The club goods theory, introduced in the previous chapter, originates in collective goods literature and is an important tool in explaining how alliances like NATO function in contemporary international relations. It suggests that these structures have features similar to clubs. The North Atlantic Treaty Organization exemplifies a specific alliance management dynamic due to its heterogeneous nature of incorporating diverse groups of nations. The admission of twelve new members between 1999 and 2009 strengthened NATO’s overall heterogeneity and made the group of new members larger and more cohesive, which ultimately facilitated the formation of various new alignments and coalitions within this club and outside of it.

What accounts for the survival of alliances in a changing strategic environment? How do individual states further their interests in the new strategic circumstances? The logic of intergovernmental and intra-alliance bargaining identifies several distinctive features: (a) negotiations among allies take place within a non-coercive system of unanimous voting; (b) the costs of providing collective defense generally remain low compared with the benefits associated with it and; (c) the distribution of benefits reflects relative bargaining power of organization’s members. This chapter focuses on the cost-benefit analysis of allied bargaining that originates in economic literature and explores how individual members manage their resources to advance of specific capabilities needed for NATO’s out-of-the-area missions. The concept of complementarities introduced in the study expands the logic of club goods and discusses important features of alliance behavior not addressed by the intra-alliance bargaining approach.

The chapter is organized around several core sections. The first section surveys the evolution of warfare and its implications for NATO’s overall
military and political transformation. The second one introduces the theoretical foundations of complementarities in the context of the broader debate about national contributions and the distribution of allied burden. This concept explains how the individual allies adjusted their resources in order to develop new capabilities for overseas missions. Finally, the validity of the model is tested against three groups of countries—the old NATO allies, the new NATO allies, and four European nations that belong to the EU, but that are not NATO members—Austria, Finland, Ireland, and Sweden.

MILITARY TRANSFORMATION AND ALLIANCE EFFECTIVENESS

The pattern of NATO’s transformation cannot be isolated from the general trends in the transformation of modern armed forces. Military transformation is particularly important in international security because it deals with a distinct and somewhat unique culture that operates in the context of general governmental culture. Military structures consist of large bureaucracies with routine, repetitive, orderly action where the different units of have their own customs, ceremonies and even uniforms and in which navies, air forces, land forces, and marines create and sustain their own distinct organizational routines. These organizations are not likely to be open to innovation or external change by nature, which is why they can easily survive decades without encountering an “ultimate test” of their performance. As a result, they become particularly resistant to externally introduced reorganization.

Nonetheless, change within military organizations occurs more frequently than one might expect. In fact, the literature on military transformation identifies several stages in the advancement of modern military. The first one can be associated with the French and the Prussian militaries. These organized warfare by “fielding a mass national army organized into corps and divisions and trained in a flexible tactical system.” Warfare of this era was determined by the need to maintain coordinated order on a battlefield of mass armies, and this need led to marching columns of men linking up and shooting one another with rifles and cannons in a regimented manner. The second stage in the advancement of modern warfare occurred around the time of World War I when the French military introduced the dictum that the artillery is the first to conquer and is followed by the Army, which occupies afterwards. The beginning of the third stage was associated with the German military campaigns during World War II known as blitzkrieg or “lightening war.” The Germans introduced new operations that combined maneuverability across the breadth and length of the battlefield with a speed that progressively replaced firepower. This new strategy included the use of tanks with innovative operations
and ultimately played a decisive role in the May–June 1940 defeat of France and the Low Countries. Thus, the second stage focused on attrition, whereas the third reflected the destruction of the enemy’s strategic rear, i.e., their industrial capacity and supply network. However, these stages should not be interpreted linearly in the sense that each one of them followed progressively right after the previous one. Overlapping occurred frequently—these are situations when certain components of previous stages can be observed in during later periods of warfare or vice versa. Thomas Barnett noticed an interesting trend during operation Desert Storm in 1991—the coalition partners chose to bomb their adversary for four consecutive days of bombing before the land intervention—a pattern very similar to the military warfare during World War II.

The U.S. military labeled the latest stage of transformation, in the late twentieth and early twenty-first centuries, as a “Revolution in Military Affairs” (RMA). RMA reflects “an emerging consensus on what constitutes a modern military: small highly skilled, rapidly deployable forces using advanced information technologies that are more flexible and putatively much more lethal.” Five distinctive characteristics define this latest stage of transformation: (1) doctrinal flexibility; (2) strategic mobility; (3) tailorability and modularity; (4) joint and international connectivity; and (4) versatility to function in a war and operations other than war (OOTW). In other words, as Gen. George Casey summarized, the twenty-first century modern army needs to be a “versatile mix of tailorable organizations” organized “on a rotational cycle that provide[s] ready forces for operations across the spectrum of conflict” and that can hedge against various unexpected contingencies.

The modern army needs to be prepared for fourth generation orthogonal warfare that involves a vast array of operations including guerilla or insurgency based warfare. This kind of warfare seeks to defeat the enemy politically, rather than militarily, and not only on one battle-field, but over years and even decades of what is generally referred to in the literature as “low intensity conflict.” Thus, the latest stage in military transformation reflects the demand for specific capabilities to deal with asymmetrical warfare and the conduct of military operations other than war such as the conflicts in Rwanda, Somalia, former Yugoslavia and, most importantly, in the aftermath of September 11, 2001. Asymmetrical warfare reflects “a conflict between two foes of vastly different capabilities. It became pervasive after the end of the Cold War when the Red Army was dissolved in the early 1990s. The new smaller opponents knew that the U.S. military was basically unbeatable in a straight-up fight and that is why they sought to exploit its weaknesses and negate its strengths by being ‘clever’ and ‘dirty’ in combat.” Thus, the RMA has led to the emergence of two types of forces: (a) forces who successfully wage
war and; (b) a “blended” force, known as “System Administrators” or “Sys-
Admin,” that implements post-war peace. Among other tasks, the so-called
system administrators are optimized to deal with a broad set of operations—
stabilization, support and reconstruction operations, military operations other
than war, humanitarian assistance and disaster relief, low-intensity conflict,
and counterinsurgency operations.

Thomas Barnett correctly identifies the evolving nature of military conflict
and argues that contemporary military operations seek to defeat the enemy
politically, rather than militarily. The major problem in this analysis derives
from the definition of defeat within the classical Westphalian understanding
of military conflict—defined as occurring between two or more states in
which the defeat has to be recognized by the legitimate government or politi-
cal leadership of the state as a unit of analysis. What about defeat in the cases
where no state or legitimate government exists, such as so-called “rogue” or
“failed” states? These concerns raise the broader question of how to deal
with anonymous actors or players that cannot be identified with a specific
state, its territory and population, and with a government that is in effective
control of both. The anonymous sources of threats and the phenomenon of
growing non-state actors pose a novel puzzle for contemporary militaries—
while they restrict the scope and size of traditional military involvement,
these new sources do not alter the understanding of security from a military to
a purely political dimension. Ultimately, those efforts involved in the support,
stabilization, and reconstruction broadly described as military operations
other than war (OOTW) require the involvement of organizations that have
certain military resources available. The reaction to these types of threats
relies again on individual states’ traditional armed forces, not on some sort of
para- or post-military mechanisms emanating from various non-state entities
or supranational bodies. In other words, contemporary states are required to
react to different, evolving sources of threats relying on traditional mecha-
nisms to exercise power that states normally have available, e.g., intelligence
gathering, armed forces, police, etc. Again, the humanitarian interventions
and the subsequent stabilization missions in the former Yugoslavia, Rwanda,
and the war on terror in Afghanistan and Iraq were conducted by the same
military, not by some extraordinary soft-power, diplomatic, or non-state in-
stitutions.

The post-Cold War cases of military intervention demonstrate that states
continue to rely on allies and multinational coalitions in the same way as
they did during the nineteenth century European multi-polar concert or dur-
ing the costly global conflicts of the twentieth century. Furthermore, to deal
with these contemporary international security issues, states’ militaries need
to work together under various formal and informal arrangements including
alliances. The growing participation of international alliances in various missions is confirmed by the fact that NATO became more frequently and intensively involved in military operations in the 1990s and early 2000s than during the entire Cold War period. In 1995 NATO used its airpower to intervene in Bosnia-Herzegovina and in 1999 it did the same in the Serbian province of Kosovo to put an end to ethnic violence in these parts of former Yugoslavia. On September 12, 2001, a day after the terrorist attacks in the United States, the North Atlantic Council approached these attacks on New York City and Washington, DC as an attack on all alliance members and invoked Article Five. In October 2003, NATO took over the command and coordination of the International Security Assistance Force (ISAF) in Afghanistan. Therefore, military transformation has a direct impact on the management of international alliances—the new military organizations need to adjust to the new operational requirements and improve effectiveness while also combating insurgency, failed states, and a variety of non-state networks.

Military effectiveness is generally defined as “a process by which the armed forces convert resources into fighting power.” The resources in question include: “human and natural resources, money, technical prowess, industrial base, government structure, social characteristics, political capital, the intellectual qualities of military leaders, and morale.” While a thorough analysis of military effectiveness requires the analysis of various factors such as organizational attitudes, behaviors, and relationships, it also implies the notion of efficiency. Similarly, scholars of military history and international security agree that some relationship seems to exist between military effectiveness and victory. Nonetheless, such a relationship is not always positive—there are political strategic, operational, and tactical aspects which determine precisely where and in what ways organizations have or have not been effective. The efficient use of military resources is only one such aspect that contributed a successful completion of a set of military activities defined as victory. In the specific dynamic of international alliances, efficiency implies that the available resources are used to develop various capabilities that are needed by the alliance to ensure a successful completion of its missions.

EXPLAINING ALLIANCE TRANSFORMATION

In the 2000s NATO became bigger, more heterogeneous, and more involved than ever in out-of-the-area operations. But has the Alliance been able to retain its effectiveness as institution of international security? International relations literature attributes NATO’s recent transformation either to the structure of the international system, or to various institutionalist, organizational, or
bureaucratic factors. Most structural explanations about alliance transformation are linked to realism, but not all realist explanations are structural in their nature. As discussed in the previous chapter, neo-realists attribute NATO’s transformation to specific features of the international system but they vary in their interpretation of transformational patterns. Pessimists share skepticism about NATO’s ability to transform itself and adapt to the demand for new non-Article Five missions and also argue that NATO is a product of the Cold War that was created to balance against the Soviet threat and, when the latter disappeared, the alliance became obsolete. They expect that the current distribution of power is short-lived because the U.S. hegemony will trigger a counter hegemonic backlash. Evidence of such a balancing dynamic exists in the growing terrorist and insurgency activities that target the United States. 

Institutionalism attributes NATO’s capacity to transform itself to the specific dynamic of international institutions: facing the dilemma of going out of business, NATO chose to go out of area and undertook a long path of adjustment to the new security reality. During the Cold War the Alliance invested in certain general assets such as the Supreme Headquarters Allied Powers Europe (SHAPE) and the North Atlantic Council. These were key organizational ingredients developed over many years that facilitated transparency, integration, and negotiation among its members. These assets started paying off after the Cold War because they “could be mobilized to deal with new security missions.” Thus, NATO’s institutional adaptation can be explained by the minimization of relative costs (such as the cost of information), and by the ability to utilize existing norms and procedures to deal with new problems rather than create new ones. The allies overcome obstacles of cooperation by modifying the Alliance to address the new issues and develop new ties to “other actors, state and non-state, in pursuit of regime goals.”

Organizational perspective builds on the logic of institutionalism and focuses on the inner settings of various organizations, thus arguing that “the internal life of an organization tends to become but never achieves a closed system.” Certain needs are generated by the organization itself, which command the attention and energies of its participants. The organization’s core problems arise from the need for continuity of policy and leadership. The latter create an intricate system of formal and informal relationships and activities that have primarily an internal relevance. Graham Allison expands this logic and highlights the importance of organizational routines that produce information, alternatives and action. These routines matter in the same way as do the bureaucratic politics and individual government leaders who make major governmental choices. Therefore, organizational action is determined primarily by the various routines established in these organizations prior to that instance known as ‘standard operating procedures and programs.’ The model
accepts that the “explanation of government action starts from the base line noting incremental deviations.”\textsuperscript{19} Organizations learn gradually over time, while change occurs only in response to major disasters, thus allowing these organizations to remain influenced by the existent organizational capabilities and procedures. Therefore, the NATO officials are expected to reaffirm the value of the alliance to its members in hopes of assuring continued access to resources. They generally resist efforts to downsize the organization, unless they feel that organization’s future is at stake in which case they would favor the modification of existent or generation of new roles and missions to retain support from the current and possibly new members.\textsuperscript{20}

The organizational perspective can be illustrated by the interaction of NATO’s parallel political and military structures headed by the North Atlantic Council and the Military Committee respectively. The activities of these structures are coordinated by about five hundred standing committees. While most of the structures operate on an intergovernmental basis, some bodies, such as the Secretariat or the Allied Commands, are alliance-specific and do not require the consent of individual members. The organizational perspective, therefore, provides explanations on two different levels: on one hand, bargaining among individual allies is driven by the existing organizational routines of the twenty-eight members; on the other hand, the organizational routines also shape the outcome of the alliance-specific structures such as the Allied Commands or the Secretariat. In both cases, however, these perspectives provide a better explanation of why the Alliance might face major resistance on the part of its structures or members to embark on a transformational path that might challenge the different organizational routines pertaining to these structures or members. It offers, however, little explanation regarding why NATO would undergo such a profound transformation through adding new members, undertaking out-of-the-area missions, and developing new capabilities.

The bureaucratic politics model suggests another alternative to the rationalist models. It assumes that leaders who sit at the top of organizations do not constitute a monolithic group. Rather each one is “a player in a central competitive game.” This game reflects bargaining “along regularized circuits among players positioned hierarchically within the government.”\textsuperscript{21} Thus, the position of each player is determined by parochial priorities and perceptions, which affect a variety of goals and interests of the players, including national security, organizational interests, domestic politics, and personal interests. The bureaucratic model faces major challenges in determining the influence of bureaucratic players in cases in which presidential (or any other top government leader’s) preferences significantly constrain the leeway of bureaucrats. Thus, bureaucratic politics can explain decisions of lower importance,
but fails to capture the top-level decision-making requiring central coordination. Therefore, other alternative explanations need special consideration such as the concept of complementarities explained below.

THE COMPLEMENTARITIES APPROACH

The Origins of the Concept

The notion of complementarities originates in economic literature stating that two goods are considered to be complementary if “the presence (or efficiency) of one increases the returns from (or efficiency) of the other.” Complements include those items that are normally consumed along with the product in question. If the demand for the product rises, then the demand for the complementary good rises, too. Thus, if we assume that people consume non-alcoholic beverages (such as Coke, Pepsi, etc) with pizza, then when the price of pizza falls, the demand for non-alcoholic beverages increases. As a result, the demand for a good varies inversely with the price of the complements. Additionally, from the multi-good monopoly theory we know that if two goods are complementary then lowering the price of one good stimulates the demand for the other. Furthermore, the relationship between two goods such as pizza and non-alcoholic beverages also depends on the elasticity of these goods, which is also known in the literatures as sensitivity of demand to income or income-elasticity of demand.

Political scientists apply complementarities to institutions of the political economy in order to reinforce the differences between liberal and coordinated market economies. However, complementarities may also exist among the operations of a firm; an example of which can be understood in marketing arrangements that offer customized products and also may offer higher returns when coupled with the use of flexible machine tools on the shop floor. Therefore, under certain conditions, the logic of economic theory can be applied to security studies.

Firms are the core units of analysis in economics, while states make up the major analytical units in international politics. Firms and companies essentially concern themselves with different issues—while a companies’ primarily goal is to increase productivity and therefore maximize profits, states are concerned about their survival, the preservation of sovereignty, and furtherance of national power. The rational actor model, which applies equally to firms and states, assumes that the efficient reallocation of resources by the principal players leads to some sort of utility maximization. An example of such efficient allocation of available resources relates to geographic location and strategic airlift. Consider the operation in Afghanistan—if NATO has ac-
cess to allied or partner infrastructure, such as ports, airports, etc in countries close to the area of operation, proximity will significantly reduce the cost of airlift (and therefore, the overall cost of the operation) and will also enhance the alliance’s overall capabilities to provide security and ensure the mission’s success. The concept of complementarities implies that the alliances occasionally operate similar to markets in terms of enhanced efficiency and utility maximization.

In the case of NATO, the concept modifies the logic of inter-allied bargaining. In the specific context of the Cold War the main focus of NATO’s bargaining process was on the adversary’s intentions in terms of abstract goals, as well as “costs and risks involved in pursuing those goals.” The negotiation of NATO’s flexible response posture illustrates the extent to which the allies varied in their perception of the Soviet and the Warsaw Pact threat. As a result, they could only agree on a declaratory strategy that “papers over the divergent interests in the alliance” and is “contingent upon the force posture designed to implement it.” The logic of complementarities reassesses these observations in the context of a new bargaining dynamic in the absence of the Soviet threat. The evidence from the 1990s and 2000s indicate that NATO has introduced various mechanisms to ensure that allies participate in the collective efforts to combat new threats such as terrorism, ethnic violence, failed states and non-state actors. The notion of complementarities discusses the mechanisms through which this heterogeneous club distributes responsibilities for the missions set up to address these new threats, encourages the development of new capabilities, distributes the burden among old and new members and, in general, provides collective defense to its members whose perceptions of these new threats may vary significantly. By providing an explanation of how allies manage resources within the club in a way that is consistent with the club’s strategy, what holds the alliance together and what keeps it an efficient component of international security, the concept offers a novel insight into how alliances function as clubs. Simultaneously, complementarities fill in an analytical gap by offering a new perspective into issues of cost-sharing and burden-sharing, which are not thoroughly addressed in the literature.

The logic of the analytical framework assumes that the increase of military resources decreases the price of collective defense and, therefore, enhances the capabilities of each state and the alliance as a whole. Conventional logic suggests that the relationship between military resources and allied capabilities to contribute to peacekeeping efforts overseas should be positive, i.e. that the increase of resources directly affects the capabilities that allies develop. However, a careful analysis indicates multiple outcomes. For example, some of the former communist countries who joined NATO in 1999, 2004
and 2009, used an outdated and inefficient system of resource management and, for the most part, were forced to reduce or re-allocate portions of their defense resources in order to make more efficient use of them. Nonetheless, the direction and scope of the relationship between military resources and capabilities for peacekeeping operations varies on a case-by-case basis.

Complementarities presents a suitable framework of analysis because it takes a balanced and pragmatic approach in explaining post-Cold War allied bargaining. It departs from the Cold War approach of accommodating structural inequalities of vulnerability and capabilities by negotiating a broad and vague framework. Instead, this approach entails specific commitments designed to offset the effect of varying threat perceptions among different allies and provide a more equitable and adequate division of burdens and benefits. Furthermore, the proposed concept of complementarities fills in an analytical gap left by other alternative explanations developed in the literature. Consider, for example, the argument that NATO expands because the United States desires stronger East European democracies, thereby exporting the uniqueness of the American political system in the North Atlantic Area and, thus establishing a viable security community. This argument does not clarify how the new members become fully integrated into the military and political structures of the Alliance nor the patterns by which they transition from security consumers into viable security providers. Along the same line, institutionalists explain NATO's persistence with its cost—it is less expensive to maintain an alliance that has been in business since 1949 than to create new institutions of international security to deal with the war on terror. Therefore, the allies agreed to transform NATO after the Cold War in order to keep it in business as well as use it as a tool to fight terrorism. While this book's approach embraces the adaptability perspective, it offers a different interpretation of its nature: First, unlike institutionalism, the logic of complementarities accepts the importance of military power measured in terms of resources and allied capabilities. Second, the concept departs from the institutionalist assumption that once created, international institutions are resilient and very adaptive to the new environment. Instead, the approach that is presented in this chapter highlights the importance of intergovernmental bargaining in improving the capabilities of the allies and furthering NATO's overall transformation.

Finally, the organizational perspective provides valuable feedback about how organizations function similar to organisms that need continuity in policy and leadership, but does not take into account how external pressure from the political and military structures in Brussels or the other allies can influence governments’ decisions to draft and implement transformation plans, adapt their militaries to the new security environment, and share the cost and burden of alliance commitments. Despite the fact that the liberal-democratic,
institutionalist, and organizational perspectives are not irrelevant in the analysis of NATO politics, when considering operations in Kosovo, Iraq, the Mediterranean and, mainly, in Afghanistan, the management of military capabilities remains highly salient.

**Defining Resources and Capabilities**

The model assesses allied involvement in various out-of-the-area operations. Two alternative approaches exist regarding the operationalization of such involvement: (a) measuring each member’s contributions relative to the other allies and; (b) comparing the level of allied contributions in terms of coefficients adjusted to the size of each country’s population and, thus, estimating the resource base per population unit. Given the multi-layered dynamic of alliances, each of these approaches has its strengths and weaknesses. The operationalization and measurement of allied resources and capabilities has always aroused debate among scholars of transatlantic relations. For example, comparing per capita allied contributions to common defense is not necessarily the most accurate approach because such a comparison would mean that each member contributes to and benefits from this club exactly at a proportion relative to its population size. This has never been the case in the history of any alliance, including NATO, due to the diverging views of the members on how best to achieve the purposes upon which common agreement is reached. Some scholars highlight the importance of ‘fair shares’ and equality in the financial sacrifice made for collective defense and argue that all allies should spend proportionately on their defense to the U.S. contributions. If the Europeans are not willing to do so, the United States should adjust accordingly and reduce their share in Europe’s defense. A more pragmatic perspective elicits the role of effective military contributions and maintaining alliance unity—differences of opinion among the allies encourage specialization (including joint procurement) which, in turn, addresses the provision of military inputs, and not merely the equalization of costs. The Atlanticist approach is more consistent with heterogeneous clubs logic; it explores the variability in the qualitative difference of each country’s defense spending rather than setting and monitoring actual numerical expenditure goals. Therefore, the resources and capabilities in this study will be measured as indicators divided by the size of the population of each of the alliance members toward an appropriate assessment of the variation in the available resources of each member relative to its size and role in the bargaining process.

In addition to defense spending, the complementarities approach warrants other factors, such as geography and specialization. For example, the country’s strategic position may add a specific value, thus enhancing alliance’s
overall efficiency. Geography also account for specialization in the case of land-locked countries like the Czech Republic, Hungary, Luxembourg, and Slovakia do not have the resource base to develop a navy and are therefore required to utilize their resources toward specialization in other types of capabilities. As discussed in the pervious chapter, club goods entail two forms of heterogeneity: Members vary based on the difference of their per capita resources and capabilities; they also vary based on the size of their countries relative to the other allies measured in terms of population, territory, etc. Consider, for example, the cases of Hungary and Greece: they are relatively homogenous in terms of their size, each of which has a population of about 10–11 million people. In terms of defense spending and overall military power, however, they differ dramatically. Greece has better equipped armed forces and spends more on defense in terms of actual allocations and as a percentage of their national product. Alternatively, if we compare the cases of Poland and Slovakia, each differs in size—Poland with its 36 million people is about seven times bigger than Slovakia. However, in terms of defense spending, the structure of armed forces, and patterns of military transformation, Poland and Slovakia can be compared meaningfully.

In the 1970s and 1980s, debates about NATO’s burden sharing focused primarily on defense expenditures and could be considered misleading due to the complex and variable relationships among expenditures, costs, defense inputs and the value of defense spending. Charles Cooper and Benjamin Zycher argue that a disparity between the burdens comparisons measured in terms of spending and military resources exists due to the fact that the European shares of collective burden rise significantly when shifting the analysis from spending to resource contribution. Instead, they suggest that conclusions would be quite different if alliance contributions were measured in terms of resources as opposed to pure military spending. The U.S. contribution, although seemingly higher in terms of spending, is not greatly disproportionate relative to European contributions when measured in resource terms. By the same token, when looking at real output measures, the European allies contribute very substantially to the provision of final military services in Europe. In addition to financial support, the military resources include quantity and quality of manpower, a sufficient military-industrial base, and control over the conversion of military resources into actual capabilities.

In order to draw a much needed distinction among the different categories of allied resources, this study classifies the available military resources into three categories: (a) land, navy, and air force equipment; (b) military personnel, including army, navy, air force officers, and conscripts, but excludes reserves and paramilitary and; (c) actual spending on defense in US dollars. Military equipment is measured by three separate variables—one for each
of the three categories of armed forces. Several different ways of quantifying defense spending could be identified—as a percentage of GDP, in terms of actual spending, and as a difference in spending from the previous year. Although none of these approaches warrants sufficient parsimony and precision, the defense spending per capita measured in purchasing power parities is a relatively precise indicator used in this model to measure the ongoing dynamic for each of the allies. Similarly, each allies’ wealth is operationalized in terms of GDP per capita (U.S. dollars in PPP).

The model of complementarities explores the conversion of the available military resources into actual allied capabilities. The definition and operationalization of capabilities varies substantially. During the Cold War the understanding of capabilities was circumscribed to the deployment of military equipment. The patterns of the post-Cold War transformation imply a very different approach to capabilities. Despite the lack of universally agreed definition, the evaluation of capabilities implies an estimation of allied willingness and an ability to adapt to a new strategic environment including members’ actions to respond to alliance’s goals and missions. When members barely agree on common objectives, such as in the case of the Baghdad Pact, alliances are doomed to fall apart. In other cases, when allies agree on common objectives, these international structures could sustain themselves over extended periods of time such as were the cases of NATO and the Warsaw Pact during the Cold War. NATO’s strategy of deterrence prior to 1990 was quite similar to the strategy of Warsaw Pact. The collapse of the eastern bloc placed NATO in a new strategic environment, where not the deterrence, but rather, the contribution of its members to peacekeeping, crisis prevention and post-conflict stabilization became NATO’s raison d’être. The 1994 Brussels Summit Declaration recognized that in pursuit of its common transatlantic security requirements, NATO would increasingly be “called upon to undertake missions in addition to the traditional and fundamental task of collective defense of its members.” The alliance set itself the goal to of adapting its political and military structures to reflect the full spectrum of its new roles, such as the development of Combined Joint Task Forces (CJTF) and intensified efforts against the proliferation of weapons of mass destruction and their means of delivery. Force mobility and allied interoperability were essential contributions to NATO defense burdens.

On a theoretical level, international security literature does not agree on a definition of capabilities that is generalizable and directly applicable to alliance theory. Recent NATO studies emphasize the importance of “the appropriate capabilities to meet its missions” and demonstrate timely military response “to threats to any member’s territory.” These definitions imply that the notion of capabilities represents a framework that studies the exercise of
military power approached in a specific strategic environment. The notion of capabilities includes several different tiers of activities: (a) a decision-making process in a specific organizational setting (i.e. formal associations such as alliances or clubs); and; (b) clearly defined missions designed to conduct peacekeeping, prevent crises, and enhance overall stability and; (c) the development of a certain set of military capabilities based on a mutually agreed alliance military doctrine to support these missions. Furthermore, these alliance activities are aimed at changing and adjusting the existent capabilities as well as building new ones. The logic of military transformation indicates that the advancement of new capabilities is not a one-shot activity, but rather a continuous and cumulative process involving various stages of negotiations and implementation. Despite some shortcomings, this approach provides insightful analysis of the willingness of these states to commit troops for new missions, implement needed reforms and share the burden of NATO’s new peacekeeping operations in support of these missions.

The Model

As discussed earlier, current literature focuses only on specific aspects of NATO’s transformation, such as the debate over the admission of new allies, or challenges to the advancement of new capabilities. In the mid- and late 1990s, most NATO studies chose to focus on the costs of the post-Cold War NATO expansion as well as the commitments associated with it, concluding that “the enlargement process is certain to be expensive.” A sense of prevailing skepticism existed about the new allies’ preparedness to undertake major security commitments concluding that the alliance “could discover by extending its realm eastward it had accepted security obligations that its members could not or would not honor, much as France and Britain when faced in 1938 with possibly having to honor their pledges to Czechoslovakia.” Thomas Szayna conducted a comprehensive study on the conditions for the enlargement in which he identified several key determinants for the admission of new allies: the applicant countries needed to resolve the disputes with neighboring countries; they committed to a peaceful settlement of international disputes and promised to contribute militarily to the new allied missions. These contributions include participation in conflict prevention and crisis management throughout Europe (including beyond the North Atlantic Treaty area). The new NATO members were evaluated according to political, strategic, and military criteria to determine where the candidates “stand in relation to the established conditions for membership.” The assessment also explored the extent to which these nations were willing to take steps to
Explaining NATO’s Transformation

achieve interoperability with other alliance members in order to determine the strategic rationale for issuing invitations to join NATO.

Thus, previous studies on NATO emphasized the importance of key resource variables such as defense expenditures, military personnel, analysis of the structure of the three types of armed forces (army, navy and air force), and strategic location. Although primarily policy-oriented, Szyna’s model establishes an implicit causal link between military resources and the capabilities needed for allied missions in the context of assessing the prospective candidacy for NATO membership. The model presented in this study expands the number of observed nations and explores causal links between available resources and new allied capabilities. The sample includes three groups of nations—the old NATO members, the new NATO members and four non-NATO West European nations (Austria, Finland, Ireland, and Sweden). The timeline begins in 1993 when NATO’s new programs and partnerships were launched, and ends in 2004 which marked the completion of the biggest round of NATO expansion.

Although the September 11, 2001 terrorist attacks and the later bombings in London and Madrid did not change the alliance’s goals, these tragic events once again highlighted the growing demand for “balanced and effective capabilities” within the Alliance so that “NATO can better carry out the full range of its missions and respond collectively to those challenges, including the threat posed by terrorism and by the proliferation of weapons of mass destruction and their means of delivery.” Therefore, the concept of complementarities implies that the management of new post-Cold War missions require an optimization and more efficient use of available resources in order to advance new capabilities that will enable the Alliance to respond quickly and effectively to various international security challenges. This model explores two separate explanations: (a) whether the development of new capabilities is driven by the demand for new missions and; (b) the extent to which the advancement of these new capabilities is shaped by the efficient relocation, transformation, and expansion of the resource base. This relationship between resources and capabilities has direct implications for all three dimensions of NATO’s transformation.

In order to join NATO, the applicants had to incur certain entry costs associated with the development of allied interoperability, such as acquisition of transponders that identify tanks as friendly, training new commanders and troops in English and French, or the capacity to commit troops to out-of-the-area missions in Kosovo, Afghanistan and in the Mediterranean. Furthermore, the new out-of-the-area missions needed the development of new capabilities—when NATO embarked on its first overseas missions in former
Yugoslavia in the early and mid-1990s, the Alliance became primarily involved in stationary peacekeeping, which led to the initiation of the so-called combined joint task forces (CJTFs). The growing demand for more advanced forms of allied involvement in crisis prevention and response missions led to the initiation of the Prague Capabilities Commitment (PCC) which was aimed at improving the response to international crises, nonproliferation, and interoperability among allies. As a part of the PCC package, members agreed to create the NATO Response Force (NRF). These new forces were intended to reach further, faster, and stay in the field longer while also undertaking the most demanding operations. The ISAF mission in Afghanistan confirms that the need for even more advanced capabilities that serve hybrid missions beyond rapid deployment and incorporate several lines of operation ranging from security and stability to governance, reconstruction, and development. For this purpose NATO needed different force multipliers such as Intelligence, Surveillance, and Reconnaissance (ISR) platforms and helicopters, as well as an Alliance Ground Surveillance system consisting of defense against WMDs and theater missile defense. The detailed model of complementarities is summarized in Figure 2.1 below.

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**Figure 2.1. The Model of Complementarities**
Therefore, NATO’s new capabilities represent efforts to enhance coordination and increase its forces’ deployability and usability. The aim is to ensure that the alliance can fulfill its present and future operational commitments as well as fight the new threats of terrorism, insurgency, and the spread of weapons of mass destruction (WMDs). As shown in the chart, the interoperability is a key ingredient that affects the advancement of new allied capabilities needed for peacekeeping, crisis prevention and response, and stability operations. The logic of complementarities implies that the evolution of allied capabilities may be vertical or horizontal. The vertical evolution can be explained with the need for new types of missions that expand beyond simple peacekeeping and include crisis prevention and response. This trend is illustrated in the context of the progress from Combined Joint Task Forces doctrines to NATO’s Rapid Reaction Force. Alternatively, horizontal evolution indicates that, in the new strategic environment, the same mission changes over time. The improvement of current and the acquisition of new capabilities is intended to meet the new requirements of the same mission. Such are the cases of the multinational battalions for Chemical, Biological, Radiological and Nuclear (CBRN) defense, as well different force enablers, which are designed to deal with stabilization and reconstruction efforts.

The model presented in this chapter measures allied capabilities in terms of number of troops abroad under NATO or UN command, including troops involved in operations in Afghanistan and Iraq after 2001. Thus, the dependent variable captures several different tiers of indicators. First, the number of troops that participate in peacekeeping operations reflects an actual capacity to send a certain number of trained troops for overseas missions. Second, it also reflects the willingness of political elites in each of the countries to contribute to alliance efforts. The model assumes that the allies contribute up to their actual capacity and even if they would like to participate with a higher number of troops, they are not able to do so due to their limited military resources. For example Canada, Norway, or Denmark may be willing to contribute more to NATO or UN-led peacekeeping missions but, due to budget constraints, they obviously cannot surpass their resource base cap. Alternatively, other countries like Germany or Spain may be reluctant to send troops although they have the capacity to do so. The model is intended to capture a general trend not a country-specific variation and does not aim at explaining the foreign policy positions of the individual members. Its implications for specific capabilities (e.g., CJTFs, NRF, multinational teams, and Force Enablers) will be discussed separately in the chapters that follow.

The quantitative model presented below includes some inherent weaknesses: it does not take into consideration country-specific assets, such as geography. Consider the case of Iceland. Due to its specific geographic
location, this ally does not maintain armed forces, and therefore, contributes
minimally toward core alliance capabilities or the improvement of interoper-
ability. However, the country contributes to the Alliance’s collective defense
with its important geographic position in the Atlantic Ocean. Due its specific-
ity, Iceland is an exceptional case and will be excluded from the model’s analy-
tical framework. Similar to previous studies, the complementarities model
is essentially static; i.e. it assumes that the relationship between resources
and capabilities is linear and does not account for variation in the scope and
direction of the observed relationship.

The quantitative aspect of the study identifies three groups of countries—
the fifteen old members; the new allies that joined in 1999 and 2004, and
the four non-allied Western European nations (Austria, Finland, Ireland, and
Sweden). In spite of a list of differences among old allies, a number of com-
monalities exist in the way that these countries distribute resources and de-
velop capabilities within the alliance. Most importantly, they have established
habits of bargaining during the course of their membership that distinguishes
them from the group of new allies. Even though this group is not perfectly
homogeneous, further fragmentation into four or even five additional sub-
groups is not justifiable because of inherent methodological constraints.46

The data have been collected for each of the members and then applicant
countries from 1993 to 2004.47 This extended period allows the exploration
of the transformational patterns during the entire decade. In all three models,
the resources are measured through six variables: (1) military personnel, (2)
army equipment, (3) navy equipment; (4) air force equipment; (5) defense
spending per capita in U.S. dollars and; (6) GDP per capita measured in
purchasing power parities. Defense spending and GDP per capita can be
measured either in absolute values of a major currency (say U.S. dollars or
the Euro) or in terms of purchasing power parities. The research indicates
that both approaches lead to the same results and that the difference is not
statistically significant. Nonetheless, the purchasing power parities indicator
is slightly more precise because it captures the differences in the cost of labor
and military equipment among the different NATO members.

The dependent variable in the model discussed in this chapter measures
the contribution to various international and allied efforts overseas, which
include but are not limited to peacekeeping operations. It has been operation-
alyzed in terms of forces abroad (including UN, other peacekeeping forces,
and forces participating in Iraq). It is common practice to lag values of the
independent variables by one year to ensure that resources do not affect allied
capabilities. In this way, the accumulation of the resource base in a certain
year affects the size of peacekeeping efforts the following year. Although
in reality it has effect over a longer period of time, the model assumes that
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12 months is sufficient time to capture this tendency. In order to ensure that the data in the model are comparable, countries’ sizes have been eliminated by dividing indicators by the population size of each country for each respective year. Thus, all the data reflect per capita indicators. Similarly, the time lag between independent and dependent variables has been applied to all three datasets. Lastly, the model does not take into account inflation, the variation of the exchange rates, and the value and depreciation of the various types of military equipment over time.

The model presented in this chapter explores two hypotheses. First, it studies whether a relationship exists between military resources and specific allied capabilities as far as NATO is concerned. This hypothesis is tested separately through an OLS regression model for the three groups of nations—the old NATO allies, the new allies, and the four EU non-NATO countries (Austria, Finland, Ireland, and Sweden). It seeks evidence for the link between available military resources and specific allied capabilities. The second hypothesis studies whether NATO membership makes a difference in developing allied capabilities. By comparing results from the three groups of nations (the old allies, the new allies, and the non-NATO European Union countries), the second hypothesis investigates whether and to what extent the relationship between resources and capabilities studied in the first hypothesis can be observed within and outside of the alliance framework. If the hypothesized relationship is not confirmed in the case of non-NATO European nations, this will indicate that the link between military resources and allied capabilities is alliance specific and does not apply to regional nonmembers.

ASSESSING THE EFFECT OF COMPLEMENTARITIES

Despite the variations among old NATO allies, important similarities exist among them, which is why they are approached as a coherent group. They are either founding members or have joined the alliance during the Cold War period and, over time, have been able to achieve higher interoperability with the other allies. Furthermore, they share similar political and economic systems. With the exception of Turkey, all other old NATO allies belong to the wealthy western democracies. Lastly, with the exception of Iceland, Norway, and Turkey, the remaining European allies are also members of the European Union.

Data

The regression analysis for the three sets of countries includes six independent variables and one dependent variable. The independent variables are:
military personnel, army, navy, air force, and defense spending per capita, and GDP per capita. Both defense spending and GDP per capita are measured in terms of purchasing power parities. The dependent variable is forces abroad. All variables are constructed based on yearly data collected for the three groups of nations: old allies; the ten new NATO allies; and Austria, Finland, Ireland, and Sweden.

The independent variables measure the military resources of each member state. The personnel variable is composed as an aggregate coefficient of ground, navy, and air forces measured by a thousand people.\textsuperscript{49} The data on Military Personnel, Army, Navy, and Air Force have been collected from the Military Balance Yearbook issued by the London-based International Institute for Strategic Studies.\textsuperscript{50} The population data have been collected from The Europa World Year Book and compared with Military Balance in cases of data fluctuation.\textsuperscript{51} The operationalization of Army and Navy equipment raises major methodological concerns. For the purpose of this study, these are composite variables that aggregate several indicators respectively.\textsuperscript{52} Thus, the regression analysis analyzes the overall distribution of military resources across the North Atlantic Area and their relation to specific capabilities in terms of troops that each nation is willing to commit for allied operations abroad.

The data on military expenditure have been collected from the database of the Stockholm Peace Research Institute (SIPRI).\textsuperscript{53} Similar to Military Personnel, Army, Navy, and Air Force equipment, Military Expenditure constitutes a coefficient that measures defense expenses in millions of U.S. dollars for each country divided by the population size. The variable indicates actual military expenses per capita in U.S. dollars and provides an easily identifiable measure of the resources absorbed by military activities. Military expenditure is an input measure and is not “directly related to the output of military activities, such as military capability.”\textsuperscript{54}

The dependent variable in the quantitative model presented in this chapter is operationalized in terms of forces abroad. It is an aggregate indicator of all military personnel sent abroad for various operations serving as observers, peacekeepers, and contributors to international coalitions. These are primarily contributions to peacekeeping operations under NATO and UN auspices, but also other forces that have participated in the international coalition in Iraq as well as ISAF and OEF in Afghanistan. The data have been collected from the Military Balance Yearbook.\textsuperscript{55} Despite the variation in the number of troops due to the alternation of different contingents’ tours of duty, the data show convergence in the contributions of the old and new NATO members. The contribution of the old allies tends to assemble around 100 troops per million people and in some cases the data reflect an actual decrease of the overall contribution made by the nations that contribute the most. Alterna-
Explaining NATO’s Transformation

Relatively, the data for the new NATO allies indicate that in the late 1990s they increased their contributions on average to around sixty to ninety troops per million people. The same trend is, nonetheless, hardly observable in the cases of Austria, Finland, Ireland, and Sweden, as Finland remains the top contributor followed by Ireland, while Sweden and Austria have almost the same per capita contributions to international peacekeeping—slightly over one hundred troops per million.

The analysis accounts for several important assumptions that need to be checked. First, all independent variables are continuous, i.e. these are scale variables and have positive values that vary from zero to infinity. Second, the model is linear because linearity exists between the dependent variable and the independent variables. Third, the assumptions about the parameters are realistic. Furthermore, several separate assumptions are valid about the residuals. First, the independent variables should not be related, i.e. the number of troops abroad is independent from the Military Personnel, Army, Navy, and Air Force equipment and defense expenditure. Second, the independent variables have to be normally distributed. Finally, there must also be homoscedascity. The three models indicate that albeit not severely, the last assumption is violated because the scatterplot is not normally distributed along the fit line. Finally, the descriptive statistic indicates that the six independent variables explain 63.1 percent of the variance in the number of troops for the group of old NATO allies, 25.5 percent of the variance in the number of troops abroad for the group of new members and 36.4 percent of the variance in the number of troops abroad for non-NATO European nations.

**The model of the old allies**

The model indicated that for the first hypothesis tested in this study, namely that a relationship exists between military resources and allied capabilities of old NATO members, five out of six variables were significant. GDP per capita is the only variable that is not significant in the model of the fifteen old members. The variable “defense spending per capita” indicated lower levels of significance (.05), which means that alliance structures such as NATO have stimulated a positive relationship between resource base in terms of defense spending and peacekeeping efforts of individual allies. In other words, the more military resources the old fifteen NATO allies allocate for defense, the more successful they are in advancing their allied capabilities. Alternatively, the variable “wealth” operationalized as GDP per capita is not significant, which means that how rich or poor the allies are is not important, because their contribution toward alliance capabilities does not depend on their national wealth (see the Appendix, Table A.1). For example,
some less wealthy countries like Portugal, Greece, or Turkey have, in fact, been able to participate more actively in peacekeeping than wealthier allies. This finding also implies that the argument against inviting poorer nations to join the alliance because of their expected marginal contribution to allied capabilities is inconsistent. To confirm the validity of this claim, one needs to test the relationship between military resources and specific allied capabilities in the context of new NATO members.

The model of the new allies

The second model compares the ten allies that joined NATO in 1999 and 2004. It explores whether the observed relationship between resources and capabilities studied in the first hypothesis extends to other groups of nations, such as the new allies. This group of countries also meets the basic criteria for homogeneity—they all share common past and similar features due to the nature of their political and economic transition after 1989. Table 2.1 illustrates that these are relatively small states whose their population varies from 1.3 to 38 million people; they also possess limited resources with regard to population, GDP, defense spending, and size of armed forces.

The commonality between the new allies is further strengthened by the nature of their transformation throughout the 1990s and early 2000s. By early 1997 the Central and East European countries had already expressed their desire to join NATO. Also, in 1997, the Alliance enhanced the cooperation

Table 2.1. Population, GDP, defense spending and size of armed forces for the new NATO members (2004)

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</thead>
<tbody>
<tr>
<td>Bulgaria</td>
<td>7.45</td>
<td>9,000</td>
<td>516</td>
<td>1.9</td>
<td>42.5</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>10.24</td>
<td>18,000</td>
<td>1,741</td>
<td>1.8</td>
<td>43.3</td>
</tr>
<tr>
<td>Estonia</td>
<td>1.33</td>
<td>16,400</td>
<td>181</td>
<td>1.9</td>
<td>5</td>
</tr>
<tr>
<td>Hungary</td>
<td>10.00</td>
<td>15,900</td>
<td>1,485</td>
<td>1.8</td>
<td>31.5</td>
</tr>
<tr>
<td>Latvia</td>
<td>2.29</td>
<td>12,800</td>
<td>205</td>
<td>1.7</td>
<td>4.9</td>
</tr>
<tr>
<td>Lithuania</td>
<td>3.59</td>
<td>13,700</td>
<td>1,042</td>
<td>1.6</td>
<td>13.5</td>
</tr>
<tr>
<td>Poland</td>
<td>38.63</td>
<td>12,700</td>
<td>4,149</td>
<td>2.0</td>
<td>133.3</td>
</tr>
<tr>
<td>Romania</td>
<td>22.33</td>
<td>8,300</td>
<td>1,399</td>
<td>2.4</td>
<td>87.2</td>
</tr>
<tr>
<td>Slovakia</td>
<td>5.43</td>
<td>15,700</td>
<td>585</td>
<td>1.9</td>
<td>18</td>
</tr>
<tr>
<td>Slovenia</td>
<td>2.01</td>
<td>20,900</td>
<td>465</td>
<td>1.5</td>
<td>7.1</td>
</tr>
</tbody>
</table>

level with partner countries by moving beyond the achievements of the North Atlantic Cooperation Council that was established in 1991, creating the Euro-Atlantic Partnership Council (EAPC). EAPC proposed a new cooperative relationship with all the countries of Central and Eastern Europe, including the then ten prospective members from Central and Eastern Europe. Third, the process of NATO expansion was initiated at the Madrid Summit of 1997 with invitations to the Czech Republic, Hungary, and Poland. In April 1999 the Membership Action Plan (MAP) for all other prospective members was launched. It was designed to assist these countries in their preparations by providing advice, assistance, and practical support regarding all aspects of membership. NATO also established a Planning and Review Process (PARP) under PfP and MAP, and developed individual Membership Action Plans for the applicant countries in order to have them prepared for full membership. The successful implementation of military reforms by these nations signifies that new NATO members have, at least partially, been able to optimize their militaries and improve capabilities to deploy troops for operations overseas. This is, in part, illustrated with the increasing contribution of overseas troops after 1998–1999 as shown in Figure 2.3. Therefore, complementarities implies that expanding NATO leads to a more efficient allocation resources by the new members and, with the gradual convergence of their economies, they would be able to contribute more adequately to the Alliance’s strategic goals.

Similar to the old NATO members, the model with the new allies indicates, albeit moderately, that military personnel and army variables are statistically significant (.05) as shown in table A.2 (see the Appendix). The navy variable, in this case, also shows high values of standard error that can similarly be attributed to the individual countries’ characteristics. The wealth of the states does not affect the resource base, since GDP per capita does not constitute any statistical significance. However, two major differences exist between the models discussed above. Unlike the first model, defense spending and navy variables are statistically insignificant in the second model. Two alternative explanations could account for these differences. First, although homogenous from the outside, this group actually includes two sets of nations with different history of military transformation. The first one consists of the six Eastern European countries that were once members of the Warsaw Treaty Organization (WTO)—Bulgaria, the Czech Republic, Hungary, Poland, Romania, and Slovakia. These nations inherited from the Cold War heavy military structures and their transformation included primarily reduction and more effective re-allocation of the existent resources. The second set includes Estonia, Latvia, Lithuania, and Slovenia that had no experience with independent statehood prior to 1990. Therefore, their military transformation consisted mostly of institution-building thus leading to two different types of
relationships between military resources and allied capabilities for the two sets of new members. As a result, the former WTO countries had to reduce their actual military equipment which led to inverse relationship between their army equipment and the size of their forces abroad, as well as military personnel and forces abroad, while in the case of the newly emerging states this relationship is positive.

Second, it is necessary to bear in mind that the period between 1993 and 2004 actually captures an extended time line. The data focuses on a period that begins long before these nations intensified their military transformation and even before they were given a clear timeline for upcoming membership. Therefore, the data does not completely capture the relationship between resources and capabilities for the new allies as intensive reforms of their armed forces were initiated only after their governments expressed desire to join NATO and, more importantly, after Brussels introduced MAP in the late 1990s. The study on the expansion in the chapters that follow will present further evidence in support of this argument.

The model of four non-NATO European nations

Finally, the third model explores the relationship between military resources and the deployment of overseas troops in the case of Austria, Finland, Ireland, and Sweden. It tests the relevance of the third hypothesis, namely whether NATO membership stimulates the advancement of capabilities to deploy troops abroad, particularly in the cases of the four European Union states that do not belong to the North Atlantic Alliance. If such a relationship exists, then the optimization of the available resources and the advancement of allied capabilities cannot be explained with NATO membership, but rather with other processes (such as the European integration). Alternatively, a hypothesis that rejects the relevance of complementarities for these non-aligned countries would confirm that the linkage between resources and allied capabilities is relevant only within the specific NATO setting and applies solely to current and prospective members. The model presented below does not set itself the goal to assess the contribution that these four European countries have made to international peacekeeping efforts—nations like Austria, Finland, and Sweden are among main contributors in this respect. The goal of this model, rather, is to test whether or not the deployment of troops for peacekeeping missions overseas by non-NATO nations relates to the optimization of their military resources. Despite the small number of cases observed (only forty-three), the model clearly indicates that such a relationship does not exist and that none of the variables included is significant. Thus, the test shows that no conclusive evidence exists in support of the relationship between resources
and capabilities in the North Atlantic Area outside of the NATO framework (see the Appendix, Table A.3). These findings confirmed the original expectations for the third hypothesis, namely that NATO membership stimulates the optimization of available military resources in contemporary international security.

In conclusion, the results of the study presented in this chapter confirm that a relationship exists between military resources and the deployment of overseas troops in support of peacekeeping efforts. This relationship can be observed in the cases of the old and, to a certain degree, the new NATO members, but not in the cases of the non-NATO European nations. These observations have several important implications for alliance theory. First, *ipsa facta*, the model shows that NATO membership makes a difference in optimization of available resources and the advancement of allied capabilities. Despite the fact that different members contribute differently, NATO has put tremendous efforts in standardizing procedures and systems aimed at a more efficient use of resources, improving allied interoperability and ultimately enhancing needed capabilities for new out-of-the-area operations.

Second, the findings illustrate a tendency that has been overlooked by the intra-alliance bargaining approach—even though in alliance structures members do not share the burden of costs and risks equally, they tend to participate in common efforts despite the fact that their national interests induce them to do otherwise. In the 1990s and 2000s NATO troops were deployed in numerous locations away from the territory of its member-states—the Balkans, Afghanistan, Iraq, the Mediterranean, and the Horn of Africa. These operations vary tremendously—some are part of global efforts against terrorism, others involve nation-building, and yet others combine efforts to protect the local population, territory, and international waterways against terrorist or pirate attacks. In order to curb the effect of disproportionality in burden-sharing, NATO allies and applicants have introduced various mechanisms that are conducive to a more equitable burden-sharing such as the optimization of national resources, participation in multinational teams and specialization in certain niche capabilities. These observations are illustrated throughout the book by surveying the advancement of capabilities such as Combined Joint Task Forces (CJTF), the NATO Response Force (NRF), and various multinational teams and enablers. They are consistent with the logic of complementarities and constitute an important corollary to the literature on intra-alliance bargaining.

Third, the proposed concept of complementarities has also relevancy for NATO’s overall survivability. Domestic pressures in various members to cut contributions and commitments to the alliance have been on the rise, especially after the global economic crisis and subsequent recession in the
late 2000s. The increasing heterogeneity of the Alliance following the admission of twelve new allies after 1999 additionally increased these centrifugal tendencies. NATO has been able to formulate new missions, set up goals and targets to develop new capabilities, and incorporate twelve new allies from Eastern Europe as a part of its adaptation to the new needs of international security after September 11, 2001. The success of these processes requires that the alliance remain effective when its members are able to efficiently use their resources in order to boost their much needed operational capabilities. This observation has also an important policy implication—the logic of the complementarities implies that NATO should keep its doors open to new members insofar as the applicants indicate sufficient capacity and willingness to reorganize and transform its armed forces in order to effectively support its various out-of-the area operations. This analysis highlights the importance of the ability of the states in question to bring additional allied capabilities at low cost and, most importantly, to enhance NATO’s overall capabilities as a club.

NOTES

1. For details about the core assumptions of intergovernmental bargaining theory see Andrew Moravcsik, The Choice, 60–62.
9. The U.S. Joint Chiefs of Staff defines low intensity conflict as “political-military confrontation between contending states or groups below conventional war and above the routine, peaceful competition among states.” It usually involves a conflict that ranges from “subversion to the use of the armed forces” and is often localized
but “contains regional and global security implications.” It is waged by a combination of means that involve political, economic, informational, and military instruments.


12. The essence of the modern international system is the territorially defined, mutually exclusive, and fixed nation-state. The territoriality of contemporary states is understood primarily as defensibility (broadly defined) against hostile outside forces. John Herz, E. Gulick, and Hans Morgenthau attribute the sustainability of the states to their internal and external stability, as relations with other states, as well as “potential ability to protect a specific population.” W. H. McNeill noticed that the “linkage between military advancements and state consolidation” has been at the heart of modern states’ survival. For details see Richard Harknett, “The Soft Shell of Territoriality in the Nuclear Era.” in Globalisation: Theory and Practice, ed. Eleonore Kaufman and Gillian Youngs (2nd ed., London: Continuum, 2003), 295; and “Nuclear Weapons and Territorial Integrity in the Post-Cold War World,” in New Studies in Post-Cold War Security, ed. Ken Dark (United Kingdom: Dartmouth, 1996), 34–35.


25. In economics, the income elasticity of demand studies the responsiveness of the quantity demanded for a good to the change in the income of the people demanding the good. It is measured as the percentage change in demand that occurs in response to a percentage change in income. People will consume various goods depending on their income and the elasticity of the various goods. For example, if their income increases, the demand for inferior goods will decrease because people will consume more luxury (or superior) goods.
28. Here I refer mostly to Ikenberry’s study on U.S. hegemony and Doyle’s hypothesis on democratic peace. In this study I do not challenge the relevancy of these arguments. Instead, my concern is that they simply do not address important features of intra-alliance bargaining.
32. Cooper and Zycher, Perceptions, 11–12.
34. The army equipment is quantified as the average value of the MBTs, AIFVs, APCs and artillery. The navy variable includes principal surface combatants, frigates, submarines, patrol and coastal equipment, and mine countermeasures and warfare. Finally, the air forces variable is measured in terms of combatant aircraft.


47. The sample does not include Albania and Croatia which did not become NATO members until April 2009.

48. The independent variables measuring the various military resources were lagged one year before the dependent variable (i.e. troops abroad), which means that the data on troops abroad include 1994 through 2005 while the data on the independent variables include 1993 though 2004.

49. In the case of the United States the manpower also includes the Marine Corps. The Army equipment variable is a coefficient that averages three land power indicators—battle tanks, AIFV and APC, and artillery. By the same token, the navy equipment is operationalized as a coefficient of five indicators—Principal Surface Combatants (PSC) including frigates, submarines, patrol and coastal vessels, mine countermeasures and warfare vessels, and other miscellaneous vessels, including amphibious, but excluding craft vessels. Each of these indicators has been divided by the population size (in millions) for the respective year of each country in the dataset. Finally, the navy equipment coefficient consists of five indicators with the same weight (0.20). The air power coefficient is based on a single indicator—the combatant aircraft, divided by the population size of each nation included in the study (in millions of people).


51. See *The Europa World Year Book* (Taylor and Francis Group, London and New York), Vol. 34 through 45 (1993–2004). In cases of large discrepancies between the two sources (e.g., over 100,000 people), the data included in the dataset have been adjusted to the general trend during the observed period between 1993 and 2003. Such was case of Turkey’s population for 2001, 2002, and 2003.

52. In reality, the importance of battle tanks, AIFV and APC, or artillery may not always be the same, where certain types of equipment may be more important than
others. Nonetheless, no sufficient literature exists arguing that certain indicators measuring military resources are more important and should be given a higher weight. Thus, the model assumes that Army and Navy equipment are compound variables whose indicators of military resources have the same weight in the overall coefficient.


55. Occasionally, due to troop rotation or shift of the missions, the Military Balance (MB) database tends to underestimate or overestimate the actual forces abroad by recoding the new and the old troops or not recording any. In order to avoid data spuriousness, the data from the SIPRI database have been compared with the data from the Military Balance and where major discrepancies between the different sources were found, the indicators have been adjusted or national sources were used to confirm the actual number of forces. Such were the cases of Bulgaria’s and Romania’s contributions to the operation in Iraq in 2003 and 2004.

56. The correlation matrix indicates that some of the variables in the three groups of countries do not meet the linearity assumptions because the correlation is not significant. In the case of the old fifteen NATO nations, the Military Personnel and Army Equipment variables are not significant.

57. Due to its nature, Navy Equipment necessitates a higher number of military personnel to maintain compared to the personnel needed to operate Army and the Air Force equipment. As a result, in order to increase military presence overseas with one soldier, there should be an increase of 30 thousand dollars in defense expenditures for the new allies and about 40 thousand dollars for the old allies. This estimation also seems quite realistic, especially given the fact that the new allies have slightly lower costs to maintain troops abroad due to the cheaper cost of labor there. It seems that in the case of the four non-NATO nations, this relationship is not significant. The unstandardized coefficient (-.26) is not an indicator of any particular dynamics because the analysis did not find any evidence in support of a possible relationship between military resources and troops overseas.

58. The assumption for homoscedascity is assessed by looking at the scatterplots of the standardized predicted value and standardized residuals.

59. In this case scholars of statistical analysis recommend that violations of homogeneity can be corrected by transformation of the dependent variable scores. Nonetheless, the biggest problem with this approach is the interpretation of the scores. Alternatively, untransformed variables may be used with a more stringent level [. . . ] .01 with severe violation. For details see Barbara Tabachnick and Linda S. Fidell, Using Multivariate Statistics (Boston: Allyn and Bacon, 2001), 82. The second option would not demand data transformation but instead would require the use of more stringent levels of significance.

60. The army equipment indicates the highest level of significance (.001), while air force and military personnel record a moderate level of significance (.05). The Navy variable is also significant at .05 but it also has a high standard error (7.47). This can be explained by the specificity of navy power, which includes fewer mostly large
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units of equipment such as frigates, submarines, patrol and costal vessels, and amphibious vessels. If only several of these pieces of navy equipment are being repaired, replaced, or decommissioned during the observed period, significant data fluctuations are likely to appear that skew the trend of the model. Furthermore, due to their geographic constraints, some allies such as Luxembourg do not have a navy at all.

61. Due to their specific geography, the Czech Republic, Hungary, Slovenia, and Slovakia do not have any navy resources at all. Therefore, this model based only on the observations from six nations and cannot render sound scholarly conclusions.

62. Although Czech Republic and Slovakia are new states that emerged with the split of Czechoslovakia in 1993, they not only shared common statehood for about seventy-five years but also agreed to divide peacefully the resources of Czechoslovakia, including the military ones, in a ratio that corresponded to the contribution of each of the two nations (usually in a ratio of two to one). This information was also confirmed by representatives from the Czech and Slovak missions at NATO Headquarters during the interviews conducted in January 2006.

6. Operation Active Endeavour in the Mediterranean was launched as an immediate response to the terrorist attacks against the United States on September 11, 2001. The operation is a part of the Alliance’s strategy to combat terrorism by helping to detect and deter terrorist activity in the Mediterranean, http://www.nato.int/issues/active_endeavour/index.html, 05/14/2008.