

ASAN REPORT

The ASAN-Army Policy Studies Series 1

F-35 JSF and Military Transformation

American Militarism during the Post-Cold War Era

PH. D. KEE HYUN AHN
WITH S.J.D. BEOM CHUL SHIN

NOVEMBER 2019



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The Asan Institute for Policy Studies

About

The ASAN-Army Policy Studies Series is representing the endeavor of both institutions to bring prosperity to the Republic of Korea through practical research on security policy issues.

It is also the products of selfless cooperation between the Republic of Korea Army and ASAN Institute for Policy Studies. This is the first volume of the series and other ones will follow soon.

Authors

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His fields of research are American Politics, International Relations, Military History, and Statistical Analysis.

This volume is the abstracted version of his Ph.D. dissertation.

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Disclaimer

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Summary

All armed forces are maintained in two ways – in both the military way and the militaristic way. In this sense, every nation which has its own military has specific features of militarism, regardless of how dominant these features are over other parts of the society. The U.S. has its own type of militarism in its military and society. In the United States, there is a public belief that the US military should be number one in the world. This American public belief takes various shapes of military imperatives which connect every part of society with military. Furthermore, the imperatives lead the parts of society to cooperate and support the realization of themselves.

Part I of this report shows that military transformation in the post-Cold War era is an example that well captures how American militarism has been embedded in American society. During this period, public opinion showed a positive and significant correlation with defense spending. Within the US military, American Militarism has led the Department of Defense and military services to the endless preparation for a future adversary in the situation of strategic uncertainty after the Cold War era. Defense related industries have strongly supported the military's effort to be *Number One* in military affairs. In the political arena, the congressional committees that are responsible for national defense seem inclined to be conservative in the matter of ideology – more conservative than the median in the House of Representatives.

Part II of this report explores how American Militarism has influenced on the decisions of each legislator in the roll call votes on amendments regarding defense authorizations and appropriations bills. The result reveals that authorization process 1) is quite different from appropriation process; 2) is more policy oriented and less budget related than appropriation process; 3) is more predictable than appropriation process. Furthermore, the result shows that the amount of PAC contributions to each legislator is a significant factor to determine legislators' choices in roll call votes in authorization process even though ideological aspect of individual legislator's ideology is still influential in decision making of each legislator.

Acknowledgments

This is the abstracted version of my Ph.D. dissertation as well as the collection of essential parts in it. For almost five years, I could not have helped but put the manuscript of my Ph. D. dissertation in the closet due to my urgent assignments as an officer in uniform, which began just after coming back to Korea. ASAN and the Republic of Korea Army gave me a gratitude opportunity to bring my manuscript locked in the closet into the sunlight and turn it into the first volume of the ASAN-Army Policy Studies Series.

I have owed the Republic of Korea Army more than a lot. The Republic of Korea Army allowed me to earn Ph.D. Furthermore, the Army set the stage for me to turn my Ph.D. dissertation into a single volume of book by sending me to the ASAN Institute for Policy Studies. The six months at ASAN is the prestigious time for me to revitalize myself as a policy planner in the security domain.

My boss at ASAN, Acting President Choi Kang put me under effective and happy pressure by keeping reminding me of not dreaming of putting even a step forward to my next assignment in the Army before submitting three policy research writings. Without this pressure, this volume must not have come out. Senior Research Fellow Beom-Chul Shin at ASAN encouraged me to move forward in order to write a fine draft that fits in the professional academic requirements. He also breached several administrative obstacles to the publication of this volume. Program officer, Song Ji-eun, finalized the publication process with editing corrections and precious recommendations.

I would like to express my gratitude to everyone who assisted me to finish my Ph.D. degree. My Lord – Jesus Christ showed me the way to go. My wife and son – Jisun and Joonmo – always stayed with me and encouraged me. We are the best team ever. My parents and ones in law supported and prayed for my team in a long distance. At the University of Kansas, I met Great mentors. My advisor, Professor Mark Joslyn; Professor Michael Lynch at the GAU; Professor Adrian Lewis of the History Department; Pastor Lanny Maddux for English writing.

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한글 요약본

들어가며

미국에서는 모든 연방정부의 예산은 의회에 의해서 승인이 된다. 국방정책과 국방예산도 다르지 않다. 특히 전투력과 직접 연결이 되는 무기체계 도입 등에서 의회가 행사하는 예산승인권한을 생각해 보면, 국방정책에서 의회가 차지하는 비중을 어렵지 않게 공감할 수 있다.

이론적으로 보면, 국방정책이 외부의 적으로부터 미국을 지키기 위한 것이고, 무엇보다도 효율성과 합리성에 의해 추진되어야 하지만, 실상은 그렇지 않다. 특히 의회 예산안 심의를 통해 승인되는 무기체계 도입사업은 정치적으로 논란의 여지가 많았다. F-35 합동타격 전투기 개발사업이 이러한 측면을 잘 설명해주는 좋은 예시이다. 군과 국방부, 의회, 그리고 13개 국가들 모두 개발 단계에서 많은 단점과 흠평이 있었던 F-35 전투기 구매의사를 바꾸지 않았다. 왜 미 의회를 비롯한 여러 구매자들은 문제가 많다고 평가를 받은 F-35 전투기를 사야만 했을까? 이 보고서는 질문에 대한 답이다.

국방정책과 두 가지 핵심업무

국방정책을 추진함에 있어 정책기획자는 두 가지 업무를 담당한다. 외부의 적 위협으로부터 국가를 지키기 위해 필승의 방책을 구상한다. 군사전략을 구상하고, 군사작전을 계획한다. 이는 전문직업군의 임무이며, 국민이나 의회와 협상하기 보다는 설득으로 업무를 추진한다. 다른 한편으로 정책기획자는 군사작전을 수행할 군사력을 조직하고 구성한다. 기업과 계약을 해야 하며, 병역에 대한 국민의 지지를 이끌어 내야 하며, 의회와 대통령을 설득해야 한다. 여기에서 핵심은 국민의 지지를 반영하여 국방에 필요한 군사력을 유지하는 성공적인 방안을 찾는 것이다. 민심은 선거를 통해 반영되고 예산이 의회의 승인을 거쳐야하기 때문에, 전문직업군인의 영역인 필승의 방책을 구상하는 것과 함께 의회에서 논의되는 국방정책을 연구하는 것이 필요하다. 국방정책의 국내적 기반을 구축하는 것은 정치적 과업이며, 효과적인 무기체계를 구매하고, 우수한 인력 확보하며, 군 내부 조직의 효율성을 유지하기 위해서는 군에 선호하는 정치적 환경을 만들고, 우호적인 여론을 형성하며, 국내 경제 상황과 연계하여 추진해야 한다.

『군사적 효과』 중심 방식’과 ‘군사주의적 방식’¹⁾

군 조직은 『군사적 효과』 중심 방식(Military way)’과 ‘군사주의적 방식(Militaristic way)’ 등 통상 두 가지 방법을 통해 구성된다. 군 조직은 모체인 사회의 특성을 반영하게 되는데, 불가분 군 조직은 사회의 여러가지 요소들과 연관이 된다. 정치체제, 경제상황, 안보상황, 국민의 정서 및 성향, 동맹관계, 전략문화와 각 군별 특성과 그 시대의 기술 등이 군 조직의 구성에 영향을 주게 된다. 군 조직과 모체 사회의 관계를 고려할 때, 모든 국가의 군 조직은 과학적이고 군사적 기능에 초점을 맞춘 『군사적 효과』 중심 성향과 더불어 순수한 군사적 목적 이외의 특성에 의해서 조직의 효율성과 군사적 효과성이 분산되는 군사주의적 성향이 더 붙어 나타날 수밖에 없다. 그래서 군사조직을 보유한 모든 국가는 그 정도와 양상의 차이는 있지만 그 나름대로의 군사주의가 발현된다. 통상적으로 군사주의는 ‘의장행사를 중요시’ 하고, ‘혁명적 성향에 반대’하며, ‘이념적으로 보수적’이고, ‘영웅주의적 성향’으로 나타난다.

미국의 군사주의

미국 역시 군 조직과 사회내부에 독특한 군사주의가 형성되어 있다. 미국의 군사주의는 ‘미국의 군사력은 세계 제일이어야 한다’라는 대중적이면서도 국가적 규모의 믿음에서 시작된다. 갤럽에서 실시한 세 개의 여론결과²⁾를 종합해보면, 미국인의 70%는 미군이 최강이어야 하며 군사력이 대외정책에 중요한 부분이라고 인정하는 반면, 40% 이상은 미국의 군사력이 세계 최강의 수준에는 이르지 못했고(Not strong enough), 40% 정도가 미국의 군사력이 다른 강대국들과 비슷한 정도라고 생각하고 있다. 즉 세계 최강의 군사력이 중요하지만 아직 그 수준에 이르지 못했다는 생각을 가진 미국인이 상당부분 된다고 할 수 있다.

미국 국민들에게 심어져 있는 이러한 믿음은 미국의 군사력은 세계 평화와 번영에 중요한 수단이며, 미국의 무력사용이 민주주의와 인권 등 보편적 가치에 의해서 정당화될 수 있다

1. 본문 Chapter 2의 “3. Militarism in the United States”에서, 11 ~ 14 페이지 참조. 군 조직과 모체사회, 군사주의의 연관성을 설명함. 본문의 ‘Military way’가 과학적인 군사력 운용의 효과성에 중점을 두고 있어서 『군사적 효과』 중심 방식’으로 번역하였고, ‘Militaristic way’는 일반적인 번역을 따라 ‘군사주의적 방식’이라는 용어를 사용하였다.

2. 본문의 14 ~ 18 페이지 참조. 갤럽에서 1993년부터 2013년의 기간에 세 개의 질문으로 실시한 여론조사는 미국인들의 미군 군사에 대한 인식과 그 변동 추이를 보여준다.

는 믿음으로까지 확장된다. 군사력에 대한 미국 국민들의 믿음은 다양한 형태의 정언명령으로 군과 사회의 각 부분을 연결하고, 이러한 정언명령³⁾들을 실현케 하는 원동력이 되었다. 우선, 지구상의 어떠한 환경과 상황에서도 군사적 우월성을 유지해야 한다고 미국사회에 요청한다. 둘째, 군사적 우월성을 유지할 첨단무기체계를 만들 산업기반을 유지해야 한다고 미국사회에 강요한다. 셋째, 또 다른 군사혁신을 이룰 수 있게 연구개발을 지속해야 한다고 미국사회에 외친다. 넷째, 징병제에 의존하지 않는 전문직업군인으로 이루어진 완전한 모병제를 해야 한다고 미국 사회에 제안한다. 마지막으로, 미국 본토에서는 절대 전쟁이 일어나서는 안된다는 신앙을 미국 사회에 전파한다. 이러한 정언명령들은 미국 사회의 모든 분야들이 미국 군대를 만들어 가는데 참여해야 한다고 요구한다. 이것이 민주주의 국가이자 자유주의 국가인 미국이 가지고 있는 군사주의의 모습이다.

군사변환과 미국의 군사주의 – 여론

냉전 종식 이후 미국의 군사변환 정책은 미국의 군사주의가 어떠한 방식으로 미국사회에서 작동하는 지를 잘 보여준다. 군사변환이 군 조직을 이상적인 형태로 변화시키는 것이라면, 군사변환의 최종산물은 조직의 변화, 무기와 장비의 개발, 그리고 군사교리의 발전 등이다. 이러한 변화를 가능하게 하는 것은 다름아닌 국방예산이다. 민주주의 국가에서 여론은 국가의 정책에 영향을 주기 때문에, 만일 국민여론이 국방예산에 우호적인 성향을 갖는다면 국방예산의 증액이 가능할 것이다.

이러한 가정하에 미국의 여론, 냉전기 및 테러와의 전쟁에 참전 여부, 연간 국가채무 등의 요소들이 탈냉전기 국방예산의 변화에 가져온 영향력을 분석하였다.⁴⁾ 분석 결과, 테러와의 전쟁에 참전한 기간과 국방예산에 우호적인 국민 여론이 이듬해에 국방예산의 증가에 도움이 되었다는 것이 증명되었다. 더불어 참전 중인 분쟁의 강도, 외부 안보환경의 변화 등에도 영향을 받는데 특히 ‘전쟁과 평화가 상호 전환되는 시기’가 ‘상당 기간 지속되었던 냉전기’보다 더 강도 높은 영향을 주었고, 냉전기에 비해서 상대적으로 분쟁에 참전하는 시기가 짧았던 테러와의 전쟁 기간이 더 강도 높은 영향력을 준 것으로 나타났다. 즉 국민여론은 기간이 상대적으로 짧고 강렬한 분쟁⁵⁾에서, 그리고 전쟁과 평화가 교체되는 시기에 더

3. 미국의 군사주의가 미국 사회에 주는 영향력을 표현하고자 Military Imperatives를 정언명령으로 번역하였다.

4. 본문 Chapter 4의 “3. Public Opinion and Defense Budget”에서, 64 ~ 68 페이지 참조. 연구설계와 절차를 자세히 설명하였다.

민감하게 작용한다고 결론 지을 수 있다.

군사변환과 미국의 군사주의 – 미국 군

미국의 군사주의는 냉전기간 동안 미 국방부와 각 군을 소련과 군사적 경쟁을 하게끔 만들었고, 탈냉전기 동안 전략적으로 불확실한 상태에서도 끊임없는 군사변환을 시도하게끔 하였다. 이러한 미래에 대한 끊임없는 준비의 트렌드는 미국이 9. 11 테러공격 이후 2개의 전구 군사작전을 수행하는 동안에도 유지되었다. 군사분야에서 최상의 지위를 유지하기 위해서, 국방부와 각 군은 새로운 전투수행방식을 만들어왔고, 이를 수행하기 위한 무기체계와 군사교리를 끊임없이 개발하였다. 이러한 미국의 군사조직의 노력들이 2차세계대전 이후 지속적으로 입안된 군사변환 계획들 안에 잘 담겨있다.

탈냉전 이후 미국의 군사변환은 소련의 몰락 이후에 군사전략, 교리, 군 구조 및 무기체계 등 미국 군 조직 전반을 변환하는 시도였다. 당시의 군사변환은 20세기 말 정보기술의 혁명적 변화를 군사분야에 적용하는 군사변혁 사상⁶에 기반을 두고 있고, 1992년부터 2014년까지 20년 이상 미 국방부의 핵심 국방정책의 목표였다.⁷

탈냉전기 미국의 군사변환은 1992년에 출간된 미국의 군사전략(The National Military Strategy 1992)에서 언급된 기초군 계획(The Base Force Plan)으로 부터 시작되었다. 기초군 계획은 미국이 ‘2개의 지역수준의 우발상황 대비계획(Two Major Regional Contingencies Strategy)’을 시행하기 위해 필요한 군사력 규모를 제시한 것이다. 미 국방부는 기초군 계획의 타당성을 점검하였고, 그 결과물로 상향식 점검 결과 보고서(Bottom-Up Review Report)를 1994년에 발간하였다. 이 보고서에서 미 국방부는 기초군 계획의 기본가정인 2개의 지역수준의 우발상황 대비계획은 타당하다고 평가하였지만, 동시에 추

5. 9.11 테러 공격이 미 본토에 대한 공격이었고, 이어진 군사작전이 전지구적인 영향을 주었다는 의미에서 냉전보다 강렬한 분쟁이었다고 표현하였다.

6. 군사혁신(Revolution in Military Affairs), 군사변환(Military Transformation), 국방개혁(Military Reform)의 차이점에 대해서는 본문 Chapter 2 “1. RMA, Military Transformation, Military Reform?” 의 8 ~ 10페이지에서 설명하고 있다. 미국의 탈냉전기 군사변환정책은 군사혁신 사상을 현실화하기 위한 계획으로, 다양한 국방개혁 방안들이 포함되어 있다.

7. 본문 Chapter 3. The US Military의 18 ~ 36 페이지 참조.

가적인 군 규모 감축과 냉전 기간 추진해왔던 다양한 군 현대화 계획에 대한 조정의 필요성도 언급하였다. 당시 추진 중이던 모든 무기개발 및 구매 사업을 재평가하여, 불필요하다고 판단된 사업은 중단하고 동시에 새로운 연구개발 소요들도 제안하였다.

1997년 이후 2014년까지, 미 국방부는 4년을 기본적인 주기로 하는 4개년 국방분야 점검 보고서(the Report of the Quadrennial Defense Review)를 발간하였는데, 총 5회 발간된 이 보고서에는 미국의 군사변환 정책의 핵심이 포함되어 있다. 1997년 보고서에는 군사변환 정책이 국방부의 각 군의 비전으로 제시되었고, 2001년과 2006년 보고서에서는 군사변환정책이 특정한 시간과 명확한 목표가 포함된 주요 정책기조로 확대되었다. 중동 및 서남아시아에서의 군사작전이 종전단계로 접어들고 오랜 군사작전으로 인해 국가재정이 악화됨에 따라, 2010년과 2014년 보고서에서는 국방정책의 중심이 군사변환에서 군사력의 재균형(The Rebalance of Forces)정책으로 변경되었다. 더불어, 1990년대 초반에 시작된 탈냉전기 군사변환 정책의 종료시점이 다가옴에 따라, 미 국방부와 각 군은 또 다른 군사변환을 위한 새로운 개념을 찾게 되었고, 이러한 시도가 2010년 및 2014년 보고서에서 군사력의 진화(Evolution of Forces)와 혁신과 적응(Innovation and Adaptation)이라는 정책기조로 나타났다.

군사변환과 미국의 군사주의 – 군 관련 기업⁸

군 관련 기업들은 군사분야에서 세계 제일이 되고자 하는 각 군의 노력을 열성적으로 지지해왔다. 군 관련 기업들은 첨단 군사기술과 무기체계의 연구개발을 위해 엄청난 규모의 자금을 투자해왔고, 각 군은 기업들의 연구개발 산물을 적극 구매하고 추가적인 투자를 해왔다. 연구결과의 산물이 미완성이거나 초기단계에 있는 경우에도 각 군은 종종 투자와 구매를 해줌으로써, 군 관련 기업의 연구개발을 독려하였다. 이러한 측면에서 보면, 각 군과 군 관련 기업 사이의 관계는 단순한 구매자 – 판매자 관계이기보다는 공생관계라고 할 수 있다. 냉전 기간 군사적 우위의 기반이었던 미국의 산업기반을 보호하고 군 관련 장비를 생산하는 능력을 제대로 보존하는 것이, 미국 정부가 냉전 종식 이후에 대규모의 군사력 감축을 추진하는 동안에도 고려해야만 했던 중요한 정책기조 중에 하나였다.

미국의 산업 기반능력이 미국 군사력의 필수적인 주춧돌이며 냉전 승리의 원동력임은 명

8. 본문 Chapter 5. Defense Industries의 70 ~ 84 페이지 참조.

백한 사실이다. 군-산-의회 복합체는 냉전기간 동안 소련과 바르샤바 조약기구에 대해 군사적 우위를 유지하기 위한 하나의 정책이었다. 하지만 냉전이 종식되고 1980년대 말 미국의 국가경기가 악화됨에 따라서 군-산-의회 복합체에 균열이 생기기 시작하였고 군 관련 기업들은 그 동안의 생산라인을 폐쇄하거나 새로운 방향으로의 전면적 전환을 고려해야 하는 상황에 놓였다. 국방예산을 승인하는 주체인 의회는 단순히 국가 경제상황만을 고려하여 생산라인을 폐쇄하는 조치를 할 수 없었는데, 이는 방위산업을 담당하는 기업과 지역경제가 밀접하게 연계되어 있는 주 또는 지역구의 경우, 군 관련 기업의 존폐는 지역구의 중요한 경제적 사안이면서 동시에 향후 의원들의 정치적 생존인 재선과 결부되는 사안이기 때문이었다.

군-산-의회 복합체의 붕괴가 생겨날 즈음, 미 국방부는 군 관련 기업들에게 기업간 합병을 권유하였고, 냉전기간 안보상 이유로 용도가 제한되어 있는 첨단기술에 대한 규제완화를 의회와 함께 추진하였다. 의회는 안보와 산업에 동시에 활용될 수 있는 이중적용 기술(Dual-use Technologies)을 상용으로 전환할 수 있는 법적 토대를 만들었다면, 미 국방부는 반드시 보호해야 하는 특정 기술과 상용화 허용이 가능한 기술을 구분하는 현실적인 가이드라인을 제시하였다. 이러한 여건 속에서 네트워크 중심 전쟁수행을 골자로 하는 군사변환 정책은 군 관련 기업들에게 새로운 무기체계의 개발, 기존 무기체계의 보완, 그리고 이러한 무기체계들을 연결하는 네트워크 구축 등 세 가지 사업영역을 제시하였다. 이러한 사업영역들은 군 관련 기업들에게 1990년대 초반의 심각한 위기를 극복하는 계기가 되었고, 미국 정부에게는 국방을 위한 산업기반을 유지할 수 있는 방안이 되었다. F-35 합동타격전투기 사업은 군 관련 기업과 군사변환 사이의 관계를 보여주는 좋은 예이다.

냉전이 종식되고, 안보상황보다 국가의 경제상황이 군 관련 기업과 무기개발 사업을 움직이는 주요 동인이 되었다. 각 군별 독자개발 하였던 전통적인 무기체계 개발 방식과는 달리, 각 군에게 합동무기체계 개발을 요구하게 되었다. 미 해군이 A-6 전폭기를 대체할 A-X/A/F-X 프로그램을 발주할 때, 미 공군은 F-111 전폭기를 대체하기 위해 같은 프로그램에 참여하였다. 뿐만 아니라, 1990년대 초반의 경제상황 역시 각 군별 전투기 개발사업을 원천적으로 제한하기도 하였다. 더욱이, 변화하는 안보상황 역시 각 군별 전투기 개발사업과 노후 기종 교체사업에 대한 필요성을 뒷받침하지 못했다. 반면에 미국 정부 입장에서는, 냉전이 끝나기는 했으나 다양한 전역에서 임무를 수행하는 군사력이 필요했고, 군 관련 기업들이 국가적으로 중대한 경제적 기반이었기 때문에 방위산업 기반시설을 적정수준 이상으로 유지해야만 하는 딜레마의 상황이 지속되었다.

국방부는 군 관련 기업들을 산업분야별 대표적인 회사 몇몇을 중심으로 인수/합병하여 기업 수를 줄이게 권고하였다. 그 결과, 16개의 항공기 관련 회사들이 1990년대 말 즈음해서 5개의 회사로 합쳐졌다. 더 나아가서, 국방부는 비슷한 형태의 무기체계 개발 프로그램도 합쳐서 필수적으로 개발해야 하는 무기체계를 선별하였다. 그 과정에서 취소 및 해체된 프로그램 중에서도 활용성 및 경제적 효과를 고려하며 연구개발 단계의 프로그램으로 전환시키고, 해외투자를 유치하는 등의 조치도 병행하였다. 이러한 국방부와 의회, 군 관련 기업들 사이에 있었던 모든 협의와 조정 과정들이 F-35 합동타격전투기 개발사업에서 발견된다.

F-35 합동타격전투기 개발사업⁹은 군 관련 기업, 국방부, 의회의 관계를 잘 보여주는데, 이들의 연결관계가 F-35 합동타격전투기 개발사업을, ‘지나치게 야심적이고,’ ‘비효율적이며,’ ‘불합리적으로’ 묘사되는 미국의 군사주의로 흐르게 하였다. 미국의 군사주의가 F-35 합동타격전투기 개발에 영향을 주었다는 것은 다음 네 가지 논지로 설명할 수 있다. 첫째, F-35 합동타격전투기 개발과정에서 심각한 결점들이 발견되었음에도 불구하고, 구매자인 의회, 미 국방부 등이 판매자인 록히드마틴사 및 계열사에 구매자로서 책임 있는 권한을 제대로 행사하지 못했다. 둘째, F-35 합동타격전투기 개발사업이 최종소비자라고 할 수 있는 미국 공군, 해군, 해병대의 요구사항을 충족시키지 못했다. 공군의 경우, F-35를 개발하는 것보다 더 나은 성능을 지닌 F-22 전투기를 추가 구매하기를 희망하였고, 해군의 경우는 F-18 E/F 전투기 구매가 F-35 전투기를 개발하는 것보다 바람직하다는 의견이었다. 셋째, 사용자인 각 군의 요구에 맞는 전투기 개발보다는 국제 전투기 판매시장에 경쟁력을 갖추는 것과 산업기반 시설을 유지하는 것이 미국 정부의 중차대한 이익과 관련이 있었으며, F-35 합동타격 전투기 개발사업은 이러한 상황적 맥락에서 추진된 것이라 할 수 있다.

마지막으로, F-35 합동타격전투기가 가지고 있는 ‘5세대 전투기’¹⁰라는 문구가 미국 군 내부에서 사용되었던 군사용어가 아니라는 점이다. ‘5세대 전투기’라는 용어는 록히드마틴사가 미국 국방부와 외국 구매자들에게 F-35 합동타격 전투기를 판매하기 위해 사용한 광고 문구라고 할 수 있다. 미국 각 군에서 새로운 전투기 개발을 위해 사용하던 용어는 다음 아

9. F-35 합동타격전투기 개발사업에 대해서는 본문 Chapter 5의 “2. F-35 JSF: A representative of military transformation” 73 ~ 84 페이지 참조.

10. 본문 Chapter 5의 2. F-35 JSF: A representative of military transformation중 “C. The Fifth Generation Jet Fighter: Where does it come from?” 76 ~ 84 페이지 참조. 캐나다 등지에서 F-35 전투기에 대한 비판과 함께 논의되었던 것을 미국의 국내상황과 연결하여 설명하였다.

닌 ‘차세대 전투기’였다. 각 군에서 추진했던 것은 당시의 적대세력의 전투기를 대적하고 압도하기 위한 차세대 전투기를 개발하는 것이었다. ‘5세대 전투기’라는 용어는 1990년대 후반 국제 전투기 판매시장에 새로운 MiG계열의 전투기를 판매하기 위해 러시아가 사용하였다. 러시아 무기종합회사(the Russian Weapon Corporation)가 최초로 ‘5세대 전투기’라는 용어를 사용하였고, 국제 전투기 판매시장에 널리 알려졌으며, 록히드마틴 사가 F-16, F-18, A-6, AV-8 등 노후 전투기를 대체할 신종 전투기 개발 사업의 광고문구로 사용하게 되었다. 이후, ‘5세대 전투기’라는 용어가 미국 국방부와 의회, 그리고 각 군에서 첨단 전투기를 지칭하는 용어로 굳어지게 되었다. 이는 미국 정부에서 F-35 합동타격 전투기와 함께 ‘5세대 전투기’라는 광고문구를 함께 구매하였고, 이 용어에 최첨단 전투기라는 의미를 부여했다고 해석할 수 있다.

군사변환과 미국의 군사주의 – 의회

미국의 정치 현장에서 보면, 미국 의회가 군사 분야에 많은 영향력을 행사해 왔음을 알 수 있다. 물론, 군사력 사용과 대외정책이 백악관, 국방부 등 행정부의 소관업무이기는 하지만, 예산심의권과 정부에 대한 감독의 권한을 가지고 있는 미 의회가 군사분야에 대한 강력한 영향력을 행사해왔다. 더 나아가면, 군사관련 업무들은 양원의 군사위원회에서 주로 다루어 지는데, 두 위원회 모두 위원들이 군 출신이거나 지역구 및 해당 주들이 군과 경제적으로 밀접하게 관련되는 경우가 대부분이다. 이러한 양원 군사위원회 위원들의 성향이 자신들 지역구의 이익이나 각 군의 입장을 잘 대변하게 한다는 장점도 있지만, 때로는 위원회 소속 의원들의 의사결정이 군사적 효과성보다는 지역구의 경제와 각 군 사이의 경쟁 관계에 의해 분산되기도 한다는 단점도 공존하게 된다. 이 역시 미국이 가지고 있는 군사주의의 한 형태라고 할 수 있다.

미 국방부의 군사변환 정책 문서에 대한 청문회자료를 통해서 군사변환 정책에 대한 의회의 반응을 읽을 수 있다. 기초군 계획(Base Force Plan)¹¹에 대한 의회의 전반적인 평가는, 군 구조와 이를 지원하는 능력의 측면에서 볼 때, ‘제한된 예산 규모에 맞추기’보다는 ‘전략에 기초하여 입안된 문서’라는 것이었다. 군사위원회 소속 의원들은 탈냉전기의 전략적 불확실성에 대해 이해하였고, 기초군 계획을 국방정책이라는 큰 그림에서 전략적 불확실

11. 본문 37 ~ 40 페이지 참조. 당시 합참의장 콜린 파월 대장이 기초군 계획을 의회에 설득하기 위하여 했던 여러 증언들이 직업군으로서 많은 귀감이 되었다.

성에 대응하기 위한 계획으로 인정하였다. 반면에, 상향식 검토 결과 보고서(Bottom Up Review)에 대한 하원 청문회에서는 하원 군사위원회 소속 의원 대부분에게 비판을 받았다. 하원 군사위원회 소속 의원들은 상향식 검토 결과 보고서¹²에 대해 지나치게 제한된 예산의 규모에 얽매어 있으며, 그 결과 군사력 규모가 추진하는 군사전략과 잘 맞지 않다고 평가하면서, 국방부가 계산하는 것보다 높은 수준의 위험 부담을 감수하고 있으며, 미래에 대한 청사진을 보여주지 못한다고 비판하였다.

상향식 검토결과 보고서와는 달리 1997년에 발간된 4개년 국방분야 검토 보고서(QDR 1997)¹³에서는 군사분야에 대한 미래의 청사진으로 ‘합동비전 2010’과 군사변환 정책이 제시되었다. 미 국방부는 두 개의 비전을 국방의 제 분야와 연결하여 양원 군사 위원회에게 QDR 1997과 국방정책을 성공적으로 대변하였고, QDR 1997의 정책적 방향을 승인하도록 설득하였다. 2001년에 발간된 4개년 국방분야 검토 보고서(QDR 2001)¹⁴에 대한 상원의 청문회에서는 9.11 테러공격에 대한 대응방안으로 청문회의 중심이 옮겨질 수밖에 없었다. 하지만 상원 군사위원회는 9.11 테러 공격과 같은 비정규전 성격의 비대칭 테러 위협에 대응하는 정책 기초가 군사변환 정책에 이미 포함되어 있다는 점을 적시하면서, 군사변환이 올바른 방향으로 추진되고 있음을 확인해 주었다. 이는 9.11 테러 공격 이전에 진행된 하원 청문회에서 논의된 것과 동일한 반응이었다. 이후 이어진 QDR 2001에 대한 양원 청문회에서 몇 차례 9.11 테러 공격에 대한 후속 대응을 직접적으로 언급하고 있기는 하지만, 양원 청문회에서 진술한 증인들의 발언과 QDR 2001 문서 자체에서 군사변환과 관련된 명확한 정책기조의 연속성을 발견할 수 있다. 2006년 발간된 4개년 국방분야 검토 보고서(QDR 2006)¹⁵에 대한 청문회에서는 군사변환 정책과 테러와의 전쟁 등을 주요한 두가지 이슈로 다루었다. 청문회에서 다루어진 여러가지 논의들은 재원이 제한되는 상황에서 어떻게 군사변환 정책과 테러와의 전쟁 수행을 조화있게 추진할 것인가로 모아졌다.

12. 본문 41 ~ 44 페이지 참조. 상향식 점검 보고서의 경우, 의도와 결과가 어긋나서 혹평을 받았으나, 국방부 입장에서는 꼭 필요한 보고서였다.

13. 본문 44 ~ 47 페이지 참조. 냉전 이후 기지 통폐합 및 이전 사업이 청문회 동안 주목받는 주제 중에 하나였다.

14. 본문 47 ~ 50 페이지 참조. 중동지역 및 서남아시아에서의 군사작전 수행방안과 현지 여건 등이 많이 다루어졌다.

15. 본문 50 ~ 55 페이지 참조. 예비군의 파병문제와 테러와의 전쟁에 대한 보도내용, 언론 매체에서 전달하는 전쟁의 실상에 대한 논쟁 등이 많이 다루어 졌다.

이전에 발간된 보고서와는 달리 2010년에 발간된 4개년 국방분야 검토 보고서(QDR 2010)¹⁶에 대한 청문회의 중심은 군사변환정책이 아니었다. 군사변환 정책과 관련된 의제들이 QDR 2010에 대한 청문회에서 논의되기는 하였으나, 주요의제는 악화된 국가재정 아래에서 여러 국방 관련 프로그램들에 대한 효율적/효과적 조정 통제 방안이었다. 청문회에서는 증가되는 국가 부채의 상황이 군사변환 정책하에 추진된 여러 무기체계 개발 프로그램들에 미치는 영향력을 평가하였고 여러 대안이 제시 되었다.

종합하면 양원의 군사위원회는 기초군 계획, QDR 1997, QDR 2001, QDR 2006 등에 대해 전략에 기초한 국방정책 문서라고 긍정적을 평가를 하면서, 미래의 청사진을 제시하고 연구개발에 더 많은 투자를 골자로 하는 군사변환 정책에 호감을 표시한 반면에, 상향식 검토 보고서와 QDR 2010에 대해서는 제한된 국방예산에 맞추어 작성된 문서라고 혹평하였다.

하원 군사위원회의 구성 형태

의회 내 각종 위원회의 구성 형태는 위원회 소관 입법안의 최종 산물을 예측할 수 있는 또 하나의 지표이다. 의회 내 각종 위원회는 소관 분야의 전문가 및 이해 관계가 밀접한 의원들로 구성되기 때문에, 위원회는 구성원들의 이해타산을 가능한 범위 내에 최대한 반영하는 방향으로 입법과정을 유도하게 된다. 의회의 입법과정에 대한 기존연구에 따르면, 의원들의 투표에 개인의 이념적 성향이 반영되고, 과반수 찬성을 통과기준으로 하는 기명투표의 결과에도 영향을 주게 된다.¹⁷ 즉, 하원 의원 개인의 이념적 성향을 측정할 수 있다면 이를 바탕으로 하원 군사위원회의 전체의 이념적 성향을 구성할 수 있고, 또한 군사위원회가 만들어내는 의정활동의 산물 역시 예측할 수 있다.

키이스 풀(Keith Poole)과 하워드 로젠탈(Howard Rosenthal)이 구축한 DW-NOMINATE 지수¹⁸를 활용하여 미 의회 103회기에서부터 112회기의 하원 군사위원회의 이념적 성향의

구성을 분석한 결과,¹⁹ 108, 109, 112회기를 제외한 전 기간 동안 군사위원회의 이념적 성향 측정치의 중간값이 하원 전체의 중간값보다 보수적인 성향을 띄었고, 110, 112회기를 제외한 전 기간 동안 군사위원회의 공화당 의원들의 이념적 성향 측정치의 중간값이 하원 공화당 의원 전체의 중간값보다 보수적인 성향을 보였으며, 전 회기 동안 군사위원회의 민주당 의원들의 이념적 성향 측정치의 중간값 역시 하원 민주당 의원 전체의 중간값보다 보수적인 성향을 가지고 있었다.

보수적 이념 성향이 국방예산의 증가를 지지하는 특성과 일치하는 특성을 가지고 있는 점을 고려하면, 하원의 군사위원회는 당파와 관계없이 하원 전체와 비교할 때 전반적으로 더 보수적이고, 국방예산의 증가에 긍정적인 반응을 보일 것이다. 민주당의 경우, 전체 하원 민주당 소속 위원과 국방위원회 소속 민주당 의원들의 중간값 차이가 공화당의 경우보다 차이가 크게 나는 것으로 분석되었고, 이는 이념적으로 자유주의적 성향을 보이는 민주당 소속의 국방위원회 의원들이 국방 관련 의정활동에 임함에 있어, 당의 기조보다는 자신들의 입장을 반영하려는 성향이 공화당 의원보다 강할 것으로 보인다.

의회에서의 국방예산 관련 의사결정 과정

그러나 지금까지 언급되었던 미국의 군사주의와 관련된 논의들은 개별 의원들이 활동하는 지역구와의 연관성과 상원 및 하원에서의 국방정책과 관련된 투표활동에서 벌어지는 의사결정과정을 설명해주는 못한다. 하원에서 개별의원들의 여러 특성이 국방정책 관련 기명투표에서 주는 영향력을 분석하기 위해서 회기분석 모델을 구성하여 검증하였다.²⁰ 국방예산과 관련된 기명투표에서 개별 하원의원이 보여준 국방예산 증액에 대한 우호적인 성향²¹ (우호적 성향 = 1, 비우호적 성향 = 0)을 설명하기 위해서 개별 의원의 소속 정당의 다수당 여부,²² 개별의원의 이념적 성향,²³ 현직 지역구에 배정되는 국방예산의 총액,²⁴ 각 의원

19. 본문 Chapter 4의 “2. House Armed Services Committee Composition” 61 ~ 64 페이지 참조.

20. 본문 95 페이지, 〈Figure 7-1. Model 1: Estimation of Defense Vote Index〉 참조.

21. 해당 분기에 기명투표에 상정된 국방예산 증액 관련 수정안 중에 해당 의원이 찬성표를 선택한 비율을 지수화하여 추출하였다. (총 기명투표 수정안 수 = n, 찬성표 선택 횟수 = P, 지수 = p/n).

22. 본문 97 페이지 참조. 해당 기간 동안 103회기와 111회기를 제외하고 모두 공화당이 다수당이였다.

23. 본문 98 페이지 참조. DW-NOMINATE 지수를 활용하였다.

24. 본문 99 페이지 참조. 미국 정부가 군 관련 기업과 맺은 계약 중에 해당 지역구에 있는 군 관련 기업에게 지급된 금액.

16. 본문 55 ~ 61 페이지 참조. 핵 추진 항공모함 및 잠수함 정비를 위한 추가적인 항만건설에 대한 찬반논쟁이 있었다. 지역구의 경제적 이익이 국방정책의 전략적 의미를 잠식하는 현상을 보여주었다.

17. 키이스 풀과 하워드 로젠탈이 미국 개국 이래 모든 기명투표 결과에 대한 분석과 연구의 결론이다. 최근 국내 유력 일간지에서 한국 국회의원들의 이념적 성향에 대한 기사를 발표했는데, 같은 맥락에서 이해하면 된다.

18. 위의 두 학자는 기명투표의 결과에 기반하여 개별 의원들의 이념성향을 매 회기마다 제시한다.

들이 받았던 군 관련 기업 기부금의 총액²⁵ 등의 요인들을 고려하였다. 더불어 국방예산의 의회 예산 처리단계가 국방수권법안 처리단계와 국방세출법안 처리단계로 구분되기 때문에 국방예산 관련 기명투표를 수권법안 처리단계와 세출법안 처리단계로 나누어서 검증절차를 진행하였다.

검증결과에 의하면,²⁶ 수권법안 처리단계와 세출법안 처리단계 모두에서 보수적 이념 성향이 국방예산 증액에 대한 우호적인 투표성향에 통계적으로 유의미한 긍정적 영향력을 보여주었다. 다수당의 여부는 모든 단계에서 개별 의원의 국방예산 증액에 대한 우호적인 투표성향에 유의미한 영향력을 보여주지 못했다. 군 관련 기업 기부금과 지역구에 배정되는 국방예산의 규모는 수권법안 처리단계와 세출법안 처리단계에서 각각 다른 결과를 보여주었다. 군 관련 기업의 기부금의 경우에 국방수권법안 처리단계에서 개별 의원의 국방예산 증액에 대한 우호적인 투표성향에 긍정적이며 유의미한 영향력을 보여주었던 반면, 지역구에 배정되는 국방예산의 규모의 경우에는 국방세출법안 처리단계에서 개별 의원의 국방예산 증액에 대한 우호적인 투표성향에 부정적인 방향으로 통계적으로 유의미한 영향력을 보여주었다.

군 관련 기업의 기부금이 국방수권법안 처리단계에서 개별 의원의 국방예산 증액에 대한 우호적인 투표성향에 긍정적이며 통계적으로 유의미한 영향력을 보여주었던 점을 고려하면, 국방수권법안 처리단계가 연구개발과 무기체계 구매와 밀접하게 연관되어 있는 「미국의 군사주의」의 영향력 아래에 있음을 예측할 수 있다. 반면에, 지역구에 배정되는 국방예산의 규모가 국방세출법안 처리단계에서 개별 의원의 국방예산 증액에 대한 우호적인 투표성향에 부정적인 영향력을 보여준 점을 감안하면, 이는 국방세출법안 처리단계는 전반적인 미국의 군사주의의 영향력 아래 있기보다는 개별 지역구의 경제적 이익과 보다 밀접하다고 예측할 수 있다.

이와 더불어, 지역구에 배정되는 국방예산의 규모라는 ‘변수’를 보다 정교하게 가다듬을 필요가 있음을 분석을 진행하는 가운데 발견하게 되었다. 지역구에 있는 군 관련 기업과 맺은 계약을 다시 재하청을 주는 문제에 대한 보다 심층깊은 고려가 필요하며, 이에 더하여,

지역구가 한 기업이 영향력을 주는 경제단위인지에 대한 추가적인 검증이 요구된다. 뿐만 아니라, 이번 연구를 통해서 의회에서 국방예산의 처리단계에 따라서 개별 의원이 보여주는 투표행위가 다르다는 것을 밝혀냈고, 개별의원들이 지역구에 돌아가는 경제적 이익에 민감하게 반응하는 점을 고려할 때, 국방세출법안 처리단계에서는 국방정책의 일반적인 이슈보다는 국방정책에 포함된 개별 프로그램별로 구분하여 의원들의 투표 성향을 분석을 해 볼 필요가 있다.

나가며

미국의 군사정책을 연구하며 깨달은 것은 미국 정치제도의 특성을 이해하지 않으면 미국 군사정책에 대해 제대로 그림을 그려낼 수가 없다는 점이다. 대부분의 미국 군사에 대한 연구가 국방부나 각 군에서 제공하는 교리와 공식문서의 분석에 중심을 두고 있다. 필요한 작업이지만 한 걸음 더 나아가갈 필요가 있다. 더불어 국방정책을 위한 예산 승인권과 군 관련 업무에 대한 감독의 권한이 있는 의회의 의견과 그중 군사위원회에서의 논의를 같이 들여다 봐야 미국 군사정책을 이해하고, 그 방향을 제대로 예측할 수 있다.

미국과 정책을 함께 추진하는 경우에도 같은 노력이 필요하다. 미국 국방부와 미 육군 등 군 관련 조직들과 관계를 돈독히 유지하는 것도 중요하지만 미국 의회와 신뢰감 있는 동반자 관계를 구축하는 것이 필요하다. 이스라엘이 AIPAC (The American Israel Public Affairs Committee) 등을 통해 미 상·하원 의원들과 좋은 관계를 유지하며, 친 이스라엘 성향의 정책을 만들어가는 것과 같은 맥락에서, 대한민국 육군도 합법적이고 공개적인 범위에서 상·하원 국방위원회 위원들과 의미 있는 관계를 구축하는 것이 향후 한국의 안보에 보탬이 될 것이라 생각한다.

한국에서도 다르지 않다. 대한민국 육군이 유지하고 있는 국회의원들과의 관계를 더 깊게 만들어가는 것이 필요하다. 영향력이 있는 국방정책의 동반자인 국회의원들에게 의미 있는 정보와 자료를 제공하고, 협력적 관계를 구축하는 것이 육군의 정책과 비전을 실현하기 위한 든든한 후원자를 얻는 길이라 생각한다.

끝.

25. 본문 98 ~ 99 페이지 참조. 군 관련 기업 정치위원회(Political Action Committee)에서 현직 의원에게 제공한 정치기부금의 총액. 미국의 경우 기업의 정치 기부금을 선거관리 위원회에 신고하게 되어있다.

26. 본문 Chapter 8. Analysis, 101 ~ 107 페이지 참조.

Asan Report

The ASAN-Army Policy Studies Series 1

F-35 JSF and Military Transformation:
American Militarism during the Post-Cold War Era

Chapter 1. Introduction

“U.S. and allied air superiority can no longer be taken for granted,” Granger says. “If we hold fast together, the F-35, along with the F-22, will provide dominance in the skies for the next half-century.” - Rep. Kay Granger (R-TX 12)

“We the people of the United States, in order to form a more perfect union, establish justice, insure domestic tranquility, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our prosperity, do ordain and establish this Constitution for the United States of America.” - U.S. Constitution.

Defense policy is a part of federal policy under the control of the budgetary authority of Congress. Congress authorizes weapon procurement programs – one of the core parts of defense policy – through legislative voting in both the House and Senate. Furthermore, the results of these legislative actions determine the fate of various weapon procurement programs as well as the capabilities of the military services to perform their missions. Consequently, Congress plays an essential role in the US defense procurement process and, more broadly, in the process of developing US defense policy and national military policy.

In this aspect, the process through which Congress authorizes new weapons programs can be especially controversial. Theoretically, one might assume that the defense policy needs to be purely based on effectiveness and rationality, since such a basis will lead a defense policy that best protects a country from external threats. However, this is never the case. The story of legislative actions on the F-35 Joint Strike Fighter Program is one example of Congress not purely focusing on military effectiveness and budgetary efficiency as well.

Even though the F-35 Lightning II is being developed as the next generation jet fighter, several evaluations of this jet fighter have been negative and not suitable for the term – next generation.²⁷ Despite negative evaluations, three military services – the Navy, Air Force, and Marine Corps have already determined to buy this jet fighter. Furthermore, both chambers of Congress have resisted calls to halt the program and the Department

of Defense still supports keeping this program alive. International buyers have also remained determined to purchase F-35s. Why haven't potential buyers of the F-35 – foremost, Congress – changed their minds in the light of these concerns and what made them choose the F-35 eventually?²⁸ This report is an answer to this question.

1. Defense Policy as a Policy Domain

As the starting point of the report, it needs to address that the defense policy can be divided into two parts in accordance with the two distinct challenges that defense policymakers deal with – external front and domestic front. The defense policy primarily functions to deal with foreign threats. But in order to function well, it should be based upon domestic foundations such as popular support and national economy. Furthermore, it should be supported by the public. Generally, defense policy can be defined as a broad course of actions or statements of guidance for military institutions to deal with two fronts – external and internal – in pursuit of national defense objectives.

In order to provide common defense against the external threats, military institutions have to face the external front. Defense policies dealing with the external front search for source of threats and further develop military strategies, doctrines and technologies to respond to them. These tasks are purely the jobs of professional soldiers, who are responsible for developing their own ways to fight against threats. On the way of dealing with external threats, what professional soldiers need is a logic to persuade their principals such as citizens, the President, and members of Congress rather than a deal to negotiate with them.

Nonetheless, when it comes to building up the foundation of defense policy, military institutions have to meet the challenges of the internal front for negotiations with domestic actors. Building up the foundations of defense policy are purely political tasks that require promoting public support, making contracts with industries, and mostly persuading Congress and the President. Consequently, in order to comprehensively understand defense policy, it is not sufficient to merely look at the execution of military strategies. It is necessary to analyze the inner dynamics of civil – military relations – the relationship between defense policy and its domestic foundations.

27. “Lockheed F-35 Fighter in Deficit Panel’s sight.” The New York Times, Nov. 10, 2010.

28. Several great weapon systems have been developed from deeply flawed R&D efforts and flawed procurement procedures. F-4 Phantom is an example.

In this relationship, the main issues have been how the public perceives their military and how public opinions affect defense policy and military strategies. In the United States, there are two political institutions to transmit public opinions to defense institutions – the Presidency and Congress. Because the Presidency has executive power over all the military organizations, the relationship between the Presidency and military can be the proper level of analysis for strategic issues. However, some other issues with public attention – like military procurement, Military Base Realignment and Closure – have been closely monitored and affected by Congress. Moreover, even on strategic issues, Congress exercises authority by requesting executive branches to attend hearings and report the causes and consequences of related issues. Consequently, it is necessary to consider Congress as an influential actor in internal fronts of defense issues.

2. Military Transformation and American Militarism

Recent trends of military transformation can be a driving force in developing defense policies for both the development of strategies & doctrines and the build-up of the necessary military capabilities including technologies. In the United States, military transformations have given birth to the development of representative weapon systems to equip the US Armed Forces. On the way to maintain the global military superpower status, the U.S. attempted to transform its weapon systems and military organization into ideal shapes of the periods. The products and legacies of these attempts of military transformations have been the representative weapon systems of the periods (Kagan, 2006). F-35 Joint Strike Fighter is a representative weapon system of ‘the military transformation after the Cold War.’

Furthermore, American Militarism was the hidden driving ideational force that created the trend of the military transformation. One probable source is the traditional American public belief that its armed forces must be the first ranked and finest armed forces in the World (Bacevich, 2008). The belief is unique American form of militarism that has influenced the American people who have grown to accept large defense budgets and the status of the most powerful nation-state on Earth. Due to the electoral connection, the American militarism could influence decision making process in Congress.

3. Congressional Budgetary Process and Defense Acquisition

Annual defense budget consists of three major parts: ‘maintenance and operation,’

‘weapon procurement programs,’ and ‘Research, Development, Test, and Evaluation (RDT&E).’ Among them, RDT&E is the budget to develop and test weapon systems that fit the requirements of the Department of Defense and each service. Weapon Procurement Programs are the budget for weapon systems that are chosen by the US government in order to equip the US military. Due to the characteristics of budget categories, budgets in these two categories receive a great deal of the attention from members of Congress. Since each member of Congress seeks to maintain a positive electoral connection with their constituents, congressional interests in these two budget categories might be more considerable than that on other areas of defense budget. In addition, military related industries involved in weapons procurement are likely to encourage members of Congress to seek funding for industries located in their districts, further increasing the likelihood of Congress wanting to remain influential in the process of making the defense budget.

For example, the F-35 Joint Strike Fighter program is a weapon procurement program to equip three of services.²⁹ This characteristic led the program to more complicated situation. Three services have been tangled into the program in order to fit the F-35 into their requirements. Moreover, more than 46 states have economic connections with the program.³⁰ Since the F-35 JSF program is intricately connected with industries in a large number of congressional districts spreaded across the United States, it is no surprise that the program has discussed many times in Congress. Since the industries producing F-35 provide jobs to constituents of members of Congress, there is an intrinsic incentive for members of Congress to support the development and purchase of the certain weapon systems. In regard to military procurement programs, it is likely that national security is but a secondary matter, and a unique form of American militarism³¹ exerts greater influence in US Congress – specifically, House of Representative.

29. Christopher Drew, “Costliest Jet, Years in Making, Sees the Enemy: Budget Cuts,” in *New York Times* Published: November 28, 2012.

30. Rajiv Chandrasekaran, “F-35’s ability to evade budget cuts illustrates challenge of paring defense spending,” in *Washington Post* on March 9, 2013.

31. American Militarism is a tendency to manifest the United States in a romanticized view of soldiers to achieve ideal goals of democratization and civilization; a tendency to see military force as the truest measure of national greatness; and a tendency to have oversized expectations regarding the efficacy of force. (Bacevich, 2005).

Part I

Military Transformation After the Cold War

Chapter 2

Military Transformation and Militarism

Chapter 3

The US Military

Chapter 4

Congress and Public

Chapter 5

Defense Industries

Chapter 2: Military Transformation and Militarism

After the Cold War ended in the late 1980's, the US government has attempted to change its military strategy and force structure. In 1992, the Joint chiefs of staffs developed the Base Force Plan³² as a part of national military strategy. The plan was mostly about downsizing of the US military, but this plan suggested the four supporting capabilities as the necessary conditions for the military forces to be effective after downsizing. The Bottom - Up Review (BUR)³³ in 1994 attempted to find the right force structure, and further mentioned the force modernization for the force structure. The term of military transformation appeared for the first time in the first Quadrennial Defense Review (QDR)³⁴ that was released in 1997. Since then, military transformation had been the primary defense policy until the Department of Defense recalibrated the focus of defense policy from *military transformation* to *evolution of military forces* in the QDR published in 2010.³⁵ Although they have different titles, there is a sharing point: all of them were plans to transform the US military.

Along with a primary analysis on these policy documents, this chapter uncovers policy makers' motivations in these plans and shows how major participants are connected to military transformation in the mood of American Militarism.

1. RMA, Military Transformation, Military Reform?

When a serious change in military affairs occurs, three similar concepts are used to describe the change: Revolution in Military Affairs, Military Transformation, or Military Reform.

First, a revolution in military affairs (RMA) is the idea that dramatic changes in any number of variables of war lead to fundamentally and radically different approaches to the entire military structure and its modus operandi.³⁶ In this definition, the cause of an RMA is "dramatic changes in variables of war," and the result of an RMA is "fundamental and radical change of approaches to the military structure and the way to use the military." However, this definition of RMA does not necessarily specify the final shape of military organization and the way it operates. Rather, RMA is a broad trend of change in the way to approach to military affairs.

As opposed to revolution in military affair, military transformation means a specific plan to bring changes to military structure and its functions.³⁷ To be a dominant player in the changed environment of war, a subject pursues a RMA by reorganizing previous perspectives in military affairs. On the way to pursue RMA, the subject develops certain plans to transform its military fitting to the changed environment of war. The specific plans can be considered military transformation. For example, the American military transformation in the post-Cold War era was the plans of the US government to transform its military into the ideal of the RMA in order to be a dominant player in the changed environment of war that was sparked by technological innovations in the end of the 20th century.³⁸

Compared to military transformation, military reform is the plan to change or reform a system damaged by the defects that make the system non-workable or not function effectively as planned.³⁹ Military reform is the process to remedy the causes of malfunction by bringing changes to the system. In the plan of the United States' military transformation,

32. Joint Chiefs of Staffs, 1992, *THE NATIONAL MILITARY STRATEGY of the UNITED STATES*, pp. 17-22.

33. Les Aspin, 1993, *Report on the Bottom-Up Review* (Department of Defense), pp. 27-32.

34. William S Cohen, 1997, *Report of the Quadrennial Defense Review* (Department of Defense), Section VII, pp. 39-52.

35. Department of Defense, 2014, *Quadrennial Defense Review 2014* (Department of defense), Chapter III. Rebalancing the Joint Force & Chapter IV. Rebalancing the Defense Institution, pp. 22-52.

36. Bernard Loo(Ed.), 2008,"Introduction: Revolutions in military affairs: theory and applicability to small armed forces," in *Military Transformation and Strategy: the Revolution in Military Affairs and small State* (Routledge: London) pp. 1-11.

37. Bernard Loo(Ed.), 2008; Frederick Kagan, 2006, *Finding the Target: The Transformation of American Military Policy* (Encounter book).

38. Frederick Kagan, 2006; Major, Aaron. "Which Revolution in Military Affairs?: Political Discourse and the Defense Industrial Base." *Armed Forces and Society*. 35, no. 2 (Jan 2009): p. 333; Beier, J. Marshall. "Outsmarting Technologies: Rhetoric, Revolutions in Military Affairs, and the Social Depth of Warfare." *International Politics*. 43, no. 2 (Apr 2006): 266-280.

39. Winslow T. Wheeler and Lawrence J. Korb, 2007, *Military reform: a reference handbook* (Praeger: Westport CT).

a number of military reforms were included to remedy problems discovered on the way to pursue RMA.

In that this report focuses on how the US government attempted to change its military and factors of warfare, military transformation is the right concept for analysis. Using all three concepts, it can be stated that *the Military Transformation including several military reforms is taking place in context of the RMA*.

2. Theories of Military Transformation

Wars are the collisions of forces. Since death and survival are determined by results of wars, each side must defeat others for their survival. To defeat others, they need strong tools – military or army –, which must be stronger than others. In addition to that, it is necessary to maintain a level of *military effectiveness* sufficient to defeat others.

Theoretically, sufficient military effectiveness is not determined by one factor, rather by various factors that constitute warfare and wars themselves.⁴⁰ The most significant of those factors also has changed throughout the history of wars, and the factors themselves have changed as well.⁴¹ In order to maintain the effectiveness of military forces, the factors of warfare must be understood. Furthermore, military organizations need to follow up significant changes in these factors. The concept of RMA well captures impact of changes in factors of warfare: how these changes deeply influence the way to evaluate the effectiveness of military organization.

As an analytical framework, Eliot Cohen offered three criteria to examine whether a change in military affairs is an RMA⁴²: first, it has to change militaries' shape – organization and weapon systems; second, it has to change the processes of battles – the way militaries behave in the battle fields; third, it has to change the outcome of battles – what defines the winner and loser. Even though there is no orthodox answer in the literature of military history, there has been a consensus that the following two historical turning points can

40. Bernard Loo(Ed.), 2008, pp. 1-11.

41. Bernard Loo(Ed.), 2008, pp. 1-11.

42. Eliot Cohen, 2008, "Change and Transformation in Military Affairs," in *Military Transformation and Strategy: the Revolution in Military Affairs and small State* (Routledge: London) pp. 22-26.

be considered as recent examples of RMA: Napoleonic warfare in the 18th century, German Blitzkrieg theory in the interwar period.⁴³ Both cases well satisfy the criterion.

However, these transformations in military organizations and doctrines did not happen by the effort of military alone. In both cases, there were social and political support from the national societies. In the case of Napoleon's French Army, the French Revolution prior to the Napoleonic war brought fundamental social changes within France.⁴⁴ The coup of Napoleon Bonaparte after the French Revolution also changed the political situation within the French society. The French Army of Napoleon had the social and political support from the French people. In the case of Germany during the interwar period, there was an explosive mood of nationalism within Germany against the Treaty of Versailles and the harsh economic environment that was more aggravated after the Great Depression.⁴⁵ This mood of nationalism and national economic hardship united the German people, and brought the Nazi party on the German political scene.

The RMA in the late 1990's also satisfies the criteria of Elliot Cohen.⁴⁶ The transformation of the US military after the Cold War was the plan to change the US military's shape and doctrines pursuant to the trend of the RMA. In this sense, the American military transformation after the Cold War must have been supported by the US public and politicians in Congress.

3. Militarism in the United States

In a society, political and public support for the military depends on the relationship between a society and its military. The relationship is defined by the roles of the military and the affinity between the military and its society.⁴⁷ On the one hand, the military is

43. Bernard Loo(Ed.), 2008, pp. 1-11.

44. Peter Paret(Ed.), 1986, pp. 138-140.

45. Peter Paret(Ed.), 1986, pp. 554-572.

46. Eliot Cohen, 2008, pp. 22-26.

47. Samuel P. Huntington, 1959, *The Soldier and the State* (Harvard University Press, Cambridge, MA); Morris Janowitz, 1960, *The Professional Soldier*, (Free Press, Glencoe IL); James Burk, 2002, "Theories of Democratic Civil-Military Relations," in *Armed Forces and Society/Fall 2002 Vol.29, No.1*. (Sage Publication) pp. 7-10; Eliot Cohen, 1997, "Are U.S. Forces Overstretched?: Civil-Military Relations," in *Oribis Spring 1997*, pp. 177-186.

an organization which has a unique role to manage armed forces in the society and to protect the society by using armed forces. On the other hand, military is a part of society so that military has affinity with its mother society. The core values and ideology should be reflected in its military, as the way of warfighting and as the form of culture in military.

When a government builds military, it designs the military to well reflect the national ideology and constitution. When it maintains military, it wants the military to be ready for war by training and equipping efficiently. When a government uses its military forces, it expects the military to be effective enough to win wars. All these issues of exercising political authority over the military lead a national government to the expectations about *how* the military would perform *what missions* in the name of *national defense*. Theoretically, the expectations seem to focus on pure military affairs with military purpose only. In reality, they are likely to be about more than pure military affairs.

Vagts describes ‘military way’ as the way that a military is maintained with the philosophy that assumes that a military is performing its mission on the basis of pure military purpose – winning at war.⁴⁸ On the other hand, he defines ‘militarism’ as a vast array of ideas and culture associated with military but transcending true military purpose. He further explains that it may permeate all of society and become dominant over all industries and arts.⁴⁹

In reality, military is maintained in both the military way and the militaristic way. It means that any military has some features of military way *which are scientific and related to military functions* and other features of militaristic way *which are too much distracted by social aspects other than pure military purpose*. In this sense, every nation with its own military has specific features of militarism in the society no matter how dominant they are within the society.

The United States has militaristic features in the US military and American society. In the United States, there is a belief that the US military should be number one in the

world.⁵⁰ Moreover, the belief is further extended into the idea that the U.S. military can be an asset that promotes peace and prosperity in the world and the use of force can be justified by good causes such as democracy and human rights.⁵¹ This American public belief takes various shapes of military imperatives which connect every part of society with military and lead them to cooperate and support the realization of these imperatives. First, the belief asks the society to maintain military superiority in every possible environment and circumstance on the planet Earth. Second, the belief asks the society to maintain the industrial bases that produce the weapons and technologies required for military superiority. Third, the belief asks the society to advance military science and technology, in order to produce the next Revolution in Military affairs. Fourth, the belief asks the society to maintain a professional *All Volunteer Force* which is not dependent on conscription or draft. Fifth, the belief asks the society to secure the United States of America without wars in the mainland continent. All these military imperatives ask each part of American society to participate in shaping American military forces.

Within the US military, this belief has led the Department of Defense and military services to competition against the Soviet Union during the Cold War era and endless preparation for the future adversary in the situation of strategic uncertainty after the Cold War era. This trend of preparation for the future has been sustained even while the US military was engaging in two theater-level military operations in the Middle East after the attack of September 11. In order to maintain the top position in military affairs, the department of defense and military services have brought new concepts of war fighting and have developed weapon systems and military doctrines that realize the new concepts of war fighting. These efforts have been best embodied in the continuing pursuit of military transformation since the Second World War ended.

Defense related industries have well supported military’s effort to be number one in military affairs. Defense industries have invested enormous amount of fund in research and development of advanced military technologies and weapon systems. Even when these technologies were not sophisticated enough and incomplete, the US military has

48. Alfred Vagts, 1959, “Introduction – The Idea and Nature of Militarism,” in *A History of Militarism* (Meridian Book), pp. 14-32.

49. Alfred Vagts, 1959, pp. 17-22.

50. Adrian R. Lewis, 2012, “2. Traditional American Thinking About the Conduct of War,” in *American Culture of War 2nd Edition*, (Routledge, New York), pp. 23-37.

51. Gallup polls on Military and National Defense. (<http://www.gallup.com/poll/1666/military-national-defense.aspx>).

purchased them and encouraged defense industries to keep investing in Research and Development. In this sense, the relationship between military and industries has been symbiotic rather than simple vendor-buyer relationship. When the US government planned a large scale build-down of armed forces after the Cold War, one of the main concerns was how to preserve the capabilities of producing military equipment and how to save industrial bases which enabled the US military to keep military superiority during the Cold War.

In the political arena, Congress has been the main source of influence on military affairs. Even though foreign policy and use of force have been primarily under the influence of the executive branches such as the White House and Department of Defense, Congress has the authoritative power of funding military programs and governmental oversight regarding military and defense policy. Furthermore, issues in military affairs are under the jurisdiction of the Armed Services Committees in both chambers of Congress. Most members of both committees have the experience of military service and come from regions which are closely connected with the military in aspects of demography or regional economy.⁵² These attributes of committee members guarantee sincere representation of regional interests and position of military services, while they also lead committee members' decisions to be distracted by other issues such as regional economy and inter-service rivalry – rather than effectiveness of military forces –, which also can be considered signs of militarism.

4. Social and Political Context of the Military Transformation

The military transformation in the post-Cold War era was the plan to realize the ideals of Revolution in Military Affairs. The plan of military transformation was a large scale project and did not come out without political and public support. Despite it was primarily about to increase military effectiveness, it was also maintained in militaristic way. The links between military transformation and militarism in the United States are the plans of military transformation, Congressional responses to military transformation, and public opinion regarding military issues including military transformation.

52. Rebecca Thorpe, 2010, "The Role of Economic Reliance in Defense Procurement Contracting" in *American Politics Research* July 2010 vol. 38 no. 4 (Sage Pub) pp. 636-675.

An indicator measuring the political context of the military transformation is how Congress responded to the reports regarding the military transformation. When the secretary of Defense and the Chairman of Joint Chiefs bring national military strategies to Congress, the strategies have been presented in front of the committees of both chambers – House Armed Services Committee and Senate Armed Services Committee. Dealing with defense related legislative issues in Congress, the committees have enormous influence on the military related issues.

An indicator measuring the social context is the public opinion of American people. A couple of Gallup polling results on military issues well describe how the American public think about their military during the period of the military transformation – from 1992 to 2014. The first poll asked the American public if they were considering the US military as the number one in the World or one of the several leading militaries.

Figure 2-1. Gallup poll regarding number one military in the world

Do you think the United States is No. 1 in the world militarily, or that it is only one of several leading military powers?				
	U.S. is No. 1	U.S. is one of several leaders	Neither (vol.)	No opinion
	%	%	%	%
2013 Feb 7-10	50	47	*	3
2012 Feb 2-5	54	45	*	1
2010 Jan 8-10	64	34	*	1
2007 Feb 1-4	60	39	*	1
2000 May 18-21	56	41	*	3
1999 May 7-9	51	46	1	2
1993 Mar 29-31	63	34	1	2

Source: <http://www.gallup.com/poll/1666/military-national-defense.aspx>.

Figure 2-2. Gallup poll about ‘military strong enough’

Do you, yourself, feel that our national defense is stronger now than it needs to be, not strong enough or about right at the present time?				
	Stronger than it needs to be	Not strong enough	About right	No opinion
	%	%	%	%
2012 Feb 2-5	13	32	54	1
2011 Feb 2-5	11	37	50	2
2010 Feb 1-3	7	45	46	1
2009 Feb 9-12	6	37	54	3
2008 Feb 11-14	10	47	41	2
2007 Feb 1-4	8	46	43	2
2006 Feb 6-9	7	43	47	3
2005 Feb 7-10	9	40	49	2
2004 Feb 9-12	10	34	54	2
2003 Feb 3-6 ^	13	34	52	1
2002 Feb 4-6	6	43	50	1
2001 Feb 1-4	7	44	48	1
2000 May 18-21	6	38	55	1
2000 Jan 13-16	6	39	52	3
1999 May 7-9	7	42	48	3
1990 Jan 4-7	16	17	64	3
1984	15	36	46	3

Source: <http://www.gallup.com/poll/1666/military-national-defense.aspx>.

The poll covers from 1993 to 2013. More than half of the respondents – the lowest 50%, the highest 64% – replied that they thought the US military was number one, while little bit less than half of them – the highest 47% and the lowest 34% – considered the US military as one of the several leading military powers.

The other poll asked how American public felt the strength of the US military – stronger than it needs to be, not strong enough or just right.

The Poll covered from 1990 to 2012. Around 50% of the respondents – from 41% to 64% – felt that the US national defense was about right; more or less than 10% of them – from 6% to 15% – thought that the national defense was stronger than it needed to be; while around 40% of the respondents – from 17% to 47%, the second lowest 32% – answered that the national defense was not strong enough. The point to notice is that more than 30% of the American public – except for 17% in 1990 – have thought their military as “not strong enough” as well as almost half of the American public have considered their armed forces as not “number one” but “one of several.”

Another Gallup poll asked that if American public felt that it was important that the

Figure 2-3. Gallup poll regarding ‘important to be number on military in the world’

Do you feel that it's important for the United States to be No. 1 in the world militarily, or that being No. 1 is not that important, as long as the U.S. is among the leading military powers?			
	Important	Not that important	No opinion
	%	%	%
2013 Feb 7-10	62	37	1
2007 Feb 1-4	61	38	1
2000 May 18-21	70	29	1
1999 May 7-9	59	39	2
1993 Mar 29-31	61	37	2

Source: <http://www.gallup.com/poll/1666/military-national-defense.aspx>.

United States should be number one military in the world. The poll covered from 1993 to 2013. Around 60% of the respondents – from 59% to 70% – has felt that it was important that the United States should be number one in the world military, while the rest of them – from 29% to 39% – thought that it was not important.

These polling results tell us that the majority of the American public – around 60% – think their military needs to be the strongest one in the world; moreover, considerable portion of the American public – around 30% – are not satisfied with their military. These public beliefs can offer supporting arguments to the US government to build up additional military capabilities in order to keep the status of ‘number one military in the world’ and to satisfy the American public. These beliefs also can lead the US to an increase in defense spending, if the beliefs are recognized and accepted by influential political actors such as members of Congress, Department of defense, or defense industries and interest groups.

Chapter 3. The US Military

The Cold War was a competition between two superpowers – the United States of America and the Soviet Union. Each side considered the other as the prominent and urgent adversary, and they built up military capability to fight against each other. They squandered enormous national resources to obtain technological superiority in military. When the Cold War ended, it seemed inevitable for the United States to downsize its military. Nonetheless, the official documents released by the White House and the Department of Defense show that the US government considered other plans to change its military’s shape based on the broader picture of national security rather than just downsizing it – the United States attempted to transform its military.⁵³ The question is why the US government had to consider the military transformation even after the primary source of threat disappeared.

53. Joint Chiefs of Staffs, 1992, *National Military Strategy of the United States*. This document is the beginning of the military transformation after the Cold War.

Looking back at the international environment of the early 1990’s, the US is not the only government to pursue transforming its military after the Cold War. Singapore and Britain did it, and many others did it, too.⁵⁴ Nonetheless, in contrast to other national governments – whose primary concerns were their national economies; and who heavily focused on cost-effectiveness of military spending – the military transformation of the US government was too ambitious and quasi-imperialistic. This is *because the military transformation was not the plan for the imminent and existing threats but the plan for the unknown and unseen future challenges. Furthermore preparation for the future was not a function of real world threats but a function of forces within the United States.*⁵⁵ It started with the development of the Base Force Plan.

1. The Base Force Plan

During the Bush administration (1989-1992), the Armed services of the US military faced the pressure of downsizing after the fall of the Soviet Union. The US military reviewed its status under the guidance of the Chairman of the Joint Chiefs of staffs, *General Colin Powell*. ‘The Base Force plan’ was released as the product of the review process.⁵⁶ In the Base Force Plan, the United States changed its military strategy from the 2 and ½ strategy to the two major regional contingencies strategy.⁵⁷ To implement this strategy of regional contingencies scenarios, the Base Force was suggested as the minimum force structure to be maintained under the budgetary constraints and in the uncertain international environment of the 1990’s.

This strategic change began with the intent of Colin Powell who served as the Assistant to President in National Security Affairs during the Reagan administration and became the chairman of the Joint Chiefs later in the Bush administration. He eye-witnessed the inevitable change within the Soviet Union during his visit to Moscow with President

54. Bernard Loo(Ed.), 2008, *Military Transformation and Strategy: the Revolution in Military Affairs and small State* (Routledge: London).

55. Adrian R. Lewis, 2012. The American strategic culture in the 1990’s was shaped by the Second World War and the Cold War. The United States had been in an arms race for half a century. That was not just going to stop.

56. Joint Chiefs of Staffs, 1992, *National Military Strategy of the United States*.

57. Lorna S. Jaffe, 1993, “A New Strategy,” in *DEVELOPMENT OF THE BASE FORCE 1989 – 1992 JOINT HISTORY OFFICE, Office of the Chairman of the Joint Chiefs of Staff*, pp. 45-50.

Reagan.⁵⁸ He had confidence that it would not be necessary for the United States to prepare for global scale military conflict because the Soviet Union would not exercise a strong enough influence that could turn a regional contingency into a global scale conflict as the Soviet Union did during the Cold War period. On this assumptions, he suggested shifting the focus of the US military strategy from global scale military conflicts to regional scale military contingencies. He divided the whole globe into two regions – the Atlantic region and the Pacific region.⁵⁹ For the US military to perform effectively in these regions, he argued that the US military was required to maintain *contingency force* to respond to various military contingencies and *strategic force* to deter the use of weapons of mass destruction. The Base Force Plan mentioned the Persian Gulf and Korea as the most likely regions where regional military contingencies would break out.⁶⁰

This strategy – the two Major Regional Contingencies (MRC) strategy – became the logic and the base line to determine the scale and structure of military forces to be maintained in the beginning of the Post-Cold War period. The base force is the product of this deliberative process to determine the force structure to perform the ‘Two Major Regional Contingencies Strategy’ after the Cold War ended.

However, the military, including Chairman Colin Powell, did not have a comprehensive picture of threat assessment for the coming years of the post-Cold War era. He argued that it was difficult and impossible to visualize all the sources of threat and to develop specific scenarios to respond to them in situations of strategic uncertainty.⁶¹ Instead, he and his team paid attention to the concept of *warning of war* that was discussed and developed in the Roundtable of Warning (ROW) in 1988.⁶² The ROW recognized the difficulty of determining precise warning times at the end of the Cold War and offered the identification of multiple warning patterns as the analytical tool which was applicable in a regional as well as a global context. This new concept of warning gave the Chairman Colin Powell and his team the idea that if early warnings with proper quality are offered in advance, it is possible to respond to various situations with the reduced force structure.

58. Lorna S. Jaffe, 1993, “General Powell’s Strategic Vision,” pp. 10-13.

59. Lorna S. Jaffe, 1993, “General Powell’s Strategic Vision,” pp. 10-13.

60. Lorna S. Jaffe, 1993, “General Powell’s Strategic Vision,” pp. 10-13.

61. Lorna S. Jaffe, 1993, “Changes in Strategic Thinking,” pp. 6-10.

62. Lorna S. Jaffe, 1993, “Changes in Strategic Thinking,” pp. 6-10.

When supporting capabilities for the Base Force were discussed, this idea about the early warning was later connected to the plan to use space as the essential part of Command, Control, Communication, and Intelligence (C3I) and related to the series of Research and Development (R&D) to maintain technological superiority.⁶³

The impact of the Gulf War on the Base Force Plan is another issues to be mentioned. The Gulf War broke out in October 1990 by the invasion of Iraqi forces into Kuwait, and it ended in February 1991. It was in the middle of the process. The Base Force plan was signed by the Chairman of the Joint Chiefs, reported to the Secretary of Defense and the President, and released to the United States public on the 27th of January in 1992.⁶⁴ Considering that the Gulf War brought a swift victory to the United States, it would have affected the Base Force plan which had been prepared in two years advance and was released in one year after the war ended. According to the Joint History Office of the Office of the Chairman of the Joint Chiefs of Staff, the war itself did not make any significant change on the force structure suggested in the Base Force Concept.⁶⁵ In other words, the result of the Gulf War supported the restructuring program and gave the green light to pursuing the plan further into the designed direction. It means that, at least, the Gulf War and its result satisfied the Joint Chiefs of Staff – the organization that developed the Base Force Plan.

The Base Force plan did not end with the suggested force structure only. It also included further recommendations for the modification within the reduced force structure.⁶⁶ To maintain global stability in the 21st century, the plan argues that further investment would be required for the Base Force to perform effectively and its reconstitution in the event of global conflict. The plan prescribes that these investments should focus on how to move the forces swiftly (transportation), how to use Space (space technology), how to retain reserve forces to regenerate forces (reconstitution), and how to maintain technological superiority (research and development).⁶⁷ These recommendations show that the plan was not just suggesting an alternative force structure but also further

63. Lorna S. Jaffe, 1993, “Acceptance of the Base Force,” pp. 44-45.

64. Lorna S. Jaffe, 1993, “A New Strategy,” p. 49

65. Lorna S. Jaffe, 1993, “Endorsement of Chairman’s Views,” pp. 30-43.

66. Joint Chiefs of Staffs, 1992, “The Base Force – A Total Force,” *National Military Strategy of the United States*, pp. 17-26.

67. Joint Chiefs of Staffs, 1992, pp. 17-26.

urging military to achieve the transformation of the United States Armed forces.

The Base Force plan was not the product of an ideal type of deliberation for developing defense policy. When the plan was developed, there were various and vague assumptions about security environment but a clear picture of threat assessment. A strategic uncertainty was prevalent in the late 1980's and the early 1990's. Only four facts were certain: first, the influence of the Soviet Union was not the same as it had been; second, the military was under the pressure of budget constraints; third, the military should be functioning well even after downsizing; fourth, technological changes particularly the development of stealth technology and precision weapons appeared to change the nature of warfare.⁶⁸ Under these circumstances, military services made enormous effort to prevent relentless downsizing by arguing that there were not clear evidences of the changes in threats from the Soviet Union.⁶⁹ In order to persuade military services about the inevitability of downsizing, the Joint Chiefs of Staffs attempted to start formulating the requirements of military forces under the guidance of logic – or strategy – of two major regional contingencies, instead of a specific picture of threat assessment.⁷⁰ In the end, they offered the structure of the Base Force as the answer.

However, the lack of a clear picture of threat assessment led the plan to the two problems later: first, the force structure in the Base Force concept was too small to successfully execute the two MRC scenario; second, the potential adversaries in the two MRC scenario did not have the same strong military capability as the Soviet Union had in the Cold War era.⁷¹

2. The Bottom-Up Review

Congressman Les Aspin, later the Secretary of Defense during the Clinton Administration, expressed negative opinions toward the Base Force Plan as the chair of Armed Services Committee in the House.⁷² He pointed out that the Base Force was

68. Joint Chiefs of Staffs, 1992, "Introduction: Strategic Landscape & Realities," pp. 1-5.

69. Lorna S. Jaffe, 1993, "Endorsement of Chairman's Views," pp. 30-43.

70. Lorna S. Jaffe, 1993, "Endorsement of Chairman's Views," pp. 30-43.

71. Frederick Kagan, 2006, *Finding the Target: The Transformation of American Military Policy* (Encounter book).

72. *Debate on National Defense* – Hon. Les Aspin (Extension of Remarks – April 03, 1992).

not the product of deliberations based on clear strategic goals and visible threats in the future. He argued that the size and capabilities of the US Armed Forces should not be determined in a vacuum but based on the forthcoming threats. He insisted that a new force structure should require a series of reviews like the *Bottom Up Review (BUR)* on security environment, military strategy and military posture. He further argued that the reviews would guide how to build the size and capabilities of the US Armed Forces. The idea of building new force structures to respond to new threats brought the concept of military transformation during the Clinton administration.

The Bottom-Up Review was an attempt to reevaluate the validity of the whole content in the Base Force Plan, which was in the *National Military Strategy of the United States in 1992*.⁷³ The primary author of this document was the Defense Secretary Les Aspin, who previously had served as the chairman of the Armed Services Committee in House of Representatives. He explicitly mentioned negative expressions about the Base Force plan and claimed that the plan required a full scale review during his last years of tenure at the House.⁷⁴ After taking the office of the Secretary of Defense, he pursued a full scale review process on the military structure of the United States. The main purpose of the review was to evaluate how well the military strategy matched with the force structure. The report uses the term of "nearly simultaneously two major conflicts"⁷⁵ when describing the possible scenarios under the assumption of two major regional conflicts. By continuing using the term of 'simultaneous' two major conflicts, the report recognized the inevitability of the strategy of two MRC. The report stated that the strategy based on 'only one MRC scenario' would put restrictions on strategic flexibility of the US military due to possible military actions from other potential aggressors while the US was in a military conflict.

However, by using the word of "nearly simultaneously," the report reluctantly showed that the United States was not in the conditions to maintain the size of forces satisfying the ideal requirement for the strategy of two MRC. Even though the force structure for two MRCs was described as the optimal option in the report, the suggested force structure in the report was not twice the quantity of the estimated force structure for one

73. Joint Chiefs of Staffs, 1992, *National Military Strategy of the United States*.

74. *Debate on National Defense* – Hon. Les Aspin (Extension of Remarks – April 03, 1992).

75. Les Aspin, 1993, "Section IV: Building an Overall Force Structure," pp. 27-32.

conflict in numerical aspect.⁷⁶ To explain this, the report brought the logic of balanced force mixes. The logic is based on the following assumptions: first, every component in military has its own purpose; second, it is difficult to choose the right force structure under strategic uncertainty, and too much concentration on a certain component will make entire military vulnerable to respond to unexpected threats; third, a component can compensate for the reduction of other components and substitute for others under different circumstances; fourth, it is possible to generate balanced force structures by mixing the capabilities of each components in military forces; fifth, the U.S. has allies in both the Pacific and the Atlantic Regions who can contribute to US force structure.⁷⁷

While reducing the size of forces with the logic of balanced force mixes, the report raised the necessity for reviews on force modernization.⁷⁸ The report evaluated the principal weapons procurement programs and research & development programs. It further argued that modernization programs should be re-focused on preparations for what comes next instead keeping alive the legacy weapon programs that were designed to fight against the Soviet Union.⁷⁹ In addition to the future operational needs and the changing characteristics of unclear threats, the core considerations in the review process were to preserve the capacity of the military industrial base under the fiscal constraints, and to develop technologies to provide enhancements to the capabilities of the US weapon system.⁸⁰

The recommendations of the report were to stop the unnecessary weapons procurement programs, to continue the production of mission essential programs, and to keep investing in R&D programs to respond to the existing threats and forthcoming ones. The essence of the recommendation was that almost all major R&D programs – except for the development of space lifter launch vehicles – survived : for jet fighters, A/F-X and MRF programs were merged into Joint Advanced Strike Technology Program;⁸¹ for theater missile defense system, the decision was to continue all three major development programs such as Sea Based Upper Tier system, Corps SAM, and ascent/boost phase

76. Les Aspin, 1993, “Section IV: Building an Overall Force Structure,” p. 31, Figure 8.

77. Les Aspin, 1993, “Section IV: Building an Overall Force Structure,” pp. 27-32.

78. Les Aspin, 1993, “Section V: Modernization,” pp. 33-76.

79. Les Aspin, 1993, “Section V: Modernization,” pp. 33-34.

80. Les Aspin, 1993, “Section V: Modernization,” pp. 33-34.

81. Les Aspin, 1993, “Section V: Modernization,” pp. 35-38.

intercept capabilities, even though Corps SAM was deferred until 1998;⁸² for national missile defense, the Department of Defense decided to fund Brilliant Eye missile tracking satellite;⁸³ for military satellite communication, development of advanced EHF satellites was decided to be continued.⁸⁴ All these programs were evaluated as necessary for the operational needs for the military strategies as well as beneficial for US defense industrial bases of the United States under the national fiscal constraints in the early 1990's. In this sense, the report of the Bottom-Up Review offered specific options of necessary weapons procurement programs for the strategy of two MRC, while the base force plan established the corner stones of military transformation by suggesting the strategy of two MRC.

Both the Base Force Concept and the Bottom-Up Review agreed that there was no foreseeable threat to the US after the fall of the Soviet Union; and the US military was in the position to prepare for every possible scenario that might happen in the World. The two MRC scenarios was a guideline and a logic to set up the minimum size of military forces required in uncertain security environments. Moreover, the US government attempted to adjust their military not on the basis of clear external threats but on the basis of capability to respond to the tentative scenarios – this is the capabilities based approach.

The congressional evaluation on this report was controversial: On the one hand, the content of the report itself seemed not to satisfy the members of Congress; on the other hand, the review process in the report was considered as an essential and necessary step to develop national defense policy.⁸⁵ The result of deliberation on the Bottom-Up Review was the Military Force Structure Act of 1996,⁸⁶ which mandated a comprehensive report on a quadrennial review of military force structure – Quadrennial Defense Review (QDR). When the House passed the Annual National Defense Authorization Act of FY 1996, the House representatives inserted the Military Force Structure Review Act in the bill. The Act stated that the Bottom-Up Review had been criticized due to its

82. Les Aspin, 1993, “Section V: Modernization,” pp. 43-48. The report told that the Corps SAM shared core technologies of PAC-3 which was planned for development and purchasing.

83. Les Aspin, 1993, “Section V: Modernization,” pp. 43-48.

84. Les Aspin, 1993, “Section V: Modernization,” pp. 65-68.

85. The US House, 1995, “Sec. 922. Findings”, in *Military Force Structure Act of 1996*.

86. The US House, 1995, *Military Force Structure Act of 1996* (10 USC 111).

strategic assumptions, the recommended force level for the strategy, and the ways to fund the force structure.⁸⁷ Despite critical appraisal, there was the consensus in Congress that the review process of the Bottom-Up Review was the necessary step to develop national defense strategy and to determine the force structure of the US military under the strategic uncertainty. In addition, the Act mentioned that more frequent comprehensive reviews of military force structure would be required due to the pace of global change.⁸⁸ The Act mandated the Secretary of Defense to report the result of comprehensive review of national defense one year after a new administration begins as the result of a presidential election.⁸⁹ The report is *the Report of Quadrennial Defense Review*, five of which have been published since the first QDR was released in 1997.

The military transformation of the US Armed Forces has been a critical issue of defense policy in these five QDRs. The term, *the military transformation*, appeared for the first time in the QDR 1997. The military transformation got into the main policy objectives in the QDR 2001 and 2006. In the QDR 2010 and 2014, the military transformation itself was not described as a major policy issue. Instead, the terms of “Rebalancing” and “Evolution of Military Forces” appeared as the means to deal with the flaws of the military transformation and to manage the programs and projects that were set up for the military transformation. It means that every administration since the Clinton administration considered the military transformation as a critical issue of defense policy, even though the position of each administration on the military transformation was quite different from other administrations.

3. The Report of Quadrennial Defense Review 1997

The first QDR represents the national defense policy of the Clinton administration. The military strategy in the QDR 1997 was still based on the assumption of strategic uncertainty as were previous. Unlike the Cold War era, there were a variety of small scale contingencies including peacetime engagements in crisis during the late 1990's. The concept of full spectrum operations was developed for various military operations

in the wide range of crisis spectrum.⁹⁰ The Full-Spectrum Operations was the conceptual answer to the changing characteristics of warfare and uncertain security situations during the post-Cold War era: not to prepare for a single primary source of threats but to be ready to respond to various types of threats.

Nonetheless, the main framework for the force structure was the two Major Theater Wars (MTW) scenario which implies that the US military needs to maintain a force structure that fits ‘more than one’ theater-scale military conflict simultaneously.⁹¹ In this sense, the two Major Theater War scenario shared the same strategic logic with *the two Major Regional Contingencies* scenario in the National Defense Policy in 1992 as well as *the two Major Regional Conflicts* building blocks in the Report of the Bottom-Up Review. Despite the similarity of the logic, the recommendations for the force structure in the QDR 1997 were distinguished from those in the previous reports in two senses. First, it focused more on the capabilities of the US military. The change of the term from “Major Regional Conflicts” to “Major Theater Wars” implies that the US military would not have the force structure that limited itself to specific regional threats but should maintain the capabilities and the force structure that enable the US military to perform military operations in more than one theater scale war no matter where a war takes place. This also means that the US military strategy departed from the threat-based approach to the capabilities based approach even in regional scale. Second, the QDR 1997 recommended that the force structure satisfied the requirements of the near term but also be transformed into the appropriate shape to respond to the future challenges. The QDR 1997 mentioned that the technological development of the time would change the way to build the force structure; and the force structure would differ from the ones that previous reports recommended.⁹²

Nonetheless, the concept of military transformation was still premature and vague when the QDR 1997 was published. With regard to the urgency of military transformation, the QDR 1997 considered the Joint Vision 2010 as the guideline for the military transformation.⁹³ With the assumption of unpredictable future, the QDR 1997 supported

87. The US House, 1995, “Sec. 922. Findings,” in *Military Force Structure Act of 1996*.

88. The US House, 1995, “Sec. 922. Findings,” in *Military Force Structure Act of 1996*.

89. The US House, 1995, “Sec. 923. Quadrennial Defense Review,” in *Military Force Structure Act of 1996*.

90. William S Cohen, 1997, Section III. Defense Strategy, pp. 11-17.

91. William S Cohen, 1997, Section III. Defense Strategy, pp. 12-13.

92. William S Cohen, 1997, Section III. Defense Strategy, pp. 11-18.

93. William S Cohen, 1997, Section VII. Transforming U.S. Forces for the Future, pp. 39-41.

the concept of the full spectrum dominance which implied that the US military should secure essential capabilities for military superiority to perform any kinds of missions under any circumstances in the future. The military transformation was the plan to obtain these capabilities and to develop appropriate methods to implement them in the battle field.

Even though the military transformation in the QDR 1997 was vague and premature, the QDR set out the critical conceptual bases for the military transformation. First, the QDR 1997 pursued the exploitation the Revolution in Military Affairs.⁹⁴ The QDR 1997 put the Revolution in Military Affairs at the center of the military transformation and considered it as the conceptual guideline that could lead the military transformation in the right direction and into the ideal shape. Second, the QDR 1997 contained the vision of the US military to conceptualize the military transformation. Based on the Joint Vision 2010 of the Joint Chiefs of Staffs, each service developed its own plan for the military transformation: *Force XXI* and *the Army After Next* for the Army, *Global Engagement: A Vision for the 21st Century Air Force* for the Air Force, *From the Sea and Forward* for the Navy, and *Marine Corps Operational Maneuver for the Sea* for the Marine Corps. Third, the QDR 1997 offered the force modernization plan that would function as the bridge between the force structure of that time and the one of the future. Even though the QDR recommended reducing the overall number of weapon procurement, it suggested replacing the aging weapon systems with the new ones that were still in the stage of R&D.⁹⁵ The QDR 1997 also saved several weapon systems by delaying the time of deployment and putting them in the R&D stage for more modification and research.⁹⁶ In conclusion, the idea of military transformation was conceptualized in the QDR published in 1997 as visions of each military service and the Department of Defense, in order to realize the concept of the Revolution in Military Affairs, even though it did not have specific and detailed programs or projects representing the

94. William S Cohen, 1997, Section VII. Transforming U.S. Forces for the Future, pp. 41-43.

95. William S Cohen, 1997, Section VII. Transforming U.S. Forces for the Future, p. 44-47. F-22 was considered as the replacement of F-15. JSF, which was still in the R&D stage in 1997, was the replacement of F/A -18 E/F and EA-6B. MV-22 was the replacement of CH-46. In the ADR 1997, JSF was the program that was reviewed as the Department's largest acquisition program and the first to develop a family of common aircraft for use by land - and sea-based aviation forces. JSF was the result of evaluation that developing three new combat aircraft simultaneously would have been prohibitively expensive. (QDR 1997 p. 46).

military transformation.

4. The Report of Quadrennial Defense Review 2001

In the QDR 2001, what started as a vision in the QDR 1997 was developed into a comprehensive policy objective with a clear blueprint for the future force structure.⁹⁷ Military transformation became the center piece of the QDR 2001, which was the defense policy during the first term of the Bush Administration. The QDR 2001 drew the legitimacy of military transformation from capabilities based approaches. In the QDR 2001, the military transformation was considered as the means of developing the necessary and superior military capabilities in the key functional areas like power projection, space and information. QDR 2001 also included a plan to transform the force structure into the proper shape which fits to employ these capabilities.

The framework of force planning in the QDR 2001 was to maintain the force structure that enables military operations anywhere in the globe, not focusing the specific regions such as North East Asia and South West Asia.⁹⁸ By changing the term from the major theater wars of the QDR 1997 to the major combat operations of the QDR 2001, the force structure in the QDR 2001 moved away from the regional based structure and took into the shape of more capabilities oriented structure. This framework required information superiority for early warning, advanced network technologies for communication, effective combat capabilities of forces for warfighting, and high mobility for force projection. The QDR 2001 mentioned that the force structure of the year of

96. The Department decided to keep THAAD (Theater High Altitude Air Defense) program alive by putting them in the R&D stage even though its technical failure and delay in the target date. In case of National Missile Defense, the Department did not set up a target date for the deployment of national missile defense system, while the Department decided to obtain the ability to deploy initial operational capability within three years after the decision to deploy would be made. (QDR 1997, p. 46).

97. Department of Defense, 2001, *Quadrennial Defense Review Report* (Department of defense), V. Creating the U.S. military of the 21st Century, pp. 29-48; The QDR 2001 was released just one month after the attack of September 11. Even though some parts regarding the attack of September 11 were added, this was the document that contained the national defense policy before the attack of the September 11.

98. Department of Defense, 2001, "III. Paradigm Shift in Force Planning," p. 21.

2001 was not adequate to satisfy these requirements so that it was necessary to transform the US military into the shape which fits a global basis of military operations.⁹⁹

For the military transformation, the QDR 2001 focused on organizing force structure able to conduct joint operations anytime necessary. The QDR 2001 also emphasized developing operational concepts to respond to *emerging operational challenges* and testing these operational concepts through experimentation and field exercises. The center piece of the military transformation in the QDR 2001 was the development of capabilities: the layered missile defense for protection, sea & air – lift capability and ‘light but lethal expedition modular units for force projection, littoral vessel and new tactical aircraft for defeating anti-access and area denial threats, and new information technologies for information superiority.¹⁰⁰ Specifically, the QDR mentioned *information operations, intelligence and space assets* as the core capabilities of future forces for the transition to network centric warfare.¹⁰¹ Differing from the previous QDR and other reports with regard to military transformation, the QDR 2001 contained the Department’s specific intention to develop the military transformation into the plan with time line and clear goals. The QDR 2001 specified the Office of the Force Transformation as the organization that would lead the process of the military transformation and it also offered the interim stage of transformation plans of the Services as well as the final goals of the whole process of the military transformation.¹⁰² In conclusion, the military transformation in the QDR 2001 changed into the core policy objective of national defense which had a comprehensive plan with the responsible organization to lead the process, the specific time line and the clear goals to achieve, the military strategies and doctrines to be the basis of military operation, military procurement programs and R&D projects to equip the armed forces, and budget plans to fund these programs and projects.

5. The Report of Quadrennial Defense Review 2006

The QDR 2006 still considered the military transformation as the core policy objective, even though the United States was engaged in two military campaigns in South West

Asia: one in Iraq and the other in Afghanistan.¹⁰³ It was emphasized many times in the QDR 2006 that the report was not a new start but under the momentum of the QDR 2001. Specifically, in the matters of military transformation, the QDR 2006 mentioned that the QDR was the part of continuum of transformation in the Department of Defense; and the focus of the military transformation was to provide warfighting capabilities for the future in the decades ahead.

The logic for the recommended force structure in the QDR 2006 was described in the concept of the wartime force planning construct. When describing the refined wartime force planning construct, the QDR 2006 explicitly mentioned that the Department should increase its capabilities to conduct operations against enemies who employ asymmetric approaches. The QDR 2006 counted ‘homeland defense,’ ‘war on terror & irregular warfare,’ and ‘conventional campaigns’ as the three objective areas of the wartime force planning construct. For the objective of homeland defense, the QDR 2006 recommended increasing the capabilities necessary to work with other agencies and provide homeland defense with unique functions of the US military¹⁰⁴ including air and missile & maritime defense. For the objective of war on terror and irregular warfare, the QDR 2006 emphasized increasing intelligence capabilities to locate and track terrorists, strike capabilities to eliminate terrorist threats,¹⁰⁵ communication capabilities to share information and to connect with related agencies, and counterinsurgency capabilities to gain support and cooperation from indigenous forces. For the objective of conventional campaigns, the QDR 2006 proposed the strategy and the capabilities to wage two nearly simultaneous conventional campaigns while selectively reinforcing deterrence against opportunistic acts of aggression.¹⁰⁶ The strategy also assumed the other case in which one conventional campaign might occur while the US was engaged in an

99. Department of Defense, 2001, “IV. Reorienting the U.S. Military Global Posture,” pp. 25-27.

100. Department of Defense, 2001, “V. Creating the U.S. military of the 21st Century,” p. 37-40.

101. Department of Defense, 2001, “V. Creating the U.S. military of the 21st Century,” p. 37-40.

102. Department of Defense, 2001, “V. Creating the U.S. military of the 21st Century,” p. 36-37.

103. Department of Defense, 2006, “Fighting the Long War,” pp. 9-16; “Reorienting Capabilities and Forces,” *Quadrennial Defense Review Report* (Department of defense), pp. 41-59.

104. Department of Defense, 2006, “Operationalizing the Strategy,” pp. 24-27. These functions include the air and maritime domain awareness capabilities for the early warning against attacks aiming the Homeland of the United States and the air & missile defense system with prompt global strike capabilities against Weapons of Mass Destructions attacks.

105. Department of Defense, 2006, “Reorienting Capabilities and Forces,” pp. 41-61. The special operation forces and prompt global strike capabilities were counted as the necessary strike capabilities.

106. Department of Defense, 2006, “Operationalizing the Strategy,” pp. 37-39.

irregular campaign with a long duration and a large scale. Regime change was considered in the strategy as a possible option to deal with a hostile regime against the US.

The emphasis on increasing capabilities led the force planning construct to the military transformation. Rather than presenting its own version of military transformation, the military transformation in QDR 2006 focused on reorienting the capabilities and the forces for developing joint capability portfolios for the wartime and future demand.¹⁰⁷ The QDR 2006 offered ten domains of joint capabilities¹⁰⁸ including Joint Warfighting Capabilities, Anti-WMD capabilities, Joint Mobility for global engagement, and Capabilities for achieving net-centricity. Based on these ten joint capabilities domains, the QDR 2006 attempted to evaluate the ongoing process of military transformation that was initiated in the QDR 2001. The lessons learned from combat experiences and demands of the combatant commanders were counted as important factors in the evaluation process. On top of the interim evaluation about the military transformation, the QDR 2006 also spelled out the direction and tasks of military transformation for the future force structure. These directions and tasks were embodied in weapon procurement programs and R&D projects to realize the visions of ten domains of joint capabilities: the fifth generation jet Fighter program, Littoral Combat Ship programs, establishing the Defense Threat Reduction Agency as the primary agency dealing with WMD, the Space Radar program and E-10A technology demonstrator program, the Global Information Grid program for achieving net centricity, and establishing Standing Joint Forces Headquarters for Joint Command and Control, etc.¹⁰⁹

6. The Report of Quadrennial Defense Review 2010

Differing from the previous two QDRs, the QDR 2010 did not address the military transformation as the core policy objective. Instead, the QDR 2010 presented the four primary defense objectives to manage the international security environment including the on-going wars in South West Asia. The four primary defense policy objectives

107. Department of Defense, 2006, "Reorienting Capabilities and Forces," pp. 41-61.

108. The ten domains of joint capabilities included the following capabilities: Joint Ground Forces, Special Operations Forces, Joint Air Capabilities, Joint Maritime Capabilities, Tailored deterrence and New Triad, Combatting WMD, Joint Mobility, Intelligence/Surveillance/Reconnaissance (ISR), Achieving Net-Centricity, and Joint Command & Control.

109. Department of Defense, 2006, "Reorienting Capabilities and Forces," pp. 55-61.

included prevailing in the wars in Iraq and Afghanistan, preventing and deterring conflicts, preparing to defeat adversaries, and preserving and enhancing the All-Volunteer Force.¹¹⁰ On the basis of the evaluation on the status of the US military forces in 2009, the QDR 2010 argued that it was urgent for the US military forces to be rebalanced to accomplish the four primary defense policy objectives.

The military transformation, which was initiated in the QDR 2001, was redirected to the plan of *the evolution of forces* as a part of *the Rebalancing the Forces* in the QDR 2010.¹¹¹ In the shortfall in the capabilities and capacity of forces, the QDR 2010 suggested the tradeoffs between programs that would redirect resources from lower-priority programs into the higher priority programs. To lead the initiatives to meet the future operational needs, the QDR 2010 presented the four capability areas – ISR, fighters and long-range strike aircraft, joint forcible entry, and information network and communication – as the vectors of evolution of forces. In conclusion, the military transformation in the QDR 2010 was the wrapping up phase of the military transformation initiated in the QDR 2001 and the process of searching for the new vectors that would lead to the direction of another military transformation.

7. The Report of Quadrennial Defense Review 2014

The most recent QDR was published in March 2014. Comparing to the QDR 2010, the QDR 2014 had a significant change in strategic assumptions. The QDR 2014 proposed the transition from the wartime strategy to the peacetime.¹¹² While the QDR 2010 focused on winning two wars in South West Asia and balancing resource and manpower for the defense policy objectives, the QDR 2014 emphasized defending homeland and managing risks in the force structure caused by fiscal constraint and

110. Department of Defense, 2010, "Defense Strategy," in *Quadrennial Defense Review Report* (Department of defense), p. 11. This mission was about taking care of military forces which engaged battles for a decade. Under the system of All-Volunteer Force, the big burden of decade long warfighting was put over the military personnel who occupied only 1 % of the whole population of the United States.

111. Department of Defense, 2010, "Rebalancing the Forces: Guiding the Evolution of the Forces," pp. 39-41.

112. Department of Defense, 2014, "Chapter II: The Defense Strategy," *Quadrennial Defense Review 2014* (Department of defense), pp. 11-26.

sequestration in the defense budget.

The QDR 2014 followed the same direction expressed in the QDR 2010 in the matters of the military transformation. As in the QDR 2010, the center piece of the QDR 2014 was the rebalance of the forces rather than the transformation of the US military forces.¹¹³ As the wars in South West Asia went into the ending phase, the fiscal constraints became the critical factor to determine defense planning. The fiscal constraint began to influence every part of defense policy and bring significant changes into the force structure of the US military. The QDR 2014 described the strategy for the conventional campaign as defeating a regional adversary in a large scale multi-phased campaign, and at the same time denying the objectives of another aggressor in other regions. The QDR 2014 also implicitly expressed a concern about the situation that a smaller military force under the fiscal constraint would strain the ability to simultaneously respond to more than one major contingency at a time. It means that the US military considered changing the strategic guidance of ‘responding to two major campaigns simultaneously’ for the first time since the two major regional contingencies scenario was developed in the National Military Strategy in 1992.

The fiscal constraint and sequestration level budget cut also affected the military transformation that remained as the major part of defense policy objectives since 1997. Even though the military transformation was not explicitly mentioned as the core policy objective in the QDR 2014 as well as the QDR 2010, the military transformation was still the major part of defense policy. Considering the fact that most programs of the military transformation were targeted to be mission operable by the year 2020,¹¹⁴ these programs were still in the phase of research and development or production. The fiscal constraint and the sequestration level budget cut urged the Department of Defense to determine the fate of the procurement programs and R&D projects. The determination was done through the prioritization of programs. The following are the programs that were prioritized through the QDR 2014 decisions: F-35 JSF program, development of the long range strike aircraft with stealth capability and the KC-46A next generation tank/cargo aircraft for Air force; selective upgrade of combat and support vehicles and

investments in new technologies for Army; investments to start SSBN (X) submarine construction in FY2021, the Offensive Anti-Surface Warfare weapons, Next Generation Land Attack Weapon, Virginia Payload Module, and F-35 programs for Navy; upgrade of the Amphibious Combat Vehicle and investment on capabilities that enables littoral maneuver for Marine Corps.¹¹⁵

Instead of the military transformation, the QDR 2014 considered the innovation and adaptation of the forces as the paramount and central line of effort. The innovation and adaptation in the QDR 2014 was defined as seeking innovative approaches to ‘how to fight,’ ‘how to posture the forces,’ and ‘how to leverage the asymmetric strength and technological advantages.’¹¹⁶ When addressing the necessity of maintaining the technological superiority, the QDR 2014 presented energy efficiency, new technologies, and renewable energy sources as the objectives for leveraging the asymmetric strength and technological advantages. Even though the innovation and adaptation in the QDR 2014 covered the domain of the military transformation in the previous QDRs, it is difficult to consider this policy agenda as a part of the previous military transformation or as a plan of a replacing military transformation. Rather, the innovation and adaptation in the QDR 2014 can be counted as an interim initiative to search the direction or concept for another military transformation in the coming future.

8. Summary

The US military transformation during the post-Cold War era was the attempt to transform the US military after the demise of the Soviet Union. The military transformation was based on the idea of Revolution in Military Affairs, which focuses on applying revolutionary advance of information technologies of the 1990’s into the military sphere. It has been the core defense policy objective of the Department of Defense for longer than 20 years, from 1992 to 2014.

It started with the Base Force Plan in the National Military Strategy published in 1992. The Base Force Plan was the force structure for two major regional contingencies scenarios. The report of the Bottom-Up Review in 1994 assessed the validity of the

113. Department of Defense, 2014, “Chapter III. Rebalancing the Joint Force & Chapter IV. Rebalancing the Defense Institution,” pp. 22-52.

114. William S Cohen, 1997, Section VII. Transforming U.S. Forces for the Future, pp. 31-48.

115. Department of Defense, 2014, “Chapter III. Rebalancing the Joint Force,” pp. 27-31.

116. Department of Defense, 2014, “Chapter II. The Defense Strategy,” pp. 22-25.

Base Force Plan. While the report of the Bottom-Up Review agreed with the two MRC scenario as the logic of the force planning construct, it also suggested further reducing the size of forces and adjusting force modernization plan to the changing security environment. The report of the Bottom-Up Review included initiation of new R&D projects to equip the military forces as well as cancellation of unnecessary force modernization programs. Since 1997, the Department of Defense has published the report of the Quadrennial Defense Review every four years. These five Quadrennial Defense Review Reports contain the core contents of the military transformation. In the QDR 1997, the military transformation was presented as the vision plan of the Department of Defense and the military Services. Through the QDR 2001 and 2006, the military transformation was changed into the major policy objective which has a specific time frame and clear goals to be achieved. As the wars in South West Asia came down into the ending phase and the fiscal constraint was aggravated, the priority of defense policy was moved from the military transformation into the rebalance of forces in the QDR 2010 and QDR 2014. In addition, as the due time for the military transformation comes, the Department of Defense and the Services have tried to search new concepts for another military transformation in the name of the Evolution of Forces and the innovation & adaptation of forces in the QDR 2010 and QDR 2014.

Chapter 4. Congress and Public

The Chapter 2 says that the United States of America has a type of militarism – American militarism based on the public belief that the U.S. military should be number one in the technological aspect.¹¹⁷ Furthermore, in the United States, a representative system in politics is the mechanism to transmit public opinion to political representatives.

When the U.S. public share this belief, they also influence their political representatives. Due to the committee system in the US Congress, most military issues are under the jurisdiction of the Armed Services Committees of both chambers. Considering that the

committee system in congress is organized to offer professional and special information to all members of each chamber, the decisions in the chambers with regard to military issues are under the influence of the both Armed Services committees.

1. Committees' Responses to Military Transformation

A. *The Base Force Plan*¹¹⁸

During the post-Cold War era, the Department of Defense officials went through a complicated situation in which they were required to draft a comprehensive defense policy without prominent threats, under a fiscal constraint, and just after the military victory against one of the strong militaries – Iraq. The Senate Armed Services Committee held a series of hearings in 1992 in order to question the Department of Defense about the security environment being described as 'strategic uncertainty' and to discuss possible policy options for the U.S. Armed Forces to be militarily effective and fiscally affordable.

The hearings – *Threat Assessment, Military Strategy and Defense Planning* – covered various issues such as security environment (Jan 22, 1992), nuclear weapons options (Jan 23, 1992), defense and federal budget (Feb 19, 1992), military strategy in Europe (Mar 2, 1992), and defense planning and force structure (Mar 20, 1992). The hearings related to 'defense planning and force structure' proceeded under the subtitle of *Military Strategy, Net Assessment, and Defense Planning and Budget Issues*. The main focus during the hearings was the Base Force Plan which was a blueprint for the force structure of the post-Cold War era.

The main witness was the chairman of the joint chiefs, General Colin Powell. He was quite confident about the Base Force Plan. During the hearing, he kept arguing that the force structure of the Base Force Plan was a reasonable one to satisfy the national military strategy in the security environment under budgetary constraint. In the drafting process of the Base Force Plan, his main focus was to suggest a proper force structure

117. Andrew J. Bacevich, 2013, "Wilsonians under Arms," in *The New American Militarism*, (Oxford University Press, New York), pp. 1-9; Chalmers Johnson, 2001, "The Root of American Militarism," in *The Sorrow of Empire: Militarism, Secrecy, and the End of the Republic* (Metropolitan Books, New York), pp. 39-66; Adrian R. Lewis, 2012, "2. Traditional American Thinking About the Conduct of War," in *American Culture of War 2nd Edition*, (Routledge, New York), pp. 23-37.

118. This is the summary of the hearings. United States Senate, 1992, "Military strategy, Net Assessment and Defense Planning and Budget issues," in *Threat assessment, military strategy, and defense planning: hearings before the Committee on Armed Services, United States Senate, One Hundred Second Congress, second session, January 22, 23; February 19; March 3, 20, 1992*. (U.S. G.P.O., Washington D.C.).

that would satisfy the military strategy under budget constraint.¹¹⁹ The suggested force structure was much smaller than the force structure during the Cold War era. Force reduction was inevitable due to the national economic crisis in the early 1990's as well as the disappearance of main source of military threat. The inevitability of force reduction urged General Colin Powell to develop a plan to manage the process of force reduction at an affordable rate. General Colin Powell was quite confident and the committee well understood this issue as well.

The main issues in the hearing were how to design the force structure and how to reduce the current force size to the 'new' force structure in a manageable way.¹²⁰ Before the Senate hearing, there was a debate between Congressman Les Aspin (D-WI) and General Colin Powell in the House of Representatives.¹²¹ As the chairman of the House Armed Services Committee, Congressman Aspin criticized the base force plan as not reflecting the change of security environment in which the Soviet Union collapsed and the CIS was divided into 15 different states in 1993.¹²² He further argued that the force structure could be reduced more than the plan in the national military strategy of 1992, and the reduction should be determined based on the plausible scenarios that reflected the security situation of the time. Furthermore, he offered the four options of force structure that were suitable for possible scenarios under the strategic environment of the time.¹²³ Eventually, House members voted to pass the National Defense Authorization Bill of 1993¹²⁴ that would cover option C of Aspin's plans. Considering the fact that option C was a similar plan to the base force plan, it seemed that House members did not support the radical options but chose a more flexible one among Aspin's recommendations. Contrary to the aggressive reduction recommended by Congressman Aspin, Senator Wallop expressed doubts about the effectiveness of the force structure in the Base Force

Plan.¹²⁵ Senator Malcolm Wallop (R-WY) argued that force reduction was so fast and radical that the base forces would not satisfy "the Iraq equivalent capability." He also pointed out that once the force structure was reduced, the reconstitution of forces would not be as "idyllic" as it was described in the Base Force Plan.

Toward the criticism that the Base Force Plan did not reflect the security environment of 1993, General Collin Powell argued that even though the planners of the base force plan had not precisely predicted the sudden collapse of the Soviet Union, the plan assumed similar situations that were equivalent it.¹²⁶ He also criticized changing the force structure swiftly whenever any change in security environment happened as inappropriate, specifically in the era of strategic uncertainty. Instead, he claimed that it was necessary to build up a force structure that might work effectively in various possible scenarios in the strategic environment of the post-Cold War era.

Members of the Senate Armed Services Committee also questioned the assumption about the roles and level of involvement that the allies would take in the strategy of Two Major Regional Contingencies.¹²⁷ They asked whether further reduction in force structure would be possible if the allies took more roles and responsibilities in the regions. Colin Powell responded that the US military should prepare unilateral operation plans in the situation of allies not working for the US due to domestic political situations.

The inevitability of force reduction led the hearings in how to build down the force structure without significant damage in the aspects of effectiveness and the quality of soldiers. The most highlighted issue was the personnel problem – how to reduce service members and civilian employees in the Department of Defense and each military service.¹²⁸ Despite the disagreement about the force structure, most committee members agreed that if the process were not managed in a "smart" way, large-scale force reduction would cause serious social problems and affect the quality of forces in the end. Force reduction also led the members of committee to debate the Base Closure and Re-

119. Joint Chiefs of Staffs, 1992, *National Military Strategy of the United States*.

120. United States Senate, 1992, pp. 485-490.

121. United States Senate, 1992, pp. 490-493.

122. These two events occurred after the National Military Strategy had developed in 1992. Congressman Les Aspin argued that the Soviet Union got weaker than assumed in the National Military Strategy in 1992.

123. *Debate on National Defense* – Hon. Les Aspin (Extension of Remarks – April 03, 1992); United States Senate, 1992, pp. 461-467.

124. This vote was not scheduled on the hearing but during the authorization process for the annual budget. The force structure was the main debate issues during the authorization process.

125. United States Senate, 1992, pp. 507-509.

126. United States Senate, 1992, "Anticipating the Break-up of the Soviet Union," pp. 510- 513; pp. 500-501; Senator Levin asked.

127. United States Senate, 1992, pp. 470-477. Chairman Sam Nunn (D-GA) and Senator Wallop (R-WY) questioned about it.

128. United States Senate, 1992, pp. 484-494.

alignment issue and the industrial base issue.¹²⁹ Along with active military forces, the reserve component was also a target of force reduction. Senators Strom Thurmond (R-SC), who had military installations related to the National Guard, stated that the plan of too much reduction in the National Guard would not gain support from Congress.¹³⁰

The committee members also questioned the effect of force reduction on industrial bases. They were concerned about losing the capability to manufacture equipment and weapon systems that had been developed during the Cold War era.¹³¹ Considering the fact that those weapon systems were equipped with the most sophisticated and state of the art technologies of the time, closing important industrial bases such as shipyards and manufacturing facilities might undermine the industrial capacity to equip the military forces in emergencies. General Powell explained that even if there were a reduction in weapon procurement, necessary parts of weapon procurement programs would be funded to keep them moving along as a part of Research and Development.¹³²

Senator John Warner (R-VA) raised the issue of four different air forces¹³³ in the US military. He asked if these four different air forces were necessary; if it was recommendable to merge them into one air force. General Colin Powell answered that all four air forces have unique missions and roles for each military service that they were supporting, and merging them into one air force would undermine military effectiveness during the mission.

Overall, the hearing was going quite smoothly. The Base Force Plan was evaluated as a “very strategy driven” document in the aspects of force structure and supporting capability for the force structure. There were some disagreements about which weapon depots or bases would be closed, but, mostly the committee members understood the security environment of the post-Cold War era and the strategy to deal with it in a big picture of national defense policy.

129. United States Senate, 1992, pp. 503-506; pp. 508-509.

130. United States Senate, 1992, pp. 496-498.

131. United States Senate, 1992, pp. 509-510.

132. United States Senate, 1992, pp. 515-516.

133. They include US Air Force, US Marine Corps Aviation, US Navy Aviation, and US Army Aviation.

B. The Bottom-Up Review

During the hearing on the report of the Bottom-Up Review in the House, almost every member of the House Armed Services Committee did not support the bottom up review.¹³⁴ The criticism was that the report was budget driven; the force structure did not match the strategy; it was based on a higher level of risk than the Department assumed; and it did not show a clear picture of how to prepare for the future.

The first criticism was that the plan in the report was ‘budget driven’ instead ‘strategy driven.’ Representative Kyl (R-AZ) and Representative Ike Skelton (D-MO) argued that, by focusing on force reduction and allowing only a slight margin, this plan would put too much burden on the current force structure and it would increase the fatigue of forces; eventually, the plan would compromise the capabilities of US in the long term.

Second, the committee members argued that the suggested force structure in the report was not enough to execute the military strategy.¹³⁵ Basically, the strategy for force construct was the Two Major Regional Contingencies that was also the strategy for force construct in the Base Force Plan. They warned that similar strategic goals with a reduced force structure led the force construct and military doctrine to be too complicated.¹³⁶ In addition, the representatives argued that the force structure was developed on the basis of ‘very’ optimistic threat evaluation narrowly focusing on the security environment of the time.

Third, Representatives Ike Skelton (D-MO) criticized the report for accepting a higher degree of risk than recommended in the Base Force Plan.¹³⁷ He pointed out that both plans were developed to satisfy the absolute minimum with the level of “Low to Moderate Risk,” which was based upon the risk assessment from Joint Military Net Assessment.

134. United States House of Representatives, 1994, *Assessment of the Bottom-Up Review : hearings before the Military Forces and Personnel Subcommittee of the Committee on Armed Services, House of Representatives, One Hundred Third Congress, second session, March 1, and March 22, 1994*, (U.S. G.P.O., Washington D.C.).

135. Representative Kyl (R-AZ), Representative Skelton (D-MO), Representative Martin Lancaster (D-NC).

136. United States House of Representatives, 1994, pp. 28-37.

137. United States House of Representatives, 1994, pp. 32-34.

During the hearing, Representatives Ike Skelton (D-MO) and Representative Martin Lancaster (D-NC) also asked what caused the difference between the Base Force and the Bottom-Up Review Force in the matter of absolute minimum force structure with the same level of risk assessment in the similar security environment of strategic uncertainty.

Fourth, the committee members criticized the report for not having a clear vision for the future. When the chairman of the committee asked the second panel in the hearing if the suggestions in the Bottom-Up Review were proper proposals for national defense, all the witnesses of the panel expressed a concern that the suggestions in the report would be successful only in the short term – a couple of years.¹³⁸ John L. Peterson criticized the report for not offering proper options to deal with even five to seven years ahead and recommended having “a long range kind of strategy” that could deal with extraordinary changes in the 1990’s. Altogether, they urged the Department of Defense to have “some kind of first order rethinking,” warning that it might be much harder to do a few years later.

They also discussed the concept of RMA and the impact of on-going changes in the field of technology.¹³⁹ They recommended transforming the US military into the shape that could contain the extraordinary changes in technology and respond to the threat coming from potential future adversaries who might willingly use these technologies against the United States.

In the midst of harsh criticisms, there was one proponent for the plan who argued that the problem of the report was not the answer – contents of the report – but the question that was given to the authors – intent and purpose.¹⁴⁰ Krings pointed out that the authors were asked to write a plan that would satisfy the budget constraints; and the answer was the best one available under the specific assumptions of the report. He concluded that the review process was excellent because it enabled accurate cost estimation to maintain force structure and analyze availability of force structure within the boundary of budget.

138. United States House of Representatives, 1994, pp. 42-67. John L. Peterson (Arlington Institute), Elliot A. Cohen (Johns Hopkins University), and John E. Krings (Former Director of Operations Test and Evaluation).

139. United States House of Representatives, 1994, pp. 42-67.

140. United States House of Representatives, 1994, pp. 54-56.

In the two party system of US politics, it is unusual that almost every committee member from both parties disagree with contents of a report and express negative evaluations on policies described in the report that was published in the name of a federal agency and an administration. Particularly, defense policy has been the domain in which the executive branch – the White House and the Department of Defense – has policy initiatives. In this perspective, harsh criticism toward the Bottom-Up Review was unusual. What caused harsh responses to the Bottom-Up Review was the intent with which this report was prepared as well as the specific policy contents contained in the report.

All the criticisms came from the purpose of the report. In the bottom-Up budgeting process, all the units’ costs are calculated individually – so the cost for each part will be calculated only for the part itself. This ‘bottom up’ process will be beneficial to discover unnecessary and hidden costs that can be neglected in a ‘top down’ budget process in which each unit might be considered identical. Then, why were there so many criticisms regarding the report of the Bottom-Up Review?

The problem is that the maximum amount of budget was already set up even before getting the cost for each part of the force structure.¹⁴¹ The Bottom-Up Review suggested further reduction in force structure from that of the Base Force Plan, because the financial status of the United States was not stable enough to guarantee sufficient budget for the force structure of the Base Force.¹⁴² This was the reason that the report was budget driven, not strategy driven. All the criticisms came out of the budget driven manner of policy development.

In addition to that, the military strategy was similar to that of the base force plan, which means that the military would function with smaller force structure for a similar strategy. The budget driven force reduction urged the Department of Defense to consider force construct options with higher level of risk that could increase OPTEMPO / PERSTEMPO¹⁴³ and eventually the fatigue of soldiers. The high level of OPTEMPO and PERSTEMPO has led to the lack of strategic reserve and it also demised strategic

141. United States House of Representatives, 1994, pp. 28-30.

142. Les Aspin, 1993, *The Report on the Bottom-Up Review* (Department of Defense).

143. OPTEMPO(Operation Tempo): the rate of unit rotation, PESTEMPO(Personnel Tempo): the rate of personnel rotation.

flexibility. This situation made the department of defense focus on not a variety of possible scenarios but specific scenarios that were regionally focused and based on the security environment of the time. Eventually, all these shortcoming did not allow the department of defense to develop a comprehensive plan about how to prepare for the defense policy of the future – military transformation which includes strategy, force structure and weapon systems.

C. The Report of Quadrennial Defense Review 1997

Since Congress passed the Military Force Structure Review Act of 1996 requiring ‘administration based defense review’ – the Quadrennial Defense Review (QDR) –, the Department of Defense released the reports of the Quadrennial Defense Reviews in 1997, 2001, 2006, 2010, and 2014. Each time, both chambers of the US Congress held the hearings on the QDRs before the committees which had jurisdiction over military and defense policy. The members of the committees inquired of the key witnesses – including members of the National Defense Panel, representatives from the Department of Defense, Joint Chiefs of Staffs, and each military service – about military strategy, force structure and modernization programs.

Considering the fact that military transformation in the post-Cold war period was the core defense policy in the series of the QDRs, these hearings on the QDRs well expose the main issues of military transformation and the responses of the members of Congress to the plan of military transformation. The hearings also show how the Department of Defense rationalized the core assumptions and blueprint regarding the military transformation and how the Department of Defense advocated affordability of the military transformation.

In the hearing on the QDR in 1997, the primary concern in the House National Security Committee was whether the QDR was budget driven or strategy driven.¹⁴⁴ Several members of the committee referred to the Bottom-Up Review as the prominent example of budget driven defense review, while the Base Force Plan had been acknowledged as

144. U.S. House of Representatives, 1997, *THE QUADRENNIAL DEFENSE REVIEW: COMMITTEE ON NATIONAL SECURITY HOUSE OF REPRESENTATIVES, ONE HUNDRED FIFTH CONGRESS, FIRST SESSION* (HEARINGS HELD APRIL 16, MAY 21 AND 22, 1997).

an example of strategy driven plan.¹⁴⁵ The problem of the budget driven policy document is that the basic assumptions could be unrealistic to build up a sound defense policy due to budget constraint. Secretary Cohen partly admitted that the QDR was developed under the constraint of a 250 billion dollar budget.¹⁴⁶

The committee members also questioned whether the force structure was adequate to execute the strategy of two MTW scenarios. Representative Ronald Dellums (D-CA) pointed out that the force structure in the QDR was not distinguished from the one in the BUR and requested reasonable provenience of the effectiveness of the force structure.¹⁴⁷ Phillip A Odeen, Chairman of National Defense Panel, responded that the size might be similar but the current force structure was proven to be effective through the effort during a four year period to find the path to make the version of force structure in the Bottom-Up Review operational in the strategy of two major theater wars.¹⁴⁸ Secretary Cohen further explained that the force size will be proper to execute the strategy of two MTW with force modernization.¹⁴⁹

The discussions regarding force modernization led the hearing on the QDR 1997 to the discussion about the vision of the military transformation. Because the primary criticism of the Bottom-Up Review was about the lack of preparation for the future, the Department of Defense and the Joint Chiefs put enormous effort to escape from the same. A more capabilities-based approach was the solution. When the committee members questioned what made the QDR 1997 different from the Bottom-Up Review in the aspect of strategy, General Shalikashvili explained that the Department changed the national defense strategy from the two major regional contingencies strategy to the two major theater wars strategy.¹⁵⁰ The Department of Defense further explained that the two major theater war strategy was developed to respond not to the two specific

145. U.S. House of Representatives, 1997, pp. 87-90; p. 96; pp. 201-208. Representative Floyd D. Spencer(R-SC), Representative Ron Lewis (R-KY), Representative Ronald V. Dellums (D-CA), Representative Lane Evans (D-IL).

146. U.S. House of Representatives, 1997, pp. 96-99.

147. U.S. House of Representatives, 1997, pp. 21-23.

148. U.S. House of Representatives, 1997, pp. 65-69.

149. U.S. House of Representatives, 1997, pp. 98-103.

150. U.S. House of Representatives, 1997, pp. 116-123. General John M. Shalikashvili (Chairman of the Joint Chiefs of Staffs).

regions such as Northeast Asia and the Middle East but to any region where a theater level military contingency might occur. By abandoning the regional based scenario and moving to the two theater war strategy, the Secretary of Defense argued that this strategy requires a universal force construct concept which is based on capabilities to execute a theater level war.¹⁵¹ In the Senate Hearings, the chairman of joint chiefs presented *the joint vision 2010* as the unifying vision based on revolution in military affairs.¹⁵²

The discussion about the military transformation led the hearings on the QDR 1997 to the issue of how to secure the required expense for military transformation. The Secretary of Defense stated that the QDR 1997 estimated the shortage of 10 to 20 billion dollars to fund the military transformation.¹⁵³ As the solution to cover the 10 to 20 billion dollars, the Department of Defense suggested reducing the force structure, closing unnecessary military installations and outsourcing the tasks that could be better performed through civilian institutions.¹⁵⁴ Regarding further force reduction, the committee members questioned whether the force reduction would undermine the capability to execute the two theater wars strategy. The Chairman of Joint chiefs answered that the force reduction would be focused on the non-deployed part of the forces, and further explained that this force reduction would not affect the operation and personnel tempos of the forces.

With regard to closing unnecessary military installations, Senator Dirk Kempthorne (R-ID) complained that the solutions presented by the Department of Defense were putting too much pressure on Congress by asking to reduce the size of the national guard, solve the depot maintenance issues, enact two more rounds of Base Closure, while not asking the Services to terminate a major weapons system, tackle roles and mission redundancy, and address reduction in force structure.¹⁵⁵ He further argued that these options brought too much political pain to the members of Congress while the Services avoided sharing the political pain. The Secretary of Defense answered that the

QDR 1997 was not designed to share political pain but it was designed to build the best possible force for the future. He further explained that the options such as two more BRAC rounds, 60/40 changes, and reduction in guard were the essential and necessary steps to get to the right force structure for the future. He added that there would be a legislative recommendation sent to Congress, which required the Office of the Secretary of Defense to absorb as much political pain as Congress.¹⁵⁶

In conclusion, the committee members brought several issues such as force reduction, program reforms, and the plan of outsourcing. They were mostly understood by the DOD witnesses and satisfied by the plans. In reality, the QDR 1997 did not have significant differences from the Bottom-Up Review except for the fact that the QDR 1997 had a clearer vision for the future – Joint Vision 2010 and the military transformation. By connecting these two vision plans with other issues, DOD satisfactorily defended the QDR 1997 and defense programs, and persuaded the committee to approve the policy directions in the QDR 1997. Specifically, they clearly explained the effects brought by the QDR 1997 and made them have a sense of affordability.

D. The Report of Quadrennial Defense Review 2001

QDR 2001 contained a more detailed plan of the military transformation. Military transformation was the core issue of the QDR 2001. At the beginning of the House hearings on the QDR 2001, Secretary Rumsfeld announced that the Department of Defense was developing a comprehensive plan to take action for the military transformation which would change the military organization into the military forces for the future.¹⁵⁷ Considering the fact that the September 11 attack occurred between two congressional hearings on the QDR 2001, the September 11 Attack is a factor determining the characteristics of the QDR 2001.¹⁵⁸ The hearing on the QDR 2001 in the House of Representatives was held before September 11, while the hearing in the Senate was held after September 11. The timeframes of these events show that the QDR 2001 should have included the product of discussion on how to deal with the September 11 Attack.

151. U.S. House of Representatives, 1997, pp. 103-116.

152. U.S. Senate, 1997, *Quadrennial defense review: hearings before the Committee on Armed Services, United States Senate, One Hundred Fifth Congress, first session, May 20 and 21, 1997*, (U.S. G.P.O., Washington), pp. 18-22; pp. 80-81.

153. U.S. House, 1997, pp. 135-137.

154. U.S. House, 1997, pp. 168-170; pp. 195- 197; pp. 202-204.

155. U.S. Senate, 1997, pp. 31-33.

156. U.S. Senate, 1997, pp. 31-33.

157. U.S. House, 2001, *U.S. National Security Strategy and the Quadrennial Defense Review: Hearing Before the Committee on Armed Services House of Representative, One Hundred Seventh Congress, Frist Session, held, June 21, 2001*, pp. 11-15.

158. June 21 for the House and October 4 for the Senate.

During both hearings on the QDR 2001, the main framework of discussion was how to balance between defense policy for the current time and that for the future.¹⁵⁹ Representatives in the House put more weight on the policy initiative for the future – the military transformation, while Senators allocated more time to discuss how to respond to the September 11 Attack and prevent future terrorist attacks. Even though the focus of discussion was tilted to the response to the September 11 Attack in the Senate, the Senate Armed Services Committee found that the military transformation also included policy initiatives to prevent asymmetrical and irregular threats from terrorists; and confirmed that the military transformation was headed in the right direction.¹⁶⁰ Consequently, the military transformation was a common ground shared in both hearings. Moreover, the impact of the September 11 Attack on the military transformation was minimal. Even though several items are directly addressing the following-up responses to the September 11 Attack, testimonies of witnesses in both hearings and the QDR 2001 itself show a solid consistency in the policy regarding military transformation.

The members of the Senate Armed Services Committee focused on how to respond to the September 11 Attack. The committee members asked about the roles of military in the war on terror. Specifically, the debate focused on the organizational reform to support the homeland defense in the aspect of military.¹⁶¹ The Under Secretary Paul Wolfowitz stated that the department would submit a proposal to establish a permanent assistant secretary position for homeland defense who would be in charge of coordination with other federal agencies.¹⁶²

Senator Jean Carnahan (D-MO) was concerned about how to respond to Chemical Biological Nuclear (CBN) threats on U.S. soil and asked if the military had enough capabilities to support civilian agencies in the event of CBN attacks on civilians.¹⁶³ Secretary Wolfowitz answered that National Guard units already had these capabilities and would enhance sufficient capabilities through the ongoing reform which embodied

159. U.S. House, 2001; U.S. Senate, 2001, *HEARING BEFORE THE COMMITTEE ON ARMED SERVICES UNITED STATES SENATE ONE HUNDRED SEVENTH CONGRESS FIRST SESSION OCTOBER 4, 2001* (U.S. GPO, Washington D.C.).

160. U.S. Senate, 2001, pp. 81-87.

161. U.S. Senate, 2001, pp. 91-99.

162. U.S. Senate, 2001, p. 107.

163. U.S. Senate, 2001, p. 111-112.

the department's resolve on homeland protection.

The committee members asked about the affordability of the military transformation. Senator Jeff Sessions (R-AL) raised the issue of OPEMPO and PERSTEMPO that could be caused by the plan of committing 5% of military forces for new experimentation programs.¹⁶⁴ He further asked where the Department of Defense would find the funding source for the military transformation in the situation of responding to the current emergency after the September 11 Attack. To the question about the impact of the September 11 Attack on the military transformation, Secretary Wolfowitz answered that there would not be significant change in the plan of the military transformation. He further argued that the September 11 Attack even confirmed that the direction of the military transformation was right, saying that the problem was that the military transformation had not been implemented quickly enough to prevent a catastrophe like the September 11 Attack. In the end, Secretary Wolfowitz reported that the department of defense was preparing a series of policy initiatives to accelerate the military transformation in order to 'transform' the military into 'the future force.'¹⁶⁵

The QDR 2001 spelled out the strategy to deter aggressive adversaries with overlapping time frame. Regarding this strategy, Senator John Warner (R-VA) asked how it was different from the previous strategy, saying that for some time, the United State has been operating with a requirement to fight and win two nearly simultaneous conflicts.¹⁶⁶ Secretary Wolfowitz answered that the United States still had a requirement to defeat aggression in any two regions in nearly simultaneous time frames. He confirmed that the strategy of deterring aggressive adversaries with overlapping time frame was based on this requirement, explaining in detail that the Department of Defense evolved the concept of a decisive defeat as another step of defeat, which means 'marching on to occupy enemy's capital.'

With respect to the force structure, Senator Susan Collins (R-ME) asked whether the current force structure was the appropriate size of military forces to execute the strategy.¹⁶⁷

164. U.S. Senate, 2001, pp. 7-8.

165. U.S. Senate, 2001, pp. 81-93.

166. U.S. Senate, 2001, pp. 97-100.

167. U.S. Senate, 2001, pp. 101-104.

Secretary Wolfowitz answered that the Department of Defense determined to take ‘status quo’ in terms of force structure after the Positive Match exercise assessing the current force structure as roughly meaning the current strategy.¹⁶⁸ He further stated that the decision was not made because the Department of Defense was satisfied with the status quo but because the status quo was the minimum requirement to avoid a point of serious strain in the force in the aspect of OPTEMPO and PERSTEMPO.¹⁶⁹ In addition to that, Congressman Joel Hefley (R-CO) asked whether the air force was moving from a bomber centric to a fighter centric force, also requesting a proposal of merging four different air forces into one air force due to the duplication of capabilities.¹⁷⁰ General Shelton answered that the key force was to achieve balance between ‘the fighter force for the air to air superiority,’ ‘the close air support capabilities,’ and ‘the bomber forces for the long range strike,’ while escaping the issue of merging proposal by avoiding direct answer to the question.¹⁷¹

E. The Report of Quadrennial Defense Review 2006

The hearings on the QDR 2006 covered two main issues: the military transformation and the Global War on Terror, which means the military operations in Afghanistan and Iraq (Operation Iraq Freedom and Operation Enduring Freedom).¹⁷² When the QDR 2006 was released, the military transformation in the QDR 2001 was about to have a series of outcomes including the result of experimentations, the organization changes, and several decisions regarding the development of weapon systems. At the same time, since the first military operation in Iraq, the area of operations was expanded to Afghanistan and the military operations in the Middle East were extended into

irregular operations such as counter insurgent operations, nation building and other stabilizing operations. In order to fund the Global War on Terror, the U.S. Government heavily relied on supplementals, which is a type of emergency fund, differing from base budget.¹⁷³

These two vital issues were so essential that the Department of Defense had to balance between them under the situation of resource constraint, rather than abandoning either. The QDR 2006 was the document that contained the agony of the military to accomplish these two urgent missions – preparing for the future and engaging in the current military conflicts in Afghanistan and Iraq. The opening remark of the chairman of the House Armed Services Committee well captured this characteristic of the QDR 2006.¹⁷⁴ Congressman Duncan Hunter (R-CA), the chairman of the House Armed Services Committee, opened the hearing by stating that the QDR 2006 had several points of contradiction: first, the QDR 2006 contained the plan to transform the US military into more expeditionary units, at the same time requiring the military to be effective not only in combat mission but also in counter insurgency warfare; second, the QDR 2006 considered long range strike capability as the top priority while it planned to cut the active bombers which were still functioning in the military operations in Afghanistan and Iraq; third, the QDR contained the plan of reduction in force structure while it also pursued the modernization of military forces in the name of the military transformation.

There was an interesting rhetorical debate about the words that described the Global War on Terror between one committee member – Representative Ellen Tauscher (D-CA) and Deputy Defense Secretary England. Representative Tauscher (D-CA) described the Global War on Terror and its warfare as ‘unconventional,’ ‘unpredictable,’ ‘asymmetrical,’ ‘uncertain,’ ‘unknowable,’ ‘indirect,’ ‘irregular,’ ‘complex,’ ‘adaptable for the enemies,’ and ‘long for the long war, never ending, not knowing when it would be over.’¹⁷⁵ The committee member also pointed out the fact that the rubric of these words had

168. U.S. Senate, 2001, pp. 104-106.

169. U.S. Senate, 2001, pp. 104-106.

170. U.S. House, 2001, pp. 34-36.

171. U.S. House, 2001, pp. 34-36. This testimony can be considered as a confirmation that the US military needs to have four different air forces due to the unique mission of each air force.

172. U.S. House, 2006, *Department of Defense Quadrennial Defense Review: hearing before the Committee on Armed Services, House of Representatives, One Hundred Ninth Congress, second session, hearing held, March 14, 2006* (U.S. G.P.O., Washington D.C.); U.S. Senate, 2006, *The Department of Defense Quadrennial Defense Review: hearing before the Committee on Armed Services, United States Senate, One Hundred Ninth Congress, second session, March 8, 2006* (U.S. G.P.O., Washington D.C.).

173. The Department of Defense submitted supplemental requests for Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) in FY 2002, FY 2004, FY2006, FY2007. This item was changed into Global War on Terror Requests in FY2008 and FY2009 and eventually was renamed as President's Budget Request for Overseas Contingency Operations (OCO) in FY2010.

174. U.S. House, 2006, pp. 1-2.

175. U.S. House, 2006, pp. 23-25.

been used to justify supplementals to fund military operations in Iraq and Afghanistan. When the committee member further asked how to solve the war which was described by those words, Secretary England responded that the only way to react to this type of threat and warfare was preparedness, at the same time arguing those words had been chosen to describe the characteristics of the 21st century military conflict during the post-Cold War era, not just for the Global War on Terror.

In addition to this rhetorical debate, several other members warned that these abnormal practices with defense budget such as relying on supplementals for the Global War on Terror and increases in the R&D investment might ruin the national financial status. Representative Mike Conaway (R-TX) criticized the increase of R&D investment as ‘Risk Averse manner,’ arguing that politicians were engaged in a race to see who can frighten the public most with this tendency seeming to translate into military budget as well.¹⁷⁶ Representative Gene Taylor (D-MS) argued that the national defense plan for the next four years – which means the QDR 2006 – did not take the war in Iraq into account because it primarily relied on supplementals.¹⁷⁷ He further pointed out that there has been hidden costs that were not covered by the base budget or supplementals, saying that several National Guard units including his unit were left behind in the priority of maintenance, replacement, and acquisition.¹⁷⁸ Dr. Lawrence Korb supported this argument by testifying that it would be necessary to move these supplementals into the regular budget and view the national defense budget all together.¹⁷⁹

Representative Solomon P. Ortiz (D-TX) bluntly asked how the Department of Defense would manage several major acquisition programs that began during the Cold War,

176. U.S. House, 2006, pp. 27-29. Basically, he argued that statements of politicians had been used to justify supplementals for the Global War on Terror. At the same time, what made this justification taken as granted was the attitude of US public toward the war. Regarding the public attitude, the chairman of the committee also pointed out that nobody in American was asked to sacrifice except for the Armed Forces, quoting a statement of General Pace which is saying that “The daily life of the average American citizen reflects none of the hardships or shortages that we associated with a nation at war.”

177. U.S. House, 2006, p. 51.

178. U.S. House, 2006, pp. 12-14.

179. U.S. House, 2006, pp. 50-52.

quoting a criticism that the QDR 2006 failed to kill any Cold War Weapon program.¹⁸⁰ Secretary England and Admiral Giambastiani answered that the Department of Defense considered canceling several programs with the consideration of broad spectrum of capabilities and long term estimations. This issue was also covered during the Senate hearings. Senator Mark Brandt Dayton (D-MN) asked what recommendation the Department of Defense would make when ‘four dozen system developments’ were not affordable. Secretary England answered that the Department of Defense would make hard decisions based on analysis of the risk brought by decisions on these development programs.¹⁸¹

As the US government deployed the units of National Guard and the reserve component, the use of reserve component in the military operations in Afghanistan and Iraq got the attention of members of Congress. What made the deployment of reserve components a more prominent issue was the fact that the capability to respond to Hurricane Katrina was severely limited by the absence of the National Guard.¹⁸² Representative Joel Hefley (R-CO) questioned why the reserve component should be sent to the war theater and which role the reserve component unit would take in the theater. Representative Joel Hefley (R-CO) also pointed out that frequent call-ups of reserve component would destroy the family unity and job careers of the reservists. Admiral Giambastiani answered that the Department of Defense considered sending the reserve component to slow down the OPTEMPO of the active component because the fatigue on the active component was at the point of threshold as the Global War on Terror was extended over a long period of time. Admiral Giambastiani further explained that the Department of Defense would manage the deployment rotation rate down to under one tour per 6 year period for the reserve forces.

Senator Jack Reed (D-RI) raised the issue of force size, specifically, the size of ground forces which include Army and Marine Corps.¹⁸³ He pointed out the fact that the

180. U.S. House, 2006, pp. 8-11.

181. U.S. Senate, 2006, pp. 23-26. The decisions included the followings: 1) replacing the overused c-17s, 2) upgrading DD(G) – Guided Missile Destroyer – and standing up DD(X) – stealth destroyer, 3) developing new deep strike long range bomber – manned or unmanned, 4) building the Littoral Combat Ship (LCS) and other riverine capabilities.

182. U.S. House, 2006, pp. 11-14.

183. U.S. Senate, 2006, pp. 26-30.

Army would be reduced to the level of 480,000, asking whether this reduction would compromise the combat effectiveness of the ground forces by the increase of assigned missions for the reduced force structure. Admiral Giambastiani answered that the Army was on the way of transformation to modularization, and further explained that the modularized Army would be more effective even after the force reduction due to the increased capability of a modularized brigadier combat team. Senator Jack Reed (D-RI) also questioned whether the force construct assumptions included the increasing demand for counter insurgent capability, referring to the 1-4-2-1 force construct¹⁸⁴ assumptions. The admiral explained that the 1-4-2-1 force construct was developed on the basis of the assumption that the US military could do two major things such as supporting counter insurgency operations in a prolonged irregular conflict and while doing a conventional warfighting operation.¹⁸⁵

In addition, Representative Susan Davis (D-CA) asked what the expected risk would be in regard to the reduction of aircraft carriers, mentioning the retirement of USS JFK, a non-nuclear aircraft carriers.¹⁸⁶ Secretary England answered that it would take two more years to have a new aircraft carrier and the gap of two years would be covered by increasing the surge rate of aircraft carrier fleets. He further explained that the retirement of USS JFK would make the Navy an all nuclear carrier force, which would be more beneficial than extending the life of USS JFK by spending more than 2 billion dollars per year for maintenance.

After the September 11 Attack, homeland security became the top priority of national policy. One of the critical issue for the federal agencies was how to cooperate with each other and which area of jurisdictions would be assigned to which agencies. Most discussions were about how to cooperate in the area of intelligence. Furthermore, the members of the House Armed Services Committee gave attention to the mission and functions of the US Northern Command that was organized to take charge of cooperation with other federal agencies in the United States. Representative Neil Abercrombie

(D-HI) asked what the role of the newly organized US Northern Command was and what it had been doing for the past four years, arguing that the primary purpose of the command had not been achieved.¹⁸⁷ Representative Gene Taylor (D-MS) added a question regarding what functions the Northern Command supplied during Hurricane Katrina.¹⁸⁸ Secretary England answered that the Northern Command is in charge of U.S. forces during a time of crisis in America and is an integral part of the Homeland security of the United States. At the same time, he also answered the Representative Taylor's question, stating that the Northern Command offered communication capability and relief function in the coordination with FEMA during the Katrina disaster.

F. The Report of Quadrennial Defense Review 2010

During the hearings on the QDR 2010, the military transformation was not the primary subject of the hearings. Rather, committee members of both chambers primarily gave their attention to the situation of budget constraint and its impact on weapon programs, military strategies, force structures, and some military personnel issues.¹⁸⁹

Regarding the situation of budget constraint, Senator John McCain (R-AZ) asked about budget items, specifically the category of Overseas Contingency Operations which had previously been named the Global War on Terror.¹⁹⁰ To the question about the purpose of Overseas Contingency Operations fund, Secretary Gates answered that the fund would cover the cost of ongoing military operations in Afghanistan and Iraq along with several supplementals. He also added that as the military situation in these two countries improves, these funds would eventually move to the base budget, which

187. U.S. House, 2006, pp. 39-40.

188. U.S. House, 2006, pp. 104-106.

189. U.S. House, 2010, *THE 2010 QUADRENNIAL DEFENSE REVIEW: HEARING BEFORE THE FULL COMMITTEE OF THE COMMITTEE ON ARMED SERVICES HOUSE OF REPRESENTATIVES ONE HUNDRED ELEVENTH CONGRESS SECOND SESSION HEARING HELD FEBRUARY 4, 2010*; U.S. Senate, 2010, *HEARING OF THE SENATE ARMED SERVICES COMMITTEE; SUBJECT: DEFENSE AUTHORIZATION REQUEST FOR FISCAL YEAR 2011; THE FUTURE YEARS DEFENSE PROGRAM; THE 2011 QUADRENNIAL DEFENSE REVIEW (QDR)*, February 2, 2010; There were issues about Prisoners Of War, Christmas bomber incident and related interrogation, how to apply Miranda Right to POWs.

190. U.S. Senate, 2010, pp. 4-7.

184. U.S. Senate, 2006, pp. 26-30. The 1-4-2-1 force construct was the concept to maintain the size of forces to execute one homeland protection mission, deterrence mission in the four forward deployed areas, defeating adversaries in two military conflicts with an overlapping time frame, and one small scale military contingency.

185. U.S. Senate, 2006, pp. 26-30.

186. U.S. House, 2006, pp. 25-27.

means the department of defense's peace time cost of operations. Senator John McCain (R-AZ) and Senator Carl Levin (D-MA) expressed concern about a hasty transfer of war time budget into base budget by arguing that the transfer would compromise the capability of warfighting in the ongoing military operations in Afghanistan and Iraq.¹⁹¹

The situation of budget constraint also impacted the military transformation which has been a corner stone of defense policy since 1997. The committee members did not explicitly mention the military transformation. Rather, they discussed military acquisition reforms to review the status of weapon programs.¹⁹² Main issues were the Joint Strike Fighter program, the Missile defense program, sea and air lift program, and long-range strike capabilities. All these programs constituted the core weapon systems to realize the military transformation described in the QDR 2001 and the QDR 2006.

Senator John McCain (R-AZ), Senator James Inhofe (R-OK), and Senator Claire McCaskill (D-MO) gave attention to the air lift capability because this would guarantee the US military's ability to move operational theaters on time and to secure maximum effectiveness of combat power in the battle field without losing critical timings. They raised the issue of the closing of the C-17 production line, since the C-17s of the squadron have been worn out more than usual from assigning those C-17s to the missions beyond the normal operating rate. They also questioned the witnesses about what caused the early wear-out of C-17s. Secretary Gates answered that it was caused by the relatively small size of air fields inaccessible to the C-5 in Afghanistan and Iraq, eventually making the Air Force more reliant on the C-17s. He also stated that the department of defense considered various options including upgrading the C-5s and using commercial cargo planes in order to replace the worn out C-17s.

The purchase of the fifth generation jet fighter was another focal point among military procurement programs in the hearings. Primarily, the committee expressed a positive attitude to the JSF program reform in 2010 including cancelation of the second engine for the F-35.¹⁹³ They evaluated the acquisition reform as appropriate remedy for flaws

191. U.S. Senate, 2010, pp. 4-10.

192. 1) C-5 and C-17: U.S. Senate, 2010, pp. 4-10; p. 13; pp. 32-34. 2) F-35: U.S. Senate, 2010, pp. 4-11; pp. 40-41. 3) long range bomber: U.S. Senate, 2010, pp. 19-21. 4) Missile Defense: U.S. Senate, 2010, pp. 4-11; p. 30; p. 38; U.S. House, 2010, pp. 31-34.

and cost overrun related to F-35. Nonetheless, the committee requested the Department of Defense's further efforts to deliver F-35 to the Services at the time when needed in the future, while mentioning more critical flaws in the program and the estimation of high operating costs compared to the current jet fighters such as F-18 and AV-8. Senator James Inhofe (R-OK) and Senator Saxby Chambliss (R-GA) asked if the Department of Defense reviewed the necessity of reopening the F-22 production¹⁹⁴ line to substitute for F-35, also addressing the coming of the Russian fifth generation jet fighter T-50 as a potential threat.

The long range strike capability was the essential part of the military transformation which put 'getting global scale preemptive strike capability' as a central pillar of the plan. In the hearings on the QDR 2010, the focus was the next bomber project. Senator John Thune (R-SD) asked which role long range bomber would take in the military strategy of the QDR.¹⁹⁵ The secretary answered that the long range bomber would be an essential part of long range strike capability along with long range missile forces. He said that the Department of Defense was considering the modification of the previous generation bombers such as B-2 and B-52 in order to fill the gap until specific decisions regarding the next generation would be made. Furthermore, he explained that the DOD and JCS determined to develop a next generation long range bomber, while the specific directions had not been chosen yet. The committee members questioned whether UAV style long range bombers had been considered.¹⁹⁶ The secretary and chairman of JCS replied that UAV was one of possible options, mentioning that more UAV pilots were graduated than pilots for conventional airplanes in the military.

Senator Evan Bayh (D-IN) pointed out that the Department of Defense was trying to save almost every weapon program under the difficult fiscal situation.¹⁹⁷ Senator James Inhofe (R-OK) further requested a balanced prioritization between programs in order

193. U.S. Senate, 2010, p. 4. The original plan was to develop two separate engines for the F-35. It has been a lesson learned from 'the great engine war' in the 1980's - monopoly in engine production would compromise the capability of air force in case of serious malfunction of airplane engines. (New York Times 1984).

194. U.S. Senate, 2010, pp. 13-14; pp. 40-41.

195. U.S. Senate, 2010, pp. 19-21.

196. U.S. Senate, 2010, pp. 32-35.

197. U.S. Senate, 2010, pp. 34-36.

to prevent several core development and modernization programs from being unfunded – such as JSTAR upgrade program, Ground based Missile Defense Program, PIM Paladin and FCV for the Army, and ship-based SM-3 for the Navy.¹⁹⁸ Specifically, Senator James Inhofe (R-OK) pointed out that ship-based SM-3 would be the centerpiece of the sea-based missile defense program, mentioning the hesitation of Eastern Europe Countries to the installation of American missile defense systems in their soils.¹⁹⁹ He also expressed a concern about the fact that the ship-based SM-3 program would require the transfer of several AEGIS vessels which were assigned to other missions. Senator Roger Wicker (R-MS) further asked the Department of Defense to develop a comprehensive plan to manage the distribution of assets within the Navy in order not to degrade the Navy's capabilities.

Along with weapon system, committee members requested specific reasons why the Department of Defense designated Mayport Naval Installation as another location of Home porting for nuclear carriers. The plan of the Department of Defense was to have an additional home port for nuclear aircraft carriers operating in the Atlantic Ocean, where the only home port for nuclear aircraft carriers has been at Norfolk, VA.²⁰⁰ The primary purpose was to protect the fleet from terrorist attacks to the facility and to prevent a total loss of aircraft carriers which could be predicted when putting all aircraft carriers in one port. Senator Jim Webb (D-VA) were against this plan, arguing that it would be inappropriate to have another nuclear carrier home port under the on-going difficult fiscal situation, considering the cost of installing the nuclear reactor maintenance facilities in the new home port.

In the part of military strategy, the committee members discussed how to balance between COIN and conventional warfare. In detail, Senator Ben Nelson (D-NE) gave attention to how to transfer the military operation to the local police and security forces in Afghanistan and Iraq.²⁰¹ As the combat missions in Afghanistan and Iraq went into the ending phase, the committee members agreed that it was necessary to withdraw the US forces from the Middle East and it would be more beneficial to transfer the missions

of stabilizing operations to the local police or their security forces. However, there was a disagreement on the timing of withdrawal. The committee members questioned whether this was the right time to withdraw – if not, when would be the right time for withdrawal of forces.²⁰²

Representative Mike Coffman (R-CO) expressed special concerns about how to increase and maintain the combat effectiveness of conventional forces designed to fight against regular forces of potential adversaries.²⁰³ Secretary Gates and Admiral Mullen answered that the Department of Defense developed a plan to transfer the responsibility of the COIN missions to Special Forces Command who had been responsible for this type of operation and to send conventional forces back to their original area of responsibility – to prepare for conventional warfare. To this answer, the committee asked the Department of Defense to consider how to match force structure to the strategy for the future when converting these conventional forces into the war fighting units.

In the force structure, the size of ground forces and Navy were the primary subjects of the hearings. As the combat missions in Afghanistan and Iraq went into the ending phase, Representative Lawrence Kissell (D-NC) in House and Senator Roger Wicker (R-MS) expressed a concern about the large scale drawdown of military forces assigned to the military operation in Afghanistan and Iraq.²⁰⁴ They asked the Department of Defense to have a long-term comprehensive plan to manage the drawdown process of work force in the Department of Defense such as active soldiers, civilians, and contractors.

In addition, committee members of both chamber pointed out the fact that the total number of navy ships was far behind the goal of a 313 ship navy and questioned how the department of defense would make up the shortage of ships.²⁰⁵ The size of naval forces became a significant force structure issue during the hearings because the QDR's shipbuilding rate (10 ships per year) did not match the expected shipbuilding rate (12

198. 1) PIM: U.S. Senate, 2010, P. 14. 2) JSTAR: U.S. Senate, 2010, p. 32. 3) GMD: U.S. Senate, 2010, p. 38. 4) SM-3: U.S. Senate, 2010, p. 14.

199. U.S. Senate, 2010, p. 14.

200. U.S. Senate, 2010, pp. 24-27.

201. U.S. Senate, 2010, pp. 23-24.

202. U.S. Senate, 2010, pp. 3-4 for Senator McCain (R-AZ); U.S. Senate, 2010, pp. 23-24 for Senator Wicker (R-MS); U.S. Senate, 2010, pp. 34-36 for Senator Bayh (D-IN).

203. U.S. House, 2010, pp. 24-25; U.S. Senate, 2010, pp. 31-32.

204. U.S. House, 2010, pp. 64-65; U.S. Senate, 2010, pp. 23-24.

205. Representative Gene Taylor (D-MS), Representative Robert Wittman (R-VA), and Representative Glenn Nye (D-VA); Senator Roger Wicker (R-MS), Senator George Lemieux (R-FL), Senator Jim Webb (D-VA). U.S. Senate, 2010, pp. 23-24; p. 27; p. 30; U.S. House, 2010, pp. 17-18; pp. 28-32.

ships per year) to get to the 313 ship navy. The issue was further spotlighted due to the recent crisis in Haiti²⁰⁶ and the emerging demand of additional vessels for realizing the ship based SM-3 system. The chairman of Joint chiefs answered that the Navy has a 30 year ship building plan to achieve and maintain the 313 ship navy but the Navy could not get to the expected shipbuilding rate due to unexpected recent cost increase for the development of the littoral combat ship and other shipbuilding programs. He further explained that the Department of Defense was going to take acquisition reforms to achieve the goal of the 313 ship navy and it would take around 10 years. He also advocated the goal of the 313 ship navy to meet the requirement in terms of global commitment, stating that the Navy was pressed and operating at a very high tempo, and the high operation tempo would quickly wear out navy capabilities.²⁰⁷

Several personnel-related issues were also covered during the hearings on the QDR 2010. Both committees primarily paid attention to the issues of taking care of the veterans who came back from military operations in Afghanistan and Iraq. They mentioned serious mental illnesses such as PTSD as well as physical wounds which disabled soldiers.²⁰⁸ Members of both committees further asked the department of defense and the department of veterans to offer adequate and appropriate medical services to those who had the illnesses caused by the global war on terror. In addition to that, they pointed out the fact that one of the main causes of injuries to soldiers was IEDs, and deliberated how to solve the problem of IEDs.²⁰⁹ The defense secretary answered that the department of defense developed the standing operations procedures to deal with the IEDs. He further explained that MRAPs deployed to protect soldiers were significantly effective to reduce the damages from the IEDs. Furthermore, Senator Clare McCaskill (D-MO)

206. U.S. Senate, 2010, pp. 31-37; p. 27; p. 30; U.S. House, 2010, pp. 56-57. One committee member asked which part of defense budget was spent for the relief mission in Haiti and what effect the mission brought on defense account and allocation of overall navy capabilities. The witness answered that a career battle group was dispatched due to expected demands on airlift capabilities for the relief mission but there would be no significant effect on aircraft carrier assets because the aircraft carrier would be back after unloading helicopters for the mission and the budget for this operation came was secured by the congressional decision on cash flow for the operation.

207. U.S. Senate, 2010, pp. 23-24; p. 27; p. 30; U.S. House, 2010, pp. 17-18; pp. 28-32.

208. U.S. House, 2010, pp. 26-28; U.S. Senate, 2010, pp. 9-12.

209. U.S. Senate, 2010, pp. 12-13; U.S. House, 2010, pp. 2; p. 13; p. 42.

and Senator Mark Begich (D-AK), and expressed concerns about soldiers' overuse and addiction to OxyCotin, a legally approved pain killer.²¹⁰ They asked for further research to study the side effects of the medicine.

Along with these issues, the members of the Senate Armed Services Committee criticized unnecessary contracts with PMCs (private military companies) as not following the proper budget spending procedure and wasting the budget. An example given was the Blackwater program, which was designed to provide navy sailors with training programs about how to defend themselves on board.²¹¹ The committee member pointed out that this task should have been under the responsibility of active soldiers, not a contractor; and that the contract was not properly reviewed by the Department of Navy because the program was in the 'operational and maintenance' block funding under the responsibility of the combatant commander.

In conclusion, differing from the hearings on previous QDRs, the military transformation was not the focus of the hearings on QDR 2010. Even though the items related to the military transformation were covered and discussed during the hearings, the primary concern was how to manage the defense program under the budget constraint. Committee members of both chambers examined the situation of the growing federal deficit and its impact on defense programs including various weapon systems which were part of the military transformations.

2. House Armed Services Committee Composition

In Congress, bills are drafted by committees in related policy areas, even though determination of a bill – pass or not – is made in each chamber. In that each Congressional committee has the responsibility and authority over issues of its policy jurisdiction, it can be said that the Congressional committees are responsible agents in their jurisdictions; and the influence of those committees on law making – specifically drafting bills – is enormous. Furthermore, the Congressional committees are not independent organizations that can exert their authority by themselves, but agents of the chambers of the US Congress and representatives from each political party.

210. U.S. Senate, 2010, pp. 35-37.

211. U.S. Senate, 2010, pp. 24-26.

If the influence of committees on the legislative process is enormous, it is necessary to analyze how Congressional committees are composed. In order to examine, the following process was implemented. First, I extracted House members' ideology score by using DW-Nominate Score from roll call data of each Congressional term.²¹² Second, I extracted the DW-Nominate score of the Armed Services Committee of each congressional term from the House data of each Congressional term by using the House committees' membership data.²¹³ Third, I compared the median value of House members' DW-Nominate score to the median value of the House Armed Services Committee members' DW-Nominate score. Fourth, I divided the House members and the House Armed Services Committee members into parties (Democratic and Republican), and analyzed how party members in the Committee represent each party by comparing the median value of each party to that of each party's committee members.

Table 4-1. House vs. Armed Services Committee

	103	104	105	106	107	108	109	110	111	112
House	-0.163	0.206	0.211	0.195	0.251	0.342	0.392	-0.141	-0.184	0.446
Committee	-0.115	0.277	0.320	0.327	0.346	0.291	0.371	-0.109	-0.114	0.445
R2-R1	0.048	0.071	0.109	0.132	0.095	-0.051	-0.021	0.032	0.070	-0.001

Note: R1= Row 1, R2= Row 2.

When I examined the difference between the median value of the House members' ideology score and the median value of the House Armed Services Committee members' ideology score during each Congressional term, the committee members' ideology score median value is higher than the House members' ideology score median value, except for the 108th, 109th, and 112th Congress. It means that the median voter of committee members is more conservative than the median voter of House members, and the product of the committee is likely to be more conservative than the House members in most Congressional terms (see Table 4-1).

212. The website of Voteview.com (<http://www.voteview.com/dwnominate.asp>).

213. Charles Stewart's Congressional Data (http://web.mit.edu/17.251/www/data_page.).

When I examined the difference between the median value of the House Republicans' ideology scores and the median value of the House Armed Services Committee Republican members' ideology scores during each Congressional term, the Republican committee members' ideology score median value is higher than the House members' ideology score median value, except for the 110th and 112th Congress. It means that the median voter of committee members is more conservative than the median voter of House members and the product of the committee is likely to be more conservative than the House Republicans (see Table 4-2).

Table 4-2. Republican Party: House vs. Committee

	103	104	105	106	107	108	109	110	111	112
House	0.4080	0.4550	0.4820	0.4990	0.5265	0.5540	0.5630	0.6180	0.6550	0.6740
Committee	0.4520	0.4995	0.5040	0.5030	0.5250	0.5870	0.5630	0.5630	0.6680	0.6670
R2-R1	0.0512	0.0435	0.0220	0.0040	0.0015	0.0270	0	-0.045	0.013	-0.007

Note: R1= Row 1, R2= Row 2.

When I examined the difference between the median value of the House Democrats' ideology scores and the median value of the House Armed Services Committee Democrats' ideology scores during each Congressional term, the Democratic committee members' ideology score median value is higher than the Democratic House members' ideology score median value during the period from 1993 to 2012. It means that the median voter of committee Democrats is more conservative than the median voter of House Democrats. In that conservative ideology coincided with an increase in defense spending, the House Armed Service Committee Democrats are likely to act or vote more favorably to defense spending than the non-committee House Democrats do.

When comparing Democrats and Republicans, the Democratic Party has wider gaps of median values between the House and the House Armed Services Committee than the Republican Party does. It means that the Democratic members of the House Armed Services Committee are likely to pursue their own position rather than representing their party in the matter of defense policy, while Republican members of the House Armed Services Committee are likely to represent their party with slightly more

Table 4-3. Democratic Party: House vs. Committee

	103	104	105	106	107	108	109	110	111	112
House	-0.333	-0.386	-0.382	-0.380	-0.386	-0.378	-0.382	-0.367	-0.343	-0.398
Committee	-0.205	-0.249	-0.253	-0.264	-0.300	-0.286	-0.316	-0.309	-0.247	-0.341
R2-R1	0.1260	0.1370	0.1290	0.1160	0.0860	0.0920	0.0660	0.0580	0.0960	0.0570

Note: R1= Row 1, R2= Row 2.

conservative legislative products (see Table 4-3).

3. Public Opinion and Defense Budget

The final products of the military transformation are changes and improvements in organization, weapon and equipment, and military doctrines. It is the budget – defense budget – that brings all these changes and improvements into reality. In a democratic society, public opinion is a significant source of influence on policy. Assuming that public officials elected by ‘public’ consider public opinion serious, it can be said that public opinion might be influential on defense policy: The President considers public opinion critical when he uses his power in crisis and strategic defense policies; members of Congress consider public opinion significant when they deal with budget issues in structural defense policies. If there is a positive public opinion to defense spending, the defense budget is likely to increase.

In order to examine the effect of public policy on the defense budget, I developed the following three hypotheses and tested them with public opinion data from 1972 to 2011.

Hypothesis 1: As public opinion changes in a positive direction, the defense budget is likely to be increased. If defense budget is reflecting the public attitude toward defense policy, the public opinion about the defense budget might precede the changes of defense budget. Furthermore, a positive change can bring an increase on defense budget.

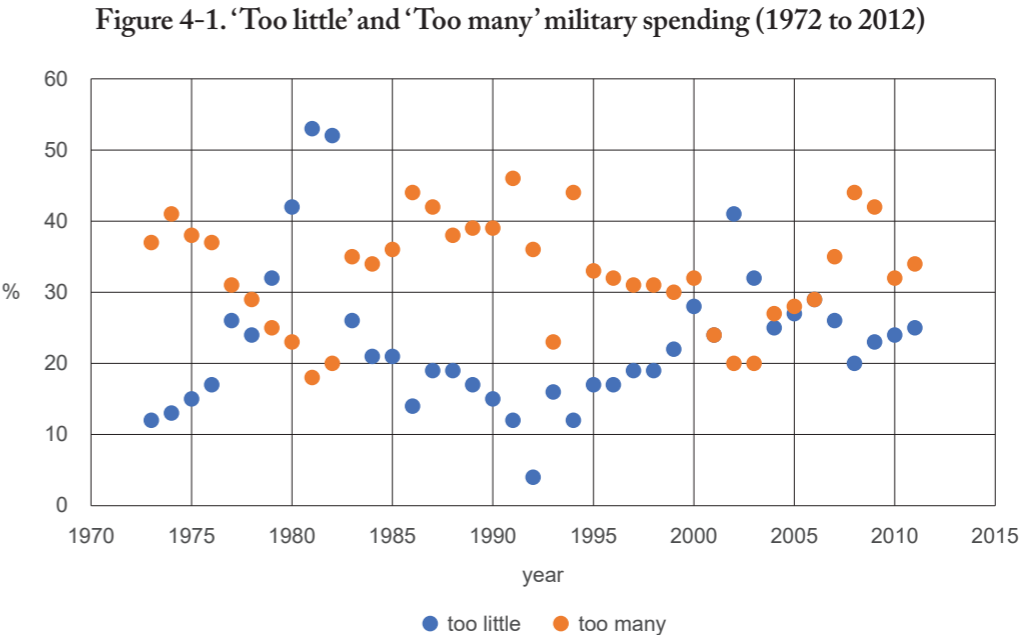
Hypothesis 2: If there are sources of external threats, defense spending is more likely to be increased. Assuming that defense policy primarily deals with external threats, defense policy can be influenced by external threats. If there are external sources of

threats, states need increased budget and defense spending is likely to increase.

Hypothesis 3: If the national economy status improves, defense spending is more likely to be increased. Moreover, defense policy is affected by various domestic factors. One of them is the national economic status. In that defense spending is also a part of the national economy, it can be said that national economy status can affect defense budget.

The year sample is the period from 1972 to 2011 as. The period covers the second half of the Cold War (1972 to 1992), the post-Cold War era, and the era of the Global War on Terror. The U.S. experienced various external changes as well as domestic changes during this period. The dependent variable is U.S. defense spending. The year sample covers a period of longer than 40 years. In order to measure defense spending with one standard, each year’s defense spending was converted in accordance with the Fiscal Year 2013 constant value of the U.S. dollar. Furthermore, the total obligational authority was chosen to represent the amount of defense budget reflecting the national economic status of the year as well.

The independent variables are public opinion of a given year, national economic status,



Source: Gallup (1969-2010) and General Social Studies (1973-2010).

and the state of war. The first and primary independent variable is the public opinion. For the public opinion, I chose the result of two different public opinion polls such as Gallup, and General Social Survey. I found two questions about how each respondent feels about the amount of defense spending in a given year. Among four choices from ‘too little,’ ‘too many,’ ‘right amount,’ and ‘no opinion,’ I took ‘too little’ and ‘too many.’ Due to the missing parts to fill in public opinion surveys, I averaged two survey polls – Gallup and General Social Studies. When I checked the similarity between two surveys, they showed a high degree of similarity.

Due to the fact that ‘planning the federal budgets’ is closely related to the national economy status, the President and Congress might seriously consider the constraint of national debt. To measure the national economic status, the federal deficit of a given year was chosen as an indicator, and it was converted into FY 2013 constant value of U.S. dollar.

In order to measure the external threats that might influence defense spending, I use the state of war. If a country is in a state of war, the country is more likely to increase defense spending. After the Second World War, the U.S. was in the Cold War. After the Cold War ended, there were not any significant external threats until September 11 of 2001. However, after September 11, 2001, the U.S. has been in a state of war – the Global War on Terror. Due to the scale of military actions and military spending during this period, the Global War on Terror and the Cold War were considered as a state of war. I coded ‘1’ for the Cold War period and the Global War on Terror period, otherwise ‘0’.

In summary, the dependent variable is the change of defense spending in each year from 1972 to 2012. The independent variables are 1) averaged % of ‘too little military spending’ in surveys of two public opinion survey houses, 2) federal deficit of a given year, 3) whether or not the U.S. was in a state of war in each year. Due to the fact that the federal budget is passed in the previous year of the target year, a one-year time lag (t-1) was applied for all three independent variables and examined the effect of them on the next year’s defense spending (t). Below is the linear regression model. In order to examine the effect of the Global War on Terror, I changed the sample period into the period from 1992 to 2012 and ran a different model with the same variables.

As a result, all three factors show positive relationships with defense spending in a broad

Figure 4-2. Estimation of defense spending

Defense Spending (t)

$$= \alpha + \beta_1 \cdot \% \text{ of 'too little' } (t - 1) + \beta_2 \cdot \text{Federal Deficit } (t - 1) + \beta_3 \cdot \text{State of War } (t - 1)$$

sense. During the period from 1972 to 2012, the public opinion shows a positive effect on defense spending but does not satisfy statistical significance of 5% confidence (coefficient: 0.5289, p value: 0.0043, the Period after the Cold War, see Table 4-4). Even though the variable does not satisfy 5% confidence rate, the public opinion can be considered a positional factor to estimate the broad trend of changes in defense spending.

Federal deficit has the highest level of statistical significant during the whole sample period but with positive correlation, which is opposite to the hypothesis (coefficient: 0.0173, p value: 0.000571; see Table 4-4). The predicted negative correlation is based on the assumption that if the deficit increases, defense spending might decrease in order to reduce the deficit. However, the positive correlation can be interpreted that when the

Table 4-4. Effect of Public Opinion and other factors on Defense Spending

	Model1(Entire Sample Period)	Model2 (After the Cold war)
	Change of Defense Spending	Change of Defense Spending
A. % of 'too little'	0.18363 (0.1895)	0.5289 (0.0043)**
B. Federal Deficit	0.01773 (0.000571)***	0.00582 (0.109)
C. the State of War	7.5517 (0.048)*	18.5805 (1.71×10 ⁻⁵)***
Const.	5.4927 (0.2028)	-1.4652 (0.7108)
Obs.	42	20

Note: *** >0.000, **>0.001, *>0.05.

government faces urgent national security issues such as the Soviet's threats during the Cold War and the Global War on Terror since 2001, the government is likely to increase defense spending even with increasing federal deficit.

On the other hand, the State of the War factor has a positive effect and statistical significance of the 5% confidence interval (coefficient: 7.5517, P value: 0.048; see Table 4-4). It confirmed the hypothesis that the Cold War and the Global War on Terror have a positive effect on changes in defense spending.

In the post-Cold War era model, all three dependent variables show a positive relationship with defense spending. Being different from the result of the entire sample period, public opinion had a positive effect and statistical significance of 1% confidence interval during the post-Cold War period (coefficient: 0.5289, P value: 0.0043; see Table 4-4). The coefficient is four times higher and it can be said that public opinion became a more salient factor after the Cold War. The Global War on Terror shows a positive effect and statistical significance of 0% confidence interval (coefficient: 18.58, P value: 1.71×; see Table 4-4). Compared to the result of the entire period, this result is almost three times higher and it can be said that the Global War on terror has more impact than the Cold War.

Examining its effect on defense policy, public opinion shows relatively positive and significant correlation with defense. However, public opinion's influence is likely to increase in accordance with the intensity of external threats and changes of external environment. Public opinion has more impact in the period of transition from war to peace and vice versa. Moreover, considering the fact that the post-Cold War era with the Global War on Terror are relatively shorter than that of the Cold War era, it can be concluded that public opinion is more influential in the case of short durations of external factors.

4. Summary

In the political arena, Congress has been the main source of influence on military affairs. Congress has the authoritative 'power of funding' military programs and 'governmental oversight' regarding military and defense policy. Furthermore, issues in military affairs are under the jurisdiction of the Armed Services Committees in both chambers of Congress. Most members of both come from regions which are closely connected

with the military in aspects of demography or regional economy. These attributes of committee members guarantee proper representation of regional interests and position of military services, while they also lead committee members' decisions to be distracted by other issues such as regional economy and inter-service rivalry, rather than effectiveness of military forces, which also can be considered signs of militarism.

Congressional hearings on the official DOD documents regarding military transformation is one indicator to read the congressional response to the military transformation. In sum, both committees responded positively to the military transformation and showed the tendency to support strategy driven plans – the Base Force Plan, the QDR 1997, 2001, 2006 –, which presented a blueprint for the coming years and guaranteed more investment in Research and Development, while criticizing the report of the Bottom-Up Review and the QDR 2010 as budget driven plans.

The composition of committees is another indicator that predicts possible legislative outcomes in a policy jurisdiction in Congress. Since the ideology of legislators is an important factor in legislative voting and the fate of a roll call vote in House is determined by a simple majority, it is possible to measure the ideological composition of committees and further to predict possible legislative outcomes. During the period, the median voter of committee members is more conservative than the median voter of House members, except for the 108th, 109th, and 112th Congress; the median voter of committee Republicans is more conservative than the median voter of House Republicans, except for the 110th and 112th Congress; the median voter of committee Democrats is more conservative than the median voter of House Democrats. Considering the fact that conservative ideology coincided with an increase in defense spending, in most cases the House Armed Service Committee members/Republicans/Democrats are likely to act or vote more favorably to defense spending than the non-committee House members/Republicans/Democrats do, respectively.

In a democratic society, public opinion is also a significant source of influence on policy. Furthermore, it is the budget – defense budget – that brings all these changes and developments of the military transformation into reality. Consequently, if the U.S. public opinion on defense spending is positive, the defense budget is likely to increase. According to the result of analysis in chapter 3, public opinion showed a positive and significant correlation with defense spending. However, public opinion's influence is likely to increase in accordance with the intensity of external threats and changes of external environment.

In summary, militarism is a type of ideology that gives more value to military ideas than to civilian life. In general, militarism coincides with conservatism and individualism. In that the political environment inside Congress and the public mood reflected in public opinion, it is highly probable that there has been a unique type of militarism in the United States. In the political arena, the congressional committee which is responsible for national defense seems inclined to be conservative in the matter of ideology – more conservative than the median in the House of Representatives. Speaking of public opinion, the US public has shown a relatively high level of confidence in the military compared to other public service organizations. The Gallup polls asking about public confidence in the military since the year 2001 have shown that the US public has maintained their support for their military, even after the twelve years of military engagement in Iraq and Afghanistan. The level of public support to the military has positively influenced defense budget increases.

Chapter 5: Defense Industries

1. Military Transformation and Industrial Base

It is an inevitable fact that the United States industrial bases were the essential foundation of the US military power and a driving force for the United States to win the Cold War.²¹⁴ Since 1941, during the Second World War, the production capacity of military arsenals was exceeded by the war-time demand of the US military. During the Cold War, the Military-Industry-Congress complex was an indispensable option to maintaining military superiority to the Soviet Union and the WARSAW Pact. This concrete complex of the Military-Industry-Congress was starting to be reconsidered, when economic conditions worsened in the 1980's. Furthermore, a critical reconstructing of defense industries was required when the Cold War ended in the late 1980's.

214. Kenneth Flamm, 2005, "Post-Cold War Policy and the U.S. Defense Industrial Base," in *The Bridge* (NATIONAL ACADEMY OF ENGINEERING); Barry D. Watts and Todd Harrison, 2011, "Executive Summary," in *SUSTAINING CRITICAL SECTORS OF THE U.S. DEFENSE INDUSTRIAL BASE* (Center for Strategic and Budgetary Assessments).

The gloomy national economic condition required the US Government to reduce the defense budget as well as the size of the US military. The Department of Defense had to make decisions regarding various programs that had started during the Cold War, while the Department still needed the industrial bases to develop necessary weapon systems and to supply military goods. Defense industries were put in a situation in which they should choose one of two options – to abandon the production line or to find other ways to survive the industrial crisis after the Cold War. Congress could not simply choose an ideal option that fitted economic conditions, because defense industries were a significant issue to senators and representatives from the states or districts whose local economies were closely tied to companies within defense industries.

When this Military-Industry-Congress Complex was about to collapse, the Department of Defense requested the defense industries to pursue the consolidation between companies.²¹⁵ Furthermore, the Department of Defense and Congress worked together to lower the bars of restrictions on defense related technologies, which were banned to be released to the free market during the Cold War.²¹⁶ Congress built legislative grounds to release the ban on dual-use technologies which were able to be used in civilian businesses.²¹⁷ The Department of Defense offered practical guidelines to discern between critical military technologies and dual-use technologies.

In this situation, the Military Transformation brought significant benefits to defense industries being in a troubled time after the Cold War by offering two opportunities for innovation. The Military Transformation during the post-Cold War era was the visions and plans for the US military to pursue the Revolution in Military Affairs, exploiting advancements in information technology in the early 1990's.²¹⁸ The Military Transformation required defense industries to develop advanced technologies for the network centric warfare²¹⁹ that the Department of Defense developed to pursue the Revolution in Military Affairs. The core part of the network-centric warfare was to

215. John Deutch, 2001, "CONSOLIDATION OF THE U.S. DEFENSE INDUSTRIAL BASE" in *Acquisition Review Quarterly*.

216. Robert C. McCormack, 1989, "Bolstering Defense Industrial Competitiveness Through International Cooperation," in *Defense* 89, pp. 10-13.

217. US Congress, 1993, "Sec. 204. Funding for Defense Conversion and Reinvestment Research and Development Programs" in *H.R. 2401- National Defense Authorization Act for Fiscal Year 1994*, the 103rd Congress.

develop the network that could connect the nodes to share the information.²²⁰ Research on information technology and development of network systems²²¹ were the innovative areas of defense industries.

On the other hand, the Military Transformation also asked defense industries to develop advanced nodes and platforms that could perform in network systems. The Military Transformation innovated the nodes and platforms into two ways – disruptive innovation and sustaining innovation. Some nodes and platforms like Unmanned Aerial Vehicles were developed on the basis of new technologies and concepts to satisfy the requirements of network centric warfare, and they opened new fields of business.²²²

218. Transformation started with development of new way of war fighting (for example, Joint Vision 2010) and the technologies that could support the doctrines. After developing the doctrines and technologies, the military asked defense industries to develop and supply the required equipment and systems in order to transform the military into the organization suitable for the vision. So, the military transformation was a symbiotic strategy to save industrial bases and transform the US military into a future force. 309. For the Brookings performance, see <https://www.youtube.com/watch?v=phQuw9IGvLc&feature=youtu.be&t=138>. See also “Praying for Jamal Khashoggi: Saudi Arabia Stands Accused of Killing Him. If it Did, it Will be a Disaster for the Regime of Mohammed bin Salman,” *The New York Times*, 8 October 2018, at <https://www.nytimes.com/2018/10/08/opinion/jamal-khashoggi-missing-saudi-journalist.html>.

219. This concept was developed within the US military as a way to achieve military transformation. It is contrasted to the platform centric warfare which focuses on the ability of each individual platform such as submarines, destroyers, and aircraft carriers. A decentralized network of forces shares information in order to engage targets more efficiently, precisely, and quickly from greater distances and from all directions. Network centric operations are expected to bring four key benefits such as increased speed of command, self-synchronization, advanced targeting and greater tactical stability.

220. The concept of the Network Centric Warfare consisted of the nodes and networks. In the Network Centric Warfare, nodes perform as sensors to collect information and platforms to strike opponents. At the same time, networks connect these nodes to share the information with each other.

221. It includes three levels of system integration such as weapon system integration, platform integration, and system of systems.

222. The Unmanned Aerial Vehicles have these values and roles: first, they are platforms for delivering precision strikes; they are nodes to transfer information from platforms to platforms; they are sensors to gain the battle field information.

The Military Transformation also asked defense industries to modify the pre-existing platforms. This type of innovation – sustaining innovations²²³ – asked to change the nodes and platforms into proper forms for network centric warfare.

The nodes in networks perform as a sensor to collect battle field intelligence and share the information through networks. The platforms in networks were required to synchronize their performances in the battle fields by sharing information and communicating with each other through networks in order to increase combat effectiveness. Being compared to the previous version of platforms equipped with all the devices and weapon systems in a unit, the network centric warfare required the deployment of more units which were less expensive but equipped with mission essential capabilities. More units connected with each other through networks generate higher combat effectiveness than one unit with all the capabilities.

Consequently, the military transformation based on the network-centric warfare offered three areas of business to defense industries such as development of new platforms and nodes, modification of traditional platforms, and network systems to connect them. These were valuable opportunities for defense industries to survive the serious crisis in the early 1990's, as well as for the United States government to maintain industrial bases for national defense.

2. F-35 JSF: A Representative of Military Transformation

F-35 is the jet fighter that matters politically, because several issues regarding F-35 have been considered in the US Congress, specifically and most recently in the process of determining the annual budget for the US Federal government.²²⁴ An amendment was related to the cancellation of the second engine development for the F-35, and the story of the amendment regarding F-35 was covered by prominent news media including the *New York Times*.²²⁵ The Department of Defense released its own position,

223. Sustaining innovations are defined by improvement in products' quality based on the previous standards: they offer new, better ways to innovate what customer organizations have been doing using previous generations of technology.

224. H.Admt 16 to H.R. 1 of the 112th Congress Roll Call no. 46.

225. Christopher Drew, “House Votes to End Alternate Jet Engine Program” in *New York Times* (Published: February 16 2011).

and President Obama expressed his opinion. So what made the F-35 program receive such political attention at that time?

Various debates on F-35 came from the two main theses. First, F-35 is important in the aspect of military affairs due to its unique features as a weapon system and its role in the military strategy. F-35 JSF program is a huge business to replace the Cold War jet fighters of all three military branches with 2,590 F-35s. F-35 was designed to perform as a part of a network that connects available assets in a combat situation with stealth capabilities and advance information sharing capabilities. Second, F-35 mattered in the political aspect – specifically, Congress – because it had been under consideration in the Congressional budgetary process where defense industries, military services and the US Congress interact with each other having their own policy positions. The large amount of production and advanced technology enticed defense industries; three military services focused on the advance capabilities of the F-35; the large size of the budget made Congress concerned about the JSF program.

A. A-X/A/FX and MRF: The Origins of the F-35

Developing a new jet fighter was not new at all. The beginning of F-35 was not different from other legacy jet fighters. At the beginning, the primary purpose was the development of a jet fighter that could replace the legacy jet fighters such as the F-16 for the US Air Force, the F-18 and A-6 for the US Navy, and the AV-8 for the US Marine Corps. These legacy jet fighters are tactical jet fighters which are responsible for maintaining air superiority and applying airpower in maritime warfare and land warfare.

Air superiority has been one for the top priorities in the US Military since air power became a significant factor in military affairs.²²⁶ On a strategic level, a strategic air force cannot penetrate into enemy territory without having air superiority. On a tactical and operational level, an air force cannot guarantee sufficient and stable support to naval forces or ground forces in the absence of air superiority. Once air superiority is attained and maintained, airpower can be applied in ground operations and naval operations.

All the legacy jet fighters were developed to perform either one or both of these two

226. US Air Force, 1999, Air Force Basic Doctrine, pp. 29-30.

missions – to maintain air superiority and to support other operations. However, differences in operational environments led the US Air Force and the Navy to develop separate jet fighters for similar roles and functions. The Marine Corps' operational environment required the capability of vertical take-off and landing, and led the Marine Corps to acquire AV-8. The carrier-based operational environment required Navy jet fighters to equip specific capabilities or devices such as twin engines, landing gears with stable positioning, and hook arrest gear. On the other hand, operational environments ask the US Air Force to focus on air-to-air combat capabilities such as air maneuverability, rather than to be concerned about aircraft carriers. This operational environment led the U.S. Air Force to develop F-16.

When all of these legacy jet fighters were required to be replaced, each military service proposed to acquire their own next jet fighters which were fit to the services' operational environments. The U.S. Air Force proposed the Multi-Role Fighters (MRF)²²⁷ program and the Navy initiated the Advanced-Attack / Advanced/Fighter-Attack (A-X / A/F-X)²²⁸ program. Along with them, the Defense Advanced Research Project Agency (DARPA) prepared to develop a next generation concept of vertical take-off and landing aircraft technologies (Advanced Short Take-Off/Vertical Landing Program: ASTOVL).²²⁹

B. JSAT and JSF: Joint-ness and Industrial Bases

When the Cold War ended, economy rather than security started to drive defense industries and weapon development programs. The services began to initiate weapon development programs jointly. When the Navy proposed A-X/A/F-X program to replace A-6, the Air Force participated in the development program in order to replace F-111.²³⁰ Moreover, the economic environment in the early 1990's did not allow the services to proceed to develop all these jet fighter programs. Furthermore, the security environment did not offer specific reasons to develop all these jet fighters or to replace outdated weapon systems. However, the US government had to maintain the industrial bases that produced military equipment during the Cold War era, because the United

227. Multi-Role Fighter (MRF) 1990-1993 in *Global Security* (<http://www.globalsecurity.org/military/systems/aircraft/mrf.htm>).

228. Advanced-Attack / Advanced/Fighter-Attack (A-X / A/F-X) 1992-1993 in *Global Security*.

229. Advanced Short Take-Off/Vertical Landing (ASTOVL) 1983-1994 in *Global Security*.

230. Advanced-Attack / Advanced/Fighter-Attack (A-X / A/F-X) 1992-1993 in *Global Security*.

States still needed to maintain the military forces which could engage globally and these industrial bases were also critical economic bases to the US national economy.²³¹

The Department of Defense recommended defense industries consolidating companies and merging into several representative companies within similar industry fields. Sixteen aircraft manufacturing companies were merged into five companies at the end of the 1990's. Furthermore, the Department of Defense canceled similar defense programs and merged them into fewer representative programs. In order to save the merged programs, the Department of Defense put the programs into the Research and Development phase and encouraged the foreign governments and defense industries to participate in these programs. MRF program, ASTOVL program and A-X/A/F-X program were canceled and merged into Joint Advanced Strike Technologies (JAST) Program in 1993.²³² Later, the Common Affordable Lightweight Fighter Program (ALWF), which was initiated by DARPA and the Navy to develop a VTOL jet fighter for the Marine Corps, was merged into JAST program in 1994. JAST program was developed into the Joint Strike Fighter program in 1997. After the X-35 – which is a prototype of F-35 – was chosen as the winner of competition for the JSF program, eight countries decided to participate in the development of F-35 JSF program which was entitled as a 'fifth generation jet fighter.'²³³

C. The Fifth Generation Jet Fighter: where does it come from?

Looking back the origin of the *concept* of the fifth generation jet fighter, this was not a concept that had a commonly shared basis within the communities of the Air Force and related industries. There were a couple of systems to classify the generations of jet fighters. In 1990, Dr. Hallion offers the system of the six generations of jet fighters.²³⁴ This system is based primarily on the engines that the jet fighters equipped. Each generation of jet fighter has a version of turbo engine equivalent to a generation of jet

fighter. The system also matches the series of jet fighter acquisition plans of the US Air Force. Basically, The US Air Force attempted to develop the *next generation* jet fighter when new threats appeared or the Soviet Union developed a new jet fighter during the Cold War.²³⁵ The US Air Force did not have a numerical version of generation. According to this system, F-35 and F-22 would be the seventh generation jet fighters.

The other system had the four generations and this was based on comprehensive capabilities of jet fighters.²³⁶ Moreover, this system approached the capabilities of jet fighter with more broadly understood concepts which can be recognized by those without professional and technical knowledge on the jet fighter. This is why the system has been more commonly mentioned as the reference for generations of jet fighters. The concept of the fifth generation fits to this system.

Even though many sources referred to F-22 and F-35 as the examples of the fifth generation jet fighter, there was no concept like the fifth generation of jet fighter when these jet fighters were determined to be developed. As I searched the related documents released around the time period in which both jet fighters were developed, F-22 was mentioned only as the "next" generation jet fighter, not the "fifth generation" jet fighter.²³⁷ Moreover, the objective of F-22 development was less fancy than the current specifications of the fifth generation jet fighter. F-22 was conceptualized and developed under the program of the Advanced Tactical Fighter (ATF) in the late 1980's. The primary purpose of the ATF program was to replace F-15 in order to maintain air superiority, since the Soviet Union successfully developed jet fighters such as MIG-29 and SU-35 that could match F-15 in air-to-air combat capabilities. Literally, the first airplane considered as the fifth generation jet fighter was the byproduct of competition for air superiority during the Cold War.

After the Cold War ended, there was no change in the necessity of a next generation fighter for the US Air Force to maintain air superiority. F-35 is the one of the programs

231. John Deutch, 2001, "CONSOLIDATION OF THE U.S. DEFENSE INDUSTRIAL BASE" in *Acquisition Review Quarterly*.

232. Under Secretary of Defense, 1994, *CHARTER for the JOINT ADVANCED STRIKE TECHNOLOGY (JAST) PROGRAM* (Department of Defense), pp. 1-4.

233. <https://www.f35.com/about/history> (as of Feb. 28. 2015).

234. Richard P. Hallion, 1990, "A Troubling Past: Air Force Fighter Acquisition since 1945," *Air Power Journal* (<http://www.airpower.maxwell.af.mil/airchronicles/apj/apj90/win90/1win90.htm>).

235. Michael J Costigan, 1997, *The F-22 The Right Fighter for the Twenty-first Century?*, Air War College, Maxwell Paper No. 9. ; Devin L Kate, 2003, *The Air Superiority Fighter and Defense Transformation: Why DOD Requirements Demand the F/A-22 Raptor*, Air War College; Maxwell Paper No. 30.

236. Richard P. Hallion, 1990.

237. James S. Browne, 1997; Michael J Costigan, 1997; Devin L Kate, 2003.

to secure the air superiority of the United States in the post-Cold War era. F-35 originated from the programs of the Joint Advance Strike Technologies (JAST). From the beginning, F-35 was quite different from F-22 in several aspects. While F-22 had a clear source of threat to respond, F-35 did not have a clear objective to fight against except the broader goal of maintaining of air superiority.²³⁸ In this situation, the term of “next” generation does not mean just some descriptions of generational changes that the new jet fighter would achieve, but a *mirror image* that the new jet fighter had to struggle with. The JAST program is an example of a capability based approach in the transformation after the Cold War because the development of the JAST program was pursued to achieve capabilities under uncertain threats. Moreover, when JAST was developed as a concept of jet fighter technologies, the economic aspect was considered as an important part. To reduce the cost of development, the concept of joint-ness and international cooperation significantly affected the whole development process.²³⁹ This is also different from the case of F-22 in which the economic factor was not the primary concern.

Speaking of the development process of these jet fighters, F-22 and F-35 did not have a clear connection with the concept of the fifth generation jet fighter when they were under consideration of development. Rather, the concept of fifth generation was introduced later when these jet fighters became its first operational members. Now the question is who did this and how this happened.

Several sources mentioned that the concept of the fifth generation jet fighter was coined during the mid-1990’s by Russia, who attempted to develop jet fighters that could match the F-22, which was described as an example of the fifth generation of jet fighters.²⁴⁰ Giovanni de Briganti further argues that after being released to the media

by the Russian aviation companies who had financial problems after the Cold War in the late 1990’s, this concept eventually became popular.²⁴¹ Lockheed Martin also started to describe F-22 and F-35 as the fifth generation jet fighter around the year of 2004, almost 10 years after this company won the contract for the development of the F-35.²⁴² Congress also began to mention the term “fifth generation jet fighter” in the bills related to jet fighter procurement in 2004.²⁴³ In conclusion, the concept of the fifth generation did not originate from the intentions of the US Air Force, who developed the concept of the weapon procurement programs, but it was brought by the potential opponent – the Russians – as a way of defining the objective of competition for military superiority against the US. Furthermore, Lockheed Martin intended to use the term of the fifth generation as a catchphrase and sold the concept as well as its products – F-22 and F-35 – to the US government including Congress.

D. Military Transformation, American Militarism and F-35 JSF Program

From the perspective of weapon acquisition process, it is controversial to argue that the F-35 JSF program is a representative weapon development program of the Military Transformation. First, the JSF program was not a product of the Joint Capability Integration and Development System²⁴⁴ which focused on the joint-ness and capability-based approaches to the defense acquisition system. Even though this program was named as a ‘joint’ program, it was a merger proposal of several jet fighter development programs initiated by each service. Considering various flaws discovered in the design phase, the specification and requirements had not matured sufficiently before the program entered into the development phase. Moreover, the Department of Defense determined to develop the F-35 even before the JCIDS was in effect.

238. Under Secretary of Defense, 1994, *CHARTER for the JOINT ADVANCED STRIKE TECHNOLOGY (JAST) PROGRAM* (Department of Defense), pp. 1-4; *Annual Report to the President and the Congress* 1994; 1995; 1996; 1997.

239. Donald Stevenson and etc., 1997, *The Next-generation attack fighter: affordability and mission needs*, Rand; Mark A. Lorell and Hugh P. Levaux, 1998, *Cutting Edge: A half century of U.S. fighter aircraft R&D*, Rand.

240. Giovanni de Briganti, 2012, “F-35 Reality Check Ten Years On – Part I: ‘fifth generation’ and other myth” in *Defense Aerospace.com*; Unknown, 1999, “Russian 1.44 to fly soon despite money shortage, says MAPO” in *FLIGHT INTERNATIONAL* 20-26 January 1999; DOUGUS BARRIE, 1995, “Mikoyan pushes 1.42 for Mosaero debut” in *FLIGHT INTERNATIONAL* 21-27 June 1995.

241. Giovanni de Brignati, 2012.

242. The Lockheed Martin Corporation, 2004, *Lockheed Martin Corporation Annual Report 2004*.

243. The Department of Defense, 2004, *FY 2004 Annual Report to the President and the Congress*; Congressional Record, *CONFERENCE REPORT ON H.R. 1588, NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2004 -- (House of Representatives - November 07, 2003)*; *NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2007 -- (Senate - June 22, 2006)* [Page: S6324]. Until the 108th Congress, the next generation jet fighter was used to describe F-35. It was the 109th Congress when the fifth generation jet fighter appeared in Congressional record.

244. Defense Acquisition University, 2004, *JCIDS Overview Brief*, slide 4-6, (<https://acc.dau.mil/adl/enUS/32579/file/6180/JCIDS%2520Overview%2520Brief%2520Oct%252004.ppt>).

However, the F-35 has the features of the Evolutional Acquisition and Spiral Developments²⁴⁵ which is a strategy for military acquisition in the situation that necessary technologies have not matured enough. The program was divided into the known part and the unknown part. The known parts were the engine development, the stealth technologies, and radar systems. These technologies and devices were already developed and implemented for several predecessors. Even though maturations and modifications were required, these technologies were expected to be completed within the appropriate time frame. The unknown part included the situation awareness system, the data sharing system, and the operating system including the helmet mounted display. Specifically, the F-35 applied a block development approach for the operating software program, which includes five blocks from the version of training configuration to the version of full warfighting capability.²⁴⁶

On the other hand, the program shows a clear connection with the industrial bases. This connection led the F-35 JSF program to American Militarism which can be featured as ‘overly ambitious,’ ‘not efficient,’ and ‘not reasonable.’ There are five evidences which show that American Militarism has influenced the development of the Joint Strike Fighter.

First, the purchasers – Congress and the Department of Defense – have not exercised the proper authority over the merchandiser – Lockheed Martin and its associates –, even though there have been significant flaws in the program.²⁴⁷ The department of defense and Congress were reluctant to take action on the program when several significant flaws occurred. The Government Accounting Office had warned about possible program failure and cost overrun, and recommended restructuring the JSF program almost every year since 2001.²⁴⁸ During the development period, the Department of Defense had not seriously considered these warnings and recommendations, and reluctantly responded

to them with minor changes or non-action, continuing to show confidence about the original development strategy and plan.²⁴⁹ Even though the Department of Defense re-planned the JSF program three times during this period, all these changes were initiated only after the program faced incurable problems. The Department of Defense’s inaction caused the program to miss out opportunities for timely remedies in the JSF program. Furthermore, considering that all these Government Accounting Office’s reports were drafted to report to Congressional committees, Congress had partial responsibility for the cost overrun and delivery delay of the JSF program.

Second, the program did not satisfy the requirements of the final consumers – the Air Force, the Navy and the Marine Corps. Within the Air Force, there have been continuous objections to the development of the F-35.²⁵⁰ In the warfighting aspect, pilots requested buying more F-22s rather than developing the F-35, arguing that F-22 guarantees better performance in air-to-air battle situations. In addition to that, the Navy has kept insisting that F-18 E/F would be a better choice than the JSF in regard to survivability and timely replacement of the retiring jet fighters.²⁵¹ Specifically, the Navy was skeptical of the single engine jet fighter because it reduces the survivability of pilots when jetfighters operate with aircraft carriers. Furthermore, when the department of defense released the plan to develop the sixth generation jet fighter, the Navy announced that the sixth generation jet fighter would be replaced with the F-18 E/F, not the fifth generation jet fighter.²⁵² It is another evidence that the Navy has not recognized the F-35 as a proper replacement for F-18.

245. Kenneth Farkas and Paul Thurston, 2003, “Evolutionary Acquisition Strategies and Spiral Development Processes Delivering Affordable, Sustainable Capability to the Warfighters” in *PM*, pp. 10-14.

246. From the program’s outset, the software team has focused on developing six key software releases known as Blocks – F-35 homepage (<https://www.f35.com/about/life-cycle/software>).

247. W.J. Hennigan and Ralph Vartabedian, 2013, *LA times* “F-35 fighter jet struggles to take off” (June 12, 2013; <http://www.latimes.com/business/la-fi-0612-fighter-jet-testing-20130612-dto-htmlstory.html>).

248. The reports are GAO-02-39 (2001), GAO-05-271(2005), GAO-06-356(2006), GAO-07-360(2007), GAO-08-388(2008), GAO-09-303(2009), GAO-10-382(2010), GAO-11-325(2011), GAO-12-437 (2012), GAO-03-309(2012), GAO-14-322(2013).

249. GAO, 2014, “Appendix I: Prior GAO Reports and DOD Responses” in *F-35 JOINT STRIKE FIGHTER: Problems Completing Software Testing May Hinder Delivery of Expected Warfighting Capabilities*, pp. 27-28.

250. James S. Browne, 1997; Michael J Costigan, 1997; Devin L Kate, 2003.

251. Sydney J. Freedberg Jr., 2013, *Forbes Champions More Super Hornets; F-18 Vs. F-35, Round Two* (December 05, 2013; <http://breakingdefense.com/2013/12/forbes-champions-buying-super-hornets-f-18-vs-f-35-round-two/>).

252. Paul McLeary, 2015, *New Budget Will Feature 6th Gen Fighter* (Jan 28, 2015; <http://www.defensenews.com/story/defense/air-space/strike/2015/01/28/sixth-generation-fighter-2016-budget/22477329/>).

Third, saving the industrial base and keeping it competitive in the international markets has been a critical interest of the U.S. Government, and it was the environment in which the JSF program began. In the 1980's, the US industrial bases had been losing competitiveness in the global markets. This situation was more aggravated during the post-Cold War era due to reduced defense budget.²⁵³ In this situation, it was crucial to save the industrial base for manufacturing advanced weapon systems and keep them competitive both in the market and in the war fighting capability. To protect manufacturing capacity, the US government considered recommending consolidation within industries and partnership with foreign business partners. This option required the US government – both the executive branch and the legislative branch – to decide to release ‘dual-use technology’ to the private sector, which had been prohibited to share with non-defense related companies or foreign companies. To stay competitive in the defense industries, robust research and development programs for new technologies were considered. Even when the Department of Defense determined not to produce weapon systems, the department attempted to save the programs by putting them in the research and development section for technological maturation.

The JSF program is one of the programs which contributed to saving the US industrial bases. When the Department of Defense encountered the situation of canceling the programs that sought new tactical jet fighters for the Air Force and the Navy in the early 1990's, the department put these programs in a research and development program to seek technologies for the next generation jet fighter, which was titled as “Joint Advanced Strike Technologies,” instead of canceling the programs.²⁵⁴ The JAST program was later turned into the Joint Strike Fighter F-35 program. In addition to that, foreign countries were encouraged to participate in the development of the F-35. Foreign investment in the development of the F-35 covers almost 20 percent of total development cost (\$4.375 billion / \$25 billion).²⁵⁵ Moreover, there are more potential buyers who are willing to purchase F-35s, including development partners such as the United Kingdom, Italy, Netherland, Turkey, Canada, Australia, Norway, and Denmark. Foreign investment and potential buyers in the JSF program are sources to save the industrial bases of the

253. Kenneth Flamm, 2005, “Post-Cold War Policy and the U.S. Defense Industrial Base,” *The Bridge*, Vol. 35, No. 1, Spring 2005 (the National Academy of Engineering: Washington, DC) pp. 9-11.

254. The Department of Defense, 1993, *the Report of the Bottom Up Review*; US Congress, 1995, *the National Defense Appropriation Act for FY 1996*, pp. 105-106.

255. Gertler, 2014, pp. 22-25.

United States.

Fourth, the title “the fifth generation” did not come from any Services of the US military. The title was the catch-phrase of Lockheed Martin to sell F-35 to customers including the US military and other foreign partners. Originally, the title came from Russia, who tried to sell its new jet fighter in the late 1990's.²⁵⁶ The Russian Weapon Corporation started to use the title of “fifth generation” jetfighter and the term was widely accepted throughout the international jet fighter market. The Lockheed Martin Corporation used this term as a catchphrase for the new jet fighter. Now, the Department of Defense, Congress and military services are using the term of the fifth generation jet fighter to describe a family of advanced jet fighters. Furthermore, when the Department of Defense recently released a new jet fighter development program, the Department called it “the sixth generation” jet fighter instead a next generation jet fighter.

Fifth, the decisions regarding the development of the F-35 were made without a solid technological basis. Specifically, it was too premature for the JSF program to enter the system development and demonstration (SDD) phase in 2001.²⁵⁷ The decision to enter the SDD phase has been criticized as “signing a contract before a test flight”²⁵⁸ and “against the tradition of business in defense industry.”²⁵⁹ This premature decision led the program to the first restructuring in 2003 which was mostly about the redesign of airframe to secure more room for armament and reduce the weight caused by adding armament. Furthermore, the JSF program's concurrency of technology advancement, program development, test, and production is substantial.²⁶⁰ So it is highly probable that failure in one part can impact other parts of the program and lead the whole program to failure. In fact, the program development without technological maturation caused the increase in development cost and the depletion of reserve funds. The depletion of

256. ALEXANDER VELOVICH, 2000; Unknown, 1999; DOUGUS BARRIE, 1995; 1996.

257. GAO, 2001, *Joint Strike Fighter Acquisition: Mature Critical Technologies Needed to Reduce Risks*; GAO, 2005.

258. Lee Ferran, 2012, “US Weapons Man: F-35 Fighter Plan Was ‘Acquisition Malpractice’,” in *ABC news* (Feb. 7. 2012; <http://abcnews.go.com/Blotter/35-fighter-plan-acquisition-malpractice-pentagon-official/story?id=15530008>).

259. David Martin, 2014, “Is the F-35 worth it?” in *60 minutes* (Jun 1. 2014; <http://www.cbsnews.com/news/f-35-60-minutes-david-martin/>).

260. GAO, 2014.

reserve funds led to the second program restructuring in 2007, which contained the plan of entering the production phase while test flights were going on.²⁶¹ This flaw in the program was caused by the conflict of the program’s two main objectives – technological advancement and replacement of legacy jet fighter. The ambitious attempt to achieve both objectives became serious threats to the program.

261. GAO, 2007, *Joint Strike Fighter: Progress Made and Challenges Remain*.

Part II
Congressional Decision Making Process

Chapter 6
Congressional Decision Making Process

Chapter 7
Method and Data

Chapter 8
Analysis

Chapter 9
Conclusion

In part I, American militarism and its relationship with the Military Transformation after the Cold War are analyzed with the perspectives of US Military, the US Congress, US Public, and American defense industries. Part I show how these actors relates with others in the name of American Militarism, at the field of the Military Transformation after the Cold War. In part II, the discussion is brought down to the Congressional Decision making process where the fore-mentioned participants make enormous efforts to influence others in order to achieve their own goals in defense policy. Even though the actor who decides the votes in the US Congress is each legislator, his or her votes are influenced by various factors. Following chapters show how these factors influence each legislator's voting behavior in Congressional budgetary process with regard to defense budget.

Chapter 6. Congressional Decision Making Process

Congressional influence on defense policies has been studied in the following three fields: defense policy as a federal policy, Congress as a political institution, and the federal budget process that includes authorization and appropriation processes.

1. Defense Policy as a Federal Policy

Defense policies can be divided into three categories: strategic policy, crisis policy and structural policy. Strategic policy and crisis policy primarily deal with the external threats while structural policy deals with the domestic foundations. Structural policy issues are related to personnel, organizations and equipment procurement. Generally, Congress makes the final decision on each policy agenda of structural defense policy through the formal legislative process. On the other hand, strategic policy pursues specific programs or deals with special situations. Those programs and situations are initiated by external threats such as changes of the international security environment. Additionally, crisis policy is about how to deal with the crises which occur with unexpected time and space.

Because strategic and crisis policies require the responsible agencies of policies to react with professional skills and knowledge within a relatively short time, the president and the Department of Defense have the authority to initiate actions, even though Congress

has the final decision authority. These have been not the subjects of negotiation or bargaining in Congress but one of persuasions required to gain support from Congress. Congress also has been inclined to defer to the executive branch's initiatives on military strategies in defense policy.

Due to presidential and executive branches' strong initiatives in strategic issues, there has been little room for Congress to influence the execution of defense policy, specifically, strategic issues. Nonetheless, Congress can assert its influence over budget related areas such as program and budget authorization. The influence of Congress has been increased in the defense policy decision making process as the defense budget literally impacts on almost every aspect of defense policy. Because a budget can be effective after passing the process of authorization and appropriations, it is necessary to analyze how military-related actors, such as Congress, the Department of Defense, and each service, interact with Congress during the processes of authorization and appropriation.

Previous research found that defense budget is one of the target areas over which most members of Congress desire to exert their influence; attributes of individual legislators like ideology and partisanship have been factors that affected each legislator's choices on roll call votes in Congressional budgetary process; the budget of RDT&E (Research, Development, Test and Evaluation) has been hidden from detailed scrutiny because it is politically safe for members of Congress to support research, while defense procurement programs have been scrutinized by public. Consequently, it is necessary to analyze the budget items which include RDT&E as well as procurement programs by which legislators can benefit their constituencies.

2. Congress as a Political Institution

Institutionally, Congress has authority and power to approve the federal policies pursued by the executive branch. In that defense policy is one of the federal policy areas under the oversight of the US Congress, it is necessary to understand the process in which Congress as a political institution exercise authority over defense policy.

Previous studies regarding Congress as a political institution point to the significance of partisanship, ideology, and influence of committee in determining the votes of legislators. Among them, partisanship and ideology are factors that determine the vote of each legislator – yea or nay –, while influence of committees is mostly related to the

process (drafting stage) or the product of process. If a legislator is influenced by his party, which can exercise influence through agenda setting and committee appointments, he might follow the choice of the majority of his fellow party members. On the other hand, if she mostly follows her personal ideology when voting on a roll call vote, she might vote based on whether the bill or amended bill is closer to her ideology. Besides, if a House member lacks comprehensive understanding of a bill or an amendment, he or she might follow the lead of the responsible and professional committee. Furthermore, in the House of Representatives, the rules of the game require the simple majority of 218 votes to secure passage of an amendment.

*A. The Process in which a Bill Takes in House*²⁶²

The process through which U.S. House of Representatives deals with proposed bills is as follows. First, one of Representatives or Senators submits a bill to his chamber with his own sponsorship. The bill will be given its legislative number and referred to the committee, which has a jurisdiction over the area related to the bill, by the House Speaker. Second, once the committee receives the bill, the members of the committee modify the bill through the processes of *public hearings* and *markup sessions*. After that, the members of the committee determine whether or not it will report the bill to the floor. If the committee determines to report the bill, it sends a committee report which has a title and a number that includes a prefix of ‘*House Report*’²⁶³ to the floor. Third, when a bill arrives at the floor of the House, the bill enters the process of *debates* and *amendments*. The debate process is the process in which members of House are discussing whether or not the contents of the bill are eligible for the purpose of the bill. If a bill is determined not to be eligible to pass, the bill moves to the process of amendments. The amendment process is the process in which members of House are discussing and determining which part of the contents of a bill is required to be changed, how it needs to be modified, and whether this change will be made through votes. The votes can take the form of several types such as roll call votes, voiced votes, etc. Fourth, after completing all these processes, members of the House determine to pass the bill by a vote.

In the congressional decision making process, the amendment process offers non-

committee members opportunities to propose changes to bills reported by the committee of related jurisdiction. Even though special rules regarding amendments in House prohibit non-committee members from proposing amendments from the House floor in most cases, the amendment process is a stage and time for legislators to express their positions and opinions which are not likely to be considered during the draft stage of a bill. Moreover, voting in House performs a critical role to determine the fate of an amendment. Voting in House also gives opportunities for legislators to express their position to legislations by choosing ‘Nay,’ ‘Yea,’ or ‘present.’ Differing from voice votes, the choice of a legislator is recorded in a recorded vote, which also requires another one fifth of quorum (44 members) to be proceeded after the decision for a voice vote. When an amendment is on a recorded vote, it means that the amendment is quite controversial to be determined by a voice vote. In this sense, recorded vote – roll call vote– are the very means to indicate how legislators consider a bill and related amendments, and to reveal legislators’ specific positions and opinions to the public or their constituents.

B. Partisanship (Party politics)

Political party can exercise influence on its members through agenda-setting power and committee appointment. If political parties matter in the legislative process, each legislator is likely to vote in compliance with his party. In this case, the degree of party unity in a vote is high in either a negative or positive direction for an amendment. Moreover, when the gap between majority and minority is not large, there is a possibility that the minority party can affect the result of a roll call vote. When the majority party does not act together in a roll call vote, the minority party can control the result of a roll call vote by acting together. According to the theory of party politics, the most significant factor that determines the passage of an amendment is whether the majority party unifies and how strongly the majority party acts together.

C. Ideological Position of Individual Legislator

Institutionally, legislators choose between two versions of legislative pieces – an original bill and a draft of amendment to the original bill – in the amendment process (Poole and Rosenthal, 1991; Krehbiel, 1998). When a legislator chooses one of them, he will choose the most preferred one. If the ideology is the main factor in a vote decision, he will choose the closer one in terms of ideology.

262. John V. Sullivan, 2007, *How our laws are made*, Washington D.C: USGPO.

263. John V. Sullivan, 2007, pp. 15-18.

Assuming that ideology is the most significant factor that determines the voting in Congress, the sponsor of a bill might consider fellow members' ideologies when proposing an amendment. If he intends to change a bill by passing the amendment, he might consider how many legislators prefer an amended bill to the current, un-amended bill. Assuming that legislators maintain consistent ideological positions during their terms, a sponsor can predict the probability of passage and only propose an amendment that is expected to pass.

D. Armed Services Committee and Economic Benefits

In that the authorization and appropriation processes create the federal budgets, amendments of this process are supposed to adjust the amount of money in the total budget. These adjustments are divided into three categories. First, there are negative adjustments to reduce the amount of budget or prohibit the use of budget. Second, there are positive adjustments to increase the amount of budget. Third, there are cases to transfer a part of budget from one item to another.

A committee has professional information in its jurisdiction, and legislators who are not members of the committee are inclined to rely on the committee's information when they make decisions on issues that are related to the committee's jurisdiction. Furthermore, legislators are inclined to make enormous efforts to become a member of the committees that are beneficial for their constituents in order to be re-elected. In that a committee membership is closely connected with economic benefit to committee members' districts, the members of military related committees are likely to support the amendments that are favorable to defense spending by offering positive information for the amendments, while likely to hesitate to act for the amendments that are not favorable to defense spending by offering negative information about the amendments. Furthermore, when a legislator comes from the districts where its economy relies on defense industries, the legislator is likely to support the amendments favorable to defense spending and vote for the amendments.

3. Federal Budget Process

A. Authorization Process and Appropriation Process

In the United States, in order for the federal government to pursue a certain program or

policy, it is necessary to obtain Congressional approval on the federal budget. The budget process consists of two different tasks – authorization and appropriation. Authorization means the process by which the executive branch obtains the authority from the Congress in order to pursue a certain program or policy. It is under authority of the committee with jurisdiction over related policy area. Through authorization, the executive branch can obtain the authority to include the approved programs in the annual budget proposal. Essentially, the authorization is centered on approving or disapproving a program and policy, rather than determining a certain amount of budget for the program.

The other task in the budget process is appropriation. Appropriation is the process of settling the annual budget – how much money to be spent for the programs and policies during a certain year. Appropriation is the task of each chamber's Appropriation Committee and its subcommittees. Through the appropriation process, each agency and department obtains the authority to draw money for the programs and policies included in the appropriation bill.

B. Categories in Defense Budget

Defense authorization bills and appropriation bills deal with the Federal budget-money. Procurement programs have been recognized significantly by members of Congress, because this is the area of budget where a member of Congress can make a difference for her political intent. Moreover, other budget items such as the budget for maintenance and operation have not been under the influence of Congress due to the fact that the budget is required to maintain the military organizations for their basic mission. In addition, several significant programs, such as *Missile Defense System Program* or *Joint Strike Fighter Program*, have been included in RDT&E phase even though they entered in the stage of procurement. Sometimes, these programs were intentionally put in the budget of RDT&E to escape from intense budget screening during the budget process.

To check the contents of budget items, I sorted 327 amendments to annual defense budget bills from the 103rd to the 112th Congress in accordance with budget categories in the defense budget request form; "1" for basic, applied, and advance technology in RDT&E phase; "2" for system development, test and evaluation; "3" for procurement; "4" for general operation and maintenance; "5" for military constructions and BRAC (Base Realignment and Closure); "6" for general items that are related to the whole budget. Below is the result of sorting amendments.

Table 6-1. Budget Categories: Amendments, the 103rd to 112th Congress

	All amendments (n=327)	Authorization (n=215)	Appropriation (n=112)
Category 1	21	8	13
Category 2	23	17	6
Category 3	23	12	11
Category 4	197	135	62
Category 5	9	7	2
Category 6	54	36	1

Note: 1: basic, applied, advanced technology, 2: system development and evaluation, 3: procurement, 4: operations and maintenance, 5: military construction, 6: etc.

Most of the amendments were in the category of ‘Operation and Maintenance’ (Category 4). It was followed by ‘General items’ (Category 6) and others. In percentages, the appropriation bills had more amendments related to procurement and RDT&E than the authorization bills had.

C. Annual Budget Process

An annual budget process begins with the preparation of a presidential federal budget proposal. The Office of Budget and Management (OBM) takes lead in preparation of a presidential federal budget proposal. When the proposal is completed, the White House sends this to the Congress. Once the presidential proposal arrives in the Congress, committees of both chambers review, modify, and amend the presidential proposal with the cooperation of the federal executive agencies. After that, each committee releases an authorization bill and sends the bill to the Office of Congressional Budget for developing an annual budget resolution. Under the guidance of an annual budget resolution, each chamber’s appropriation committee allocates the total budget to its subcommittees to review, modify, and amend budget ceilings and related programs. After completing the subcommittee’s review and modification, each subcommittee sends the result to the appropriation committee. The appropriation committee finalizes the appropriation bill

and sends it to the floor in order to consider amending the bill with all members of the chamber.

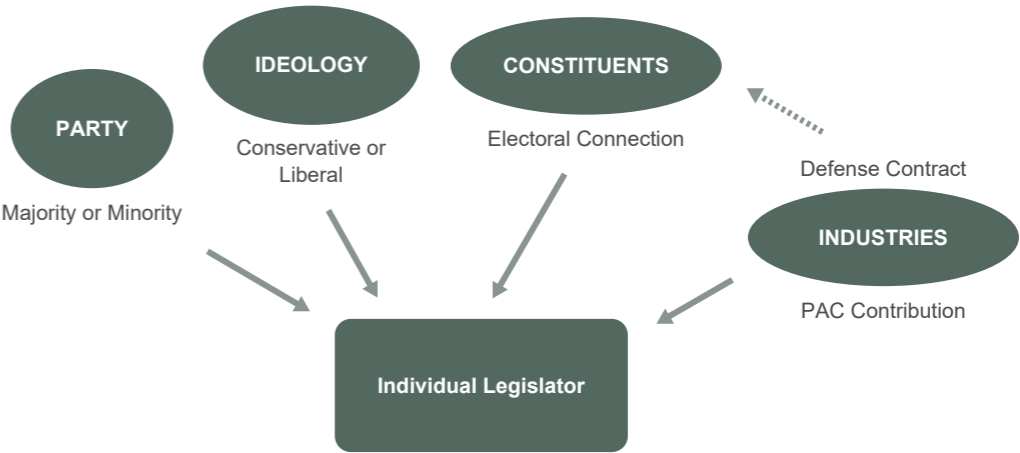
4. Factors and Hypotheses

Previous studies suggest four possible factors that can explain the choice of individual legislators in roll call votes on amendments to annual defense authorization and appropriation bills – ‘party status,’ ‘ideology,’ ‘amount of defense contracts to each district,’ and ‘amount of PAC contributions to each legislator’ as factors to explain the choice of individual legislators over amendments to defense budget bills.

As mentioned above, a committee is under influence of a majority party. If an amendment is intended to change an original bill into the opposite direction of the committee’s choice, the committee may offer negative information against the amendment and persuade the majority party members to vote unfavorably to amendments which contain decrease of defense spending. Consequently, *a majority party member is more likely to vote favorably for defense spending or less likely to vote unfavorably for defense spending (hypothesis 1).*

Ideology is another significant factor that determines each legislator’s voting behavior. Institutionally, the amendment process is the process in which legislators choose one of two legislative pieces – a bill and its amendment. If ideology of a legislator is the factor

Figure 6-1. Theoretical diagram of factors



that explains the choice of the legislator, the legislator may choose the closest one to his ideological position. According to theories of militarism, militarism is coincided with conservative ideology and favorable to defense spending. Consequently, *if a legislator is more conservative, the legislator is more likely to vote favorably to defense spending (hypothesis 2).*

In that most legislators pursue to be re-elected, legislators may pay attention on economic interests of constituents in their congressional district. Defense contracts to a legislator's congressional district might be counted as a kind of economic interest. Consequently, *as a congressional district receives more defense contracts, the legislator elected from the congressional district is more likely to vote favorably for defense spending (Hypothesis 3).*

The amount of defense PAC contribution to each legislator is operationalized as the amount of defense corporations' PAC contributions to each legislator. Defense PAC contributions may affect the general defense view of each legislator. *As a legislator receives more PAC contributions from defense corporations, the legislator is more likely to vote favorably for defense spending (Hypothesis 4).*

Chapter 7. Method and Data

1. Unit of Analysis and Estimation Model

The period for research is from 1993 to 2012 and, by administration, it covers from the first Clinton administration to the Obama administration. This period is closely connected to the concept of military transformation. During the first Clinton administration, the literature of military transformation was formed. In the second term of President Clinton, this concept evolved into specific programs for realizing its vision. During the Bush administration, the U.S. was in a war while the concept of military transformation was being thrived. There were efforts to balance between reality and vision during the Bush administration. the Obama administration prepares another shift from 'a state of war' to 'a period of peace and preparation of another version of military transformation.' In order to examine the influence of Congress on defense policy, I focused on the

amendments to the defense authorization bill and defense appropriations bill in each year during the given period. I found 227 amendments for authorization and 112 amendments for appropriation. The unit of analysis of this research is each legislator who was a House member from the 103rd Congress to the 112th Congress. Each Congress had 435 members during the period. I gathered the data primarily from the Congressional record²⁶⁴ and roll call vote record²⁶⁵ gathered by the Library of Congress.

Figure 7-1. Model 1: Estimation of Defense Vote Index

$$\begin{aligned} \text{Defense Vote Index}(AU/AP)_i & \\ &= \alpha + \beta_1 \cdot \text{Ideology}_i + \beta_2 \cdot \text{Party}_i + \beta_3 \cdot \text{PAC}_i + \beta_4 \\ &\quad \cdot \text{Defense Contract}_i \end{aligned}$$

- * Defense Vote Index(AU/AP): the ratio of 'favorable legislator i's choice toward defense spending' compared to all other votes in roll call votes in *authorization/Appropriation* process
- * Ideology: legislator i's ideological position (Liberal: -1, Conservative:1)
- * Party: status of legislator i's party
- * PAC: Defense related political action committee's contribution to legislator i's district
- * Defense Contract: the amount of defense contract to legislator i's contract

2. Dependent Variable

The dependent variable is the choice of individual legislators in each roll call vote on an amendment to the defense authorization bills and appropriations bills of the given years. I defined the dependent variable as "0% of each representative's favorable choices to defense spending out of the total roll call votes in a congressional term." For the dependent variable, I generate an index by calculating the ratio of 'favorable choices toward defense spending' compared to entire votes. For example, in the 103rd Congress, there were the 20 roll call votes on amendments to the defense authorization bills. If a legislator voted favorably to defense spending in the 12 roll call votes that were determined to be favorable to defense spending, he will be coded as '0.6' in accordance with the ratio of favorable choices (12 choices) to the entire votes (20 roll call votes) in this term of Congress (the 103rd Congress). This process requires discerning which

264. <http://thomas.loc.gov/home/LegislativeData.php?&n=Record>.

265. <http://thomas.loc.gov/home/rollcallvotes.html>.

amendment is favorable to defense spending by analyzing the contents of amendments. I coded an amendment favorable to defense spending as ‘1’ and unfavorable one as ‘0’. Then, I calculated the favorableness of a legislator to defense spending in accordance with this coding and his choices in the roll call votes of a congressional term.

When I focus on the passage of an amendment, the number of failed amendments is twice as large as that of passed ones (passed: 121, failed: 206). In authorization bills, the number of failed amendments is almost the same as that of passed ones (passed: 109, failed: 106). However, in appropriation bills, the failed amendments are five times larger than the passed ones (passed: 15, failed: 97). This difference between authorization bills and appropriation bills comes from the difference of attributes of two different budget

Table 7-1. Pass or Fail

Authorization & Appropriation		Authorization		Appropriation	
Pass	Fail	Pass	Fail	Pass	Fail
121	206	106	109	15	97
N= 327		N=215		N=112	

Table 7-2. Summary of amendments by amount of budget changes

	All amendments (n=327)	Authorization (n=215)	Appropriation (n=112)
Amount=0	185	159	26
Min.	0	0	260
Median	0	0	22,020
Mean	725,400	197,000	1,738,000
Max	35,200,000	12,000,000	35,200,000
SD	3,411,390	940,904	5,558,581

Note: 1: the unit is 1,000\$.

processes – authorization and appropriations.

Speaking of the amount of budget changes presented in amendments, there are 185 amendments that did not contain the amount of budget changes (see Table 7-2). Most of them are amendments in authorization bills, and these amendments contained the redefinitions of terms, special requests to the Department of Defense or the President, or changes of rules and regulations that were dealing with sensitive budget items. When analyzing the standard deviations and the distributions of the budget changes, the amounts are so dispersed that it is meaningless to set the average amount and possible boundaries of the expected budget changes.

3. Independent Variables

I considered four variables as the independent variables that explain the changes of the dependent variable.

A. Party status

One of the traditional factors that affects voting behavior of members of Congress has been majority party status. When a party has the majority status, the party has a relatively strong influence on its members. In this case, party members are likely to vote in accordance with the intent of their party leadership, and the party status can weaken other factors’ influence on the individual legislators’ choices.

During the period from 1993 to 2012, the Republican Party had majority status except

Table 7-3. Majority and Minority

	103 rd	104 th	105 th	106 th	107 th	108 th	109 th	110 th	111 th	112 th
Republican	176	230	228	223	221	229	232	233	178	242
Democrat	258	204	206	211	211	205	201	202	256	193
R-D	-82	26	22	12	10	24	31	31	-78	49

Note: on the basis of the beginning of each Congress; Bold & Italic means Majority status.

for the 103rd Congress and the 111th Congress. When checking the difference between the majority party and the minority party, there have been larger differences when the Democratic Party was the majority party. For party status, I code the majority party as '1' or the minority party as '0', regardless of which party is majority.

B. Ideology

According to Keith Poole and Howard Rosenthal, the ideology of each member of Congress is the most influential factor over voting behaviors of members of Congress. For ideology, DW-Nominate scores²⁶⁶ provide the ideological position of each legislator. In that NSVI score reflects each legislator's general defense view and NSVI (National Security Voting Index) is highly correlated with DW-Nominate scores, a conservative legislator in DW-Nominate score is more likely to vote favorably to defense spending.

C. PAC Contribution

Each political action committee (PAC) can make contributions to candidates for elections. There are three types of candidates: incumbent candidates, challengers, and competing candidates in open seats. I focus on incumbent candidates who are able to vote in the House of Representatives during each election cycle.

The data is downloaded from the Federal Election Commission (FEC)'s website. FEC has maintained records on registered political action committees' campaign financial contributions to registered candidates in each election cycle. The record has been filed under the title of "Contribution to Candidates from Committee." The data in the records includes the title of political action committees, the amount of money contributed, and the name of recipient.

In order to make a dataset for this independent variable (PAC contribution), I follow three steps. First, I sort out the candidate who has incumbent candidate status qualifying him to participate in roll-call votes.²⁶⁷ Second, I sort out the political action committees that are categorized as political actions committees of defense industries. I consider the

committees mentioned as defense PAC in the website of 'OpenSecret.org.'²⁶⁸ I made a report that has a list of the amount of defense contracts that defense industries made with the Department of Defense during each election cycle. I sorted the contracts from the largest to the smallest by election cycles and assigned them to individual industries which made each contract. Based on this result, I calculated the total amount of defense contracts that each industry made with the Department of Defense. I considered the top 250 defense industries in the matter of total defense contract amount. I also included the affiliate companies of each industry and counted them as the part of each industry.

I downloaded a file regarding industry lobbies from 'OpenSecret.org.' The file has the data which covers the time span from 1998 to this year. For the pre-1998 period, I obtained related information about affiliates of each defense industry from the website of 'OpenSecret.org.' After that, I added all the industries that were on the opensecrets.org website but not in the report with defense contracts. Then, I searched the PACs of the industries on reports of each election cycle in the defense PAC list. The final product of this process is a list of 250 companies that made contracts with the defense department and the amount of PAC contributions that these companies made during each election cycle. Third, I calculate the total amount of money that a legislator received from political action committees of defense industries by adding the dollar amount offered by the committees to each legislator. The product is the amount of PAC contribution that a legislator received from political action committees in defense industries.

D. Military Contract to Congressional Districts

For the amount of defense contract to each district, I obtained the data from the Federal Procurement Data System²⁶⁹ for the period from 1993 to 2012. It was a challenging task to extract the amount of defense contract to each congressional district from the data. First, the data set does not have the data field that directly connects defense contracts with congressional districts. Prior to 2003, the data set of 'Federal Procurement Data System' did not have the field of Congressional Districts, while the data set has had the field of congressional district since 2003. Furthermore, a significant number of errors exists in the congressional district field even in the data after 2003. The congressional

266. DW nominate number: <http://voteview.com/dwnominate.asp>.

267. <http://www.fec.gov/>: Federal Election Commission.

268. <http://www.opensecret.org/>.

269. https://www.fpds.gov/fpdsng_cms/: Federal procurement data system.

district is not the reliable data field to use in this research. The alternative data field that connects the contract records with congressional district is *postal zip code*.

Second, ‘assigning postal zip codes to congressional districts’ was another challenging task because the US Census does not have the relationship file which connects postal zip codes and congressional districts before the 2000 census. For the 1990’s I used the data of an appendix included in the book of “Congressional Districts in 1990s”²⁷⁰ published by the Congressional Quarterly.²⁷¹ At the same time, I used the US Census relationship files between postal zip codes and congressional districts for the 2000’s and 2010’s (See Appendix A).

Third, the congressional districts have been redistricted not only in the beginning of a decade but also between the decades due to several reasons. Mostly, redistricting between decades was initiated by ‘the issue of under-representation of minority races’ in the southern states like Louisiana, North Carolina, Florida, Georgia, Texas, and also in Minnesota. The issue of under-representation was caused by massive racial movement from northern states to southern states in the 1980’s. When the 1990’s census was finished, redistricting did not reflect the right portion of representation of minority races and several law suits were filed against state or federal government to make redistricting correct. I found 10 redistricting cases in Georgia (1996, 2006), Florida (1994, 1996), Texas (2004, 2006), North Carolina (2000, 2002), Minnesota(1998), Louisiana(1998, 2000), New York (2000), and Virginia (1998, 2002) since 1993, when the redistricting of the 1990 census took effect. Using “ArcGIS,”²⁷² I extracted *zip codes – Congressional Districts* relationship files for each congress (See Appendix B).

Fourth, subcontracting in defense industries may decrease the explanatory power of contract data which is based on prime contracts. The literature says that 50% of prime

contracts have been subcontracted and the data for the primary place of performance of contracts has been limited by various reasons.²⁷³ The primary reason is that prime contractors have denied submitting the information regarding subcontracting. However, there is an opposite argument that overall distribution of subcontracts roughly parallels that of prime contracts. Moreover, the political advantage of prime contractor may not be reduced by the fact that much of the work will not be performed by prime contractors because prime contractors have symbolic influence in the area of defense industries.²⁷⁴ In that distribution of subcontracts roughly parallels that of prime contracts and that this research covers not a program specific but deals with entire defense contracts, it is reasonable to keep using the dataset based on the prime defense contract.

Chapter 8. Analysis

1. Estimation of Models

In authorization process, the result shows that the PAC contribution (cnsum) and the Ideology of each legislator (dwnom1) are the two primary factors that lead each legislator to vote favorably to defense spending. Both factors show positive numbers: the PAC contribution has 0.101 as the coefficient, and the ideology of each legislator has 0.140 as the coefficient. Besides, within the majority party, the ideology of the majority party members has a negative relationship with their favorable voting behaviors to defense spending (see Table 8-1. “Ideology:Party”). The interaction variable between ideology and majority party status has -0.322 as the coefficient.

In appropriation process, the result shows that the military contract to districts (dollarsum) and the Ideology of each legislator (dwnom1) are the two primary factors that influence each legislator’s votes on defense spending favorably or unfavorably. The military contract

270. CQ Press, 1993, *Congressional Districts in the 1990s: A portrait of America* (CQ Press: DC).

271. There was not a digital media for the book of *Congressional Districts in the 1990s: A portrait of America*. I scanned the appendix of ‘zip code-congressional districts’ and turned it into an editable document. Then, I converted the document into a dataset.

272. First, I put the zip-code map over the plain map of the United States. Then, I overlaid the congressional district map of the related Congressional term over the Zip-code & the US map. By geographically matching these three maps, I generated zip-code & congressional district dataset.

273. Ken Mayer 1991 The political economy of defense contracting, chapter 2. pp. 33-34.

274. Ken Mayer 1995 “Electoral Cycles in Federal Government Prime Contract Awards: State-Level Evidence from the 1998 and 1992 Presidential Elections.” *American Journal of Political Science* 39 (No. 1, February 1995) p. 171.

Table 8-1. Result of Linear Regression Model: Authorization bills only

n=4266	Estimate	Pr(> t)
(Intercept)	0.546	$< 2 \times 10^{-16}$ ***
Defense Contracts ★dollarsum (\$ 100 billion)	0.187	0.3375
PAC Contribution ★cnsum (\$ 100 thousand)	0.101	4.20×10^{-12} ***
Ideology ★dwnom1	0.140	3.36×10^{-9} ***
Party ★party1	-0.0256	0.0844
Ideology:Party ★dwnom1:party1	-0.322	$< 2 \times 10^{-16}$ ***

Note: *** >0.000, **>0.001, *>0.05 ; ★ variable names in database.

to districts shows a negative coefficient, while the ideology of each legislator has a positive one as in the authorization process: the military contract to districts has -0.366 as the coefficient, and the ideology of each legislator has 0.438 as the coefficient. The ideology of each legislator shows a positive effect on House members’ favorableness to defense spending with the highest level of statistical significance (***: > 0.000). In addition, within the majority party, the ideology of the majority party members has a positive relationship to their favorable voting behaviors to defense spending (see Table 8-2. “Ideology:Party”). The interaction variable between ideology and majority party status has 0.0732 as the coefficient.

Table 8-2. Result of Linear Regression Model: Appropriation bills only

n=3835	Estimate	Pr(> t)
(Intercept)	0.546	$< 2 \times 10^{-16}$ ***
Defense Contracts ★dollarsum (\$ 100 billion)	-0.366	0.007179 **
PAC Contribution ★cnsum (\$ 100 thousand)	-0.0129	0.196976
Ideology ★dwnom1	0.438	$< 2 \times 10^{-16}$ ***
Party ★party1	0.00915	0.37346
Ideology:Party ★dwnom1:party1	0.0732	0.000674 ***

Note: *** >0.000, **>0.001, *>0.05; ★ variable names in database.

2. Party Status

Majority party member is more likely to vote favorably to defense spending (hypothesis 1).

In that the majority party’s influence on related committee and committee’s favorable inclination to defense spending, I predicted a positive relationship between majority party membership and party members’ favorableness to defense spending. Nonetheless, when I estimate model 1 with the dataset for authorization process, majority party membership does not show a positive effect on the favorableness of legislators to defense spending. Furthermore, its statistical significance is below 0.05. The estimation result does not support hypothesis 1 in the case of authorization process. Within the majority party, the ideology of each members has negative relationship with their favorable voting behaviors to defense spending (see Table 8-1. “Ideology:Party”) in authorization process.²⁷⁵ The interaction variable between ideology and majority party status has -0.322 as the coefficient.

This result comes from the fact that a political party with majority status does not want to bring changes to its original bills which are drafted and proved by a committee under the majority party's influence; the amendments to authorization bills are mostly about policy adjustments or increase of defense spending; both majority and minority parties are supportive and have a generous position to these amendments in authorization process (see the data section in Chapter 6). These facts reduce the effect of majority party and bring a negative effect as well as decrease the statistical significance of the majority party's influence.

When I estimate model 2 with the dataset for appropriation process, the majority party status shows positive effect on the favorableness of legislators to defense spending. Nonetheless, its statistical significance is below 0.05. Within the majority party, the ideology of the majority party members has positive relationship with their favorable voting behaviors to defense spending in appropriation process (see Table 8-2. "Ideology: Party"). The interaction variable between ideology and majority party status has 0.0732 as the coefficient. Majority party status does not change the direction of 'the effect of ideology' on voting behavior in appropriations process, being differed from authorization process.

This result comes from the fact that the amendments to appropriation bills are mostly about decrease or transition of defense spending and neither majority nor minority party are supportive to the amendments to decrease defense spending in appropriation process. Both parties negatively respond to the unfavorable amendments to defense spending in appropriation process (see the data section in Ch. 6). These facts increase the effect of majority party and brings a positive effect even though the statistical significance of majority party's influence is not strong enough.

3. Ideology

If a legislator is more conservative, the legislator is more likely to vote favorable to defense spending (hypothesis 2).

275. The result show that the voting behavior of a representative under the specific condition of authorization process within a majority party no matter whether it is Democratic Party or Republican.

In that conservative ideology generally coincides with favorableness to defense spending, I predicted a positive relationship between conservative ideology and legislators' favorableness to defense spending and developed hypothesis 2. When I estimate model 1 with the dataset for authorization process, the legislators' ideological position shows a positive effect on the favorableness of legislators to defense spending (coefficient: 0.140). Furthermore, its statistical significance is beyond level of 0.0005 (***, >0.00). The estimation result supports hypothesis 2 in the case of authorization process. The result means that 'as a legislator *has more conservative ideology*, the legislator *is more likely to vote in favor of defense spending* in roll call votes on amendment to annual authorization bills.'

When I estimate model 2 with the dataset for appropriation process, the legislators' ideological position shows a positive effect on the favorableness of legislators to defense spending (coefficient: 0.438). Furthermore, its statistical significance is beyond level of 0.0005 (***, >0.00). The estimation result supports hypothesis 2 in the case of authorization process. The result means that 'as a legislator *has more conservative ideology*, the legislator *is more likely to vote in favor of defense spending* in roll call votes on amendment to annual appropriation bills.'

4. Military Contracts to Congressional Districts

As a congressional district receives more defense contracts, the legislator elected from the congressional district is more likely to vote favorably to defense spending (Hypothesis 3).

When a congressional district has an economic connection with defense industries, the legislator of the district is favorable to increases in defense spending. Based on this assumption, I predicted a positive relationship between annual amount of defense contracts to congressional districts and legislators' favorableness to defense spending, and I developed hypothesis 3. When I estimate model 1 with the dataset for authorization process, the defense contract to congressional districts shows a positive effect on the favorableness of legislators to defense spending (coefficient: 0.187). However, its statistical significance is below 0.05 (0.3375). The estimation result does not support hypothesis 3 in the case of authorization process even though the variable has a positive effect on the dependent variable. The result comes from two facts: first, subcontract practice in defense industries²⁷⁶ might reduce the effect of amount of prime contract to a congressional district; second, congressional district is not an economic community but a political community that is based on population, which means economic factors might cross over

the boundary of congressional districts rather than being contained within the boundary.

When I estimate model 2 with the dataset for appropriation process, the defense contract to congressional districts shows a negative effect on the favorableness of legislators to defense spending (coefficient: -0.366). However, its statistical significance is beyond 0.001 (**, >0.001). The estimation result does not support hypothesis 3 in case of appropriation process even though the variable has a strong statistical significance. In appropriation process, the result means that ‘as a legislator’s congressional district receives more military related contracts from the Department of Defense, which bring economic benefit to districts, the legislator is less likely to vote in favor of defense spending in roll call votes on amendment to annual appropriation bill.’ This result comes from two facts: first, legislators are more concerned about specific interests for their congressional districts than about the general defense spending in appropriation process; second, the amendments to annual appropriation bills are mostly about specific items such as F-35 JSF’s second engine or V-22 Osprey.

5. PAC Contribution

As a legislator receives more PAC contributions from defense corporations, the legislator is more likely to vote favorably to defense spending (Hypothesis 4).

Defense industries contribute donations to a legislator who has economic ties with their defense contracts in order to guarantee investment from the department of defense, and the legislator who has his district’s economic interests with defense industries supports increases in defense spending. Based on these assumptions, I predicted a positive relationship between PAC contribution from defense industries and legislators’ favorableness to defense spending, and I developed hypothesis 4. When I estimate model 1 with the dataset for authorization process, the PAC contribution from defense industries shows a positive effect on the favorableness of legislators to defense spending (coefficient: 0.101). Furthermore, its statistical significance is beyond level of 0.0005 (***, >0.00). The estimation result supports hypothesis 3 in the case of authorization process. The result means that, in authorization process, ‘as a legislator receives more

contribution from the Political Action Committees which have connection with defense industries, the legislator is more likely to vote in favor of defense spending in roll call votes on amendments to annual authorization bills.’ This result confirms hypothesis 4.

On the other hand, when I estimate model 2 with the dataset for appropriation process, the PAC contribution from defense industries shows a negative effect on the favorableness of legislators to defense spending (coefficient: -0.0129). Furthermore, its statistical significance is below level of 0.05. The estimation result does not support hypothesis 4 in the case of appropriation process. This result comes from the fact that amendments to annual appropriations bills are mostly about cutting of defense spending and are closely related to specific items. This fact reduces the effect of *generalized* PAC contributions on favorableness to defense spending.

Chapter 9. Conclusion

Defense policy deals with two fronts – external and internal fronts. Defense policies dealing with the external front search for source of threats and develop military strategies, doctrines and technologies to respond to the external threats. Defense policies for the internal front seek to create favorable political environments, public climates and economic conditions within the society in order to build up the necessary military capabilities such as *effective weapon systems, high quality human resources, and cohesive, sustainable, and well-functioning organization.*

The armed forces are maintained in two ways – in both the military way and the militaristic way. It means that any military has some features of military way which are ‘scientific and related to military functions’ and ‘other features of militaristic way’ which are too much distracted by aspects other than true military purpose. In this sense, every nation which has its own military has specific features of militarism, regardless of how dominant these features are over other parts of the society. The U.S. also has its own type of militarism in the military and the society.

In the United States, there is a belief that the US military should be number one in the world. This American public belief takes various shapes of military imperatives which

276. In defense industries, prime contractors make subcontracts with other small companies which are located outside congressional districts or states where prime contracts are located.

connect every part of society with military and lead them to cooperate and support the realization of these imperatives. All these military imperatives ask each part of American society to participate in shaping American military forces.

Military transformation in the post-Cold War era is an example that shows how American militarism works in American society. The final products of the military transformation are changes and improvements in organization, weapons and equipment, and military doctrines. The defense budget brings all these changes and improvements into reality. In a democratic society, if the public opinion on defense spending is positive, the defense budget is likely to increase. According to the result of analysis in chapter 3, public opinion showed a positive and significant correlation with defense spending. However, public opinion's influence is likely to increase in accordance with the intensity of external threats and changes of external environment such as 'transition from war to peace or peace to war,' 'the post-Cold War era,' and 'the Global War on Terror.'

Within the US military, American Militarism has led the Department of Defense and military services to competition against the Soviet Union during the Cold War era and endless preparation for a future adversary in the situation of strategic uncertainty after the Cold War era. These efforts have been best embodied in the continuing pursuit of military transformation since the Second World War ended. The US military transformation during the post-Cold War era was based on the idea of Revolution in Military Affairs, which focuses on applying revolutionary advance of information technologies of the 1990's into the military sphere. It has been the core defense policy objective of the Department of Defense for longer than 20 years, from 1992 to 2014.

It started with the Base Force Plan in the National Military Strategy published in 1992. The Base Force Plan was the force structure required to conduct two major regional contingencies scenarios. The report of the Bottom-Up Review in 1994 assessed the validity of the Base Force Plan. While agreeing with the two-MRC scenario as the logic of the force planning construct, it also suggested further reducing the size of forces and adjusting the force modernization plan to the changing security environment. The report of the Bottom-Up Review included initiation of new R&D projects to equip the military forces as well as cancellation of unnecessary force modernization programs. Since 1997, the Department of Defense has published the report of the Quadrennial Defense Review every four years. These five Quadrennial Defense Review Reports contain the core contents of the military transformation. In the QDR 1997, the military transformation

was presented as the vision plan of the Department of Defense and the military services. Through the QDR 2001 and 2006, the military transformation was changed into the major policy objective, with a specific time frame and clear goals to be achieved. As the wars in Southwest Asia wound down into the ending phase and the fiscal situation was aggravated, the priority of defense policy was moved from the military transformation into the rebalance of forces in the QDR 2010 and QDR 2014. In addition, as the time for the military transformation comes due, the Department of Defense and the services have been trying to search new concepts for another military transformation in the name of the Evolution of Forces and the Innovation & Adaptation of Forces in the QDR 2010 and QDR 2014.

Defense related industries have strongly supported the military's effort to be number one in military affairs. Defense industries have invested enormous amount of money in research and development of advanced military technologies and weapon systems. In return, the US military has purchased them and encouraged defense industries to keep investing in Research and Development, even when these technologies were incomplete and not sophisticated enough. Furthermore, when economic conditions worsened in the 1980's, Congress could not simply choose an ideal option fitting economic conditions – closing the production line –, because defense industries were a significant issue to senators and representatives from the states or districts whose local economies were closely tied to companies within defense industries. In this sense, the relationship between military, Congress and industries has been symbiotic rather than simple vendor/buyer relationship.

After the Cold War, when this Military-Industry-Congress complex was about to collapse, the Department of Defense requested the defense industries to pursue consolidation between companies. Furthermore, the Department of Defense and Congress worked together to lower the bars of restrictions on defense related technologies, which were banned to be released to the free market during the Cold War. Congress built legislative grounds to release the ban on dual-use technologies which were able to be used in civilian businesses. The Department of Defense offered practical guidelines to discern between critical military technologies and dual-use technologies. In this situation, the military transformation based on the network-centric warfare offered three areas of business to defense industries such as development of new platforms and nodes, modification of traditional platforms, and network systems to connect these nodes and platforms.

When the Cold War ended, the economy rather than security started to drive defense industries and weapon development programs. The services began to initiate weapon development programs jointly, because the economic environment in the early 1990's did not allow the services to develop all the weapon systems replacing outdated weapon systems only for each service. In this environment, the US government had to maintain the industrial bases for the military forces to engage globally and for the US national economy as well. The Department of Defense's recommendation was that defense industries consolidate companies and merge into several representative companies within similar industry fields. Sixteen aircraft manufacturing companies were merged into five companies at the end of the 1990's. Furthermore, the Department of Defense canceled similar defense programs and merged them into fewer representative programs. In order to save the merged programs, the Department of Defense put the programs into the Research and Development phase and encouraged foreign governments and defense industries to participate in these programs.

The F-35 JSF program is one of the examples that show the connections between defense industries, the US military and Congress. These connections led the F-35 JSF program to be a proof of American Militarism, which can be featured as 'overly ambitious,' 'not efficient,' and 'not reasonable.' There are five evidences which show that American Militarism has influenced the development of the Joint Strike Fighter. First, the purchasers – Congress and the Department of Defense – have not exercised the proper authority over the merchandiser – Lockheed Martin and its associates –, even though there have been significant flaws in the program. Second, the program did not satisfy the requirements of the final consumers – the Air Force, the Navy and the Marine Corps. Within the Air Force, pilots requested buying more F-22s rather than developing the F-35, and the Navy has kept insisting that F-18 E/F would be a better choice than the JSF. Third, saving the industrial base and keeping it competitive in the international markets has been a critical interest of the U.S. Government, and it was the environment in which the JSF program began.

Fourth and finally, the title "the fifth generation" did not come from any services of the US military. The title was the catch-phrase of Lockheed Martin to sell F-35 to customers, including the US military and other foreign partners. What the Services did was to develop a next generation jet fighter to defeat enemies' current jet fighters. Originally, the title came from Russia, who tried to sell its new jet fighter in the market in the late 1990's. The Russian Weapon Corporation started to use the title "fifth

generation" jetfighter and the term was widely accepted throughout the international jet fighter market. The Lockheed Martin Corporation used this term as a catchphrase for the new jet fighter which eventually would replace the legacy jet fighters such as F-16, F-18, A-6, and AV-8. Now, the Department of Defense, Congress and military services are using the term "fifth generation jet fighter" to describe a family of advanced jet fighters. It means that the US government bought the catch phrase of the fifth generation jet fighter and gave it the meaning of advanced jet fighter.

In the political arena, Congress has been the main source of influence on military affairs. Congress has the authoritative power of funding military programs and governmental oversight regarding military and defense policy. Congressional hearings on the official DOD documents regarding military transformation is one indicator to read the congressional response to the military transformation. The Base Force Plan was evaluated as a "very strategy driven" document in the aspects of force structure and supporting capability for the force structure. During the hearing on the report of the Bottom-Up Review in the House, almost every member of the House Armed Services Committee did not support the Bottom-Up Review. The criticism was that: the report was budget driven; and it did not show a clear picture of how to prepare for the future.

By connecting *Joint Vision 2010* and the military transformation with other issues, DOD satisfactorily defended the QDR 1997 and defense programs, and persuaded the committee to approve the policy directions in the QDR 1997. In 2001, the Senate Armed Services Committee found that the military transformation in QDR 2001 also included policy initiatives to prevent asymmetrical and irregular threats from terrorists and confirmed that the military transformation was headed in the right direction, as the House Armed Services Committee had done. The hearings on the QDR 2006 covered two main issues: the military transformation and the Global War on Terror. The focus of the hearings was how to balance between these two issues under the situation of resource constraint, rather than abandoning either. Differing from the hearings on previous QDRs, the military transformation was not the focus of the hearings on QDR 2010. The primary concern was how to manage the defense program under the budget constraint. In sum, both committees responded positively to the military transformation and showed the tendency of support toward strategy driven plans – the Base Force Plan, the QDR 1997, 2001, 2006 –, which presented a blueprint for the coming years and guaranteed more investment in Research and Development, while criticizing the report of the Bottom-Up Review and the QDR 2010 as budget driven plans.

The composition of committees is another indicator that predicts possible legislative outcomes in a policy jurisdiction in Congress. Since the ideology of legislators is an important factor in legislative voting, it is possible to predict possible legislative outcomes with the ideological composition of committees. In most congressional terms during the period, the median voter of committee members / Republicans / Democrats is more conservative than the median voter of House members / Republicans / Democrats. In that conservative ideology coincided with an increase in defense spending, in most cases the House Armed Service Committee members / Republicans / Democrats, are likely to act or vote more favorably to defense spending than the non-committee House members / Republicans / Democrats do, respectively.

However, all these arguments regarding American Militarism do not show what happens in each congressional district and how members of Congress decide their votes in both chambers. In order to examine how factors influence the choice of each legislator in a roll call vote, I estimated a linear regression model in which an index of *a legislator's choice in roll call votes* is a dependent variable and other factors are independent variables – such as ideology, party status, defense contract to their congressional districts, and defense related PAC contributions to each legislator. In order to show the difference between two phases in congressional budgetary process, I developed separate models for the authorization and the appropriation.

In the result of the estimations, conservative ideology has a positive impact with statistical significance in both the authorization and the appropriation processes. Majority party status does not have significant influence on legislators' favorableness to defense spending in both the authorization and the appropriation processes. Regarding economic factors such as PAC contribution and military contracts to congressional districts, each congressional budgetary process showed different results. PAC contribution has a positive and significant impact on legislators' favorableness to defense spending in the authorization process, while military contract to congressional district has a negative and significant influence in appropriations process.

In that PAC contribution has a positive and statistically significant impact on legislators' favorableness to defense spending in the authorization process, the authorization process is more likely to be under the influence of American militarism which has features of support for Research & Development and weapon procurement programs. On the other hand, defense contract has a negative and statistically significant impact in the

appropriation process. It means that appropriation process is more likely under the influence of congressional districts' economy rather than a broad trend of the American Militarism.

Moreover, the factor of military contracts to congressional districts needs to be modified because the problem of subcontract practice still has not been solved clearly. It is also necessary to find a proper political community, other than congressional districts, which can reflect the economic influence of military contracts. Furthermore, it is necessary to attempt program-based analysis for the appropriation process because the appropriation process is closely related to specific defense programs rather than covering general issues of defense policy.

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