

NATO's Decision-Making Process in Budgeting: prospects of the burden-sharing problem¹

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Resumo

O debate referente ao “burden-sharing” tem sido um tema primordial para a OTAN desde a criação da mesma. Até mesmo ao longo da Guerra-Fria, os Estados Unidos repetidamente demandaram uma fórmula mais igualitária de “burden-sharing” para a aliança, ainda que nunca tenha levado adiante suas ameaças de deixar a OTAN. Diante disso, os autores desenvolveram modelos e teorias de ação coletiva para engajar na temática. No entanto, há pouco diálogo entre as perspectivas econômicas e políticas na academia. O presente estudo propõe contribuir para a temática incorporando matrizes conceituais relativas à barganha, já que os membros da aliança têm que tomar decisões diante contingências históricas e geográficas. Para tal, o trabalho analisa o processo decisório e o orçamento comum da aliança além de reconstruir historicamente a questão do “burden-sharing” na OTAN. Finalmente, o artigo levanta problemáticas e propõe contribuições no que concerne o debate do “burden-sharing” na OTAN e a perspectiva futura do mesmo diante um cenário geopolítico em transformação.

Palavras-chave: “Burden-Sharing”. OTAN. Orçamento. Aliança. Barganha.

Abstract

The burden-sharing debate has been a main issue for NATO since its creation. Even during the Cold War, the United States repeatedly demanded a more equal burden-sharing formula within NATO, although it never carried out its threats to disengage from the Alliance. Scholars have developed alliance models and collective-action theories to address the issue. Nonetheless, there are few dialogues between security and political economy perspectives. This article advances such discussion by proposing the incorporation of a bargaining conceptual framework since members of an alliance have to make decisions taking into account historical and geographic contingencies. Hence, it addresses the organization's decision-making process and common budget as well NATO's burden-sharing historical experience. Finally, it draws conclusions and raises problems concerning defense-burden in NATO and the future prospects of this debate within a changing geopolitical scenario.

Keywords: Burden-sharing. NATO. Budget. Alliance. Bargaining.

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1. Introduction

Who pays for defense? What does NATO provide to its members? And how do we measure burden-sharing? These are some of the questions in which the burden-sharing problem revolves around (Olson, Zackhauser, 1966; Oneal, 1990; Hartley, Sandler, 1995). This article addresses these questions from a theoretical perspective. The burden-sharing debate is extremely relevant, not only to NATO, but also to the United Nations High Commissioner for Refugees (Roper; Barria, 2010), Multilateral Aid Organizations (Addison, McGillivray, Odedokun, 2004) and other alliances or want-to-be alliances such as the UNASUR (Union of South American Nations) and its Defense Council² (Caballero, 2017; Vitelli, 2017). The efficient form of mobilizing resources is the material pillar that determines the alliance operational success to achieve its goals. As Chalmers (2000, p. xiii) argues, “Negotiations on how the costs of common endeavors are shared between states - that is, ‘burden-sharing’ - are part of the everyday currency of international relations”. This article analyzes NATO due to its size, complexity and solidness. Furthermore, the burden-sharing debate has been a main issue for the organization since its creation in 1949, and, thus, scholars have developed a large amount of literature to address the matter (Becker, 2017; Becker, Malesky, 2017; Blankenship, 2018; Hartley, Sandler, 1995; Jakobsen, 2018; Kunertova, 2017; Olson, Zackhauser, 1966; Oneal, 1990; Rinsmose, 2010; Zyla, 2016; 2016b).

Scholars have engaged in these issues by the development of alliance models (Snyder, 1984) and collective-action (Hartley, Sandler, 1995; Olson, Zackhauser, 1966) theories. Nonetheless, so far, there has been few dialogue between security and political economy pers-

pectives in this matter (Zyla, 2016). This article argues that the developments made by political economy researchers, following the early studies of Olsen and Zackhauser (1966), namely, the introduction of concepts such as the production of public goods, as well as its criticisms which led to the introduction of the joint-product model theory - both introduced further on - can be enhanced, in analytical terms, by the incorporation of a bargaining conceptual framework. In this sense, pivotal bargaining concepts such as “promise” and “compromise” (Schelling, 1980), and the “alliance security dilemma” (Snyder, 1984), will be introduced as a solid perspective through which one can address the burden-sharing debate. Members of the alliance have to make decisions taking into account historical and geographic contingencies, which will affect their bargaining position.

This article analyzes the burden-sharing literature debate throughout NATO’s history and the prospects for the future of the organization and is structured as follows. First, it outlines NATO’s main characteristics as an International Organization, its decision-making process, and its common budget. In the sequence, it engages in the burden-sharing debate *per se*. To address the question, it explores theory of alliances, especially those which dialogue with public good theory and NATO’s burden-sharing experience. Furthermore, it outlines recent theoretical developments on the matter, as well as a bargaining theoretical perspective. Measurements issues, as they are pivotal to the burden-sharing debate, are then addressed. Further on, it investigates NATO’s burden-sharing problem within a historical perspective, in order to analyze whether the end of the Cold War and other historical developments affected the issue. Albeit burden-sharing is an ongoing debate as old as NATO, specific features of the twenty-first century present themselves as crucial for the prospects of NATO’s future. A final argument is put forward regarding future bargaining and its impacts on NATO.

² It is worth mentioning also the cases of the World Health Organization and World Trade Organization, especially due to Trump’s recent unilateral attitude towards them.

2. The North Atlantic Treaty Organization and Decision-Making

Nowadays, NATO, as an International Organization, is made of twenty-nine state-members. The countries that are a part of NATO are expected to fulfill the goals of the North Atlantic Treaty signed in Washington on 4 April 1949, which initially was directed towards deterring the Soviet threat in European territory. The treaty revolves around its article 5, the collective security article, in accordance to United Nations Charter article 51, which defines collective defense. NATO's article 5 stipulates that an aggression towards one member of the Alliance is considered an aggression towards all members: "the Alliance is committed to defending its member states against aggression or the threat of aggression and to the principle that an attack against one or several members would be considered as an attack against all"³ (NATO 2006, p. 15).

NATO is an intergovernmental organization; its member states retain sovereignty. All NATO decisions are made on the basis of consensus, jointly by the member states. This characteristic is pivotal to the burden-sharing debate. As "NATO has no operational forces of its own other than those assigned to it by member countries or contributed by Partner countries for the purpose of carrying out a specific mission" (NATO 2006, p. 15), how do twenty-nine sovereign states decide, on the basis of consensus, the contributions towards such large objectives? The problem goes further when the definition of security is broadened towards areas not primarily covered by the treaty like Libya and Afghanistan, for example (Haesebrouck, 2016; Hallams, Schreer, 2012).

³ According to the treaty: "(...) the fundamental role of NATO is to safeguard the freedom and security of its member countries by political and military means. NATO safeguards the Allies' common values of democracy, individual liberty, the rule of law and the peaceful resolution of disputes and promotes these values throughout the Euro-Atlantic area. It provides a forum in which countries from North America and Europe can consult together on security issues of common concern and take joint action in addressing them" (NATO 2006, p. 15).

Throughout its history, NATO's main objectives have changed significantly. The most obvious historical change, the end of the Cold War, altered dramatically the world in which the Alliance was embedded. Other facts like rogue states and terrorism made NATO adapt its strategic guidelines. Following 9/11, for example, it was the first time that Article 5 of NATO treaty was invoked. The end of the Cold War also altered the stability of Eastern Europe, specially the Balkans

region, in which NATO engaged. In order to take into account, the changes of the geopolitical scenario, NATO alters from time to time its Strategic Concept⁴. Crisis Management and Cooperative Security further complicates the burden-sharing problem because not only effective defense expenditures can be seen as a contribution towards the alliance, but also engagement in peace operations, inside and outside Europe, geopolitical aid, engagement of troops in crises and other tasks can count. So, how does one measure effective burden-sharing by taking into account recent Strategic Concepts and the change of the geopolitical environment? NATO's decision-making structure engages these issues with a permanent institutional structure.

The Alliance's main form of decision-making, which is applied in all levels of NATO, is the principle of consensus. This reflects the fact that each member will decide how it is involved in the alliance, although pressure from the strongest members still exists, as the Alliance provides goods in the form of security, thus affecting the budgeting process. The three main decision-making and policy implementation institutions of NATO are the North Atlantic Council (NAC), the Defense Planning Committee (DPC) and the Nuclear

⁴ NATO's fundamental security tasks are described in the Alliance's Strategic Concept. It is the authoritative statement of the Alliance's objectives and provides the highest level of guidance on the political and military means to be used in achieving them. It remains the basis for the implementation of Alliance policy as a whole. The latest Alliance's Strategic Concept was agreed in the 2010's "Active Engagement, Modern Defense" which reviews the 1999 Strategic Concept and was adopted by the Heads of State and Government in the Lisbon summit. The 2010 Strategic Concept is based on three main principles: Collective Defense; Crises Management and Cooperative Security (NATO 2018).

Planning Group (NPG)⁵. These institutions meet at different representation levels, regularity and address different issues, but they follow a similar rule of procedure: the decisions taken by each of these bodies have the same status and represent the agreed policy of the member countries, irrespective of the level at which they are taken.

The main point is that in the Organization's three main institutions- NAC, DPC and the NPG- the rule of decision-making is based on consensus. This provides the Organization with strengths such as cohesion in its main objectives and activities. Nevertheless, since consensus gives greater leverage for individual states, it can further complicate controversial issues like burden-sharing. In order to achieve its collective security purposes, NATO has a common budget structure.

3. Common Resources, Funding Collective Defense and the Burden-Sharing Problem

As NATO is an intergovernmental organization, members will allocate resources needed to enable the structure of the International Organization, its daily functions and the facilities and international staff required to consultation, decision-making and the implementation of the agreed policies and engagements. Nevertheless, NATO has only a limited number of permanent headquarters and it has a small standing number of forcers. With few exceptions, NATO funding does not cover the procurement of military forces or of physical military assets such as ships, submarines, aircraft, tanks, artillery or weapon systems" (NATO 2006, p. 57).

To the common budget, member countries make direct contributions within the arrangement of a cost-sharing formula calculated in relation to a country's ability to pay. These projects lead to a management organization with NATO's agencies acting in areas such as aircraft and helicopter production, air defense and logistics (NATO 2006, p. 57). Moreover, member states can cooperate with NATO in budgeting with more limited activities such as fund arrangements, ad hoc cost sharing and donations. The need for common funding is discussed within the general need for expenditure, and the member countries decide if the principle of common funding should be applied. If that expenditure serves the interests of all contributing countries, the burden should be collective. Collective funding follows a criteria guideline set by circumstantial developments⁶. The three funds where NATO authorities identify the requirements and set the priorities for the Alliance's objectives as a whole, and thus are fit into the common funding, include the NATO Civil and Military Budget, as well as the NATO Security Investment Program (NSIP)⁷.

That said, "the greater part of each member country's contribution to NATO, in terms of resources, comes indirectly through its expenditure on its own national armed forces" (NATO 2006, p. 57). Beyond that, it depends also on each country's willingness to provide these forces to concert with the other members so that they participate in multinational operations. Thus, member countries deploy volunteer forces to participate in NATO-led operations. The large majority of NATO's resources are national. According to Hartley

⁵ For further information on the composition and *modus operandi* of these institutional structures see NATO (2006, p. 33-37).

⁶ The criteria for common funding are: "(...) held under constant review and changes may be introduced as a result of new contingencies - for example, the need to develop clear definitions of the parts of NATO's crisis response costs which should be imputed to international budgets and those which should be financed by national budgets. Other changes may result from organizational or technological developments or simply from the need to control costs in order to meet requirements within specific funding limitations. Despite these challenges, the principle of common funding on the basis of consensus remains fundamental to the workings of the Alliance" (NATO 2006, p. 58).

⁷ For detailed information regarding the Civil Budget, Military Budget and the NSIP, see NATO (2006, p. 58-60).

and Sandler (1999, p. 663), the common-funding budget of NATO, in 1997, for example, totaled only 0.35% of NATO's defense spending. It is precisely because of NATO's historical dependence on members' willingness to provide the necessary resources to accomplish the treaty's objectives that the burden-sharing problem presents itself.

This article sustains that the prevalent theoretical analysis of burden-sharing has problems, since burden-sharing is essentially a political bargaining issue and develops according to historical contingencies. Through specific theoretical lenses, economic models of public goods were developed to explain NATO's burden-sharing features.

4. The Public Good Model and its Critics

Burden-sharing in NATO has been a debate as old as the alliance itself (Chalmers, 2000; Forster, Cimbala, 2005). Early debates revolved around a more quantitative perspective as authors were worried about developing models to explain actor behavior towards defense spending from a political economy angle (Hartley, Sandler, 1995; Olson, Zackhauser, 1966; Oneal, 1990). Burden-sharing has been addressed both from a security and an economic perspective, although there has been few dialogue among their scholarship, with one usually ignoring the insights of the other (Becker, 2017). Recently, researchers have called for the introduction of qualitative variables, as well as "nonmaterial" variables in the study of burden-sharing (Becker, 2017; Becker, Malesky, 2017; Blankenship, 2018; Jekobsen, 2018; Kunertova, 2017; Zyla, 2016a; 2016b). At this point, this study revisits some of the main arguments put forward by scholars engaged in this debate.

NATO's burden-sharing problem was dominated firstly by collective goods theory, put forward by Olson and Zeckhauser (1966), to measure the uneven distribution of defense spending in the alliance. Olson and Zeckhauser assumed that NATO's output (security) is best described as a "pure public good": the common interest of a group of individuals. Hence, public goods are expected to be non-rival and non-excludable: when a unit of the public good is consumed by one actor it does not diminish its availability and no member can be effectively excluded from enjoying this output (Samuelson, 1954). As a consequence, in Olson and Zeckhauser's (1966) theory of alliances, once one state joins the alliance, it is impossible to exclude this country from profiting from the output produced by collective efforts, and the adding of new members does not alter the amount of defense available to the members of the alliance (Ringsmose, 2010; Oneal, 1990). What follows is the "exploitation hypothesis" (Olson, 1965) in which the burden needed to defend the alliance will be distributed unevenly, with the large allies contributing relatively more. This means that one should expect free-riding behavior by smaller allies. The original versions of alliance models offered three related and policy-relevant predictions resulting in unequal burden-sharing:

(...) First, because larger members of an alliance place a higher valuation on security and protection, they will usually devote larger shares of their national income to defense than smaller nations: it is in their national self-interest to do so. Second, there is the free-rider problem, which arises when smaller allies rely on larger allies for defense protection, allowing the free-riders to 'consume' more civil goods and service (...). Third, there was no need to limit the size of an alliance since a new member would not diminish benefits for existing allies (deterrence) and may reduce burdens for other allies by its defense provision" (Hartley and Sandler 1999, p. 667).

Collective goods theory of alliances generated tests associating measures of burden and measures of wealth

(Olson, Zeckhauser, 1966). As for analyzing allocative efficiency within the alliance, the debate engages different behavior assumptions for the alliance's members. If one assumes Nash behavior by the allies, free-riding and sub-optimal provision of security will be expected, and thus, will deviate from the Pareto-optimal standard. Authors such as Palmer (1990) argue that over time, due to cooperative behavior and bargaining, free-riding might be mitigated, improving allocative efficiency⁸. Scholars in International Political Economy (IPE) and International Relations (IR) build on collective goods theory to develop theoretical insights for hegemonic stability theory and international regimes' literature. Robert Gilpin (1981) argues that a global hegemon is compelled to produce international public goods, for instance. Furthermore, according to Snidal (1985), in an alliance, a "benevolent" leader provided public goods unilaterally and thus, alleviated other members for sharing the burden of this public good or maintaining the regime. Of large relevance is a material power-based perspective (Snyder, 1997), which argues that states with a large military capability provide a surplus of security to the alliance and thus have enhanced bargaining power. Nevertheless, in Snyder's perspective - and in parallel to public good theory, but in terms of military power - states with less military capability are expected to free-ride and enjoy alliance provided public goods.

Olsen and Zeckhauser's (1966) theory was the target of reviews and criticisms as the international system changed. Russett (1970) noted that by the late 1960s, the correlation between economic size and defense burden for NATO allies was statistically insignificant. In this sense, Sandler and Forbes (1980) elaborated the "joint product model" in which defense provides

a spectrum of outputs ranging from purely public to private or country-specific defense outputs. The model is built upon Ypersle and Strihou (1967) insights, who argued that defense activities can provide specific private benefits to a nation while not generating defense output for the alliance⁹.

As put forward by critics (Hartley and Sandler 1999; Oneal 1990; Ringsmose 2010), alliance-based security is an "impure public good". As such, security outputs provided by NATO are excludable public goods, or more precisely, "club goods". This does not mean, however, that the smaller countries will not try to free-ride and make the major partners pay for their protection. Their contribution will still have only a small impact on the overall amount of defense provided by the alliance.

Sandler and Forbes (1980) observed that in the early 1970s NATO changed from a strategy of Mutual Assured Destruction (MAD) towards a flexible response that placed greater reliance on conventional forces (Facer, 1985; Legge, 1983). As that happened, it reduced the opportunities for free-riding. According to the flexible response doctrine, NATO should respond to external threats in a variety of ways; e.g., conventional ground forces, air power, or limited nuclear strikes (Murdoch 1995, p. 97). Hence, the latter doctrine enhanced the goods complementarity of the private and public defense¹⁰. The result of this effect, over time, is to generate the more equalized burdens in NATO. The reduction in the 1970s and 1980s gap between the defense burdens was, thus, not explained by the pure public goods model:

"From the critics' perspective, the benefits provided by the alliance prior to 1989 clearly fail to meet the non-excludability requirement. Assuming that it was infeasible to prevent weaker member states from enjoying the fruits of the larger allies' defense-

8 In terms of the allocative process, Murdoch argues that "the pure public and joint product models assume a noncooperative Nash allocation mechanism, which is a natural point of departure for modelling the behavior of agents who contribute to the supply of a public good. However, it is conceivable that a relatively small military alliance will behave cooperatively, especially over time as political pressure to contribute comes to bear on the free riders" (Murdoch, 1995 p. 99).

9 See Russett (1970), Knorr (1985), Oneal (1990) and Sandler (1977).

10 For further critical discussion of this argument, see Oneal and Elrond (1987) and Murdoch and Sandler (1991).

ve and deterring efforts – as Olson and Zeckhauser proposed – is considered to be too radical a simplification of real-life alliance dynamics. A NATO member that failed to deliver the contribution to the common efforts demanded by its larger alliance partners did in fact run the risk of abandonment, diplomatic and economic sanctions, and ultimately exclusion” (Ringsmose 2010, p. 325).

As a consequence of the impure public good assumption, this literature argues that large powers retain their strongest bargaining weapon when they sign the alliance treaty. They can account for intra-alliance threats about providing security and utilize different kinds of diplomatic and economic disciplinary instruments, generating fear of abandonment and marginalization among smaller powers (Ringsmose 2010). The main implication of substituting the ‘pure public good assumption’ with the ‘club good’ assumption is that:

“(...) security suppliers have instruments at their disposal with which they are able to sanction the security recipient’s attempts to free ride. Threats and pressure of varying degrees can be applied to smaller allies striving to exploit the alliance leaders. And this is exactly what happened inside the alliance during the Cold War: because the United States had instruments at its disposal that could effectively be employed in order to sanction European members opting for a free-riding strategy, collective action problems were dampened (...) small powers tend to contribute less than their proportionate share of the defence burden to avoid entrapment, but they will increase their contribution when the dominant power applies enough pressure ... small powers cooperate when they are forced to do so” (Ringsmose 2010, p. 325).

Recent studies have attempted to incorporate different variables that affect burden-sharing and ally behavior. Becker (2017), for example, argues that strategic culture and domestic economies will have a large impact on ally behavior toward burden-sharing. The author finds that unemployment and fiscal stress makes countries draw resources away from defense in general and

become more prone to transfer resources from procurement and modernization towards personnel. Furthermore, Becker and Malesky (2017) point out that allies with a more “Atlanticist” strategic culture will allocate a greater share of resources to alliance priorities than countries which exhibit a more “Europeanist” strategic culture. Jakobsen (2018) attempts to incorporate, beyond traditional measures of burden-sharing, the population’s willingness to fight for their countries, as a way to analyze the different allies’ commitment to collective defense. The author argues that threat perception among different allies can explain different levels of contributions to the alliance. Thriving for a more holistic and eclectic source of explanation, Zyla (2016a) and Keck and Sikking (1998) call for a sociological and interpretative turn in the burden-sharing debate, highlighting the importance of including intersubjective meanings, the role of social forces, norms, beliefs and values.

Another interesting angle when looking at the burden-sharing debate is allies’ willingness to strengthen the supranational character of NATO by promoting collaborative efforts in production and sharing of military technology. In this regard, scholars have engaged in different proposals such as free-trade areas, supranational procurement authority and joint ventures (Hartley, 1995; Kunertova, 2017; Ruiz-Palmer, 2016; Saxi, 2017). Authors who advocate for strengthening international collaboration argue that it would improve cost efficiency, alleviate burden-sharing tensions and avoid unnecessary duplication of R&D (Research & Development) spending. Nevertheless, despite allies’ unwillingness to share technology and production due to security issues, nationalist opposition, especially from the defense industrial base, the military and bureaucratic actors are impediments to this kind of deal, which shows that bargaining regarding burden-sharing also surpasses the domestic level.

5. Bargaining and Alliances

The theoretical developments reviewed above are further enhanced here with the incorporation of a bargaining conceptual framework (Blankenship, 2018; Mandelbaum, 1981; Schelling, 1980; Snyder, 1984). As this article endorses, in a club good perspective, private interests of allies will make their engagement in the alliance's marginal output vary due to geographic, political and ideological factors. Hence, an analysis of burden-sharing in an alliance through a bargaining lens, although guided by a theoretical framework, has to take into account historical contingencies.

Literature, in the purposing of modeling, has studied alliances analyzing actor behavior by a parameter of two extremes: defecting the alliance (D) or cooperating fully with it (C) (Snyder, 1984)¹¹. Between these two horns, there is a wide range of possible empirical variations. These options give rise to what Snyder (1984) calls the "alliance security dilemma", since each of the two options have different consequences to the ally, which are interrelated. In the alliance security dilemma, the principal "bads" are "abandonment" and "entrapment,¹²" and the principal "goods" are a reduction in the risks of being abandoned or entrapped by the ally (Snyder, 1984; Mandelbaum, 1981).

Important to the discussion forwarded in this article, according to the model developed by Snyder, is that a strategy of "C" would: i) reduce the risk of abandonment, ii) enhance credibility; iii) reduce bargaining power towards the allies; iv) increase the risk of entrapment. On the other hand, a "D" strategy would: i) increase bargaining power; ii) reduce risk of entrapment; iii) increase risk of abandonment; iv) diminish

credibility. Furthermore, allies' decision will be affected by the degree of dependence on the ally¹³. Dependence will vary in the degree of: i) disproportional resources among allies; ii) the relative strength of the ally towards its potential enemies; iii) conflict and tension of an ally with its adversaries. The principal consequence of dependence is the reduction of bargaining power, since costs of abandonment will outweigh the costs of entrapment, the more the ally is dependent on its partners.

From a burden-sharing point of view, taking into account a patron and its allies, since reassurance will reduce bargaining strength and reduce the risk of abandonment, when the patron reassures and compromises with the alliance, it will produce incentive for free-riding behavior. On the other hand, a defection strategy would give bargaining power to the patron while increasing the risk of ally abandonment. The consequence, as developed by Blankenship (2018, p. 2), is that "(...) patrons thus face a dilemma, trading off between withholding reassurance to drive hard bargains with allies and reassuring allies to dissuade them from exiting the alliance. Nonetheless, according to the author: "This dilemma may be mitigated, however, if a patron can make its assurances conditional on allied burden-sharing by combining its assurances with threats of abandonment" (Blankenship, 2018, p. 3). Threats and commitments are, as a consequence, important aspects of bargaining to the burden-sharing analysis. The patron or other allies can enhance their bargaining leverage by committing and threatening to a lower burden-share or, at the limit, the abandonment of the alliance (a D strategy).

Schelling (1980) argues that *commitment* and *promise*¹⁴ are central concepts in a bargaining situation. For the author, bargaining strength depends on the power of one actor to bind himself in the form of a commitment,

11 Related to alliance decision-making is the discussion of chain-ganging and buck-passing. See Waltz (1979), Jervis (1978) and Christensen and Snyder (1990).

12 For an explanation on these concepts, see Snyder (1984, p. 667-667).

13 Snyder (1984, p. 473-475) points out other possible variables that affect decision-making, such as: the degree of formality of the alliance and the strategic interests of the participants.

14 Here, promise refers to threats in the bargaining process, although Schelling (1980) separates the concepts of threat in his explanation sequence.

reducing his margin of acceptable outcomes in the negotiation. In this sense, one would have to bind oneself into “an irrevocable commitment, in a way that is unambiguously visible to the other party so that he can squeeze the range of indeterminacy down to the point most favorable to him” (Schelling 1980, p. 24)¹⁵. An executive cabinet can constrain his own fiscal spectrum by binding itself to a congressional law that restricts government spending, thereby reducing the acceptable agreement possibilities in a bargain with a union, for example. If a NATO country argues that it cannot increase defense expenditures, it would behoove him to prove to the other actors the validity of his restraint. Likewise, “(...) these threats are more potent to the extent that a patron faces domestic pressure to retrench from its foreign commitments, and that allies face severe threat environments” (Blankenship, 2018, p. 3).

In an ongoing bargaining process like burden-sharing, countries have to make their threats and promises credible in sequential “games”¹⁶. Therefore, countries will have to commit themselves in a progressive sense, acquiring the firmness of their bargaining power by a sequence of actions:

“In order that one be able to pledge his reputation behind a threat, there must be a continuity between the present and subsequent issues that will arise. This need for continuity suggests a means of making the original threat more effective; if it can be decomposed into a series of consecutive smaller threats” (Schelling 1980, p. 41).

If the United States, for example, wants to achieve a more equitable burden-share in NATO, its bargaining power would depend on binding itself to other priorities, as the renewed great power competition with China and Russia. Also, in this case, its threats of cut-

ting expenditure would have to be credible in a sense that its need for a more equitable burden-share is real and observable. Besides that, the firmness of its promise will have to be endorsed by a time framework of enforceable sequential threats. As it was already argued, its bargaining position will be further strengthened the more dependent allies are on its protection.

It is argued here that if one assumes that the outputs generated by a security alliance such as NATO are characterized by the conjunction of private and public goods- excludable benefits- one would have to recognize that burden-sharing is essentially a bargaining problem and historical contingencies will affect the behavior of resource allocation.

6. Measurement Issues: A Great Impasse

In order to properly address the burden-sharing problem, its measurement method has to be taken under consideration. The problem lies on the fact that different countries, as well as different scholars and institutions, utilize different indicators to measure burden-sharing within NATO, with some measurements¹⁷ differentiating the proper indicators for different time periods (i.e. post-Cold War). Typically, defense spending as a share of national output (D/GDP) is the most commonly used measure of defense burdens¹⁸. Nonetheless, as indicated by Hartley and Sandler (1999), defense as a share of the national output has its limitations as a measuring device. First, the defense output

¹⁷ For example, see Ringsmose (2010).

¹⁸ The D/GDP measurement is institutionally endorsed by NATO itself. According to NATO's Defense Review Committee: “[Percentage of GDP devoted to defense] is the best-known, most easily understood, most widely used and perhaps the most telling input measure. It broadly depicts defense input in relations to a country's ability to contribute. It takes rich and poor members' status into consideration (though it could be argued that countries with low GDP per capita should have also lower shares) and is not subject to distortion by exchange rate fluctuation. It is regularly analyzed during the Alliance annual defense review and is a baseline reference for biennial ministerial guidance” (DRC, p. 10-11).

¹⁵ Schelling (1980, p. 24) argues that “the bargain may therefore have to be expressed in terms of something observable, even though what is observable is not the intended object of the bargain”.

¹⁶ For illustrative games that exemplify commitment and promise issues, see Schelling (1980, p. 48-52).

of nations can vary depending on the country's definition of defense spending (if it incorporates pensions or R&D), for example. Second, countries also have different mixes of public and country-specific defense forces "as reflected in the allocation of their budgets between nuclear and conventional forces and the distribution of their conventional forces between home protection" (Hartley and Sandler 1999, p. 669). Furthermore, authors such as Kunertova (2017) argue that the numeric burden-sharing narrative neglects important normative and practical aspects of the problem.

Beyond that, there is the matter of efficiency. Spending does not ultimately guarantee the conversion of defense budgets to combat-effective armed forces. For example, "an increasing proportion of the budget spent on equipment might be at the expense of operations and maintenance spending, with adverse impacts on force effectiveness" (Hartley and Sandler 1999, p. 669). As argued by Kunertova (2017, p. 16) "(...) limiting burden sharing debates to one arbitrary number or confining it solely to input measures is dangerous, since the conversion of spending figures into effective capabilities is not straightforward". Becker (2017) argues that public choice theory's methodology based on spending input does not capture operational burden-sharing. He noticed, for example, that large U.S. defense spending led smaller allies to focus their investments on O&M (Operations & Maintenance), and then this tendency was reversed since NATO engaged in operations out of Europe, where not all allies followed the U.S.

Alternative measures can include the number of forces stationed in Europe, per capita income, number of forces versus ability to pay, among others. Commonly, as stated by Ringsmose (2010), the countries spending least on defense often advocated for the inclusion of other measurements in contributions to the collective undertakings. Some European allies would point, for example, to less tangible, non-quantifiable, and non-financial burdens of

defense as "making available people and space, accepting limitations in personal freedom or quality of life, braving internal and external tensions, and different degrees of exposure or vulnerability" (Ringsmose 2010, p. 323). These countries argue that these issues were linked to the components of the overall burden.

Nevertheless, at least in the Cold War, the country's output in defense as a share of the GDP was the most common and most used measurement for burden-sharing. This happened because the other indicators also had problems. After the Cold War, with the already seen new Strategic Concepts, other measurements would be made available, albeit D/GDP continues to center the debate as it was confirmed in the Wales Summit of 2014 and reaffirmed in the Warsaw Summit two years later, when allies agreed to pledge themselves to spend 2% of the GDP in defense (Techau, 2015).

So far, this article has explored and described NATO's main characteristics, structure and objectives. The burden-sharing problem was also presented as a collective-action theory debate and as a bargaining issue. The next section will be dedicated to analyzing historically the burden-sharing within NATO, using primarily the defense output as a share of the GDP as a measurement tool. The following debate is aimed at a better understanding of the burden-sharing problem in the Alliance. It intends to draw conclusions and raise problems concerning defense-burden in NATO and the future prospects of this debate within a changing geopolitical scenario.

7. NATO's Burden-Sharing: History and Prospects for the Twenty-First Century

Washington Treaty's Article 3 - "The burden-sharing Article" - committed the allies to "maintain and deve-

lop their individual and collective capacity to resist armed attack” by means of “continuous and effective self-help and mutual aid”. During the Cold War, those disputes focused primarily on national contributions to NATO’s defenses against the Soviet Union. The burden-sharing problem during the Cold War pitted the United States versus its smaller allies, as the latter invested significantly more in defense and held the nuclear umbrella which protected the Europeans against the Soviet Union. The United States had stationed hundreds of thousand troops in Europe as well.

As Table 1 shows, the United States averaged 6% of the GDP in defense expenditures during the Cold War, while the other countries, with few exceptions like Greece and the United Kingdom, averaged much less. Throughout the Cold War, the United States repeatedly demanded a more equal burden-sharing formula within NATO, although it never carried out its threats to disengage from the Alliance. The US government

was also constantly pressured by a skeptical Congress to push towards a greater burden-sharing within NATO.

Nevertheless, analyzing the burden-sharing problem from a fraction of weighted expenditure (Graph 1) suggests that the burden carried by the United States, although larger, did not induce free-riding as much as economic theory of alliances would suggest. That might be explained by taking into account the leverage that the larger countries of the alliance could put forward in the bargaining process, if we consider NATO’s output a club good and not a pure public good. “Given that the United States could in fact withhold its indispensable contribution to the alliance, the senior ally was able to induce its smaller partners to do more than they planned or intended” (Ringsmose, 2010, p. 321). Allies dependence on the United States on the World War II aftermath was high, making them prawn to consider the costs of the risk of abandonment by the US were consequently high.

Table 1- Defense Spending as a Share of the GDP (1949-2019)

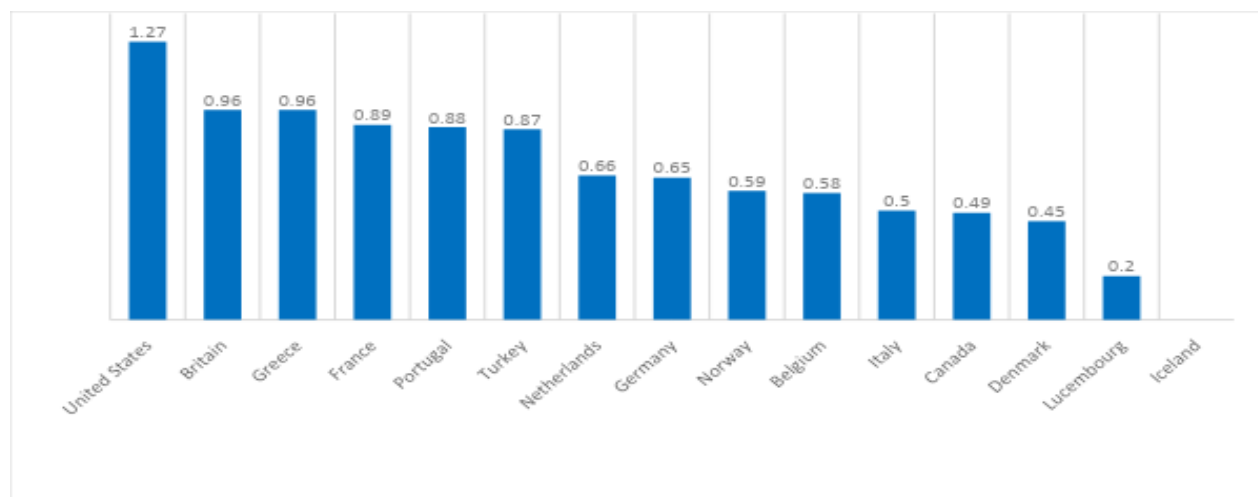
Country	49-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	91-96	97-02	03-08	09-14	15-19
Albania									3,3%	1,3%	1,6%	1,5%	1,2%
Belgium	4%	3,60%	3,40%	3,10%	2,90%	3,20%	3,20%	2,80%	1,8%	1,4%	1,1%	1,0%	0,9%
Bulgaria									2,6%	2,6%	2,3%	1,4%	1,8%
Canada	5,30%	5,30%	3,90%	2,70%	2,10%	2%	2%	2,10%	1,7%	1,2%	1,1%	1,1%	1,3%
Croatia									9,4%	4,7%	1,8%	1,7%	1,6%
Czechia									2,0%	1,8%	1,6%	1,1%	1,1%
Denmark	2,50%	3%	2,80%	2,70%	2,20%	2,30%	2,40%	2%	1,8%	1,5%	1,4%	1,3%	1,2%
Estonia									0,9%	1,3%	1,6%	1,8%	2,0%
France	7,20%	7%	6%	5%	3,90%	3,80%	4%	3,80%	2,6%	2,2%	2,0%	1,9%	1,9%
Germany		3,80%	4,40%	4%	3,50%	3,40%	3,40%	3%	1,7%	1,4%	1,3%	1,2%	1,2%
Greece	5,70%	5,10%	4,10%	4,20%	4,70%	6,80%	6,60%	5,80%	3,5%	3,3%	2,7%	2,5%	2,6%
Hungary									1,8%	1,5%	1,4%	1,0%	1,1%
Iceland									0,0%	0,0%	0,0%	0,0%	0,0%
Italy	4%	3,50%	3%	2,90%	2,50%	2,10%	2,10%	2,30%	1,7%	1,7%	1,6%	1,4%	1,3%
Latvia									0,8%	0,9%	1,6%	1,0%	1,8%
Lithuania									0,6%	1,1%	1,1%	0,8%	1,8%
Luxembourg	2,10%	2,20%	1,20%	1,10%	0,80%	1%	1,20%	1%	0,8%	0,7%	0,6%	0,4%	0,6%
Montenegro											2,2%	1,6%	1,5%
Netherlands	5,10%	5,10%	4,40%	3,80%	3,10%	3,10%	3%	2,80%	2,0%	1,5%	1,4%	1,2%	1,2%
Norway	3,70%	3,50%	3,30%	3,60%	2,90%	2,80%	2,70%	2,90%	2,6%	2,0%	1,6%	1,5%	1,6%
Poland									2,2%	1,9%	1,9%	1,8%	2,0%
Portugal	3,80%	4,10%	6%	6,70%	6,90%	4%	3,40%	2,80%	2,3%	1,9%	1,9%	2,0%	1,9%
Romania									3,3%	2,6%	1,8%	1,3%	1,7%
Slovakia									2,5%	1,8%	1,6%	1,1%	1,3%
Slovenia									1,8%	1,3%	1,5%	1,2%	1,0%
Spain							2,30%	2,20%	2,0%	1,7%	1,4%	1,3%	1,2%
Turkey	4,30%	3,80%	3,90%	3,60%	3,30%	4,30%	3,80%	3,40%	3,9%	3,7%	2,5%	2,0%	2,3%
UK	8,20%	7,30%	6,20%	5,50%	5,20%	5%	5%	4,70%	3,1%	2,2%	2,2%	2,2%	1,8%
USA	8,90%	8,90%	8%	8%	6,50%	4,90%	5,60%	6%	4,3%	3,2%	4,1%	4,4%	3,4%
Average	4,90%	4,70%	4,30%	4%	3,60%	3,40%	3,40%	3,2%	2,4%	1,9%	1,7%	1,5%	1,5%

Source: The Authors. Data: Ringsmose (2010) and SIPRI (2020).

With the late 1960's and early 1970's economic crisis, the *détente* and debates around the relative loss of American power (Kindleberger, 2013; Kennedy, 1989; Strange, 2014), the United States pressured its European allies more forcefully. The so-called Mansfield Resolutions put forward by US Senator Mike Mansfield, from Montana, introduced a series of resolutions judging that the United States should reduce the number of forces permanently stationed in Europe (Ringsmose 2010). As it can be seen in Table 1, in the 1970's, differences in relative defense expenditure of the United States and its allies were mitigated. The U.S was guided by the so-called “quid

pro quo doctrine”, which was constituted by the U.S promise not to make unilateral reductions in the number of American forces committed to Europe if the allies in return made a serious effort to maintain – or preferably enhance – their military preparedness. Following this doctrine, President Jimmy Carter pressured the Europeans to accept the Long Term Defense Program - which included the increasing of defense outputs to 3% of the GDP. Although Ronald Reagan put forward a massive military build-up in the 1980's, the quid pro quo doctrine continued to be the guideline in his both terms as President (Ringsmose, 2010).

Graph 1- Ally burden-sharing as a fraction of weighted NATO average (1950-1984)



Source: The author. Data: (Onca, 1990, p. 388).

From the point of view of this article, burden-sharing during the Cold War, although obviously sustained by the bigger allies and especially the United States, was characterized by a complex bargaining process, as the smaller allies needed the alliance and the United States had the leverage to put pressure towards them. The threat of the Soviet Union directly at territories in Western Europe summed with the relative power difference among Europeans in comparison to both the United States and the URSS mitigated the expected (from the point of view of public goods) free-riding, since Europeans needed the United States' protection and, therefore, give into pressures of a "fairer" burden-sharing formula.

The NATO burden-sharing debate in the 1990's changed as the main objectives of the alliance were also re-adapted (Sandler and Shimizu, 2014). While most countries reduced their defense spending after the Cold War, so was the gap between the United States and its European allies reduced in terms of defense spending. The cases of Greece and Turkey figuring as the top contributors probably reflects their own rivalry more than anything to do with NATO. Although with the end of the Cold-War NATO's objectives seemed to provide public goods (Ringsmose, 2010), this article sustains that the alliance's output continued to be constituted

of excludable private goods since the United States provided the allies with protection in their own regional theaters and contingencies. Beyond that, the U.S engagement in Iraq in 1990-1991 indicated a widening gap in military capabilities across the Atlantic, which was also perceived in Bosnia (1995-6) and Kosovo (1999) (Coonen, 2006). US' superiority gave the country leverage in the bargaining process regarding burden-sharing. As Hallams and Schreer (2012, p. 316) sustain:

"For NATO this became a more serious problem during the alliance's engagement in the western Balkans, which exposed the inability of European nations to resolve the crisis without US diplomatic and military power. The resulting military operations in Bosnia (1995-6) and subsequently in Kosovo (1999) reflected the reality that most European allies were no longer able to operate effectively alongside their American ally".

Even though incentives for free-riding seemed greater, as public good theory would argue, European countries continued to contribute in a middle-level ground, since they depended on the United States. As it is argued by Zyla (2016a, p. 305), "contrary to assumptions held by collective action theorists [...] middle powers shouldered a disproportionately high relative share of NATO's peace operations in the Balkans. They were active and committed agents rather than

freeloaders". In Schelling's terms, if the United States engages in other regions besides Europe, its bargaining position would be strengthened since it would be binding himself to a commitment, adopting a D strategy. That would leave Europeans with the need to lean further into the U.S' terms in order to continue to receive club benefits from the alliance.

In the first decade of the twenty-first century, although the War on Terrorism and George W. Bush's unilateralist strategy widened the burden-sharing gap between the U.S and Europe, it remained small if compared to early Cold War figures. From 2001-2010, while NATO's average D/GDP annual expenditure in the decade was 1.7%, the US spent 4.1%. In the light of the fight against the Taliban, International Security Assistance Force (ISAF) and Operation Enduring Freedom (OEF), burden-sharing debates were revived in terms of measurement issues and out of traditional theater engagement (Hallams, Schreer, 2012). How could one measure contributions in terms of troop engagement taking into consideration population? How would one compare contributions in the form of light infantry versus helicopters, for example? Why would Europe reassure its engagement within the Alliance in a middle-eastern war? Ringsmose (2010) argues that risk-sharing is an important new burden measurement in the post-Cold War scenario. The author states that NATO outputs shifted towards public goods, although this did not create incentive for free-riding:

"(...) to many smaller European allies, NATO membership is still, first and foremost, an entry ticket to American security guarantees and the provision of regionally anchored security goods. And as long as the allies continue to perceive the alliance as a provider of excludable public goods, many NATO nations have substantial incentives to contribute to operations generating pure public goods in the form of humanitarian relief, stability, and the reconstruction of fragile and failed states. The perceived linkage between club goods and other non-excludable NATO products therefore

facilitates NATO's ability to provide the necessary forces for American-led out-of-area operations" (Ringsmose 2010, p. 336).

Ringsmose's (2010) argument is coherent from the point of view of the public good generation. Nonetheless, in the first decade of the twenty-first century, from a bargaining point of view, there was an incentive for free-riding, as tensions in the European scenario diminished and, by consequence, European's fear of U.S. abandonment diminished as well. Nevertheless, there was also an incentive in the opposite direction, since the United States shifted its resources and priority to the Middle-East (in Shelling's sense, binding himself to another commitment), augmenting the fear of abandonment and downsizing fear of entrapment for the Europeans. The tension between these opposing incentives explains European allies' middle-range contribution (2% of the GDP) towards burden-sharing.

The 2010's NATO burden-sharing, in terms of D/GDP, as shown in graph 2, is very similar to the previous decade. The greatest issue for the future of the alliance, however, is the shift being made in the United States grand strategy. As Drezner (2011) has recently argued, the current US government has pursued two grand strategies: one of "multilateral retrenchment", which aims at minimizing US overseas commitments and shifting burdens more onto allies and partners; and one of 'counterpunching', which strives to reassert America's position and aims to reassure allies and partners. The balance of power is shifting towards the Pacific, and that leaves NATO with a question of burden-sharing, since the U.S will most likely prioritize that region (Simon, Desmaele, Becker, 2021).

Also, as Russia rises again as a main actor in the European scenario, smaller allies, such as Poland and the Baltics, will continue to depend on U.S protection in order to contain Russia's interests in the region. In this sense, the future scenario is ambiguous. The U.S

will probably pressure the Europeans to spend more in their own defense since the country is prioritizing the dispute against China. Nevertheless, even if the U.S. leans towards a D strategy by making enforceable threats of leaving the alliance, its bargaining power will be determined by Europe's dependence on its strength vis à vis themselves and possible adversaries, as well as the level of tension posed in the European geopolitical scenario, which will determine the risks of abandonment and entrapment for Europeans. After the advent of the annexation of Crimea by Russia, Europe increased its share of the burden (Jekobsen, 2018). Furthermore, COVID-19 increases the complexity of the situation, as it seems that as European countries and the U.S. have to spend more on healthcare and the economic consequences of the current situation will tend to tighten budget restraints¹⁹ (Gvosdev, 2020; Kunertova, 2020). The recent decision to scale back the major military exercise "European Defender" is a strong indicator of the current crises (Emmott, 2020; Judson, 2020). So who will pay for collective defense?

8. Concluding remarks

This article revised the main features of NATO as an International Organization and its burden-sharing debate. In the first moment, it addressed issues such as the organization's decision-making process and common budget. Entering the main topic of discussion of this study - the burden-sharing problem- main theories and data were reviewed in order to address this topic. This article endorses the criticism made towards public goods theory by joint-product model theorists. Nevertheless, if one takes into account private benefits, one has to take into account historical

and geographical contingencies that affect burden sharing. In this sense, the study proposed the incorporation of a bargaining theoretical framework in order to better explain the matter.

Although after the Cold War NATO's missions and Strategic Concepts have changed, the burden-sharing problem remains intrinsic to the future of the alliance. The argument put forward here is that the output of the Alliance is a club good, characterized by the protection offered by the United States in the European regional arena. Although smaller allies have some incentive to free-ride, they cannot solely count on this. That becomes even more assertive as the U.S. shifts its military priorities towards the Pacific. In order to gain the protection needed, the smaller allies probably will have to give into the U.S.' bargaining position. On one hand, the degree of further European commitment to the alliance will vary according to its dependence towards the United States, especially with regard to Russia's rise. On the other hand, it remains to be seen if the European allies will follow the United States position in what regard its refocus towards the Pacific. Hence, if the Europeans allies do not buy the U.S. vision that the Pacific is to be the high priority, it is not an absurd to expect closer relations among some European allies and Russia.

Moreover, it is worth questioning whether NATO's great solidness during the Cold War was a consequence of a so-called "transatlantic solidarity" or of the bipolar structural configuration of the time. That is, even with great disputes around the burden-sharing problem, the U.S. has never abruptly reduced its contribution share, especially due to the USSR's threat – and not due to some kind of solidarity. It follows that one cannot now take for granted that all European countries will follow U.S. preferences – especially due to the different kind and level of threat that Russia poses to Europe in comparison with the

19 According to Gvosdev (2020, p. 2): "faced with a massive health care catastrophe - along with all of the economic damage that quarantines and lockdowns create - it is going to become increasingly difficult for any political figure in Europe, and increasingly inside the United States itself, to argue that resources, tax dollars, and euros should be earmarked for increased defense spending".

former USSR. Hence, if, somehow, some Europeans decide that Russia is not the main threat to them, they would probably have a bargaining advantage with the United States in what regards the burden-sharing of allocating military resources in Europe.

In what refers to China and the Pacific region, one may not simply imply that it is a real and direct threat to Europeans. Hence it may not provide the glue that will bind NATO together as it was the case during the Cold War. Moreover, if the United States is emphasizing the Pacific threat and leaving the alliance as a D strategy in order to get better deals in Europe, it may backfire - since it has already put forward discussions in Europe whether they are better with, or without, the United States - what was inconceivable years ago.

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