Abstract:

It is of crucial importance for a country to thoroughly analyze the costs and benefits of war before making the decision to go to war. A nation should carefully consider past, present and future periods when making these decisions. The Iraq War is a topic of much controversy and debate with respect to whether careful planning and analysis of the costs and benefits occurred before the war was initiated. This paper explores how to take a comprehensive measurement of the costs and benefits associated with any war and focuses specifically on the current Iraq War.
Table of Contents

Introduction.........................................................................................................................3
Background..........................................................................................................................3
Literature Review..............................................................................................................4
Bias..................................................................................................................................6
Model...............................................................................................................................7
Critics and Criticism.........................................................................................................8
Discount Rate and Present Value Calculation.................................................................10
Direct Budgetary Cost to U.S. Government.................................................................11
Additional Costs to U.S. Society: Veteran’s Disability Benefits..................................14
Additional Costs to U.S. Society: Social Costs..............................................................16
Additional Costs to U.S. Society: Macroeconomic Costs...........................................16
Oil.................................................................................................................................18
Defense Spending...........................................................................................................20
National Debt..................................................................................................................22
War Structure................................................................................................................23
Conclusion.......................................................................................................................25
References.......................................................................................................................27
Figures and Tables..........................................................................................................29
Introduction

If the decision is made to go to war, how does a country justify its reasons? How are the costs and benefits of war accounted for, both now and in the future? This paper explores how to systematically and meticulously account for the costs and benefits of war with a special emphasis on the current conflict in Iraq. Using the recent work *The Three Trillion Dollar War*, this paper examines the analysis of Joseph Stiglitz and Linda Bilmes, prominent experts in their respective fields of study. Stiglitz is an economics professor at Columbia University, one of the world’s most quoted academics, and a 2001 Economics Nobel laureate. Bilmes is one of the world’s top defense budget analysts and is a faculty member of Harvard University with an emphasis on budgeting, applied budgeting, and public finance. This paper takes a detailed look at their latest work by presenting some of their conclusions while further exploring topics within the work, addressing criticisms of their model, expanding upon the current literature by including research from other studies, and examining how we truly measure the costs and benefits of war, with a specific focus on the Iraq War.

Background

On March 20th, 2003 the first stages of the invasion of Iraq commenced. The United States and a coalition of the willing, consisting of forty-nine other nations, began what could turn out to be one of the world’s most costly wars. Only six nations besides the U.S. included troops for the invasion (the United Kingdom, Spain, Italy, Australia, Poland, and Denmark) while thirty-three provided assistance for the post-invasion occupation (1). These six nations account for 94.9% of the coalition forces in Iraq with the United States comprising more than 84% of the total troops (2). With the U.S. carrying out the majority of military duties, it will also bear the most economic responsibilities and repercussions from this war. It has been more than five years since the end of major combat operations in Iraq, which occurred on May 1st, 2003. This was
highly publicized by the immense “Mission Accomplished” banner on the USS Abraham Lincoln (3). The United States has been involved with this war “longer than the three years and eight months we were involved in World War II; the two years and two months in World War I; the three years and one month in Korea; and even the four years Americans fought each other in the Civil War” (4). Enough time has now passed that we can estimate the full costs and benefits of this lasting conflict.

**Literature Review**

A multitude of papers have been recently published detailing the diverse issues of the Iraq War. Many of these papers have been published through the National Bureau of Economic Research (NBER). Stiglitz and Bilmes published a paper in January 2006 titled, “The Economic Costs of the Iraq War: An Appraisal Three Years After The Beginning of the Conflict.” This was published as a working paper through the NBER and the information it contained is similar to their latest effort, *The Three Trillion Dollar War* (5). However, the recent book is much more detailed and comprehensive than the aforementioned paper.

William D. Nordhaus, published “The Economic Consequences of a War With Iraq,” which reviewed past American wars and their fiscal impacts in direct costs. The piece contained previous war costs that were adjusted for inflation to the American dollar in 2002, and war costs as a percent of total GDP (6). Warwick J. McKibbin and Andrew Stoeckel add to Nordhaus’ findings by including more macroeconomic costs and global costs of the war in their paper, “The Economic Costs of a War in Iraq.” In their 2003 findings, they added costs associated with the increase in oil prices to further quantify the war’s global impact (7). In 2005, Scott Wallsten and Katrina Kosec published a paper looking solely at the direct and avoided costs of the Iraq war titled, “The Economic Costs of the War in Iraq.” They include estimations through the year 2015. The authors articulate that the avoided costs can be viewed as the benefits to a war,
because they are costs that don’t have to be currently paid. The avoided costs include not having to enforce the “no-fly zone,” and the impact of Saddam’s regime on his cultural adversaries (8).

The Congressional Research Service (CRS) provided a report for Congress in 2008 with data that has been converted into current dollars and shows war appropriations for all American wars. It provides categories of total years of war spending, total military cost, war as a percentage of GDP in peak year of war, and total defense spending as a percentage of GDP in peak year of war (9). GDP is gross domestic product, and it is a measurement of how productive an economy is. It is the value of all of the goods and services produced in one year (10). The estimates in the CRS report are based on U.S. government budget data, but the researchers warn that the data “do not reflect costs of veteran’s benefits, interest on war-related debt, or assistance to allies” (9). This report is critically important when comparing present defense spending to past conflicts and the cost of the current war to previous wars. However, another CRS report, “The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11” is much more detailed and provides trending analysis and tables (11). It is a very complete report, but it is lacks comparisons to other wars and figures adjusted as a percentage of GDP. I believe Congress received the reports concurrently and it is necessary to view the reports together to contrast past and present conflicts accurately.

In most of these reports, with the exception of the reports prepared for Congress, very little attention is paid to defense spending as a percentage of GDP and total military spending on the war as a percentage of GDP. None of the literature previously mentioned examines the national debt or the current war’s effect on it. Stiglitz and Bilmes do mention that the Iraq War isn’t the most costly of U.S. wars (World War II holds this distinction), but note that this war has been financed almost entirely through debt. This is an important point that the other authors do not address, as we will have future interest and principle to repay (4).
My paper adds to the existing literature because it gives a more complete overview of previous studies and includes additional research on world oil prices and defense budget data that is not mentioned by other authors. A section on the U.S. national debt is included, with an emphasis on how the current conflict is affecting it. A historical overview of oil prices and the latest price decrease are explored. This significant decline in oil prices directly opposes the authors’ predictions, and has occurred so recently that it has not yet been professionally studied. It must be noted that this paper only includes the costs the United States incurs. It does not examine the vast costs that Iraq and its people face, which could only be fully addressed in a paper of equal or greater length.

Bias

Bias exists in every work due to the personal viewpoints of the authors. It is common to influence the examination of a situation through the style of writing and the sources of research used when assembling a paper. Political and economic opinions become commingled with authors’ research and analysis. The way a situation is viewed in advance also impacts the problem solving approach taken and can affect a study’s outcome. Stiglitz and Bilmes mention outright that they have a strong bias against the way the war is being managed. They show in their work how they compensate (and they believe overcompensate) for their bias. They look at a “best case” scenario and a more “realistic moderate” scenario. Future data is estimated using excessive conservatism. Throughout the book they detail why their data is conservative and compare it to other estimates. Many authors aren’t as direct and honest.

In order to be direct and honest, I need to admit that I am not pleased with how this war is being run as well. I believe that not enough planning and examination of data went into the initial stages of this war. I imagine that much of the costs of this war are going to be born by my generation and my children’s generation. A large portion of the costs will be in the form of
disability and medical payments to veterans and future interest due for the borrowed war funds. I concur that these costs are not as apparent as they will become in the near and long term future. That being said, I will try to be as objective as possible and draw a fine line between positive and normative economic analysis. Positive economics, according to *The Economist*, “describes the world as it is, rather than trying to change it.” Normative economics involves opinions and one’s own views by “suggest[ing] policies for increasing economic welfare” (10).

**Model**

Cost-benefit analysis is a “method of reaching economic decisions by comparing the costs of doing something with its benefits” (10). Weighing costs against benefits is a very useful tool in economics; it is also a device that everyone uses in their daily lives to make sound decisions with respect to investments in time, money, and effort. The model presented here is the work of Stiglitz and Bilmes, but it has been converted for broader, more general use. Their specialized model can be viewed in Figure 1 following the text of this paper. The authors identify the areas that need to be accounted for when calculating the true costs of any war.

It is necessary to review the previous costs and the costs that are presently faced when accounting for the true costs of a war. This includes the direct budgetary (operational costs). These are the costs that are readily available and are the most accurate. Next, one needs to project the operational costs in the future based on accurate and conservative estimates. This can be determined by predicting how much additional time will be spent in the war theatre and what the size of the resulting occupying force will be. The costs of bringing the military back to its prewar strength is also included in the future costs, and this is called the “reset” cost.

If the data are in past or future dollar amounts, present value calculations need to be performed in order to bring the figures into present 2008 dollars, which allows them to be compared in a practical manner. The payments made to returning veterans for disability and
health care costs are a very important segment of the overall estimate and have been frequently left out by other researchers. They will increasingly be paid in the future, and are an essential component of the overall cost of a war because they concern the continuing health of our wounded and injured veterans. It is a very large amount, and the payments are crucially important to observe when dealing with wars that have a sizeable ratio of injuries to deaths, as in the current war. Finally, social costs and macroeconomic costs must also be tallied (4). The process to specify the benefits of a war would be found in the same way, but one would instead look to see where funds were saved instead of spent. Calculating the benefits for a war is equally important because it allows for a comparison to the costs, completing the cost-benefit analysis.

Critics and Criticism

_Three Trillion Dollar War_ has met with some criticism and there have been several notable critics of the authors. Surprisingly, most of the reviews have been positive. Out of about 30 reviews, most have been positive and some even praised the book on its detailed methodology, thoroughly cited sources (about 70 additional pages), and the diverse areas in which costs were estimated. Favorable reviews were published by the _Los Angeles Times, New York Times, Washington Post_, and other respected media organizations.

The White House has predictably criticized the book for its views. Spokesman Tony Fratto stated “what price does Joe Stiglitz put on attacks on the homeland that have already been prevented? Or doesn’t his slide rule work that way?” (12). The authors refute that critics who reference this point are confusing the relationship between the terrorist attacks of 9/11 and the Iraq War, believing they are logically related. They insist that there have been no proven ties between Al Qaeda and Iraq. Critics have also remarked that the benefits from the war should be included. Stiglitz and Bilmes believe that the benefits are very slim, and in the end are unlikely to be significant. The authors focus much more on the costs of the war, and believe that the
benefits are elusive. The only benefits the authors consider are the funds saved from not having to enforce the “no-fly” zone, and the resources gained by the private U.S. contractors. The savings of not having to enforce the “no-fly” zone are estimated at $10 billion a year. The authors subtracted this amount from their budgetary estimate even though they believe that this savings has not been truly saved. It is very likely that the funds have been used for additional defense spending (4). The benefits that have been bestowed upon the private contractors are more fully detailed in the war structure section of this paper.

Robert Higgs is a senior fellow of political economy for the Independent Institute. He is also the editor of Independent Review, the Independent Institute’s quarterly journal. In the past he has been one of Stiglitz’s leading critics. Surprisingly, he does not criticize his work with respect to the war in Iraq. In an article Higgs wrote about the nation’s defense budget he stated, “I propose that in considering future defense budgetary costs, a well-founded rule of thumb is to take the Pentagon’s (always well publicized) basic budget total and double it. We may overstate the truth, but if so, we’ll not do so by much. The pentagon's budgetary figures should be doubled in order to make a more accurate prediction on the war’s costs” (13). It seems as if Higgs and Stiglitz have agreed to an armistice regarding the current war’s cost, and are now mutually criticizing the government and its military spending.

There is a group of University of Chicago professors who wrote a paper that was published at the same time Stiglitz and Bilmes published their preliminary paper on the costs of the current Iraq conflict. These professors argue in favor of a containment policy for Iraq instead of war and use cost-benefit methodology. They argue from an ex ante perspective (before the start of the war), meaning with “analysis on data and facts that were known or reasonably knowable, as of early 2003.” Containment through “economic sanctions…disarmament requirements, weapons inspections, Northern and Southern no-fly zones within Iraq, and
maritime interdiction to enforce trade restrictions” is the best alternative. The professors stress that “continued containment was the leading option to war and forcible regime change.” They affirm that “forcible regime change in Iraq has proved to be a costly undertaking.” Their estimate is that containment would have cost nearly $300 billion (14). However, in an article in the New York Sun, Professor Stephen Davis stated that in some situations the cost of containment would have been “in the same ballpark as the likely costs of the Iraq intervention” (15).

Other individuals have criticized the authors’ work and they have been addressed in the body of this paper. One criticism has been directed toward the use of discount rates and interest rates. Some blame Stiglitz and Bilmes for using too low of a discount rate, exaggerating the amount of funds needed in the future. I more fully detail the specifics of discount rates and the correct way to set a discount rate in the discount rate and present value calculation section. Tunku Varadarajan, a professor of New York University, is concerned with the figures the authors use to estimate the value of soldiers’ lives compared to the government’s figures. The authors’ data is explained in the veteran’s disability benefits section. Both Varadarajan and Stephen Davis have criticized the authors on their calculations of the increase in the world price of oil. Varadarajan’s concerns deal with the increased demand from India and China causing the increase in the world price of oil (16). Davis deems linking the war in any amount to an increase in the world price of oil is “unwarranted” and believes the war is not a factor (15). These points are more fully detailed in the macroeconomic costs section and the oil section of the paper.

Discount Rate and Present Value Calculation

The time value of money is a key concept in economics and finance. A dollar today is worth more than a dollar one year from now. This is due to two different conditions. One is that the value of a current dollar is constantly being eroded by inflation. The other is that the dollar today can be invested during the next year and grow to become “worth” more. The process of
discounting is the process of performing present value calculations which take data from future estimates and convert it into dollars “worth” the same amount as today’s dollars. This allows for comparisons of estimates between time frames (intertemporally) that wouldn’t be possible otherwise (17).

The discount rate is another very important concept when dealing with present value calculations. Criticism has been expressed regarding the authors’ choice of discount rate. It is a point of contention because the correct value needs to be assigned for the calculation to be accurate. One doesn’t want to assign too much preference of consumption for future generations over current generations and vice versa. The lower the discount rate the more emphasis is put on future generation’s consumption and some believe the authors have done precisely this, exaggerating their data. Conversely, the higher the discount rate the more emphasis is put on current generation’s consumption. This rate should be set at the opportunity cost (the rate of return that could be earned if the funds were invested elsewhere) or the rate at which individuals forgo current consumption for future consumption (the intertemporal trade-off). “Some economists take the view that the welfare of each future generation should be given the same weight in the analysis as the welfare of today’s” (10). The authors use a discount rate of 1.5%, which is the rate the government is able to borrow at in real terms (adjusting for inflation). The authors believe this is a fair rate to use because it most accurately describes the future consumption versus present consumption dilemma (4).

Direct Budgetary Costs to U.S. Government

In The Three Trillion Dollar War, the authors extensively compute and document the data that they have researched and exhaustively cite its sources. There are about 70 additional pages of citations. To calculate the direct budgetary costs, the authors examine the operational costs to date and project the future operational costs. To predict future costs, the authors employ
two scenarios. The “best case” scenario projects the number of “unique troops deployed to the conflict by 2017 will total 1.8 million” with troops declining to 75,000 by 2010 and adjusting to a non-combat force of 55,000 by 2012. The other scenario, dubbed the “‘realistic-moderate’ scenario…assumes that troop levels will decline more slowly as we approach 75,000 in 2012.” Our presence in the Middle East will also be longer in this scenario, with the switch to a non-combat role occurring later, increasing the total number of troops to “2.1 million by 2017.” These cost estimates include predictions that “both the costs per troop and the overall operational costs will decline by 50 percent as the force shifts to a non-combat role” (4).

To tally up the costs from the past to the present, the records from the Department of Defense (DOD) were used, but problems ensued. The funds for both war and baseline accounts are commingled, which poses a problem for accurate estimation due to the DOD’s lack of detailed cost information. Independent auditors of the DOD have cited “long-standing material weaknesses” in many of the department’s accounts and stated that “these pervasive material weaknesses also affect the reliability of certain information contained in the annual financial statements” (18). To overcome these difficulties in information transparency, the authors employed the same techniques used by the Congressional Research Service, which include using a variety of sources and methods to estimate expenditures on defense, foreign affairs, and veteran’s medical costs (4).

The servicing of equipment and strengthening of the armed forces to the point prior to any combat duty is called the “reset” cost. This is necessary because military equipment is being destroyed in the theatre and equipment is being worn out at a faster rate than it is being replaced. The authors state that “some defense analysts argue that it could take anywhere from ten to twenty years to reset.” The figures they estimate are based on a fifteen year time span in which it will cost $13 billion per year for the Army, $2.5 billion per year for the Marines, and $1.0 billion
per year for the National Guard, the Reserves, and the Navy. The Air Force is assumed to have ten percent of its reset costs attributed to the current conflict. Stiglitz and Bilmes estimate the reset cost at $250 to $375 billion in order to completely rebuild the military (4).

The DOD’s budget and the Pentagon’s budget have increased drastically since the start of the war, a portion of which is believed to be spent on war appropriations. An example of defense expenditures being spent on the war is the “Pentagon’s monthly budget ‘sweep’, in which any underspending on continuing programs is not carried forward but is immediately reallocated to war spending.” The Pentagon’s budget has increased by more than $600 billion cumulatively since the start of the war. One quarter of this amount is accounted for in the “realistic-moderate” scenario. It is ironic that the Sarbanes-Oxley Act was passed in order to combat corporate fraud and wastefulness, but the government is not held to the same standards. “The accounting systems of the Pentagon are so poor at tracking expenditures that the department has flunked its financial audit every year for the past decade.” Legislation requiring minimal standards of accountability and transparency in the early 80’s and 90’s was passed, and since then almost all of the “cabinet-level departments…have been able to produce ‘clean’ financial statements that are approved by outside auditors” (4). The authors want the Department of Defense and the Pentagon to comply with strict accounting standards and practices.

Including all of the past and present operational costs, the reset costs, the interest that will come due on all of the funds borrowed to fund the war (described more fully in the national debt section), and the “hidden” war funds in defense accounts, Stiglitz and Bilmes estimate the direct budgetary cost of the war to the U.S. government in the range of $1.7 trillion to $2.7 trillion, which is illustrated in Figure 2 (4). This includes all past, present, and future budgetary costs associated with the war through 2017. The authors believe that this is still too conservative, especially since the total cost of any war is much larger than the direct budgetary costs.
Additional Costs to U.S. Society: Veteran’s Disability Benefits

The true costs of a war must also include the costs of the payments made to veterans in the form of veterans’ benefits and disability pay. In the past, the amount paid to veterans over time is a significant portion of the total war costs. In the Iraq War, veteran’s disability benefits and medical care are two of the most significant long-term costs. The veterans of this war contain “an unprecedented number who have been wounded or injured and survived.” In relation to other U.S. involved conflicts, the Iraq War has the highest ratio of wounded soldiers to deceased soldiers. “The Vietnam and Korean wars saw 2.6 and 2.8 injuries per fatality, respectively. World War I and World War II had 1.8 and 1.6 wounded servicemen per death, respectively. In Iraq and Afghanistan, the ratio is more than 7 to 1 --- by far the largest in U.S. history. If we include non-combat injuries, the ratio soars to 15 wounded for each fatality.” The authors point out that it makes no difference if an injury occurs in a combat or non-combat environment because the government pays benefits to all veterans who are wounded. This includes “medical treatment, long-term health care, pensions, educational grants, housing assistance, reintegration assistance, and counseling” (4).

It is important to look to the first Gulf War as a predictor of the costs associated with veterans in the current conflict. This is due to the fact that the qualifying requirements for disability benefits are the same between both wars. The veterans from the Gulf War claimed an “average of three disabling conditions, whereas this new group of veterans claims for an average of five conditions.” Forty-five percent of Gulf War veterans filed disability claims and eighty-eight percent of those claims were at least partially approved. Presently, Iraq War veterans appear to be even more injured than in previous wars and “one in four returning veterans has applied for more than eight separate disabling conditions” (4). Severe injuries are more prevalent in the current campaign as well.
Due to the more urban circumstances of the Iraq War, modern troops are exposed to danger at all times. There are no front lines to the fighting and soldiers are exposed to many explosions. Improvised explosive devices (IED’s), booby-trapped mines, and other roadside bombs account for two-thirds of all traumatic combat injuries (4). Bomb detonations create blast waves or “rapid pressure shifts [which] can injure the brain directly, producing concussion or contusion.” Traumatic brain injury (TBI), is one of the “distinctive injuries of this war, because unlike previous conflicts where the mortality rate from such injuries was 75 percent or higher, the majority of these troops can now be saved.” Today’s troops have better protection with Kevlar body armor and helmets, and this equipment reduces the number of penetrating head injuries, but it doesn’t prevent the “closed” brain injuries produced by blasts (19).

Mental health disorders are very prevalent in this war, due in large part from the incessant danger faced and a lack of frontlines. These disorders “will be the top medical problems facing veterans of the Iraq and Afghanistan conflict.” More than one in seven returning veterans has been treated for mental health issues. Due to the longer tours of duty and increased time spent in the theater, there may be more cases of Post Traumatic Stress Disorder (PTSD). “Studies have found a strong correlation between the length of time a soldier serves in the war zone and the likelihood of developing PTSD.” Additionally, there have been reports of VA employees being pressured to “not diagnose patients with PTSD to keep costs down” (4). Mental health problems can be seen in the suicide rate of returning soldiers, which is now double the general population’s rate (20). An Associated Press article states “12,000 veterans under VA care [are] attempting suicide per year” (21). Stiglitz and Bilmes estimate the total cost of veteran’s disability benefits at between $299 billion to $372 billion, which includes disability benefits for the wounded for an additional forty years (4). These estimates are illustrated in Figure 3 following the text of this paper.
Additional Costs to U.S. Society: Social Costs

Society is harmed by soldiers’ deaths and soldiers’ injuries through these citizens’ loss of productivity. The family members and friends who drop out of the labor market to take care of the severely wounded and disabled also need to be assessed. The government “budgetary cost for a soldier who is killed is $500,000: $100,000 ‘death gratuity’ and $400,000 in life insurance paid to family survivors.” The authors believe this is far underestimating the true value of these soldiers’ lives. They use data from automobile and workplace accidents and employ the concept of value of a statistical life (VSL, the average lifetime earnings or worth of an average human life). They use a figure of $7.2 million, which is near the center of the range of VSL’s in use (4). Professor Tunku Varadarajan, of New York University criticizes the authors because he believes they should be calculating only the direct costs expensed (direct budgetary costs). He believes they shouldn’t be including these VSL calculated figures in any cost estimates (16). The authors reject his viewpoint because in this section of the book they are speaking of additional costs to U.S. society and aren’t calculating direct budgetary costs. These social costs are quantifiable and Stiglitz and Bilmes calculate them at between $300 and $400 billion, which is illustrated in Figure 4. This is in excess of what the government has already paid to survivors for the loss of life (4). It must be noted again that these costs to society are not included in the $1.7 trillion to $2.7 trillion dollar figure.

Additional Costs to U.S. Society: Macroeconomic Costs

The macroeconomic costs to society are the costs that affect the economy as a whole working system, and need to be addressed to fully to account for the true costs of a war. For the Iraq War, the authors include a fraction of the increase in overall oil prices and the budgetary impact of the increase in oil prices to the U.S. economy. Stiglitz and Bilmes want to attribute a small portion of the overall increase in the price of oil directly to the Iraq War because they
believe that nothing else explains the increase in world oil prices as completely. To authenticate this intuition, they look at futures markets, where goods and resources are bought and sold in future terms. “These markets assess growing global demand,” and there have been only a few surprises that the markets have not accounted for (4). The markets assess both supply and demand predictions and are only disrupted through instability and sudden changes. Professor Tunku Varadarajan, of NYU criticizes the authors on this very point. He believes that the increase in oil prices comes directly from an increase in demand from India and China (16). The authors contend that the futures markets for oil had already accounted for the increasing demand from India and China because it is well known that growing market bases increase demand. The authors believe the most logical explanation for the increase in oil prices is the conflict in Iraq. The Iraqi oil supply was taken off the global market during the war, further intensifying the price increase (4).

Stiglitz and Bilmes believe that the increase in the demand for oil due to the war effort has added substantially to the price of oil. Uncertainty in the marketplace caused by the war is also affecting the price. However, they only want to attribute a small cost of five to ten dollars per barrel of oil from the total increase. The “best-case” scenario assigns $5 a barrel for a time period of seven years and the “realistic-moderate” scenario allocates $10 a barrel for a time period of eight years (4). Oil is central to our modern economy and we use it in everything from the transportation of individuals and goods, to processing and manufacturing goods, for plastics, and even for producing electricity. This increase in oil prices affects almost every aspect of our economy through secondary effects. The authors trace the increase in oil price through the economy by using an oil import multiplier, which translates a change in oil imports into a change in total output (a loss in this case). In the “realistic-moderate” scenario, government spending in Iraq and the effect of lost investment is also calculated. The authors estimate the macroeconomic
costs between $263 billion and $1.9 trillion, as shown in Figure 5. The range is immense due to a larger amount of the price increase in oil being accounted for and the use of an oil import multiplier to determine the effects of large amounts of funds being sent overseas for natural resources and not being invested into our economy. The next section on oil further details the authors’ assessment and additionally discusses the recent decrease in the price of oil.

Oil

Historically, the price of oil has been increasing, almost since its discovery. As Figure 6 illustrates, the world price per barrel of oil has gradually increased from around 1880 until the early 1970s. Due to the power and unity of the Organization of Petroleum Exporting Countries (OPEC) cartel in the 1970s, the supply of oil being sold on the market was severely limited. This lead to a drastic increase in the price of oil. There were supply shocks throughout the U.S. economy during this period, which were caused by the enormous increase in oil price (22). Figure 6 does not show that in terms of inflation-adjusted dollars, the recent price increase being felt by the U.S. economy is comparable in some ways to the previous price increases in the 1970s. Figure 7 shows in more detail the increase in oil prices and the respective historical record. The price of oil continued to rise well into 2008. It is necessary to note that the price of oil continued off the charts and reached a record setting value on July 11, 2008, when the price of a barrel of oil reached $147.27 (23).

Within the past several weeks the world price of oil has decreased substantially. This turn of events has occurred so recently that the authors have not yet commented on it. This decrease is in direct opposition to their previous view that the Iraq War is a major component in the increase of world oil prices. Within the past three months, the price of oil has plummeted to less than half of its record setting value, a 57% decrease. From an economic perspective, it is believed that the demand for oil has decreased more rapidly than previous expectations. According to Stephen
Shork, an oil trader and analyst, “we have to appreciate what extraordinary circumstances we’re now dealing with” and “we’ve had a major correction in the price of crude oil.” The major correction Shork speaks of has been in the form of a decrease in demand. The U.S. Transportation Department released a report that Americans drove 78.1 billion fewer miles over a 10-month period this year (23). This shows that Americans are changing their driving habits and driving fewer total miles. More driving occurs during summer months and this increase in demand is likely correlated to the record high oil prices of July 2008.

The U.S. economy’s current recession is adding even more uncertainty to the market. John W. Schoen, a senior producer of MSNBC, believes that the current financial crisis and the fall in oil prices are related. He claims that “as the crisis has heightened the prospects for a deep global recession, the energy prices have plunged on the expectation of lower demand.” This lowered demand is expected to occur for some time. Paul Sankey, an energy analyst at Deutsche Bank explains “the level of demand destruction in the U.S. is very, very significant. We think the global oil market will be not only lower this year but also very likely lower next [year]” (24).

The supply side of the oil market needs to be scrutinized as well, and this can be accomplished by looking at world oil production. Iraq’s oil production was halted during the start of the war, but according to Stephen Davis in a New York Sun article, “the 2003 drop in oil production by Iraq accounted for less than 1% of world production. Overall, world oil output went up from 2002 to 2006” (15). This counteracts some of the effects of supply side pressure in the market, in opposition to the authors’ conclusions. Due to the recent decline in demand OPEC met in Vienna at the end of October 2008 under an emergency meeting to assess reductions in supply. John Schoen warns that although they are looking to increase their profits, if they tighten supply too much, the global recession could intensify. This could cause global demand to fall even further. He states that “with the financial markets in turmoil, and the economic outlook
cloudier than it has been in decades, the decision about how many barrels to produce will be extremely difficult” (24). In theory, a supply side response should occur and bring the market back into a more stable equilibrium, but Stiglitz and Bilmes point out that there are problems with increasing present supply. The largest proven reserves of oil and the lowest extraction costs are in the Middle East, making it the world’s low cost supplier of oil. Increased uncertainty and instability in the region have diminished investment in oil production there, and around the world. Investments in different regions of the world are not embarked upon because when stability is restored to the Middle East, the higher extraction costs make them unprofitable (4).

**Defense Spending**

Defense spending has always been a major priority for the United States. Currently our nation spends almost half of the world’s total on defense (about 48%). In 2008 U.S. defense spending was $711 billion dollars, while the total world expenditure was $1.47 trillion. Out of the total defense spending, $541 billion was for the Pentagon and nuclear weapons programs. According to Secretary of Defense Robert Gates, at least $170 billion was for ongoing military activities in Iraq and Afghanistan (25). As previously stated, the base defense budget contains “hidden” expenditures of the Iraq War. Stiglitz and Bilmes speak very briefly on defense spending as a portion of our nation’s gross domestic product (GDP), a measure of our economy’s productivity. It is very important to look at defense spending and war expenditures as a percentage of GDP because it allows a comparison to be made between the amount of resources being put into a war and the size of our economy at that time.

Defense spending within the past 15 years has been below the 45 year historical average. In Figure 8 one can observe that defense spending is currently about four percent of GDP. This seems contrary to what Stiglitz and Bilmes would suggest. The budget for the U.S. government for fiscal year 2009 makes an elucidative remark that the relatively higher rate of defense
spending in the past was a consequence of the cold war. The U.S. spent about eight percent of GDP on defense then, but we had fears of nuclear war with another superpower (26). Current defense spending for the Iraq war is 4.2% of GDP (9). Figure 9 compares the current war to past wars. Historically, current defense spending is very low, even lower than the first gulf war. Observe that the figures used only consider the $648 billion dollars already spent, not including the requested supplementals for 2008, which put the total at closer to $750 billion. This figure climbs to almost $925 billion when including the additional requests for 2009. However, according to Pentagon correspondent Pamela Hess, looking at current defense spending in real terms (inflation adjusted dollars), the U.S. defense budget is approaching an all time high (27).

The record was set in 1987 with the Regan Administration’s defense budget of $471.3 billion in fiscal year 2006 inflation-adjusted dollars. The defense budget was $438.8 billion in 2003 and was $447.4 billion in 2006, according to the Center for Strategic and Budgetary Assessments (CSBA). It is necessary to note that this doesn’t include the recent war supplementals that have funded the Iraq War (27). Figure 10 is very useful in showing how defense spending and specifically how funds for the war in Iraq have been increasing. One can see that the amount of defense spending has been steadily increasing overall and the amount for the current war has been increasing at a more profound rate. Spending has increased 248% over the past 5 years on the Iraq and Afghanistan budget alone (28). Looking at the total war spending and spending as a percentage of GDP between past and present wars also gives us a greater understanding of the costs involved.

The authors fail to look at war costs in terms of GDP. The expenditures on the Iraq War are only 1.0% of current GDP (9). Looking at Figure 11 though, we can see that the cost of the current campaign during its most expensive year in terms of GDP is very low relative to other wars. The economy is much stronger now than it was in the past and the country is also more
populated, both of which reduce the magnitude of the statistic. Figure 12 shows the total costs of every major U.S. war in real terms (inflation adjusted dollars). This allows for comparison between wars over vast time differences. The Iraq War has total spending of $648 billion, which only Vietnam and World War II surpass in total costs. It must be noted that the estimated cost the CBO uses is closer to $900 billion, which then makes only World War II more expensive.

**National Debt**

The current war has been funded almost entirely through debt and no new taxes have been imposed to help pay for the increasing costs of the war. These decisions are adding the total costs of this war to our national debt and are making it increase substantially. The debt borrowed to pay for this war will have to be paid off at some future time. The authors consider interest already paid off, future interest on current debt, and interest that will be accumulate from future borrowing in their analysis. They estimate $462 to $616 billion will have to be paid in additional interest costs. In the past higher taxes were used to offset the amount being borrowed to pay for war, but this hasn’t occurred. The authors insist that the “financial costs of running [a] war should be borne by its current citizens, not simply transferred to the next generation” (4).

Under the current administration, the national debt has been increasing at its quickest rate ever. Using the Treasury Department’s most current figures, the national debt in January 2000 was $5.727 trillion and has now reached $9.849 trillion. CBS White House correspondent Mark Knoller claims “the national debt has grown by more than $4 trillion” and “it’s the biggest increase under any president in U.S. history” (29). It is a surreal moment when the National Debt Clock in Times Square runs out of space and needs to add an extra digit. Originally created in 1989 by the Durst Organization, the clock measured a mere $2.7 trillion (30). As of December 10th, 2008, it has reached over $10.66 trillion (31).
Examining national debt in nominal (present dollar) terms is useful because it accurately describes our national debt balance. Figure 13 represents this data, but this graph is only through 2007, which is why it is below the current $10 trillion mark (31). However, looking at the national debt in real terms is more useful because it allows for past years to be compared on the same scale as the present year. Figure 14 illustrates this data and allows us to observe that the national debt has never been higher. In spite of these findings, scrutinizing the data by comparing national debt as a percent of GDP is an even better indicator of comparing past and present outstanding balances. Figure 15 shows that although the national debt has been higher in the past relative to GDP, it has been steadily increasing over the past thirty years. It is at currently at 69% of total GDP, which is the highest it has been since 1955 (32).

War Structure

The way the present war has been planned and executed has many economic impacts besides the costs previously detailed. This war has been funded completely through emergency supplemental requests and much of the finances have gone to private U.S. contractors. These requests are intended to be used only in times of emergency and are not subject to the same scrutiny as congressional budget requests. “Emergency funds are not subject to budget caps and ---more important--- they do not require the same level of budget justification as regular appropriations” (4). The Iraq War has persisted for five years, hardly making it an emergency.

Budget requests are usually sent through Congress and are reviewed through a system equipped with checks and balances. An established factor of these checks and balances is time, which slows down the decision making process. The probability of abuse and mistakes is reduced with thorough review. When war funds are acquired in this way, congressional analysts do not have “sufficient information or time to evaluate the request” and “the normal checks and
balances designed to ensure financial accountability are circumvented” (4). The authors strongly suggest limiting emergency supplemental requests to the first year of a war.

The use of private U.S. contractors has also added greatly to the cost of the Iraq war. There are now more contractors working in Iraq than U.S. Soldiers. There were about 180,000 contractors at work and only about 163,000 – 169,000 soldiers in Iraq at the end of 2007 (33). A new estimate has increased contractors to around 196,000. Current U.S. procurement law requires that private contractors be used for tasks formerly carried out by military and civilian government employees. Using such a large amount of contractors is inefficient and wasteful, but it is mandatory under the current restrictions. Contractors are even being used in key strategic positions such as security forces for U.S. officials, top secret intelligence personnel for the CIA, and prison interrogators (4). The amount of government spending on contractors has more than doubled over the past decade. The Government Accountability Office (GAO) concludes that the DOD has failed by providing “an inadequate number of contract oversight personnel” and “a lack of comprehensive training for military commanders.” The GAO also states that “these challenges have led to negative operational and monetary impacts at deployed locations” (34).

The way in which the contracts were awarded and the different types of contracts available also raises concerns for efficiency. No-bid contracts and cost-plus contracts were granted. No-bid contracts are awarded without regard to competition between firms. This circumvents market mechanisms and leads to inefficient outcomes because firms don’t have to meet the contract’s obligations at the lowest price. Cost-plus contracts allow for all expenses to be reimbursed to a firm, plus a predetermined profit margin (4). This allows for perverse economic incentives to exist: the more money a firm spends (higher costs incurred by the firm), the higher the amount of profit they will receive.
Contractors have been caught in tax avoidance and insurance scandals throughout the duration of this war. KBR, the Pentagon’s largest private contractor in Iraq, has fabricated shell companies in the Cayman Islands and has employed workers through these firms. This has allowed them to avoid paying $100 million per year in taxes for Social Security and Medicare. The Pentagon has had knowledge of this tax scam and has allowed for it to continue as long as the company passes the savings on through its military projects. KBR has also been implicated in “a lucrative insurance scam that has gouged U.S. taxpayers for at least $600 million.”

Halliburton, another large Pentagon contractor, has misplaced millions of governmental dollars. They can’t account for where large amounts of funds were spent in their contracts (4). These examples demonstrate a lack of oversight and negligence which adds to the total cost of the war.

Conclusion

This paper has detailed how to account for the true costs of war. One must include present and future budgetary costs, “reset” costs, “hidden” costs in the defense budget, veteran’s disability and medical costs, social costs, and macroeconomic costs. Additional costs have been incurred due to the way funding has been awarded, the use of private contractors, an increasing national debt, and increased costs associated with an energy crisis. There are other sound methods of reaching a final cost estimate for any war, but the model presented in my paper has used detailed, forward-looking techniques that span nearly 50 years into the future.

A major concern for our country is the cost associated with the Iraq War. Since this war has been financed almost fully through debt, these bills will eventually come due with interest. Since emergency supplemental funds have been the solitary source used to secure funds for war appropriations, impartial analysts have been unable to carefully review and revise requests. After one year, let alone five, the budget for war funds needs to be put through a balanced process of
scrutiny and revision. More oversight and analysis is needed on these requests. We must not let checks and balances be circumvented, leading to less efficient outcomes.

It is interesting that the Congressional Budget Office (CBO) has recently revised their previous estimates to be closer to the figures calculated by Stiglitz and Bilmes. The CBO cost estimate in October 2007 “for Iraq and Afghanistan [has been revised] upward to between $1.2 and $1.7 trillion, excluding the cost of interest on borrowed money” (4). “The CBO also estimated interest costs” and including them “the total CBO projections for the cost of the war through 2017 rose from $1.8 to $2.3 trillion” (4). Since the authors estimated veteran’s costs forty years into the future and the CBO only ten, a large fraction of the gap between the figures can be accounted for. However, Peter Orszag, director of the CBO has stated that “there’s not that big a difference when the two sets of estimates are put on a comparable basis” (35). When the differences in veteran’s costs are added to the CBO’s numbers, the gap substantially decreases and the estimate is between $1.6 and $2.4 trillion. The CBO believes that the authors overestimated veteran’s costs, but Stiglitz and Bilmes contend that their estimates are on the lower end of the spectrum. By including studies “documenting the widespread prevalence of post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI)” the authors believe their projections will be more accurate as time elapses (4).

We need to always hold in mind the opportunity cost of fighting this war in Iraq. What else could we have spent this amount of money on? When we consume more of one thing now, we consume less in other areas. Present consumption comes at a price of future consumption, and future generations. We need to fully account for the true costs and benefits of any war when deciding whether to become involved in a conflict.
References

23. Associated Press. “Gas Selling For Less Than $2 in Some Areas.” MSNBC.com
24. Schoen, John W. “OPEC Faces Fresh Dilemma in Setting Oil Targets.” MSNBC.com
   Control and Non-Proliferation. February 22, 2008.
   <http://armscontrolcenter.org/policy/securexspending/articles/fy09_dod_request_global/>
28. Congressional Budget Office. “Analysis of the Growth in Funding for Operations in Iraq,
   Afghanistan, and Elsewhere on the War on Terrorism.” Washington D.C.
   February 11, 2008.
   September 29, 2008.
    <http://www.brillig.com/debt_clock/>
    <http://zfacts.com/p/461.html>
    on Contractors and Continue to Improve Management and Oversight,” Testimony before
    the House Subcommittee on Readiness, Committee on Armed Services, GAO-08-572T,
    March 11, 2008.
35. Peter Orszag, CBO director, “Director’s Blog: The Cost of the War: A comment on
Figures and Tables

Figure 1

“The Framework”

Step 1. Total relevant appropriations / expenditures to date for military operations
Step 2. Add “operational expenditures” and savings hidden elsewhere in the defense budget
Step 3. Correct for inflation and the “time value” of money
Step 4. Add future operational expenditures (both direct expenditures and those hidden elsewhere in the budget)
Step 5. Add future (and current) costs of disability and health care for returning veterans
Step 6. Add future costs of restoring the military to its prewar strength, replenishing spent armaments, repairing equipment whose maintenance has been deferred
Step 7. Add budgetary costs to other parts of government
Step 8. Add interest*
Step 9. Estimate the cost to the economy* (social and economic costs)
Step 10. Estimate the macroeconomic impact*

*not included in the $2.7 trillion figure of direct budgetary cost to the U.S. economy

Source: Three Trillion Dollar War (p. 24-31)
Figure 2

Table 2.2. The Running Total: Budgetary Costs of the Iraq War

<table>
<thead>
<tr>
<th>Cost in billions</th>
<th>Best case</th>
<th>Realistic-Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operations to Date</td>
<td>$473</td>
<td>$473</td>
</tr>
<tr>
<td>(Spent to Date—2001–2007)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Operations</td>
<td>$382</td>
<td>$669</td>
</tr>
<tr>
<td>(Future Operations only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Veterans’ Costs</td>
<td>$371</td>
<td>$630</td>
</tr>
<tr>
<td>(Veterans Medical + Veterans Disability + Veterans Social Security)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Military Costs/Adjustments</td>
<td>$66</td>
<td>$267</td>
</tr>
<tr>
<td>(Hidden Defense + Future Defense Rest + Demobilization, Less No-Fly Zone Savings)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total (without interest)</strong></td>
<td>$1,292</td>
<td>$2,039</td>
</tr>
<tr>
<td><strong>Plus Interest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Costs</td>
<td>$462</td>
<td>$616</td>
</tr>
<tr>
<td>(Interest paid to date + Future interest on current debt + Future interest on future borrowing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL (with interest)</strong></td>
<td>$1,754</td>
<td>$2,655</td>
</tr>
</tbody>
</table>

Source: Three Trillion Dollar War (p. 57)

Figure 3

Table 3.2. Total Medical, Disability, and Social Security Disability Costs for Veterans

<table>
<thead>
<tr>
<th>Veterans’ Cost (in U.S. Billions)</th>
<th>Best Case</th>
<th>Realistic-Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iraq Medical</td>
<td>106.4</td>
<td>250.1</td>
</tr>
<tr>
<td>Iraq Disability</td>
<td>242.9</td>
<td>341.2</td>
</tr>
<tr>
<td>Iraq Social Security</td>
<td>21.7</td>
<td>38.4</td>
</tr>
<tr>
<td><strong>Iraq Total</strong></td>
<td>371</td>
<td>629.7</td>
</tr>
<tr>
<td>Afghanistan/Medical</td>
<td>14.7</td>
<td>34.7</td>
</tr>
<tr>
<td>Afghanistan/Disability</td>
<td>33.7</td>
<td>47.3</td>
</tr>
<tr>
<td>Afghanistan/Social Security</td>
<td>3.0</td>
<td>5.3</td>
</tr>
<tr>
<td><strong>Afghanistan/Total</strong></td>
<td>51.4</td>
<td>87.3</td>
</tr>
<tr>
<td><strong>TOTAL COSTS</strong></td>
<td>422</td>
<td>717</td>
</tr>
</tbody>
</table>

Source: Three Trillion Dollar War (p. 87)
Table 4.1 The Running Total:  
Adding the Social Economic Costs—Iraq and Afghanistan

<table>
<thead>
<tr>
<th>Social Economic Costs</th>
<th>Best Case</th>
<th>Realistic-Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value of Statistical Life—Deaths</td>
<td>$56</td>
<td>$64</td>
</tr>
<tr>
<td>(Net of death payments)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value of Statistical Injury—All other injuries</td>
<td>$180</td>
<td>$273</td>
</tr>
<tr>
<td>Societal, Family, and Other Medical Expenses</td>
<td>$55</td>
<td>$78</td>
</tr>
<tr>
<td>(less applicable disability benefits)</td>
<td>-$12</td>
<td>-$16</td>
</tr>
<tr>
<td>Other Social Costs</td>
<td>$16</td>
<td>$16</td>
</tr>
<tr>
<td><strong>Subtotal Social Costs</strong></td>
<td><strong>$295</strong></td>
<td><strong>$415</strong></td>
</tr>
</tbody>
</table>

Plus Budgetary Costs of Iraq and Afghanistan Wars

<table>
<thead>
<tr>
<th>Budgetary Costs</th>
<th>Best Case</th>
<th>Realistic-Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operations to Date</td>
<td>$646</td>
<td>$646</td>
</tr>
<tr>
<td><em>spent to date</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Operations</td>
<td>$521</td>
<td>$913</td>
</tr>
<tr>
<td><em>future operations only</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Future Veterans’ Costs</td>
<td>$422</td>
<td>$717</td>
</tr>
<tr>
<td><em>(Veterans Medical + Veterans Disability + Veterans Social Security)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Military Costs/Adjustments</td>
<td>$132</td>
<td>$404</td>
</tr>
<tr>
<td><em>(Hidden defense + future defense reset + demobilization, less no-fly zone savings)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal Budgetary Costs</strong></td>
<td><strong>$1,721</strong></td>
<td><strong>$2,680</strong></td>
</tr>
</tbody>
</table>

**TOTAL BUDGETARY + SOCIAL COSTS**  
*(without interest)*

$2,016 $3,095

*Source: Three Trillion Dollar War* (p. 112)
Table 5.1 The Running Total: Adding the Macroeconomic Costs—Iraq and Afghanistan

<table>
<thead>
<tr>
<th>Cost in billions</th>
<th>Best Case</th>
<th>Realistic–Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Macroeconomic Costs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil Price Impact</td>
<td>$187</td>
<td>$800</td>
</tr>
<tr>
<td>Budgetary Impact</td>
<td>$0</td>
<td>$1,100</td>
</tr>
<tr>
<td><strong>Subtotal Macroeconomic Costs</strong></td>
<td>$263</td>
<td>$1,900</td>
</tr>
</tbody>
</table>

**Plus Budgetary and Social Economic Costs**

<table>
<thead>
<tr>
<th>Cost</th>
<th>Best Case</th>
<th>Realistic–Moderate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Operations to Date (spent to date)</td>
<td>$646</td>
<td>$646</td>
</tr>
<tr>
<td>Future Operations (future operations only)</td>
<td>$521</td>
<td>$913</td>
</tr>
<tr>
<td>Future Veterans’ Costs (Veterans Medical + Veterans Disability + Veterans Social Security)</td>
<td>$422</td>
<td>$717</td>
</tr>
<tr>
<td>Other Military Costs/Adjustments (Hidden defense + future defense reset + demobilization, less non-fly zone savings)</td>
<td>$132</td>
<td>$404</td>
</tr>
<tr>
<td><strong>Total Budgetary Costs</strong></td>
<td>$1,721</td>
<td>$2,680</td>
</tr>
<tr>
<td>Social Costs Total</td>
<td>$295</td>
<td>$415</td>
</tr>
<tr>
<td><strong>Total Budgetary and Social Costs</strong></td>
<td>$2,016</td>
<td>$3,095</td>
</tr>
<tr>
<td><strong>Total Budgetary, Social, and Macroeconomic Costs (without interest)</strong></td>
<td>$2,279</td>
<td>$4,995</td>
</tr>
</tbody>
</table>

*Source: Three Trillion Dollar War (p. 130)*
**Figure 6**

Crude oil prices 1861-2007
US dollars per barrel
World events

Source: British Petroleum, Chart of Crude Oil Prices Since 1861

**Figure 7**

**Figure 8** National Defense Spending as a Percentage of GDP, 1962-2007

Source: Heritage Foundation, Outlays from FY 2009 Historical Tables, Budget of the United States Government, Table 8.4

**Figure 9**

**Military Costs of Major U.S. Wars**

Source: Congressional Research Service, CRS Report for Congress: Costs of Major U.S. Wars
Figure 10

U.S. Defense Spending Since 2001
(in current dollars)

Source: The Center for Arms Control and Non-proliferation, U.S. Defense Spending Since 2001

Notes: Base budget figures are from ONI and include Department of Energy nuclear weapons activities and DOD-related spending by other agencies. Iraq-Afghanistan war budget figures are from CBO, “Analysis of the Growth in Funding for Operations in Iraq and Afghanistan,” February 11, 2008.

Figure 11

Military Costs of Major U.S. Wars

Source: Congressional Research Service, CRS Report for Congress: Costs of Major U.S. Wars
Figure 12

Military Costs of Major U.S. Wars

<table>
<thead>
<tr>
<th>War</th>
<th>Bills of Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>War of 1812</td>
<td>1.2</td>
</tr>
<tr>
<td>Civil War</td>
<td>60.4</td>
</tr>
<tr>
<td>World War I</td>
<td>253</td>
</tr>
<tr>
<td>World War II</td>
<td>4114</td>
</tr>
<tr>
<td>Korea</td>
<td>320</td>
</tr>
<tr>
<td>Vietnam</td>
<td>686</td>
</tr>
<tr>
<td>Gulf War</td>
<td>96</td>
</tr>
<tr>
<td>Iraq War</td>
<td>648</td>
</tr>
</tbody>
</table>

Source: Congressional Research Service, CRS Report for Congress: Costs of Major U.S. Wars

Figure 13

National Debt from 1940 to Present

Source: U.S. National Debt Clock, “National Debt from 1940 to Present”
Figure 14


Figure 15