] Kernkamp 1931–1934; Vogel 1997, pp. 197–210; Vogel 1993, pp. 13–21. A very insightful study of the Dutch trade of shipbuilding materials from Northern Europe to Spain offers the recent dissertation of Jiménez Montes 2020.

[3] Merchants also had to request passports for the export of shipbuilding materials and victuals.

a certificate of delivery of the weaponry, signed by the governor or city council of Caen. He would lose his deposit if he did not comply with these rules. The limited shipping time aligned with the estimated maximum duration of the return trip to Caen. These timeslots varied according to the destinations: six weeks for a return journey to London, and three months for one to La Rochelle or Bordeaux.[4] In view of the high deposits, sometimes amounting to the double market value, it can be assumed that the consents led to actual arms exports.

On the basis of such passports, I have investigated the Dutch export of arms, semi-finished products for arms, and raw materials for gun founding and gunpowder production, in particular from the Zeeland and Amsterdam admiralties, that accounted for the biggest export flows. The issued passports of the States-General in their resolutions provide for back up information for a few years in which no admiralty records were available.

From 1600 onwards merchants were obliged, based on resolution, to first request a passport for the export of arms at the States-General before applying for a similar passport at a Council of the Admiralty. At times the admiralties issued large numbers of passports when the demand for arms abruptly increased to certain destinations. Not infrequently they issued passports without prior consents of the States-General.[5] The opportunity to collect additional revenues were simply too tempting and several admiralties sometimes acted explicitly against the prevailing regulations of the States-General.

Whereas the admiralties were led by financial interests, for every request the States-General took the national strategic interest into account. The deliberations leading to their decisions, often short, sometimes more elaborate accounts, were inserted in their resolutions. They prohibited the export of war materials to enemy destinations. In the case of a neutral destination, as shown in the example above, clauses of a limited shipping time, a deposit and proof of delivery to the specified destination had to prevent that war materials ended up in Spanish-Habsburg territory. Arms exports served the foreign policy of the Dutch Republic if the foreign buyer pursued an objective that was in line with the interests of the States-General. With these interests in mind, the States-General made it compulsory from 1600 onwards that passports and consents had to be applied for first from them and only secondly from the admiralty under whose district the port of export resorted.

Whether or not a request for arms export was consented upon depended on the export bans of the States-General. These bans were made public through placards and forwarded by letter to the admiralties. Sometimes the admiralty asked for advice at the States-General, if these prohibitive regulations could not provide clarity over a certain request. In case of uncertainty, arms could be exported without consent, or, in other words, as disguised illicit trade.

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[4] NA AA 2448: Res.Adm. Zeeland 06.08.1590, 01.04.1591, 30.12.1591, 11.09.1592, 21.09.1592.

[5] Vogel 1993, p. 16. NA AA 2447, 2448: Res.Adm. Zeeland 13.06.1584–31.12.1595. Examples are the exports to France in the years 1590–1598 and to England in the years 1639–1648. De Boer 1941. A thorough insight in the activities of the various state institutions of the Dutch Republic offers: Groenveld 1984. About the Dutch arms export to England: Edwards 2000.

The divergent interests of the admiralties and the States-General illustrate the difficulty of developing and delimiting the power and competences of the central state institutions in relation to the regional institutions in the Dutch Republic. There was a certain imperfection in the formation of the Dutch state, because local authorities took limited notice of higher authorities and local interests prevailed. However, the States-General tried to improve their control on arms exports, and to curtail the admiralties' interests. This shows the dynamics of action and reaction in the state-building process of the Dutch Republic.

16.3 Extent of Exports

The series of admiralties' consents only indicate the minimum scale of the arms exports. First of all, due to more focus on other matters, not all requests and consents were recorded in an admiralty's resolutions. Secondly, only fragmented or summarily updated resolutions exist for the admiralties of the Noorderkwartier, Friesland and Rotterdam. Most of the flows of armaments, however, were exported from ports under the jurisdiction of the admiralties of Zeeland and Amsterdam and fortunately their resolutions cover most years of the Eighty Years War. The requests and consents recorded in the resolutions of these two admiralty boards therefore clearly reflect the main trend in the Dutch arms exports.

Table 16.1 shows the estimated value of arms exports via both admiralties. The quantities stated in the requests and consents were combined with the serially available price data of deliveries to the Zeeland arsenals for the State army and the admiralty of Zeeland. These data reflect the prices for arms on the Zeeland and Amsterdam markets in the period under scrutiny.[6] After 1600 only a small flow of armaments was exported via Zeeland and almost all exports originate from the district of the Amsterdam admiralty. This trend reflects the relocation of merchants' activities after the fall of Antwerp from Vlissingen and Middelburg to Amsterdam and the diminished economic significance of Zeeland at the end of the sixteenth century.

The arms exports peaked between 1590 and 1595, 1604 and 1612, and 1616 and 1621, and reflect the increased and steep demands in certain European areas due to wars. Table 16.2 differentiates the export flows of arms via the Amsterdam admiralty per area.

During the first export boom arms exports mainly went through Zeeland waters to both territories of the French king Henry IV and of the rebellious League. Various French companies, regiments and admiralties continued to be important buyers of Dutch gunpowder, sulphur, saltpetre, firearms, bladed weapons and guns.[7] Although difficult to calculate, Dutch merchants ran an important transit trade to the Spanish

[6] ZA ARC 10–360: Rek.ontv.gen. te lande 1573–1621. ZA ARC 614–640: Rek.ontv.gen. te water 1586–1621.

[7] Vogel 1993, pp. 16–17. NA AA 2447, 2448: Res.Adm. Zeeland 13.06.1584–31.12.1595.

Table 16.1 Arms exports of the Dutch Republic via the admiralties of Amsterdam and Zeeland, 1585–1621 (in carolus guilders)

Year	Zeeland admiralty	Amsterdam admiralty	Year	Zeeland admiralty	Amsterdam admiralty
1586	–	–	1604	1392	5112
1587	–	–	1605	0	87623
1588	5666	3316	1606	0	227909
1589	21762	2252	1607	1061	143799
1590	16511	7775	1608	679	155737
1591	48781	2548	1609	1080	20076
1592	25509	7077	1610	0	125038
1593	23037	13313	1611	0	111528
1594	17712	19562	1612	1046	23899
1595	8189	–	1613	2	32783
1596	–	–	1614	519	38888
1597	–	–	1615	70	19929
1598	–	–	1616	0	8065
1599	–	8351	1617	8250	74212
1600	–	21345	1618	0	69993
1601	–	7041	1619	900	110
1602	260	20136	1620	–	71000
1603	675	7404	1621	–	57172

Note No figures available for the open years
Source NA AA 2447–2454: Resolutions Admiralty of Zeeland 13.06.1584–30.12.1621; NA AA 1334–1367: Resolutions Admiralty of Amsterdam 04.02.1586–21.12.1621

Southern Netherlands and the Iberian Peninsula via North-French ports such as Dieppe, Boulogne, Calais; Rouen and Le Havre east of the Seine estuary; and ports in Southwest-France such as Bayonne, La Rochelle, Bordeaux.

The Italian territories developed into a second important market for war materials mainly due to the great orders of the Republic of Venice in the years 1606–1608 and 1616–1619. In those years, Venice fought defensive campaigns against the Habsburg and Ottoman forces in Europe and thus became an attractive ally for the Republic in the Eastern Mediterranean. In an imminent conflict between 1606 and 1608 with the Papal States, Venice purchased weapons for the first time on a large scale, in particular saltpetre, sulphur and gunpowder. The war of Venice against the Austrian Habsburg Empire and the privateers supported by Vienna, the Uskoken, again resulted in large orders from 1616 onwards for gunpowder and saltpetre and the equipment for rented and bought warships. After Venice, Livorno, the free port of the Duke of Tuscany, and Genoa followed as important arms export destinations.[8]

[8] Geyl 1913; Vogel 1993, p. 19; Engels 1997, p. 87.

Table 16.2 Arms exports of the Dutch Republic via the admiralty of Amsterdam, according to export destinations, 1585–1621 (in carolus guilders)

Year	France	Italy	Northern Germany	Sweden	Baltic	Denmark	England	Muscovy	Malta	Barbary	Other
1586	–	–	–	–	–	–	–	–	–	–	–
1587	–	–	–	–	–	–	–	–	–	–	–
1588	–	–	616	–	–	–	2700	–	–	–	–
1589	1349	–	903	–	–	–	–	–	–	–	–
1590	3950	–	1593	–	2116	–	116	–	–	–	–
1591	78	–	2470	–	–	–	–	–	–	–	–
1592	1894	–	–	5183	–	–	–	–	–	–	–
1593	11920	–	1393	–	–	–	–	–	–	–	–
1594	15252	–	200	–	2375	–	250	–	–	1485	–
1595	–	–	–	–	–	–	–	–	–	–	–
1596	–	–	–	–	–	–	–	–	–	–	–
1597	–	–	–	–	–	–	–	–	–	–	–
1598	–	–	–	–	–	–	–	–	–	–	–
1599	–	–	4497	–	–	875	1180	–	–	1800	–
1600	1161	–	8525	–	8363	–	816	1800	–	–	–
1601	805	–	4390	223	626	228	771	–	–	–	–
1602	2340	16	10125	990	–	–	6638	27	–	–	–
1603	108	–	39	–	2000	153	5104	–	–	–	–
1604	440	–	3858	72	653	–	90	–	–	–	–
1605	1680	–	–	74000	–	–	1783	10160	–	–	–
1606	5610	194870	12618	6	180	14445	–	180	–	–	–

(continued)

Table 16.2 (continued)

Year	France	Italy	Northern Germany	Sweden	Baltic	Denmark	England	Muscovy	Malta	Barbary	Other
1607	1270	127902	1116	8096	109	–	–	4611	–	–	695
1608	58136	49805	20246	22235	–	605	503	2445	1290	473	371
1609	2440	5282	358	–	400	1105	–	5285	–	3710	1125
1610	–	39471	83103	–	–	–	–	–	–	–	2464
1611	1750	–	76045	623	–	32510	–	–	–	–	600
1612	3126	–	646	–	7482	–	–	1140	–	–	11505
1613	10433	3940	3461	–	5600	3225	1952	2941	–	–	1430
1614	25968	–	284	–	30	–	900	5901	5805	–	–
1615	4218	–	448	–	–	–	3222	–	12041	–	–
1616	6000	–	1680	–	–	–	–	–	–	385	–
1617	5850	–	7466	37725	–	–	25170	–	–	–	–
1618	36551	–	643	6300	–	4500	–	20000	–	–	2000
1619	–	–	–	–	–	110	–	–	–	–	–
1620	–	–	66500	–	–	–	–	4500	–	–	–
1621	47600	–	–	–	–	–	4500	–	–	272	4800

Note No data available for 1586, 1587, 1595–1598. Other destinations were: Guinea (1607, 1618, 1621), Spanish territories (1609, 1610, 1612: 5235, 1613) and unknown (1608, 1612: 6270).
Source NA AA 1334–1367: Resolutions Admiralty of Amsterdam 04.02.1586–21.12.1621

A third sales market formed the North German ports of Emden, Bremen and Hamburg. Dozens of muskets and arquebuses were sold to their local bourgeoisie. Many Amsterdam merchants supplied the local merchant navy in Emden with arms, in particular iron cast guns. Bremen and Hamburg served as destinations for war materials for Brunswick-Lunenburg and Brandenburg, allies of the Dutch Republic during the War of the Jülich Succession (1610–1614) and the Thirty Years' War (1618–1648). However, the Hanseatic ports of Bremen and Hamburg also fulfilled an important transhipping function to enemy ports such as Bilbao, Santander, La Coruna, Seville, Lisbon and Malaga.

After the top three of export markets Sweden and Danzig, Konigsberg and Lübeck followed. Within these Hanseatic ports the merchant navy were in demand for iron and bronze cast guns, and the local bourgeoisie imported firearms and side arms. From 1592 onwards Duke Charles of Sweden, even as France, bought complete packages of firearms, bladed weapons, powder and ammunition for the equipment of regiments and companies.[9] The Swedish demand for war materials increased during the Kalmar War against Denmark (1611–1613). However, in 1612 the States-General temporarily prohibited exports to Sweden, but a year later these exports rose steeply again. When the Danish king also tried to import weapons and troops raised in Northern Germany via Frisian ports, the States-General prohibited this in 1612.[10] After 1613 arms exports to Denmark via Amsterdam resumed, but these exports only grew substantially during the Danish intervention in the Thirty Years' War (1620–1625).[11]

Between 1585 and 1621 the demand on the English market concentrated on armour parts, sword blades and rapier hilts, which were transported to London for their assembly into full-fledged weapons. Iron cast guns were not in demand, as English gun founders provided these relatively cheaply. After the peace with Spain in 1604, the English demand for weapons from the Republic decreased.

Among the more irregular, yet at times large, clients were Malta, Moscow and Barbary. Mainly consignments of sulphur and the muskets for the gunpowder industry and the Moscow bourgeoisie were exported to Muscovy. Malta, the privateer base

[9] An example is the export delivery of 65 muskets, 280 arquebuses, 1.000 helmets, 140 harnesses, 300 pikes, 150 rapiers and cutlasses and 330 pounds of matches in: NA AA 1338: Res.Adm. Amsterdam 27.06.1592. An example of another package-deal to Sweden: 2.000 muskets, 1.000 harnesses, 2.000 rapiers, 500 cavalry arms, 10.000 pounds of gunpowder and 100.000 pounds of matches: NA AA 1363: Res.Adm. Amsterdam, 09.06.1617. For the French export see for example: NA AA 1335–1338, 1340, 1343: Res.Adm. Amsterdam 06.06.1589, 10.07.1589, 11.09.1590, 12.05.1592, 08.04.1593, 20.07.1593, 12.07.1594, 11.11.1597.

[10] NA AA 2452: Res.Adm. Zeeland, 26.03.1612 A request to the admiralties via a letter of the States-General of 17.03.1612, whereupon in accordance with a resolution of the king of Denmark the States-General decided to forbid the trade to Sweden. NA AA 1358: Res.Adm. Amsterdam, 28.08.1612 A request to the admiralties via a letter of the States-General of 09.08.1612, whereupon in accordance with a resolution of the king of Sweden the States-General decided to forbid the trade to Denmark. NA AA 1358: Res.Adm. Amsterdam, 27.04.1612 Copy of a letter of the States-General of 10.04.1612 whereby the 'toevoer van krijgsvolk en commoditeiten van oorlog' was banned to both states. See also: NA AA 1358: Res.Adm. Amsterdam 24.03.1612.

[11] NA AA 1357, 1360: Res.Adm. Amsterdam 28.09.1611, 20.12.1611, 30.10.1613, 17.10.1614.

of the Johannite Order, was not only a major buyer of shipbuilding materials, but also of cannon balls and gunpowder.[12] However, Dutch merchants also supplied Malta's archenemies, the Barbary corsairs and Morocco, with war supplies as part of a Mediterranean triangular trade. Holland and Zeeland ships transported war materials, including Italian sulphur and provisions, to privateer bases such as Safi, Algiers, Tunis and Tripoli, shipped captured batches of sugar and brazil wood to Livorno, Tuscany's free port, and closed the triangle by shipping Levant goods such as silk and raisins to Western European ports.[13]

The export peaks correlate with the volatile war conditions for France, Venice, the German Protestant states, Denmark and Sweden. From 1590, the friendly relationship of the States-General with France developed into an alliance in which the Dutch Republic, in addition to subsidies and troops, exported and supplied war materials to the French king. From the Twelve Years' Truce (1609–1621) onwards, the Dutch Republic developed or continued alliances with Venice, the German Protestant states, Bohemia, England, Sweden and at times with Denmark.[14] Dutch arms exports to these states were, as Vogel concludes, closely related to the Dutch *raison d'état*.[15] This phenomenon was part of the intensification of the Republic's diplomatic relations with other European powers and the gradual maturing of this young state. This process ran parallel to what Barbour calls the intensification and expansion of Dutch trade, including the arms trade.[16] Those merchants who specialized in the support of these allies could continue their contacts in the arms trade and became more regular suppliers.

16.4 Products

One of the comparative advantages of the Dutch Republic as an arms market was the availability of a versatile range of armaments on the supply side. In particular the package deals for companies, regiments or fleet units of European allies were a

[12] The data on the export markets presented here are based on the requests and consents in: NA AA 2447–2454: Res.Adm. Zeeland 13.06.1584–30.12.1621. NA AA 1334–1367: Res.Adm. Amsterdam 04.02.1586–21.12.1621. NA AA 1334–1367: Res.Adm. Amsterdam 04.02.1586–21.12.1621. For Malta see: NA AA 1352, 1354, 1360–1362: Res.Adm. Amsterdam 03.04.1606, 09.05.1606, 20.11.1608, 13.05.1614, 31.03.1615, 19.10.1616.

[13] Zeeland with its deep coastal waters and an important transit function in the arms trade formed an attractive base towards the Southern Atlantic and Mediterranean. Thus, we encounter early examples of requests and consents to Barbary. On 28 September 1592, Eustaes Trevasche, a London merchant, successfully asked permission to export 8000 pounds of sulphur to Barbary on the condition he did not visit any Spanish fortresses in Northern Africa. NA AA 2448: Res.Adm. Zeeland 28.09.1592; Heeringa 1910, pp. 1108–1110; De Jong 1998, pp. 46–47.

[14] De Jong 2005, Chap. 9.

[15] Vogel 1997, p. 199.

[16] Barbour 1963.

very attractive selling point.[17] These involved enormous amounts in order to equip complete units. An early example is a delivery in 1592 to a Swedish regiment of 1,500 men for the war against Muscovy. It consisted of 200 muskets, 800 arquebuses, 1,000 helmets, 350 complete harnesses (with thigh and arm pieces), 1,000 pikes, 500 rapiers and cutlasses, and 30 drums.[18] In the Republic, foreign powers equipped their recruited troops with gunpowder, fuses, bullets, firearms, bladed weapons, helmets and armour. These successful packages stimulated the Dutch arms industry to coordinate the production and unite the supply of its various components. Starting out from the customer's wishes these package-deals were created in close interaction between supply and demand. The rise of these deals and its component parts were undoubtedly an incentive for standardization of troops and their equipment in European armies.

How were the package deals obtained? These were produced in the industrial centres in Holland, Zeeland and Utrecht. The organization of production aligned with the supply via the import of raw materials, auxiliary materials and fuels, and semi-finished products. Merchant entrepreneurs organized trade with the supply areas, the domestic industry and the export markets. Musket, sword and armour makers were active in Amsterdam, Rotterdam, Utrecht, Delft, Dordrecht and The Hague. They assembled parts of firearms from Liège, Brunswick and Suhl with locally produced stocks into muskets, arquebuses and pistols. Sword makers and armour makers processed sword blades and hilts, and armour parts from Liège and Solingen into finished products.[19] Bullets were crafted by blacksmiths using English, Swedish and Spanish iron or imported directly from Sweden, Poland and Brunswick. In Gouda and Utrecht, matches were spun from local hemp or imported Baltic hemp.

Various merchants were able to organize these packages of arms, based on imported, assembled and finished materials, such as Ghijsbrecht Cornelisz. van Culenberch from Utrecht and Wouter Buys from Middelburg did in the same way as their deliveries of armour, helmets, pikes, muskets and arquebuses for the Dutch State army.[20] Standardization of the armament of the Dutch state army played an important role in the delivery of packages and this development became known to foreign buyers and suppliers at an early stage. In 1604, the German Emperor was permitted by the States-General to buy 3,000 arquebuses, "made in the Dutch way" and Liège musket makers were familiar with muskets according to the Dutch model.[21]

The largest sums in arms exports, however, comprised warships and stocks of strategic materials. For example, Caspar van Ceulen exported 600,000 pounds of

[17] Vogel 1993, p. 14.

[18] Vogel 1997, p. 200.

[19] Kist et al. 1974; Gaier 1976.

[20] De Jong 2005, Chap. 1.

[21] Vogel 1993, p. 18; Yernaux 1939, p. 279.

gunpowder, 100,000 pounds of sulphur and 100,000 pounds of matches to the Venetian Republic in 1606–1608 for its war against the Papal States and, through consultancy of the States-General, free of convoys, licenses and tolls.[22] Strategic commodities such as sulphur and saltpetre were transited from respectively Italy and Sweden, and from Lorraine, Poland and, after 1622, India. Amsterdam merchants with shares in the gunpowder industry dominated this transit trade of sulphur, saltpetre and gunpowder.

The equipment of the merchant navy abroad formed a third category and concerned the transit of English and German iron cast guns.[23] Finally, there existed a more small-scale export of dozens of firearms and bladed weapons to clients from La Rochelle to Archangel.

16.5 Government Arsenals

Not only its versatile range, but also its relatively short supply lines and subsequent timely deliveries made the Dutch arms market attractive for foreign demand. Agents, trade factors and ambassadors supported deliveries with letters of recommendation in order to obtain the necessary passports. With the consent of the States-General, these export batches were sometimes supplemented or even delivered entirely from the provincial and admiralty arsenals of the Dutch Republic.[24] The advantages for arms merchants were huge: they did not have to keep stocks, they could deliver quickly and on a regular basis, and put together versatile total packages for complete army and naval units. Therefore, these total packages were also created through an intensive and flexible interaction between private individuals and the public sector. The interests of the Dutch Republic were also served: the arms trade served to support anti-Habsburg allies, generated revenues from import and export duties, and old stocks were timely sold in accordance with reduced numbers of army companies and warships during the Twelve Years' Truce.

From 1600 onwards, a comparison between the passports of the admiralties with those of the States-General on the same arms transfers is possible. The requests and consents of the admiralties almost always mention the merchants and arms involved and sometimes the ambassador's recommendations. The related first passports from the States-General only occasionally mention the merchants, but do include per arms batch partly or complete sales from the state arsenals and the ambassador's recommendations. It appears that deliveries from state arsenals for arms exports, however, only started to play a significant role after 1621. Before 1621 such deliveries only occurred sporadically. It means that the exports rose independently during the

[22] NA AA 1352–1354, Res.Adm. Amsterdam 04.09.1606, 07.08.1607, 23.07.1608. In comparison: Abraham Verbeeck exported 5000 pounds of matches and 2000 pounds of gunpowder to Venice: NA AA 1354: Res.Adm. Amsterdam 21.11.1608.

[23] The German iron cast guns were also called 'Suyrlandse', or of Sauerland origin.

[24] Vogel 1993, pp. 14–16.

Twelve Years' Truce. Together with the demand from the Dutch merchant navy and Dutch East India Company, the three sectors compensated to a certain extent for the falling orders for army and fleet. This prevented adverse effects on employment and continuity of the arms industry.

16.6 Trade with the Enemy

Trade with the enemy was a well-known phenomenon during the Eighty Years' War.[25] What was its importance for the Dutch arms exports? As stated earlier, arms exports to Spain headed for ports in Northern Spain and Southwest France, while those to the Spanish Southern Netherlands and the Spanish territories in the East-Netherlands ran via ports in Northern France and the North-German territories. Another detour was possible to Hamburg and Bremen, from where a transit route, with papers from the Hanseatic League, or in Hanseatic ships, headed for Spain and Portugal too.

Around 1585, the Dutch opportunities to export arms to Spanish territories were influenced by turbulent, international trading conditions. After the signing of the Treaty of Nonsuch on 10 August 1585, Queen Elizabeth had sent English troops commanded by Sir Robert Dudley, the Earl of Leicester, to the relief of the Dutch provinces. English garrisons held Brielle, Flushing and Rammekens as sureties for the Dutch repayments of these troops. Moreover, the Earl of Leicester became governor-general and supervisor of the collective war effort of the Dutch provinces in 1586, which enabled him to control the young Dutch admiralties and thus all flows of Dutch export trade.[26]

Since 4 August 1586 the Earl of Leicester had banned all trade on Spanish territories, the French ports east of the Seine estuary and all German ports west of Bremen. Nevertheless, the Zeeland admiralty continued to permit the export to Spain of bronze and copper for the founding of bronze guns. After repeated English protests and complaints from the States-General, the Zeeland admiralty banned this arms trade in 1590. Yet, several merchants continued their now illicit exports, declaring false destinations such as La Rochelle, Bordeaux and Bayonne in their requests.[27] In addition, bronze, copper and gunpowder were transited over Bayonne via sea or land routes to Bayona, Laredo and San Lucar in Spain. Frequently Zeeland merchants participated in the transit of these war materials to Bilbao and San Sebastian.[28] False Dutch passports or foreign passports were also used to sail on to Spanish ports.[29] Another method was to hide the war materials under different, preferably heavy, cargo and

[25] Kernkamp 1931–1934.

[26] Israel 1995, pp. 219–228.

[27] NA AA 2447: Res.Adm. Zeeland 28.11.1586.

[28] Wernham 1969, pp. 224, 390.

[29] Wernham 1969, pp. 439–440.

to export it under a different name, which seriously hampered visitations at sea of Dutch or English admiralty ships.[30]

In addition to these tricks, good trade contacts and provision of information were indispensable for arms exports to the Spanish market. Regular correspondence with consortia and trade agents in the Spanish ports informed the Zeeland and Dutch merchants of precise data. For example, Hans Vlack, a merchant from Goes, asked his son, being his agent in San Sebastian, to write regularly what types of weapons and ship equipment were most in demand and to specify their measures and weights in order to ensure quick delivery.[31] Vlack also corresponded on arms and ammunition with Jan Verhagen and Jan van der Bogaarde in Bilbao, who supplied directly to the provedor, the ammunition master of the Spanish navy! Apparently, such consortia accounted for a substantial part of the deliveries to the Spanish armed forces.[32]

Weapons were exported to the Southern Netherlands too. However, offices of the Zeeland admiralty and state fortresses, the blockade fleet of the admiralties of the Flemish coast and Dunkirk privateers prevented access to Antwerp and Flanders. However, Abbeville, Boulogne, Calais and Dieppe in Northern France provided a good alternative in times of peace between France and Spain, from here good country roads led into the Southern Netherlands. No wonder merchants regularly applied for passports at the Zeeland Admiralty to export weapons to these specific ports.[33]

However, the significance of the arms trade in the Southern Netherlands should not be overestimated due to the near location of the large arms industry of neutral Liège. The phenomenon observed by Israel that the trade in victuals on the enemy via Northern French ports increased or decreased respectively with increasing or decreasing license fees on the trade flows via the Meuse and Rhine, or closing and opening these rivers, probably did not apply for the arms trade to the Southern Netherlands.[34]

At the start of the Twelve Years' Truce, the conditions for arms trade to Spain and the Southern Netherlands seemed more favourable. In 1610 and 1612 Amsterdam merchants promptly applied to the admiralty of Amsterdam for the export of saltpetre and sulphur to Spanish destinations. Yet, the States-General and the Amsterdam admiralty turned down similar requests for gunpowder export, after gathering intelligence that these were intended for a fleet in Havana and a naval squadron in Lisbon, because the hostilities with the Habsburg Empire continued overseas.[35]

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[30] Wernham 1969, p. 223.

[31] Wernham 1969, p. 224.

[32] Wernham 1969, p. 390.

[33] In the period between 1604 and 1621 no request for Dover in England were found. The arms trade via Dover to Flanders would after 1621, and interrupted through the English-Spanish War of 1625–1630, increase enormously. Kepler 1972, p. 279, 282; Taylor 1972, pp. 236–260.

[34] Israel 1980, pp. 462–463, 489–491.

[35] NA AA 1356, 1358: Res.Adm. Amsterdam 15.03.1610, 14.02.1612.

16.7 Exports to France

A major part of the arms exports opted for France. Only France regularly purchased large quantities of war materials for their army and navy in the Republic. The civil war between the Catholic League and the Protestant king Henry IV made France an attractive export market. The States-General regarded France, that is to say the Protestant camp of Henry IV, as their main ally and sent substantial subsidies to the royal French forces between 1593 and 1598. After the peace of Vervins between France and Spain (1598) and the Triple Alliance between England, France and the Republic, French subsidies between 1600 and 1609 played a major role in the payment of, in particular the French regiment of, the States army.[36]

The French purchases on the Dutch market took place in a decentralized and centralized manner. French governors, captains and superiors purchased war materials themselves from French and Dutch merchants. The French ambassador supported all their requests for arms export from the States-General and the admiralties with letters of recommendation. Moreover, the French king ordered large amounts of arms centrally from the Dutch Republic. This resulted in a regular export of a wide range of raw materials and semi-finished and finished products, including thousands of pounds of gunpowder, sulphur, saltpetre, lead, bullets, iron and bronze cast guns, hundreds of pieces of armour, bladed weapons and firearms. Carlo Cipolla attributes their extensive French purchases on the Dutch market to the destructive impact of the Wars of Religion. He assumes that during the war experienced craftsmen fled France *en masse* leading to severe losses of production capacity of the French arms industry.[37] However, the import of gunpowder, saltpetre and sulphur to ports such as Dieppe, Caen, La Rochelle and Bordeaux indicates the existence of local powder mills. Although semi-finished products such as sword blades, blades of rapiers and armour plates were sometimes exported as well, mainly complete bladed weapons and firearms predominated in export to France between 1590 and 1621. This proves Cipolla's point: the French industry could still supply gunpowder to the French army and naval forces, but lacked producers of swords, arquebuses and muskets.

From 1588 a major part of the arms to France were exported via Zeeland waters to Caen, Grandville and Dieppe in Normandy, St. Malo and Rosco in Brittany, Calais and Boulogne in the North and Southwestern ports such as La Rochelle, Bordeaux and Bayonne. Consequently, this trade was mainly a Zeeland-French affair in which merchants from Middelburg, Vlissingen, Caen and Dieppe participated. As was common practice, the arms trade followed in the wake of other trades of existing merchant networks. The Rotterdam banker and merchant Johan van der Veecken remitted money to Paris and sent weapons for the Protestant troops to Dieppe during 1595–1598 through his brother-in-law Nicolaas Quingetti in Paris. Earlier, before 1595, he paid his brother-in-law the salary of the agent of the States-General in

[36] Vogel 1993, pp. 16–17.

[37] Cipolla 1996, pp. 66–67.

France by exchange. Likewise, Wouter Buys of Middelburg relied on his brother in La Rochelle for the arms sales to the royal French army.[38]

The armed forces of the League formed an attractive sales market too for English, Dutch, Zeeland and Hanseatic merchants. After Leicester's political failure in 1588 and the foundation of the Dutch Republic, the English authorities remained keen to stop the illegal arms export to the League. In Zeeland, a network of spies informed the English governor of Flushing, Sir Philip Sidney, on this smuggling trade of mainly Zeeland ships to the League and Spanish territories. In turn he regularly informed the Lord High Admiral and the Lord Treasurer. The Lord High Admiral sent English warships in order to intercept these ships, and agents of the Zeeland traders in Dover, the States of Zeeland and the Dutch Republic often contacted the Lord Treasurer to represent the interests of Zeeland merchants whose war materials had been intercepted.[39] These correspondence channels show how the trade to the League was organized.

Thus, a considerable number of French destinations, mentioned in the merchants' requests for export to France at the Zeeland admiralty, can be seriously questioned. In 1589 three ships from Middelburg and Flushing unloaded supplies and ammunition in Le Havre, a League port opposite the royal port of Caen. A year later three ships of Cornelis Meunicxs of Middelburg unloaded their cargoes of ammunition, instead of Bordeaux, in the League ports of St. Malo and Nantes.[40] The timeslot in the clause of the passports provided for sufficient time, and attestations to be submitted with the request could be falsified. In practice, the Zeeland Admiralty tolerated arms smuggling and Meunicxs ship went unpunished after its return in Zeeland. The admiralty's ships even escorted seventeen ships, including ones of Zeeland, to Le Havre, instead of Caen.

After French and English complaints, the States-General banned these trade flows in several edicts. License fees were levied on the export to all French destinations, instead of the convoy fee for royalist destinations. And from 1591, arms merchants needed to supplement their requests with letters of recommendation. Nevertheless, the Zeeland admiralty did not care to enforce these measures. Joos Nevejans of Middelburg lacked a letter of recommendation, but was permitted to export 4,000 pounds of gunpowder, 200 arquebuses, 60 dozen gunpowder bottles to Caen. Consignments of weapons, bronze and copper were also granted without further ado for League ports in Brittany. Other examples show that also the States of Zeeland and the city council of Middelburg protected the interests of the Zeeland arms dealers.[41] The regional interests prevailed, even where they clashed with those of the States-General, and this shows that the aspect of state formation was still incomplete.

The French king also had financial motives for his objections to arms exports to the League. In 1591 he tried to concentrate this arms trade in the royalist ports of

[38] NA AA 2447: Res.Adm. Zeeland 22.08.1588.

[39] Wernham 1969, pp. 125, 178, 224, 229, 289.

[40] Wernham 1969, pp. 125, 178, 224, 229, 289.

[41] NA AA 2448: Res.Adm. Zeeland 21.01.1591, 23.03.1591. Wernham 1969, pp. 125, 223–224.

Caen and Dieppe in order to collect an impost, similar to the license fees, on all arms and victuals trade between his subjects and the League rebels. Its revenues were to finance his army. The French king asked England, Hamburg, Saxony and the Republic, and especially the magistrates of Vlissingen and Middelburg, to stop their exports to the League and help to organize a blockade of the two main enemy ports of Rouen and Le Havre. The measures of the States-General mentioned above fitted in this context, but admiralties abstained from enforcement.[42] All this shows how inadequate the organization of the state and the scope of the central government still were in the midst of all kinds of conflicts of interest.

With the peace of Vervins between France and Spain and the breakup of the League in 1598, the arms trade to France had passed its provisional peak. However, France remained an important export market for Dutch war materials. After 1621, in particular after the start of the start of French war against the Spanish (1635–1659) and the Austrian Habsburg Empire (1635–1648), arms exports to France increased enormously.[43] This shows the volatility in the exports for arms merchants to an important ally. Only in 1621 after the restart of the subsidies from France and the support policy of the States-General from the state arsenals the French market offered sufficient guarantees to large arms dealers.

16.8 Entrepreneurs

In contrast to the domestic market of the State army, admiralties, and Dutch East India Company, no ubiquitous arms dealers were active in the Dutch arms exports. Several dozen merchants were engaged in arms exports, but each accounted for only a few percent of the annual exports. Via Zeeland dozens of merchants from Zeeland, Holland, France, Liège, the German areas and England exported semi-finished and finished products from industrial centres in the hinterland such as Dordrecht, Utrecht, Solingen and Liège. Exports via Amsterdam were dominated by dozens of merchants from that city.

Several merchants temporarily gained a prominent position in a niche export market. The volume of Dutch arms exports was volatile due to the peaks in demand that depended on country-specific war conditions, and of which those exports to Spain and France testify. Van der Kooy has pointed out the importance of regional specializations in the Amsterdam staple market.[44] Merchants with specialized knowledge and an extensive network within a specific region or state were able to respond well and supply the erratic regional demand thanks to their position within the regional economy. This offered them temporary advantages, because with the end of hostilities the demand for war materials stopped as well.

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[42] Wernham 1969, pp. 223, 229, 289.

[43] Vogel 1993, pp. 16–17; Beks 1993, pp. 36–41.

[44] Van der Kooy 1931.

Merchants as representatives or commercial agents of foreign authorities that maintained a highly branched interregional network were particularly well placed to operate on the volatile international arms market. Paul de Willem, Thomas l'Hermitage, and Jacob and Abraham Symonsz acted as agents of the kings of Denmark, England and the duke of Brunswick-Lunenburg respectively. They were the forerunners of the later more famous largescale arms dealers such as Louis de Geer for Sweden and Gabriel Marselis for Denmark and Muscovy. A sound network, experience and a specific orientation on certain regional sales markets played a crucial role. In a sense, in particular those suppliers to major states that became involved in the Thirty Years' War managed to rapidly expand their arms exports.

Entrepreneurs with major interests in the gunpowder industry may also be counted among the more prominent and wealthy arms dealers in exports. Gunpowder producers such as Abraham Verbeeck and Jacques Emmerix of Amsterdam between 1600 and 1608 exported tens of thousands of pounds of gunpowder, sulphur and matches to England, Venice, Muscovy and France. Jan Raij of Amsterdam controlled the sulphur trade to France during the Twelve Years' Truce. Caspar van Ceulen of Amsterdam supplied Venice with 600,000 pounds of gunpowder, 200,000 pounds of sulphur and 100,000 pounds of saltpetre, as mentioned earlier, and temporarily accounted for 61% of the estimated turnover in the Amsterdam arms exports.[45] They all turned out to be merchants who maintained extensive networks in Europe, traded in other products as well to areas of their arms exports such as Italy and Moscow, and as a result, were well aware of the dynamic local market situation.

But these merchants also formed stars that only lit up temporarily in the sky. The supply of different war materials per region was concentrated at a limited number of suppliers, which meant that there was an oligopolistic market form. The decisive factor for those few suppliers' ability to participate was their specialized knowledge of highly differentiated foreign markets.

16.9 Conclusion

Arms exports from the Republic increased in the dynamic years of 1585–1621. Clear peaks occurred in those years when foreign demand rose steeply due to wars. Arms were mainly exported to Dutch allies: France, Venice, the German Protestant states and Sweden. From 1621 onwards, the States-General occasionally supported arms exports by supplying war materials from the state arsenals. By means of a system of passports, they tried to control arms exports, taking into account the national strategic interests and those of their allies. The States-General banned arms exports to the Spanish Habsburg Empire. In spite of all these measures, Dutch merchants managed to exports to enemy ports through the declaration of false destinations on passports, via transit ports in neutral territory, and via assistance of local consortia and agents within their networks. In these illegal arms exports, although probably relatively

[45] NA AA 1346–1354: Res.Adm. Amsterdam 01.01.1600–29.12.1608.

small in size compared to the permitted flows of export, the interests of local Dutch authorities, opposed to the interests of States-General, played a major role. The major part of the legal exports formed total packages of gunpowder, matches, firearms, bladed weapons, pikes, armour and helmets for army regiments and companies, and strategic raw materials such as sulphur and saltpetre.

During this period, a small group of entrepreneurs supplied the domestic market of the state and provincial arsenals, the admiralties and the Dutch East India Company and held dominant positions for years. This was not the case with arms exports. There were, however, traders who, on the basis of their specialization and network by region, temporarily had a significant share in the arms exports. Entry was therefore possible, but required specialist knowledge of the local economy. Some merchants gained a temporary strong position in exports to a niche market as a commercial agent or factor of a European state, usually an ally of the Dutch Republic. Traders with major interests in the gunpowder industry also temporarily held strong positions in the export of strategic raw materials to various European markets. But all this never led to a permanent situation, given the temporary length of European wars in these decades and the resulting volatile demand for war materials.

To conclude, the arms exports fell into the hands of a limited number of arms dealers, a group of varying composition. The structure of the export market as a whole was oligopolistic, but the composition of the group of oligopolists varied depending on the region and the prevailing market conditions in question.

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