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An Analysis of Burden Sharing in NATO and the Problem of Free Riding

Anthony Zannella

Anthony Zannella is a Seton Hall University 2019 graduate and a student of the Honors Program. He majored in Political Science and Philosophy. After taking classes that focused on international relations, he was inspired to write his thesis to further broaden his knowledge about geo-politics and United States foreign policy. Post-graduation, he plans to apply to law school and continue to study international trends that are linked to United States foreign policy. Additionally, he hopes to pursue a higher degree in Philosophy.

United States hegemony over the international system has been the norm since President George H.W. Bush declared that the U.S. had the ability to create a “New World Order” (Bush 1991). However, politicians in the United States and in Europe have started to question the role that the U.S. should take on the world stage due to the aggressiveness of the Trump Presidency and a subsequent loss of trust in U.S. capabilities and motives (Emmott 2019). Trump has made some rather dramatic changes in his rhetoric regarding NATO. Due to members’ perceived reluctance to pay for military upkeep, Trump has taken a more belligerent stance against NATO members than any former president. Certainly, burden sharing within the alliance has been an issue of importance for several presidential administrations prior to Donald Trump. However, no other president has taken it so far as to question and even decline to affirm support for Article 5 which dictates mutual defense within the alliance (Gray 2017). President Trump has railed against NATO’s members, specifically those in Europe, for not contributing enough to the alliance. President Trump has focused his attacks through the lens of percentage of the gross domestic product being applied to military and defense

capabilities. One should also take note of the criticisms levied by past administrations as well. President Obama and President Bush both noted that they wanted their European allies to contribute more to NATO defense spending. Bush pointed out that increased spending on European defense would strengthen the forces of NATO, while Obama took note of decreased defense spending among European allies in 2014 (Collinson 2018). It would appear as though American patience with NATO has somewhat dwindled overtime. This has been a pressing issue as indicated by former U.S. secretary of defense Robert Gates who declared “NATO’s future ‘dim if not dismal’” if it did not seek to bolster its forces (Binnendijk 2016). President Trump still clearly demonstrates a more hostile approach that could shake up the alliance. The true question is whether his criticisms of European defense spending are warranted.

Burden sharing within NATO is a far more complex topic than just the amount of money being spent on troops and technology. NATO is an intricate alliance based on the concept of collective action, a concept which aims to maximize defensive capabilities in a wartime scenario. The alliance requires that its members uphold their militaries to a certain budgetary and readiness standard so that all

members may benefit from a general increase in their military power. The aim of this paper is to answer the question as to whether, and if so why, non-U.S. NATO allies are free riding in lieu of the charges levied by current and former presidential administrations. This paper will seek to determine levels of free riding through the lens of three different facets: NATO defense expenditures will be considered, as well as two burden sharing case studies in Libya and Afghanistan. Free riding itself shall be defined in each case by the input of relevant monetary, political, and tactical contributions. If evidence demonstrates that free riding is apparent, it is also important to understand the factors that are encouraging countries to engage in such activity. The research will demonstrate that burden sharing can be a very complex facet of NATO to analyze, even though there are clear cases of unequal burden sharing within the alliance. Free riding will be made apparent by the complexities present in the two case studies. Furthermore, this paper will also take into consideration the economic theory presented regarding burden sharing and how it factors into alliance cooperation.

LITERATURE REVIEW

The state of burden sharing within NATO has had its fair share of criticisms since the alliance's conception. Critics have been quick to point out that the United States appears to bear a heavy share of the defense burden while other members appear to free ride and take advantage of U.S. military power. Truly, debates surrounding burden sharing itself remain contentious within the NATO community. Burden-sharing literature was initiated with an article by Mancur Olson and Richard Zeckhauser entitled "An Economic Theory of Alliances." The paper was written in 1966, and it aimed at exploring (through economic theory) how burden sharing works within alliances. They concluded that other countries would attempt to free ride on other members within the alliance in order to get the

max extent of benefits while providing a minimal amount of support. This conclusion was profound and formulated what became known as the "exploitation hypothesis." They came to this conclusion through the examination of pure public goods within an alliance. According to Olson and Zeckhauser, a pure public good can be described as "non-rivalrous" and non-excludable." A more technical understanding of their conclusion is as follows: the pure public good of deterrence, which is provided by the richest country, results in the other alliance members free riding on commitments of the richest member. This became part of a theory of organizations which is known as "collective action". (Olson and Zeckhauser 1966).

Olson and Zeckhauser's article on collective action was influenced by an earlier piece of research written by Mancur Olson entitled *The Logic of Collective Action: Public Goods and the Theory of Groups*. Olson's book explores how groups and organizations work in order to further a common goal through the utilization of economic theory. Olson pointed out examples of how private business, unions, and governments interact with one another in order to make their sector more profitable, receive concessions for workers, or secure their nations. It is clear that these examples can also be applied to NATO, as Olson pointed out in his aforementioned article with Zeckhauser. The relevance of this book is that it sets the basis for understanding how public goods can lead to free riding in an organization such as NATO. Olson's conclusion, regarding how the members of a group act, was that these groups might find themselves to be at odds with another member within the group which might have the ability to increase security output in an alliance like NATO. He also pointed out that for this to work, there must be some sort of sanction in place that encourages members to pay into the organization. In

NATO, there is no truly effective sanction to discourage free riding behaviors (Olson 1971).

A great deal of research has been done to expand on Olson and Zeckhauser's work. Todd Sandler and Keith Hartley's work, for example, summarized the various models employed in the field. The initial theory, proposed in "An Economic Theory of Alliances," of a pure public good model was considered to be too restrictive and did not take into account a multitude of other factors for which a "joint-product model" would seem to make up. For example, the joint-product model includes a high ratio of excludable benefits which changes the idea behind collective action in an alliance. These findings weakened the "exploitation hypothesis" since the equation is no longer limited to the pure public good of deterrence. The joint-product model still points out other ways that countries will attempt to free ride on other allies by factoring in those excludable benefits. It is still possible for a deficit to be apparent, though not as likely (Hartley 2001).

Sandler and Hartley also worked together on an earlier piece which attempted to reevaluate the factors that go into calculating the equity involved in burden sharing. The earlier work contributed to the 2001 paper considering that it provided new criterion to look at collective action. They pointed out various new factors that could be considered viable contributions to the alliance and could result in a more equitable share of the burden between nations. In sum, Sandler and Hartley pointed out how different measures of burden sharing should be applied and to what degree. For example, military budgets and a nation's willingness to engage in a conflict are two very different measures, but both are equally important to understanding whether a country is truly shouldering their fair share of the burden. The ultimate conclusion of this paper is that nations will tend to pick a specific measurement which shows that they are shouldering more of the burden than other

nations while not paying attention to the range of other factors involved in contributing to the alliance (Hartley 1999).

Discussions of free riding within NATO on the American side argue that the United States is simply being fooled into providing defense. They believe the U.S. should be wary of supporting wealthy European nations that don't want to spend as much on their militaries. Alan Tonelson's early 2000s article highlighted this mood as he explored how changes in international geo-politics appear to be putting the U.S. at greater risk. Tonelson conveyed the risk associated with NATO through both material and non-material causes. He argued that U.S. actions leave the country exposed to more precarious situations. Tonelson mentioned that there is a greater risk that the U.S. can be dragged into "non-article 5" conflicts even though America's original objective was to keep the power of Russia in check through its military presence. Tonelson pointed to the example that U.S. troops stationed in European countries are at risk of injury in an attack (particularly from terrorists or irregular forces) and could be stuck in the middle of an unnecessary conflict. Tonelson also pointed to Kosovo as an example: the U.S. was influenced to become involved simply to strengthen NATO's credibility even though its European member nations were contributing far less to the alliance operations in comparison to those of the U.S. (Tonelson 2000).

From a financial perspective, an earlier article written by Jyonni Khana and others indicates that alliance members in NATO, and in the U.N., are in fact free riding on larger nations such as the United States. The authors concluded that there is a wide gap in the equity of burden sharing. Their analysis focused heavily on peace keeping expenditures between 1976 and 1996. Joint-product models and collective action theory were employed to study the financial contributions of the various countries. The

level of fiscal support from the larger countries far outweighed those of the smaller nations and indicated a great level of free riding (Jyonni Khanna et al 1998).

More recent studies have tried to take a more mixed methods approach; this is apparent in Jo Jakobson's article. Jakobson attempted to draw on the collective action approach and the risk-responsibility sharing school. Jakobsen ultimately factored in the different variables both schools use, but he comes to differing conclusions. He started the study with the standard input measure, (where one looks at what countries put into the alliance alone) and it became obvious that European NATO free rides from this analytical perspective. Furthermore, Jakobsen found that non-material free riding can occur when a U.S. presence in the country of operations is significant as compared to its allies. A further observation demonstrated that other allied countries showed a low willingness to fight. He also mentioned that the importance of United States military spending has to do with other variables. The United States was engaged in various operations throughout the world, especially in Europe. The United States' projection of power could essentially outweigh the lessened spending of European NATO allies. Jakobsen's conclusion is to remain cautious when attempting to decipher whether European NATO in fact free rides (Jakobsen 2018).

Examinations of free riding within NATO require a more nuanced approach, and Timo Kivimaki's work added new variables to the equations associated with economic examinations of free riding. Kivimaki produced three new variables to consider in the debate, including: a calculation of that country's power, a variable about that country's security guarantees to its allies, and the reliance of the U.S. on NATO in out-of-area efforts. Kivimaki relied heavily on Ringsmose's model for determining levels of

burden sharing. He employed these new variables to essentially say that European free riding appears to be on the decline as evidenced by lessened security guarantees. Kivimaki indicated that there had been an imbalance in the past, but he claimed that the gap was beginning to shrink. Kivimaki's evidence was supported by the inclusion of these new and telling variables. (Kivimaki 2019).

Hans Binnendijk explored the problem of free riding within NATO from an historical standpoint. Binnendijk reviewed the pros and cons of spending within the alliance since its inception, and he discussed how the United States had attempted to address budgetary issues with its allies in the past. He concluded that recent Russian aggression toward Ukraine could provide an opening for the United States to put more pressure on its European allies. The increased pressure could, in turn, coerce European allies to commit more to defense spending and effectively lessen the burden being placed on the U.S. Binnendijk also went through multiple policy proposals that would help initiate this pressure, and he also delved into how each facet would help to equalize burden sharing. Part of Binnendijk's broader argument is that European NATO is changing because new geo-political considerations have become more important since the fall of the Soviet Union (Binnendijk 2016).

BURDEN SHARING FROM AN ECONOMIC PERSPECTIVE

One of the most prominent ways to approach burden sharing is from the perspective of spending. The way that NATO manages its forces is through each country's defense spending. The alliance was founded on the notion of collective defense. This is the idea that an attack on one ally is considered a direct attack on all the other allies (as outlined in Article 5 of the treaty). Collective defense stipulates that each member state must contribute a significant number of resources to

their military, and thus these contributions would ensure that all members of the alliance would be capable to come to the defense of their allies.

NATO was a much smaller organization during the Cold War than it is today, but it grew overtime. The alliance was founded in 1949, and it was originally comprised of 12 countries. It grew to include 16 countries between 1949 and 1989, and by 2019 it had 29 formal allies. As early as 1950, the U.S. attempted to coax Europe into providing more for its own defense. One specific attempt was when the U.S. tried to take advantage of the onset of the Korean war: “President Truman... committed four US army divisions to Europe. In return, France promised to take the initiative in the creation of a European Defence Community,” (Ringsmose 2010). Truman’s goal was to initiate a “quid-pro-quo” where the U.S. would provide some level of defense for Europe while he expected it to develop its own militaries in return. Essentially, Truman’s goal defined the essence of burden sharing diplomacy for the U.S. throughout the Cold War. Despite the president’s efforts, Congress was adamant in reevaluating defense spending within NATO (Ringsmose 2010). This push and pull would continue for years to come, but it was apparent that the U.S. was contributing far more to defense spending than its European counterparts. This demonstrates some level of free riding (see Figure 1) (Ringsmose 2010). Collective defense, at this point, included different factors that modern burden sharing no longer focuses on as much. Nuclear deterrence was more important with the Soviet Bear lurking, and preparedness for a conventional or nuclear attack was given more emphasis. The reinvention of NATO as an “out-of-area” force in modern burden sharing has changed the way that spending is viewed. Now, the U.S. no longer needs to focus on its nuclear umbrella as the most important facet of collective defense. Instead, spending can

be dedicated to more conventional forces in order to deal with rogue nations and limiting (on a smaller scale) the proliferation of nuclear weapons (Hartley 2001). These changes, therefore, open the door for Europe to contribute more to NATO by increasing its technological and strategic capabilities.

The United States has been, and still is, the largest spending member of NATO. America contributed 51.1% of the alliance’s combined GDP and 71.1% of its combined defense expenditure in 2017 (Macias 2018). Furthermore, the United States dedicated more of its GDP (at 3.31%) than any other country. 23 of the other 28 members failed to meet the proposed goal of “2% of GDP being dedicated to defense spending” as was agreed upon at the Wales Summit in 2014 (NATO.int). In fact, most countries do not seem to be on track to even reach the goal of 2% by 2020. However, there has been a slight overall increase in spending, and estimates for defense expenditure as a share of GDP indicate that European NATO members are contributing more to their defense budgets than they have in the past.

In addition to the overall view of GDP, it is also important to consider to which projects the money is being applied; a more concrete understanding of specific expenditures gives a better view of the overall effectiveness of a country’s forces. NATO also has a minimum threshold of 20% of GDP expenditure toward equipment when considering the greater context of a country’s GDP being applied to defense (Antonoaie 2018). Only 11 out of 28 NATO member-states are adhering to this threshold as of 2017 (NATO.int). Luxembourg dedicates the greatest portion of its GDP for military expenditure, to equipment. Overall, only 0.5 percent of its GDP is contributed to military expenditures. This means that the potency of Luxembourg’s forces is still minimal at best. The power of each force is significantly reduced in technological advantage because most

countries are not upholding their spending promises for equipment. The category of equipment also includes R&D expenditures for major projects and munitions. The lack of spending in this category further proves that not enough countries are investing in the technology to modernize their military. The lack of funding is an incredible risk because the conduct of warfare is constantly evolving (Dubik 1). The U.S. dedicated 25.73% of its total defense expenditure on equipment (part of the percentage includes upkeep) in 2017 which means that far more work is also being applied to critical military R&D. These expenditures force the U.S. to maintain its technological superiority, but other countries are lagging and leaving more of the burden to the United States.

Defense spending has always been a major point of contention for the United States and its other allies. Presidential administrations have constantly critiqued the lack of spending within NATO, especially the lack of spending by European allies. The Bush and Obama administrations both found spending levels to be too low. Obama specifically stated, “Free riders aggravate me” (Goldberg 2016). Of course, their frustrations went far beyond simple rhetoric. The issue of defense spending has taken a new level of importance under the Trump Administration. Trump has demonstrated far more grief toward the alliance and has stirred up trouble in the process. Within this context, it is imperative to understand whether free riding is occurring from a fiscal perspective.

At first glance, it would appear obvious that the United States is indeed carrying the alliance in terms of expenditures on defense. This has been the case since NATO’s inception, and has been explored in depth through collective action theory. Mancur Olson and Richard Zeckhauser’s piece confirms that smaller nations free ride, and they rely on the largest nation to provide most of the public goods available to those within

the alliance. The theory behind collective action seems to illustrate how straightforward it can be for countries to free ride: “Since the benefits of any action an individual takes to provide a public or organizational good also go to others, individuals acting independently do not have an incentive to provide optimal quantities of such goods,” (Olson 1966). The economic models show how nations will adhere to this method of thinking: the country that is the largest (and seeks to increase defensive capabilities) will continue to increase its own expenditures while smaller nations leave the spending to said nation.

When applying this theory, it makes sense that a rather sizable chunk of European military expenditure shrank dramatically leading up to the end of the Cold War in 1991. American military investment between 1981 and 1990 remained at relatively the same level. On the other hand, European NATO members induced a drop of 10.3 percentage points. Furthermore, U.S. military personnel numbers were reduced by 7.4 percent, but Western Europe’s fell at a higher rate of 10.2 percent. By the year 1989, 36 percent of NATO’s defense forces were being provided by the U.S. In addition, the U.S. also accounted for 64.7 percent of total NATO defense expenditures (Tonelson 2000). The United States prioritized its spending on defense expansion since it was still in competition with the power of the slowly declining Soviet Union. Hence, European NATO members were decreasing defense spending while taking advantage of the United States’ continued focus on contending with weakened Soviet military programs.

The models produced by Olson and Zeckhauser have been expanded by other scholars since their creation, and updated implications must be considered in order to paint a more comprehensive picture. Burden Sharing can also be analyzed by using what is known as the joint-product model of alliances. The joint-product model digresses from the

view that alliance contributions to defense are pure public goods from which all members of the alliance can benefit. An article written by Jacques von Ypersele de Strihau points out the fact that a country's defense expenditures also provide benefits that solely increase the national goods (as opposed to alliance goods) and are instead excludable benefits. Also, he notes that these are joint products of national defense expenditures (de Strihau 1967). He goes on to argue that "The value given to each country to these strictly national benefits should be deducted from the defense expenditures to obtain the 'burden' borne by each country for the provision of the international public good," (de Strihau 1967). These strictly national benefits include a range of potential categories, including economic and political advantages. This difference in views changes the outlook on burden sharing from an economic perspective. As noted by Todd Sandler and Keith Hartley, the implications of a joint-product model could potentially even the playing field between NATO members and reduce the relevance of the exploitation hypothesis put forth by Olson and Zeckhauser. This implies that the larger country may be profiting from a high level of excludable benefits. This point of view could indeed have merit when looking back at Tonelson's view of defense spending between 1981 and 1990. The United States, at the time, was still providing a great deal of funding to defense while European allies were reducing their spending. One can assume that the joint-product model perspective would show that the United States was providing a large proportion of excludable benefits for itself. Whereas increased deterrence would have been a pure public good from which European NATO members benefitted, the revelation of the joint-product model resulted in the inclusion of the political and economic factors associated with it. Increased defense spending in the U.S. had strong political backing, and it would have provided the

excludable benefit of greater political support for the national government's administration. Furthermore, defense spending would contribute to the work force and economic strength of a country as more money funneled into that industry. In comparison, European NATO countries could have had a more equal ratio of burden sharing since they were not privy to the excludable benefits inherent within U.S. spending.

It follows, therefore, that it is important to take into consideration the additional variables of the joint-product model if one is to better understand burden sharing. This ensures that the correct variables are accounted for and plugged into calculations accordingly. The joint-product model is where ideas of material and non-material burden sharing can begin to play a rather pivotal role in understanding how NATO members ultimately benefit and provide for the alliance. These views of material and non-material burdens became more prominent after the end of the Cold War. This was due to a shift in mission directives spurred by the onset of the "New World Order." The new order had the U.S. at its helm, and it formed as a result of the end of the bipolar system of the Cold War. Now, the focus was not so much on deterrence against Russia as it was on security operations and a broader notion of conflict prevention across the globe. New burdens would be introduced into the equation as security operations would be moved "out-of-area."

One such example is military casualties as explored by Jo Jakobsen. Jakobsen points out how the use of boots on the ground, a method of contributing to security operations, leads to the obvious risk of casualties. But he also notes how these casualties now contribute to the variable of political support on the national level (Jakobsen 2018). From a joint-product model perspective, the values of those excludable goods are subject to change as forces are actively being deployed and put in harm's way. Jakobsen also points out how

rules of engagement for each specific ally can affect the general effectiveness of their forces and, therefore, lessen or enhance their share of the burden. More stringent rules of engagement can, of course, lead to less casualties enhancing the excludable goods from which the nation benefits (or, in other words, lessening allied access to the pure public goods that country produces) (Jakobsen 2018). Hence, this complicates the entire equation of burden sharing as the variables and their values are subject to more scrutiny than they once were. This leads into an analysis of the case studies of Libya and Afghanistan and how burden sharing can be looked at in greater depth.

BURDEN SHARING FROM THE PERSPECTIVE OF THE ISAF IN AFGHANISTAN

The war in Afghanistan proved to be long and costly for all the countries it has involved. The war has cost the U.S. approximately \$975 billion since 2001 from a fiscal perspective alone. This makes it only second to military costs during World War II (which have been adjusted for inflation) which were \$4.1 trillion (McCarthy 2019). Furthermore, the U.S. has suffered over 2,000 casualties and more than 20,000 wounded in Afghanistan's Operation Enduring Freedom between 2001 and 2014 (US DOD 2019). In comparison to Afghan coalition allies, the general cost in blood and treasure does not seem to align. In terms of fiscal costs, the U.K. precedes the U.S. at only £37 billion (approximately \$47 billion). The difference in troop casualties is also significant, with the UK incurring 455 deaths, Canada 158, Germany 54, and France 86 all from 2001 to the present (Soldiers Killed in Action in Afghanistan 2001-2019). It would appear as though the burden is primarily being shifted on the U.S. in terms of concrete allocations and losses regarding costs and casualties.

These numbers, taken at face value alone, are not enough to understand the complete picture of burden sharing in Afghanistan. A

study written by Peter Marton and Nik Hynek demonstrates an interesting graph which views troop deployments and costs in lieu of that country's GDP and population size. With reference to figure 2 in the appendix, one will note the contributions of countries such as Denmark and Estonia (Hynek 2012). Both countries appear to have provided an incredibly small number of troops in comparison to countries such as the U.S. and the U.K. However, if one refers to the column "People per one soldier deployed in ISAF," the rank of these countries is far higher than before. Denmark is shown to come in at 3rd and Estonia in 4th, and they are preceded only by the U.S. and the U.K. Furthermore, the financial burden of countries such as Estonia, Poland, and Romania accounts for more of their "share of GDP" in their "cost per troop" than even the US (who is in 4th place). From this perspective, it would appear as though the countries are, in fact, pulling more of their weight. The importance of looking at factors like these is that it places a country's contributions into the greater context of their economic and deployable capabilities. Surely, a smaller country such as Estonia could never contribute as much money or troops as the U.S., but it could provide a similar if not greater ratio of "troops to population" or "troops to cost" than some of the larger nations in the coalition. The last interesting fact to gather from figure two of the appendix is that the country that takes up the greatest percentage share of ISAF forces is Canada. One should note that the countries which are racking up decent numbers represent only a handful out of 29.

These elements are incredibly interesting since Operation Enduring Freedom was started as part of the United States War on Terror. Since this war was started by the U.S., it has become more important to determine whether these countries were free riding in Afghanistan. However, the significance of troop levels, troop casualties, and fiscal

contributions alone is not enough to provide a full representation of the burden sharing taking place in Afghanistan. Other important factors to note are not so easily quantified. One such variable is the potential intra-political cost of a country's contributions to operations and budget, not wholly dedicated to military expenditures, (e.g. financial reconstruction, aid and budgetary funds for the Afghan government) (Jakobsen 2018). In 2009, for example, Obama's policy of surging troops into Afghanistan was initiated. According to a Pew Research Center table, most people (from the surveyed countries) opposed the increase of troops in Afghanistan (refer to figure 3 of appendix) (Auxier 2015). Despite this opposition, there was a general increase in troops between 2009 and 2011 from those very same NATO countries involved in the survey (Rogers 2009). This demonstrates a willingness on the part of these countries to sacrifice political clout with their constituents in order to contribute to alliance operations. In fact, most of the NATO countries involved increased their troop levels leaving only Norway, the Netherlands, Latvia, Iceland, and Belgium to remove some or all their forces from Afghanistan. Canada also reinforced its claims to leave Afghanistan (Siegel 2009).

The extent of aid provided in order to help rebuild Afghanistan is the other significant measure that is mentioned. Reference to figure 4 demonstrates various countries that have provided aid to Afghanistan between 2002 and 2008. Among the NATO countries on this table, the U.S. has clearly donated the most, with the U.K. and Germany being the next highest NATO donors consecutively. One would be remiss to not mention that the final aid total disbursed by the U.S. is in fact \$5,022.7 million. The U.S. donation amount is still significantly higher than that of its other allies: the U.K.'s final disbursement is closer to \$1266.3 million, and Germany's is closer to \$767.84 million. Aid promised

(while demonstrating what could be a desire to take on a fair share of the burden) is irrelevant since the actual burden sharing aspect comes down to what was spent. (Fayez 2012).

When looking at Afghanistan as a whole, it would still seem as though the U.S. is taking on a much larger share of the burden compared to its allies. In terms of dedicating military funding it tops the charts even despite some of its smaller allies' attempts to pull their weight in terms of force deployments. Context does show that some of the smaller countries are providing a great deal in lieu of their reduced capabilities, but some of the more powerful countries are not making up for deficiencies where they could. This lack of support is especially highlighted when looking at the deployment of their forces: "The European contribution to the actual combat theater was minimal and primarily included British forces in the form of air assistance. Because the initial stages of the campaign involved almost exclusively the use of Special Forces and air power, technological and other capacity issues limited the role European forces could play" (Siegel 2009). This is further proved by the thought process of NATO when considering whether to deploy a peacekeeping force outside of Kabul in 2002. NATO considered Great Britain to be the only other country capable of quickly deploying an effective force in the region (Jones 2009). Moreover, the U.S. appeared to be taking the lead regarding reconstruction efforts; 14 out of 19 provincial reconstruction teams (PRT) were manned by the U.S. leaving only 5 of them to be led by ISAF and NATO countries in 2005 (Rashid 2008). In addition, the effectiveness of NATO forces and their contributions were not up to par despite their efforts to contribute: "In 2006, NATO promised to place a PRT in all of Afghanistan's thirty-four provinces. However, the Establishment of "national caveats" stipulating what its PRT force could and could not do was to paralyze NATO's

effectiveness in combating the Taliban,” (Rashid 2008).

Furthermore, these countries’ disregard for public opinion and their willingness to sacrifice their political power back home would seem to indicate a discrepancy in the ideas put forth through collective action. Such actions are in direct opposition to the basic premise of the exploitation hypothesis since those countries were still willing to put their forces in harm’s way for an operation that is more important for the U.S. than most of the other NATO allies. In contrast, one could argue that U.S. leaders were also putting their political clout back home at risk with their massive deployments of troops. While Canada made up the larger share of NATO forces earlier in the war, the U.S. currently makes up 12,000 of the remaining 17,148 NATO troops deployed (War in Afghanistan Global Conflict Tracker). When Obama had asked in April 2009 for European NATO members to contribute more forces along with his surge of troops, Canada (as well as the Netherlands) reconfirmed a prior commitment to pull troops out of the country as a direct act of defiance against the surge (Siegel 2009). This is an indication that allies were beginning to contribute less resources as time went on, and this would seem to suggest that the cost of providing forces was no longer worth the benefit of appeasing the U.S. and “keeping the Americans in” (Matlary 2014) the alliance. While this does not account for the spending in aid, the great reduction in allied forces removes the costs of gambling political clout and being influenced by domestic constraints, which is one of the greater, if not the greatest, factors in burden sharing today (Matlary 2014). This is also backed up by Ringsmose who states that “As NATO became involved in out-of-area operations... the burden-sharing debates increasingly came to focus not only on deployable military assets, but also on the fair sharing of risks,” (Ringsmose 2010). Instead, “checkbook diplomacy,” which reduces the

argument to simply how much money one provided, began to be frowned upon by the international community. The importance of domestic constraints is essential, and the U.S. was bearing a heavier share of the burden in this regard. Consider that “Fifty-seven percent of Americans, including 69 percent of military veterans, said they would support a decision by the president to remove all troops from Afghanistan,” (“Public Opinion on Afghanistan War: 2018 Poll”).

BURDEN SHARING FROM THE PERSPECTIVE OF LIBYA

At first glance, the onset of the 2011 conflict in Libya had potential to provide a new template of how burden sharing could work between America and its NATO allies. Libya is within the general proximity of Europe, but the United States itself did not have any major stake in the conflict at all. U.S. interests are relevant to burden sharing because they bring into question how willing America is to commit its resources to a conflict that is not directly related to its national security. In the beginning, President Obama was hesitant over what role to play in the ongoing developments in Libya. Obama took a more cautious approach until the situation deteriorated into further chaos. Eventually, Operation Odyssey Dawn was put into motion and the U.S. was going to work alongside its allies while utilizing its strategic command in a targeted air campaign. Obama wanted the U.S. to engage in a primarily assistive role while NATO allies would engage in the bulk of hard operations which was contrary to how operations had been run in the past. The administration was adamant that absolutely no U.S. troops were going to be deployed to the region, and Obama outlined a plan for U.S. involvement. The plan radically altered how the military typically allocated its resources to such operations. Instead of having the U.S. invest the largest share of military assets to the operation (as it had done for virtually all other

operations), Obama wanted to take a more restrained approach. He wanted the U.S. to move in with purpose and strength in order to break through Libyan defenses; then, US forces would pull back while only providing capabilities that the other NATO allies lacked from a military standpoint (Chiviss 2014). This military plan indicated a completely different level of practical burden sharing. Rather than the U.S. supplying more of its forces in harm's way, it was instead using its unique military role to direct allied forces and provide cohesion for NATO in the areas where it was lacking. From the perspective of a reduced U.S. role, it would appear as though a large share of the burden was suddenly shifted away from the U.S. and onto others in the alliance. One of the main reasons Obama took this position was to reduce the strain on taxpayers and the military back home (Hallams 2012). Obama's desire to satisfy his constituency plays into the excludable benefit of political clout. Since the administration had effectively increased its excludable benefit, there must be a reduction of pure public goods since the U.S. would no longer contribute as much. This implies that other NATO allies were putting much more on the line, and the value of the pure public goods they provided increased. With their forces being put out on the "front lines," it was the lives of their soldiers, the wear of their equipment, and the spending of their money that was being allocated to more of the operation than had been the case in the past (Hallams 2012).

When one takes a concrete look at the numbers involved in Libya, a different story can be gleaned. The first major piece of data to note is the number of sorties that were flown by NATO forces. Even though the U.S. meant to engage in a far more constrained role throughout the entire operation, it still managed to fly the most sorties with a total of 2,000. The UK and France were not far behind flying 1,300 and 1,200 sorties

respectively. While most sorties were flown by non-U.S. NATO forces (75% to be exact), this did not account for the lack of effective force employed by them (Shanker 2011). The U.S. still boasted the largest concentration of forces in the region, and it surpassed all allies in the categories of personnel, aircraft, ships, and the deployment of cruise missiles. Unlike the sorties, the United States greatly surpassed its counterparts: the combined forces of the U.K. and France were still not enough to match the concentration of U.S. assets in any of the categories (Rogers 2011). Tim Hasebrouck points out that despite the U.S. plan to pull back after the operation was in motion, the U.S. still seemed to demonstrate that it was "a prisoner of its size" since it continued to provide essential military assistance to the bulk of operations (Hasebrouck 2016). The fact that the U.S., even in its reduced role, was forced to step up to such a degree demonstrates two things:

1. In order for the alliance to function properly, the U.S. must be involved in a leading capacity at some level, otherwise operations would become far more costly to all allies.
2. NATO allies were severely lacking in multiple facets of military readiness and combat effectiveness as indicated by the holes left for the U.S. to fill.

These implications are essential to understanding the burden sharing dynamics of NATO. Both implications would appear to give credence to the theory of collective action and its exploitation hypothesis. Since the U.S. possessed such an overwhelming force and well-funded military, most other allies were counting on the U.S. and its position of power to make up for their deficiencies. Therefore, the other countries in NATO chose not to spend as much on their militaries since they knew that the U.S. would end up strengthening the overall capability of the alliance. This is what led to NATO allies dedicating less of their GDP to critical

military equipment and personnel which would have helped to strengthen the alliance.

NATO's lack of military effectiveness was made apparent by several deficiencies. According to an article written by Thom Shanker and Eric Schmitt, the U.S. (and to a lesser degree some of its more powerful allies) had to "lead from behind." Regarding the sorties that were flown, "NATO does not have a roster of experienced officers to do its own targeting- the essence of successful air warfare. Only the United States, Britain, and France have targeteers up to modern standards," (Shanker 2011). The article also goes on to point out that the U.S. decision to let other allies lead revealed major shortcomings regarding intelligence gathering/reconnaissance equipment as well as certain critical munitions (Shanker 2011). As stated by Ivo Daalder and James Stavridis, "The heavy reliance of alliance members on the United States during the conflict highlighted the cost of a decade of European underinvestment in defense," (Daalder 2012). In the case of Libya, it would appear as though the free riding of NATO allies forced the US to engage in a heavily involved combat role despite Obama's initial reluctance.

It is also important to consider the countries that did not take an active role in Libya. A number of these countries were simply unable to participate due to limits on their forces and budgets. But when a country like Germany decided to opt out of the operations, there were greater implications at large. Germany had the capability to provide military assistance, but only participated in a limited surveillance role and abstained from the UN security council vote to authorize the intervention. According to a website dedicated to measuring military capabilities, Germany is currently the 5th most powerful member state of NATO (NATO Member States Ranked by Military Strength). Poland, while ranked 9th in terms of capability (NATO Member States Ranked by Military Strength),

refrained from direct participation in the operation and only supplied precision missiles to its NATO allies (Daalder 2012). The lack of unity within NATO would seem to demonstrate an inability to act in a collective manner. While some allies bear the brunt of combat, others will simply engage in a "supportive" role without truly placing any of their forces in harm's way. This is problematic as the involvement of some of these countries could have helped to relieve the burden that was placed on the U.S. While there likely still would have been major holes for the U.S. to fill in terms of offensive capabilities, these nation's lack of support and participation is yet another sign that free riding was apparent in the Libyan intervention. Unlike the more dedicated efforts of allies such as the U.K. and France, these absentee countries played to the tune of the exploitation hypothesis by letting other countries deal with the risks associated with direct involvement.

It is also important to note that the countries that did try to contribute more to Libya, likely only did so in order to try and appease the U.S. by trying to take a more active role in the alliance. According to Jane Matlary, "the present challenge to NATO states in Europe is... to contribute and show solidarity with the United States, [and] also to take responsibility for security and defense policy in lead roles, as in Libya... this challenge comes at a time of deep budget cuts and where risk willingness is part of burden sharing. Military contributions must be... ready for combat," (Matlary 2014). This demonstrates how European countries might be unwilling to provide more to NATO at a time when their nations are in "deep peace mode" and not as conducive toward sending their people into harm's way. The fact that countries such as the U.K. and France might have only contributed to the alliance to appease the U.S. while other countries are focusing on their own domestic political

factors, further demonstrates the splintering of NATO cohesiveness. This, in turn, is another factor that leads to the U.S. being forced to make up for the lack of participation and readiness of those unwilling countries.

CONCLUSION

The literature on burden sharing has shown great development over the years moving from a more pecuniary focus, to a focus that incorporates a variety of inconspicuous factors. From a deterrence and pure public goods standpoint, the United States is bearing an unfair share of the burden. The simple fact that it is leading the way economically (and in turn with the efficiency and effectiveness of its forces) shows that non-U.S. NATO allies are indeed benefitting unfairly from its ally's efforts. The decline in NATO allied defense spending indicates the acceptance of relying on U.S. capabilities and letting their own forces bear less of the financial responsibility associated with collective defense.

However, the simplicity of this model does not consider other factors that can be just as important to burden sharing. The joint-product model would seem to take better account of factors that do not seem immediately pertinent to burden sharing but are without a doubt just as important. The dedication of alliance forces can produce strain in a political manner due to the potential loss of life and the ramifications such losses can have back home. Furthermore, the introduction of excludable goods levels the playing field in different ways. The massive output of defense provided by the U.S., incurs significant benefits that are only a positive for the U.S. alone. The expansion of the defense industry, for example, can provide jobs and further stimulate the U.S. economy; however, this is a good that other nations cannot benefit from directly. This same idea can be redirected back to non-U.S. NATO allies. Many of them intend to focus more on

domestic issues at home while letting their forces weaken under the greater protection of the United States. With new threats on the rise and a turn to out-of-area operations, it becomes apparent that if the U.S. "is able to provide politically or physically sufficient levels of security for the rest of NATO's members in response... then other members can free ride and will provide little additional assistance. Therefore, we should expect even more free riding than in the past," (Siegel 2009).

Regarding Libya and Afghanistan, it would appear as though NATO allies were contributing to a more balanced and fair system of burden sharing, but this is in fact not the case. In Afghanistan, alliance cooperation and burden sharing were on more equal footing with the initial invocation of Article 5. Countries were attempting to provide military assistance to the operations despite the limitations their economies and populations imposed upon them. However, there were only a few countries that provided enough force in any truly effective sense. While major allies such as Canada did indeed provide a great deal for the alliance in the beginning, support tapered off overtime. Several other capable countries did not dedicate as much as they could have, and even when they did, their support provided little strategic significance. Instead, U.S. forces were providing for the bulk of the operation while its allies were hampered by inefficient forces and a reluctance to give in to U.S. unilateralism. In addition, the restraints placed on rules of engagement and other factors significantly reduced the effectiveness of their combat roles. This forced the U.S. to pick up the slack, as it had done during the Cold War, with its deterrence abilities. The eventual decline in alliance involvement also indicates support for collective action theory as allies began to outweigh the costs to the benefits of participating in combat operations with the U.S.

In Libya, on the other hand, the U.S. attempted to reduce its role in combat operations while NATO allies shouldered the burden of putting their forces in potential danger. While the U.S. was dedicating its budget to strategic command, its allies were making up for their lack of defense spending by taking more responsibility through both material and non-material variables. The involvement of more subtle factors completely changes the implications of collective action. However, the statistics indicated that the U.S. was still forced to engage in taking on a larger share of the burden than it had anticipated or even wanted. The other allies did in fact break through domestic constraints by putting their forces in harm's way. But Hasebrouck's work showed that such constraints were not as prominent because Libya was considered an easier operation, and the U.S. still took on a greater role. Furthermore, the implications of increased U.S. involvement show in a concrete way that free riding is occurring. The inability of European forces to deal with the realities of modern combat forced them to rely on the U.S. even though they were trying to take more of a leadership role in the operation.

It could be argued that had more of the countries involved been contributing more of their GDP to their forces in the first place (especially to training pilots and updating their technology), the U.S. would not have had to employ its unique combat abilities as much as it did. The two case studies show that free riding occurs because NATO forces have not modernized their forces well. Through the theoretical application of collective action and the joint-product model to case studies, burden sharing is still not on the equal footing that the U.S. would like. While there are many factors involved in determining levels of free riding in NATO, a large gap still needs to be closed between the U.S. and its allies (especially regarding military effectiveness). Although ×non-U.S. NATO allies are increasing their

spending, the effectiveness of their forces proves that the U.S. is forced, due to its size, to attend to unfulfilled facets of combat preparedness. This, then, puts the obligation of maintaining a modern military force on the U.S. Therefore, it is forced to spend more money while letting other nations free ride. In the end, NATO is still engaged in a mindset of relying on the U.S. to take on the more costly aspects of alliance burden sharing.

APPENDIX

Figure 1:

Reproduced from: Ringsmore, Jens. "NATO Burden-Sharing Redux: Continuity and Change after the Cold War." *Contemporary Security Policy* 31, no. 2(August 16,2010): 319-38.

<https://doi.org/10.1080/13523260.2010.491391>

TABLE 1
DEFENCE BUDGETS AS A PERCENTAGE OF GDP, 1949–1989

Country	1949– 1954	1955– 1959	1960– 1964	1965– 1969	1970– 1974	1975– 1979	1980– 1984	1985– 1989
Belgium	4.0	3.6	3.4	3.1	2.9	3.2	3.2	2.8
Canada	5.3	5.3	3.9	2.7	2.1	2.0	2.0	2.1
Denmark	2.5	3.0	2.8	2.7	2.2	2.3	2.4	2.0
France	7.2	7.0	6.0	5.0	3.9	3.8	4.0	3.8
Greece	5.7	5.1	4.1	4.2	4.7	6.8	6.6	5.8
Italy	4.0	3.5	3.0	2.9	2.5	2.1	2.1	2.3
Luxembourg	2.1	2.2	1.21	1.1	0.8	1.0	1.2	1.0
Netherlands	5.1	5.1	4.4	3.8	3.1	3.1	3.0	2.8
Norway	3.7	3.5	3.3	3.6	2.9	2.8	2.7	2.9
Portugal	3.8	4.1	6.0	6.7	6.9	4.0	3.4	2.8
Spain							2.3	2.2
Turkey	4.3	3.8	3.9	3.6	3.3	4.3	3.8	3.4
UK	8.2	7.3	6.2	5.5	5.2	5.0	5.0	4.7
United States	8.9	8.9	8.0	8.0	6.5	4.9	5.6	6.0
W. Germany		3.8	4.4	4.0	3.5	3.4	3.4	3.0
Average	4.9	4.7	4.3	4.0	3.6	3.4	3.4	3.2

Source: SIPRI Yearbook, various years.

Figure 2:

Reproduced from: Marton, Peter and Nik Hynek. “What Makes ISAF S/Tick: An Investigation of the Politics of Coalition Burden-Sharing”. *Defence Studies* 12, no. 4 (December 2012): 539-71. <https://doi.org/10.1080/14702436.2012.746862>.

Opinion of Obama's Troop Increase		
	More troops to Afghanistan	
	Approve %	Disapprove %
Germany	32	63
France	37	62
Poland	28	57
Canada	42	55
Britain	41	51
Spain	41	50
Turkey	16	49
U.S.	54	42

Figure 4:

Reproduced from: Fayez, Hikmatullah. “Role of Foreign Aid in Afghanistan’s Reconstruction: A Critical Assessment.” *SSRN Electronic Journal* 47, no. 39 (September 29, 2012): 65-70. <https://doi.org/10.2139/ssrn.2333074>.

TABLE 1. (Continued)

	Troop contribution in ISAF (as of mid-April 2010); ranking indicated in brackets ^a	Population size; ranking indicated in brackets ^b	GDP size (2009) in million USD; ranking indicated in parentheses ^c	People per one soldier deployed in ISAF; ranking indicated in parentheses	Million GDP dollars per soldier deployed; ranking indicated in parentheses	% Share in ISAF's overall force; ranking indicated in parentheses ^d
Sweden	485; (14)	9,354,462; (15)	405,440; (12)	19,287.55; (13)	835.959; (19)	3.71; (14)
Turkey	1,795; (9)	72,561,312; (3)	615,329; (10)	40,424.12; (20)	342.802; (7)	0.22; (21)
United Kingdom	9,500; (2)	62,041,708; (5)	2,183,607; (4)	6,530.7; (2)	229.853; (5)	4.35; (2)
United States	62,415; (1)	309,218,000; (1)	14,256,275; (1)	4,954.22; (1)	228.411; (4)	4.16; (3)

^a Source: ISAF-P. *ISAF Placemat*, NATO, 16 April 2010, <www.isaf.nato.int/images/stories/File/Placemats/Apr-16-2010-placemat.pdf> (Accessed on 8 May 2010).
^b ISAF-P (2010a).
^c Source: http://en.wikipedia.org/wiki/List_of_countries_by_population, as accessed on 1 May 2010.
^d Source: IMF World Economic Outlook Database, April 2010 [IMF 2010].
^e Source: IISS

Figure 2 Continued:

TABLE 1. (Continued)

	Troop contribution in ISAF (as of mid-April 2010); ranking indicated in brackets ^a	Population size; ranking indicated in brackets ^b	GDP size (2009) in million USD; ranking indicated in parentheses ^c	People per one soldier deployed in ISAF; ranking indicated in parentheses	Million GDP dollars per soldier deployed; ranking indicated in parentheses	% Share in ISAF's overall force; ranking indicated in parentheses ^d
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^a Source: ISAF-P. *ISAF Placemat*, NATO, 16 April 2010, <www.isaf.nato.int/images/stories/File/Placemats/Apr-16-2010-placemat.pdf> (Accessed on 8 May 2010).
^b ISAF-P (2010a).
^c Source: http://en.wikipedia.org/wiki/List_of_countries_by_population, as accessed on 1 May 2010.
^d Source: IMF World Economic Outlook Database, April 2010 [IMF 2010].
^e Source: IISS

Figure 3:

Reproduced from: Auxier, Richard C. “Few in NATO Support Call For Additional Forces in Afghanistan.” Pew Research Center’s Global Attitudes Project. Pew Research Center, June 1, 2015. <https://www.pewresearch.org/global/2009/08/31/few-in-nato-want-more-troops-in-afghanistan/>.

Table 1: Overall Aid Pledges, Committed and Disbursed (\$ million)

Donor	Aid Disbursed (2002-08)	Aid Committed (2002-08), but Not Disbursed	Aid Pledged (2002-11) but Neither Committed Nor Disbursed	Total	Disbursed (%)
Italy	424.41	0	0	424.41	100.00
UN agencies	171	0	0	171	100.00
Russian Fed	139	0	0	139	100.00
Aga Khan Foundation	119.3	0	0	119.3	100.00
Japan/JICA	1,393.52	16.9	0	1,410.42	98.80
Australia	194.81	0	27.55	222.36	87.61
UK	1,266.3	188.87	0	1,455.17	87.02
The Netherlands	407.1	85.5	0	492.6	82.64
Sweden	217.26	41.15	11.29	269.7	80.56
ECHO	207.68	2.23	58.29	268.2	77.43
France	79.93	29.47	0	109.4	73.06
Norway	277	122.3	0	399.3	69.37
Canada	730.72	48.12	338.85	1,117.69	65.38
Germany	767.84	458.2	0	1,226.04	62.63
EC	1,074.1	646.68	19.22	1,740	61.73
Iran	213.87	13.89	126.24	354	60.42
Finland	64.1	29.91	14.02	108.03	59.34
Denmark	152.79	59.38	63.03	275.2	55.52
Switzerland	51.55	43.96	0	95.51	53.97
Saudi Arabia	76.9	30	113.1	220	34.95
WB	852.72	750.72	1,023.76	2,627.2	32.46
ADB	547.8	1,009.7	183.08	1,740.58	31.47
China	41	20.35	84.15	145.5	28.18
Turkey	20.8	22.82	46.38	90	23.11
US/USAID	5,022.9	5377	12,389.1	2,2789	22.04
India	204.26	650.85	86.92	942.03	21.68
Spain	25.6	37.15	190.54	253.29	10.11

Source: Ministry of Finance, Afghanistan.

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