INSTITUTE FOR ECONOMICS & PEACE

ECONOMIC CONSEQUENCES *of* WAR *on the* U.S. ECONOMY

An overview of the macroeconomic effects of government spending on war and the military since World War II. It specifically examines five periods: World War II, the Korean War, the Vietnam War, and the Iraq/Afghanistan Wars, summarizing the effect of financing the wars on consuption, investment, taxes, government deficits and inflation.

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/ QUANTIFYING PEACE AND ITS BENEFITS

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EXECUTIVE SUMMARY

One of the enduring beliefs of modern times is that war and its associated military spending has created positive economic outcomes for the U.S. economy. This has been supported by recent public opinion polling in the U.S. which shows a significant number of people believe that war and military spending has improved the economy.[1] This contrasts with the widespread public acknowledgement and understanding of the human cost of war.

The aim of this paper is to highlight the various macroeconomic effects of government policies and spending on the U.S. economy over the last seventy years during major periods of conflict. It specifically examines five distinct periods: World War II, the Korean War, the Vietnam War, the Cold War, and the Iraq and the Afghanistan Wars. The paper does not debate the moral, political, or philosophical justifications for these conflicts, but simply highlights some of the key macroeconomic ramifications of the U.S.'s policies during the relevant conflict periods.

To analyze the effects of these conflict periods on the U.S. economy, changes in a number of macroeconomic indicators have been analyzed both during and after each conflict period. The indicators analyzed were:

- GDP
- Public debt and levels of taxation
- Consumption as a percent of GDP
- Investment as a percent of GDP
- Inflation
- Average stock market valuations
- Income distribution

Heightened military spending during conflict does create employment, additional economic activity and contributes to the development of new technologies which can then filter through into other industries. These are some of the often discussed positive benefits of heightened government spending on military outlays. However, it can be argued that programs specifically targeted at accelerating R&D or creating employment would potentially have the same effect but at a lower cost.

One of the most commonly cited benefits for the economy is higher GDP growth. This has occurred throughout all of the conflict periods, other than in the Afghanistan and Iraq war period. Another benefit commonly mentioned is that WWII established the appropriate conditions for future growth and ended the great depression. This was associated with a sharp decline in income inequality. The trend in declining inequality started with the onset of WWII and lasted through to the end of the Cold War when it rose again.[2] It can be argued that the leveling of income inequality created the ideal conditions to build the large consumer oriented economy that the U.S. is today.

There does not appear to be a direct relationship between average stock market valuations during these conflict periods. During WWII stock markets did initially fall but recovered before its end, during the Korean War there were no major corrections while during the Vietnam War and afterwards stock markets remained flat from the end of 1964 until 1982.

1. Prior to the 2003 invasion of Iraq, a CBS/New York Times survey found that 23% of people felt the war would improve the economy versus 41% who didn't and 31% who said it would make no difference. A more recent CNN poll in 2008 found that while the majority of people (71%) thought the spending in Iraq had hurt the economy, over a quarter of respondents (28%) still thought it didn't have any impact on America's economic position.

2. In 1941, 1% of the U.S. population controlled 15% of the wealth, this dropped dramatically so that by 1945 the top 1% controlled 11% of the wealth. There was then a decline through till 1973 when the top 1% controlled 8%. By 2005 the figure had risen to over 17%.

Government policies associated with funding these conflicts resulted in the following economic indicators experiencing negative effects either during or after the conflicts:

- Public debt and levels of taxation increased during most conflicts;
- Consumption as a percent of GDP decreased during most conflicts;
- Investment as a percent of GDP decreased during most conflicts;
- Inflation increased during or as a direct consequence of these conflicts.

The higher levels of government spending associated with war tends to generate some positive economic benefits in the short-term, specifically through increases in economic growth occurring during conflict spending booms. However, negative unintended consequences occur either concurrently with the war or develop as residual effects afterwards thereby harming the economy over the longer term.

Different approaches to financing the additional government expenditure and associated changes to the market economy meant that the macroeconomic effects varied for each period. In every period however, gross investment either declined or grew at a very slow rate, and in all but one case, during the Iraq and Afghanistan wars, consumption also stalled. Each period can be summarized in the following way:

- **World War II** was financed through debt and higher taxes, by the end of the war, U.S. gross debt was over 120% of GDP and tax revenue increased more than three times to over 20% of GDP. Although GDP growth skyrocketed to over 17% in 1942, both consumption and investment experienced a substantial contraction. One of the key causes was government control of raw resources and materials. Trend lines taken from before the war and dating from 1933 onwards clearly indicate that for investment, consumption, and GDP growth there was no increase in the trend lines after the war had finished. While unemployment was virtually eliminated, recovery was well underway prior to the war, and the key counterfactual is whether similar spending on public works would have generated even more growth. The stock market initially dropped and once victory was foreseeable then rose to be higher than at the start of the war.
- **The Korean War** was largely financed by higher tax rates with GDP averaging 5.8% between 1950 and 1953 with GDP growth peaking at 11.4% in 1951. During this period however, investment and consumption stalled. The government needed to implement price and wage controls in response to inflation which had increased due to the additional stimulus that was created by government spending. Notably, both consumption and investment resumed growing after the war; however the growth was below the trend rate prior to the war. The stock market rose during the war.
- **The Vietnam War** was unlike World War II and the Korean War, as it ramped up slowly with American troop deployments starting in 1965. This war was largely funded by increases in tax rates, but also with an expansive monetary policy which then subsequently led to inflation. Increases in non-military outlays also had a role to play. Unlike prior wars, consumption remained unaltered due to expansionary monetary policy although investment fell during the war. Again, as with the two prior wars, GDP growth increased and peaked at 7.3% of GDP in 1966. At the beginning of 1965, the Dow Jones index was at 900 and it wasn't till after October 1982 that it stabilized above the 900 mark.
- **The Cold War** period can be categorized as running from the late 1970s through to 1989. This period saw sustained increases in military spending alongside tax cuts which then resulted in a blowout in the budget deficit. Although there was a boom in consumption it was fuelled by a combination of increased deficit spending and higher government debt which in turn also caused interest rates to increase. This was also accompanied by a substantial trade deficit as well as a bull run with the Dow Jones index increasing from 1,121 in February 2003 to 2,810 in January 1990.
- **The Afghanistan and Iraq Wars** were accompanied by weak economic conditions right from their beginning and corresponded with the bursting of the high tech asset bubble which led to the 2001-2002 recession. This was also the first time in U.S. history where taxes were cut during a war which then resulted in both wars completely financed by deficit spending. A loose monetary policy was also implemented while interest rates were kept low and banking regulations were relaxed to stimulate the economy. All of these factors have contributed to the U.S. having severe unsustainable structural imbalances in its government finances.

This analysis does not seek to place value judgments on the effectiveness or justification for any particular conflict but only to highlight the macroeconomic effects of war spending. It seems evident from this study of U.S. macroeconomic history over the past seventy years, that there are a number of negative economic effects from conducting these wars.

INTRODUCTION

This paper assesses the macroeconomic impact of five war periods on the U.S. economy spanning the last seventy years. Seven macroeconomic indicators have been assessed to determine how they have changed during the conflict periods:

- GDP
- Consumption as a percent of GDP
- Average stock market valuations
- Public debt and levels of taxation
- Inflation
- Income distribution

Increased military spending can generate some positive economic benefits through the creation of employment and additional economic growth as well as contributing to technological developments. This can provide a multiplier effect which then flows on to other industries. These are some of the acknowledged positive benefits of increased government spending on military outlays. However, in acknowledging these benefits, one must also examine counterfactuals, where consideration must be given to the opportunity cost and unintended consequences of military spending on conflict.

By examining the state of the economy at each of the major conflict periods since World War II, it can be seen that the positive effects of increased military spending were outweighed by longer term unintended negative macroeconomic consequences. While the stimulatory effect of military outlays is evidently associated with boosts in economic growth, adverse effects show up either immediately or soon after, through higher inflation, budget deficits, high taxes and reductions in consumption or investment. Rectifying these effects has required subsequent painful adjustments which are neither efficient nor desirable.

When an economy has excess capacity and unemployment, it is possible that increasing military spending can provide an important stimulus. However, if there are budget constraints, as there are in the U.S. currently, then excessive military spending can displace more productive non-military outlays in other areas such as investments in high-tech industries, education, or infrastructure. The crowding-out effects of disproportionate government spending on military functions can affect service delivery or infrastructure development, ultimately affecting long-term growth rates.

While military and defense spending is important in providing security for the nation as well as helping to support and protect its national allies, like other forms of government expenditure, it should be analyzed for its efficiency and whether it fulfills its primary objective. Currently, the U.S. Government spends US$670 billion [3] on its defense budget which is used to employ tens of thousands of workers in the military and defense contracting industry. The fact that these investments generate jobs, economic growth and sometimes result in valuable spin-off technologies is not doubted. However, the key question that needs to be addressed in order to understand if military spending remains cost-effective is whether it is achieving its primary purpose of improving national security as opposed to secondary objectives which may be in the provision of jobs or the development of new technologies for industrial use. This is simply because other forms of spending charged with the primary purpose of providing employment or to conduct research and development are likely to be more efficient in achieving those goals than spending targeted at national security. This has been reinforced in various studies, which show, when comparing the direct multiplier effects of military spending to other forms of government spending, it is not as productive in economic terms as spending in infrastructure, education, or even as tax cuts to increase household consumption. [4]

This analysis does not seek to place value judgments on the efficacy or justification for any particular conflict but to highlight the macroeconomic effects of war spending. [5] Security is not only dependent on an adequate military capability but also on economic stability. As research conducted by the Institute for Economics and Peace has shown, economic conditions are highly interconnected with the institutions that support peaceful environments. It is for this reason the economic implications of war should be considered, as the economic foundations of society do help determine its security.

3. U.S. Department of Defense Fiscal Year 2012 Budget Request Overview, February 2011, Office of the Under Secretary of Defense (Comptroller)/CFO; http://comptroller.defense.gov/defbudget/fy2012/FY2012_Budget_Request_Overview_Book.pdf

4. Garrett-Peltier, H. & Pollin, R. (2009), The U.S. Employment Effects of Military and Domestic Spending Priorities: An Updated Analysis, Political Economy Research Group (PERI), University of Massachusetts, viewed 1 October 2011.

5. A purely utilitarian approach to assessing the efficacy of particular conflicts would ask how much security was gained in exchange for the size of spending for that security – this requires subjective reasoning and is not within the scope of the paper.

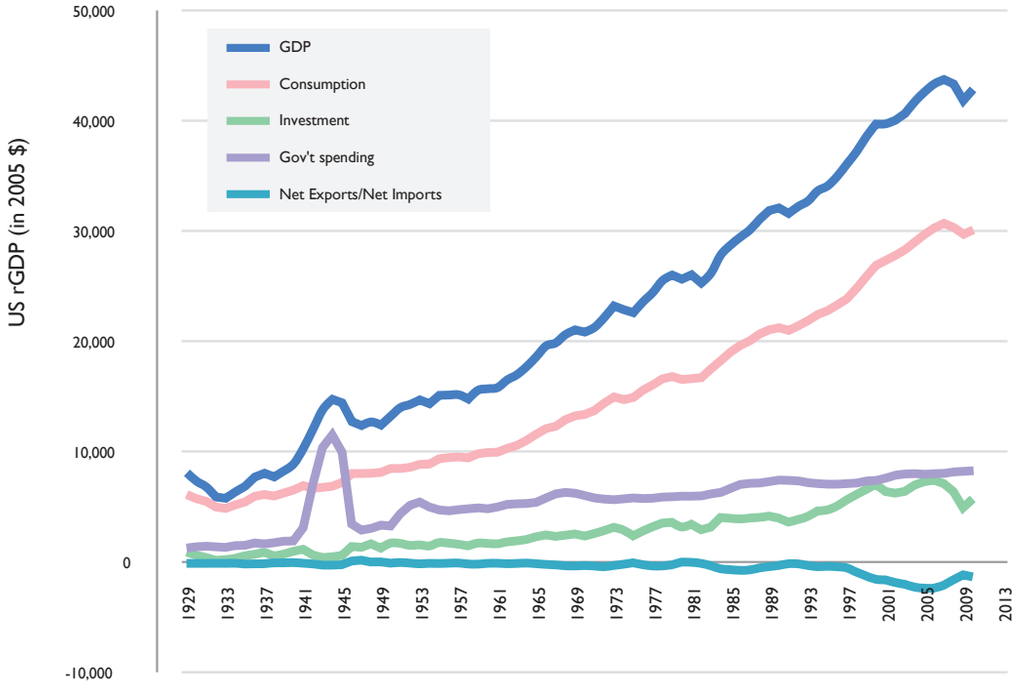
6. Institute for Economics and Peace (2011) Structures of Peace, Research Brief

WORLD WAR II AND THE GREAT DEPRESSION

The role that World War II played in ending the Great Depression can be analyzed by investigating the historic composition of U.S. GDP from 1929 through to the post-war period. World War II is a highly unique period in terms of the sheer size of the resources committed to the conflict and the associated changes to the structure of the market economy.

Using data from the Bureau of Economic Analysis, figure one shows the composition of U.S. GDP in consumption, investment, government spending and net exports and imports in per-capita terms. It can be seen the war years of 1941 to 1945 saw one of the most significant short term increases in economic growth in the history of the U.S. economy. The top line in blue is GDP, and the increase around World War II is very visible. This was driven by government spending denominated in purple.

Figure 1: History of U.S. Growth [7]

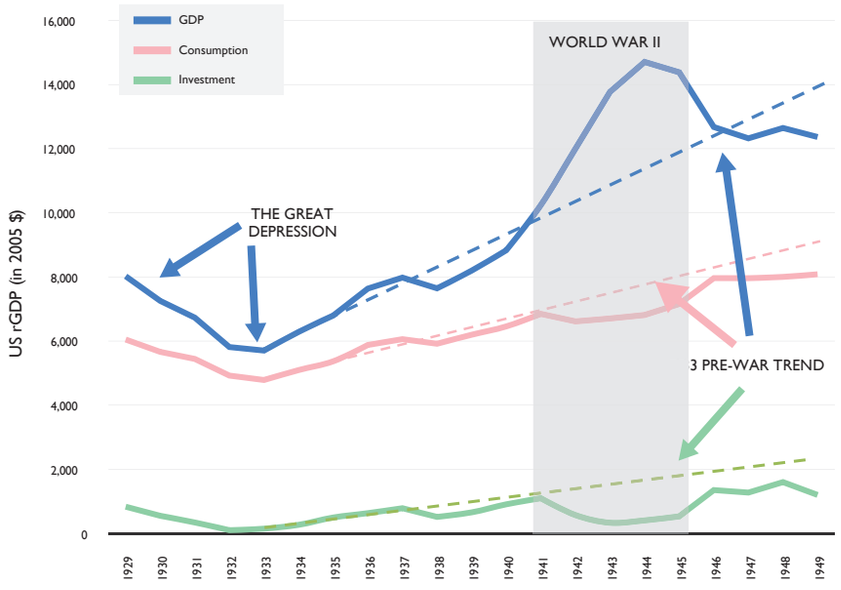


It is very clear that growth during this period was driven by government spending and accompanied by declines in consumption and investment in comparison to the pre-war trend. The funding for the war was predominately via government debt and taxation, which increased by 5 and 6 times respectively, over the course of 1941 to 1945. Unemployment fell to 1.9% by 1945 as up to 20% of the population was employed in the armed forces. So while it can be said that the war directly lead to a decline in unemployment, the level of consumption did not see any corresponding increase, despite the fact that the unemployment rate had significantly fallen from 14.6% in 1940 to 1.9% in 1945. In real terms, per capita consumption was lower in 1945 than it was in 1941.

In 1941, government spending represented approximately 30% of GDP, or almost US$408 billion. At its peak in 1944, this had risen to over US$1.6 trillion or 79% of total GDP rising by 394% in just three years. By contrast, consumption fell from 67% to 46% of GDP and investment fell from 11% to 3% of GDP over the same period. This is shown in figure two, where it can be seen via the trend lines drawn from 1933 that consumption and investment in the immediate years after the war were well below the pre-war trend.

7. Figure 1 shows real GDP, that is, U.S. GDP and its composition in inflation-adjusted per-capita terms, 1929-2009.

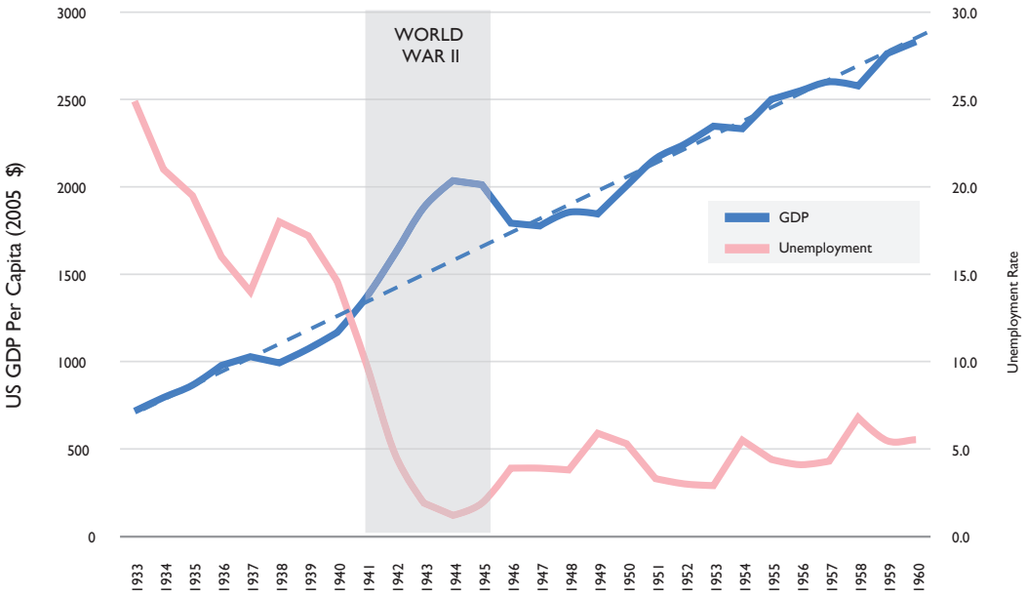
Figure 2: Consumption and Investment were well off trend after the war years



Price controls and rationing had a significant role to play in holding back consumption. It was difficult for households to purchase goods such as washing machines, irons or water heaters because the raw resources and production capabilities needed to produce these goods were needed for the war effort. New administrative bodies were established such as the War Production Board and Office of Price Administration. The War Production Board was able to assign priorities to scarce materials such as rubber, steel and aluminum to ensure they went to production of the military, rather than to civilian goods. In addition, wages were controlled and personal savings were encouraged through the purchase of war bonds which further limited the size of individuals' disposable income.

People were also encouraged to conserve food and produce as much of their own food as possible because food items were generally scarce. Freezes were also instigated for wages. Combined with a general reduction in consumption, it can be said living standards for those already employed, at least in material terms, did not improve. Even in terms of total GDP, World War II did not create a permanent increase or change in the growth trend after the war had ended. This is shown in figure three where it can be seen that after the increase in GDP, which was funded by government spending from 1941 to 1945, the post-war period fell back to the same growth trend line as was experienced between 1933 and 1937.

Figure 3: After the war growth bubble, GDP growth returned to its pre-war trend



The trend line for GDP in figure three is produced by taking the data for 1933 to 1941 and 1946 to 1960 and estimating a linear regression line through the data points. The resulting regression equation is then used to estimate the imputed data for 1942 to 1945 in order to simulate what U.S. GDP would have been expected to look like had the economy grown at the same rate during the war years as it did during the immediate pre and postwar years.

From this graph it is evident that the U.S. economy had already experienced several years of post-Great Depression growth before the Japanese attack on Pearl Harbor in December 1941, and that the war bubble was indeed no more than a bubble as post-war growth reverted to baseline growth. [8] Despite small rises in consumption, investment and net exports at the end of the war, the GDP bubble declined in line with the reduction in government spending. After the bubble of war growth, Robert Higgs found U.S. GDP growth in 1946 alone decreased by 20.6%, with a contraction lasting to 1948. [9] In spite of this contraction, Higgs argues it was only until after the war that the Great Depression truly ended.

The huge size of the military operation in World War II and the largely debt-dependent financing method resulted in publicly held gross debt reaching 120% of GDP and the end of excess capacity. The political will required for this to occur could only have happened in the face of the enormous urgency and the size of the existential threat the Axis powers created. In this sense, the main contribution of the war was the creation of a 'necessary' existential threat to enable the political will for the government to spend over 37% of GDP on military outlays for the last three years of the war. This removed excess capacity and enabled previously unemployed people to enter the workforce. However, this was arguably already happening prior to the war when the economy was on a growth trend from 1933 to 1937 which was supported by New Deal spending that averaged a much lower 15.4% of GDP with unemployment 10% lower in 1940 than in 1933.

One of the positive lasting effects from WWII was a more even distribution of wealth. WWII started a trend that would last to the end of the Vietnam War. It can be argued that this reallocation of income created the ideal conditions for the formation of an advanced consumer economy. Data provided by Saez [10], shows that the share of income held by the top decile averaged around 45% from the mid-1920s to 1940. During the war years it declined substantially to just above 32.5% in four years during World War II and stayed stable at around 33% till the 1970s, then gradually climbed back to 45% in 2007. Accordingly, Saez notes the war played a lasting role in income concentration in the United States.

In terms of share market movements, the Dow Jones Industrial Average (DJIA) fell from mid-1941 onwards, and continued to fall after the bombing of Pearl Harbor. However, by May 1942, sentiment changed and once victory was foreseeable, the stock market rallied, recovering to the 1939 level near 150 points in early 1945. After V - J Day, the DJIA moved on to new highs, reaching 200 points in early 1946 for the first time prior to the Great Depression.

8. Technical note: The time period in Figure 3 includes the Korean War episode, 1950-1953. This overestimates the trend and makes the World War II bubble appear somewhat smaller than it was.

9. Higgs, R. (2006). Depression, War, and Cold War: Studies in Political Economy

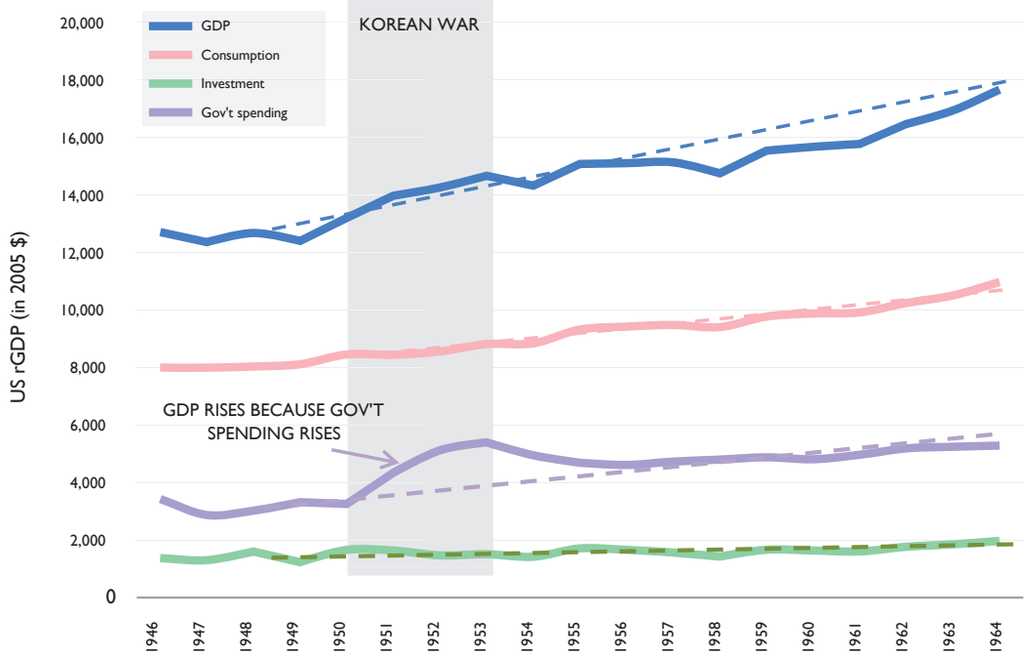
10. 2010, Saez, E. Striking it Richer: The evolution of top incomes in the United States, July http://elsa.berkeley.edu/~saez/saez-UStopincomes-2008.pdf

KOREAN WAR

According to a Congressional Research Service report on the cost of major U.S. wars, the Korean War from 1950 to 1953 cost US$30 billion in 1953 dollars or US$341 billion in constant 2011 dollars.[11] The size of the annual expenditure was equivalent to 14.1% of GDP in the last year of the war. [12] This is in comparison to the cost of World War II which is estimated to have been US$296 billion in 1945 dollars (US$4,104 Billion in 2011 constant dollars). As a result, the effect of the Korean War was far less significant than World War II, but nonetheless still changed the structure of growth via its financing.

Similar to World War II, the Korean War boosted GDP growth via government spending, although this spending was financed via taxation as opposed to World War II which was primarily debt financed.

Figure 4: During the Korean War, GDP was slightly boosted by government spending financed by taxation which constrained investment and consumption



As can be seen in figure four, as in World War II, there is an increase in the growth of GDP, albeit smaller, for the 1950-53 time period. Investment and consumption flattened while the overall growth rate was driven by government spending. President Truman relied largely on taxation and a reduction in non-military outlays as opposed to borrowing from the public or money creation policies to finance the conflict. In order to facilitate this, the government enacted the Revenue Act of 1950 which reinstituted the income tax rates of World War II, boosting taxes by an estimated 1.3% of GDP. [13] This was followed by further increases of individual and corporate taxes in 1951.

11. Congressional Research Service - http://www.fas.org/sgp/crs/natsec/RS22926.pdf

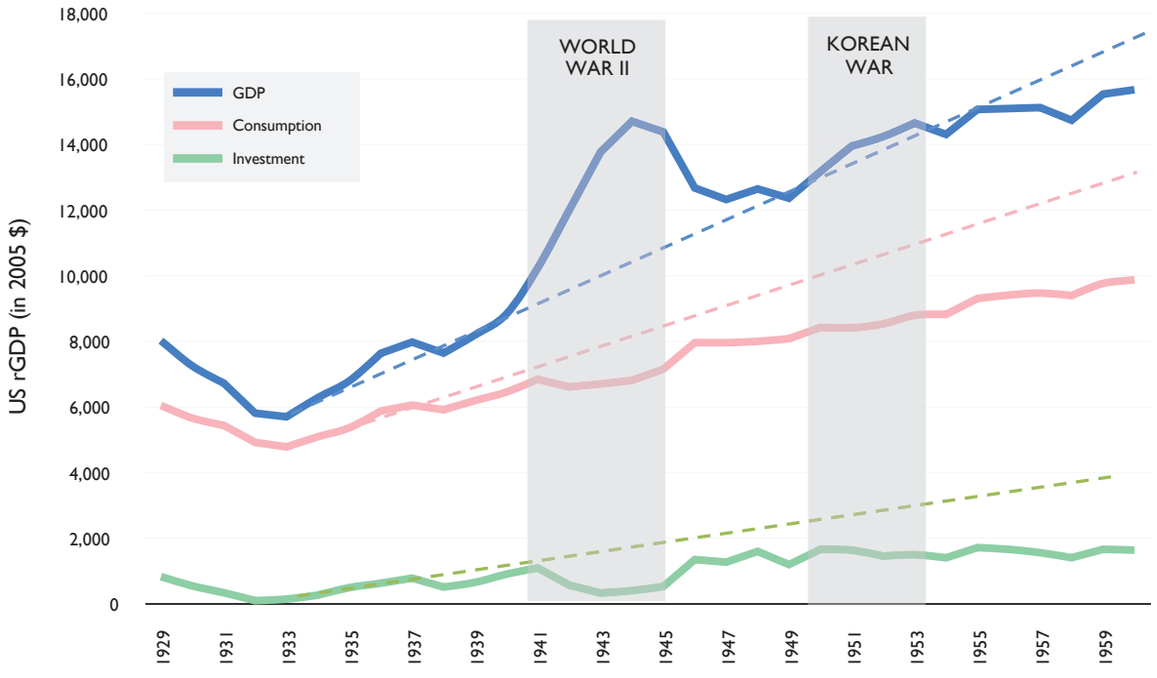
12. Labonte, M (2004) Financing issues and Economic Effects of American Wars. CRS Report for Congress http://www.ndu.edu/library/docs/crs/crs_rl31176_27apr04.pdf

13. Ibid.

The economy experienced real GDP growth of over 11% in 1951 with inflation increasing to 5.3% in 1951. The government then resorted to price and wage controls in an attempt to control inflation. Notably, the year after the conflict ended, 1954, there was a short recession in spite of the fact military outlays still constituted 13% of GDP. National GDP fell to be effectively the same as it had been two years prior, in the middle of the war in 1952.

Material well-being was affected by tax increases, new price and wage controls which constrained private sector consumption and investment. However, perhaps of more impact to the U.S. economy over the ensuing years was that two of the key components of GDP, consumption and investment, did not return to their pre-war trends.

Figure 5: After World War II and the Korean War, consumption and investment did not return to the pre-war level



By 1959, the gap between actual consumer spending and its pre-World War II projection had become substantial. Similarly, the investment component failed to keep up with its pre-war trend. During the period of 1948 to 1959 it is more or less flat, showing no growth at all. The subdued consumer spending can be partly explained by the financing of the wars that also contributed to the stagnant investment during the period.

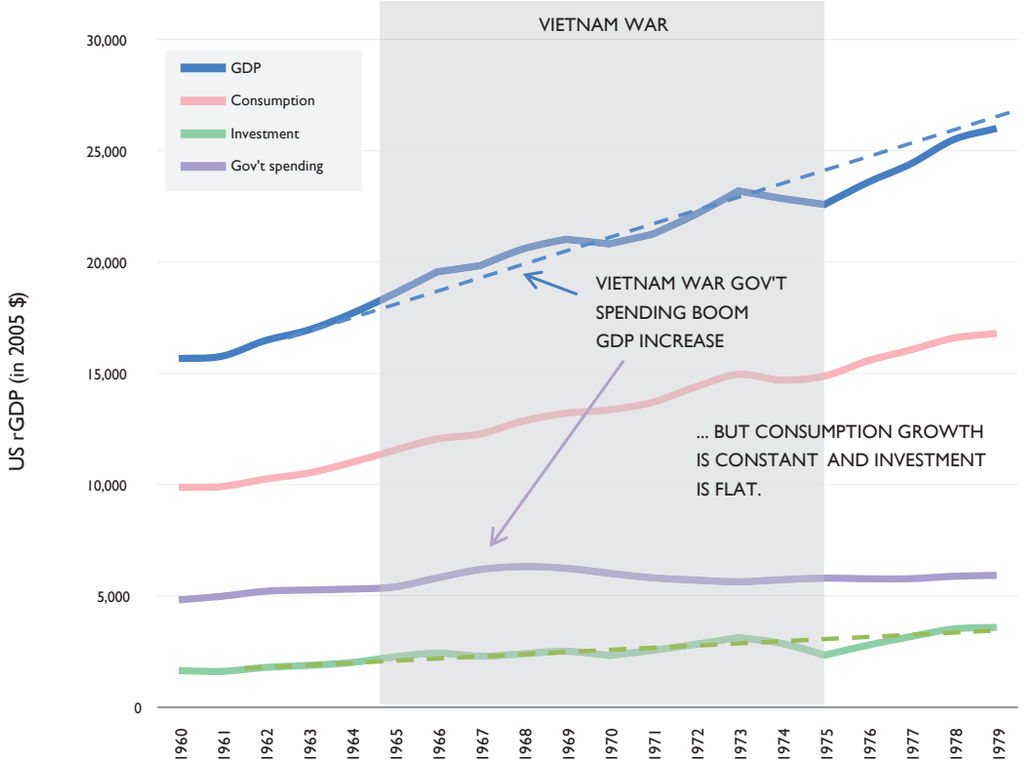
VIETNAM WAR

In monetary terms, the Vietnam War was less expensive as a percentage of GDP than World War II and the Korean War. According to Daggett, the military cost of the war as a percentage of GDP was 9.5% in the peak spending year of 1968. [14] The official U.S. Government start date for the Vietnam conflict is considered to be 1 November 1955. This was when the first U.S. military advisers arrived in Vietnam; however the first combat troops were not deployed until 1965 which is considered the start date for the purposes of this paper.

Vietnam was different to the preceding conflicts in the sense there was no spike in military outlays to mark the start of the war, as military buildup remained constant as a result of the Cold War. The peak year of military spending was 1968 when it reached 9.5% of GDP, compared to the last year of the conflict in 1973, when military spending fell to 5.9% of GDP. Fiscally, non-military spending was equally significant in the peak year of the conflict, compared to the Korean War where military outlays were almost three times non-military outlays. This was in large part due to President Johnson's Great Society domestic programs.

The Vietnam War, like the previous wars analyzed, had a lasting fiscal legacy due to the increased levels of government expenditure which was financed by increases in taxation from 1968 to 1970. [15] The blowout in budget deficits was driven by both military and non-military outlays in combination with an expansionary monetary policy that led to rapidly rising inflation in the mid-1970s. Figure six shows the increase in government spending which peaked in 1968. Consumption remained constant and investment remained flat.

Figure 6: Government spending - the driver of growth during the Vietnam War



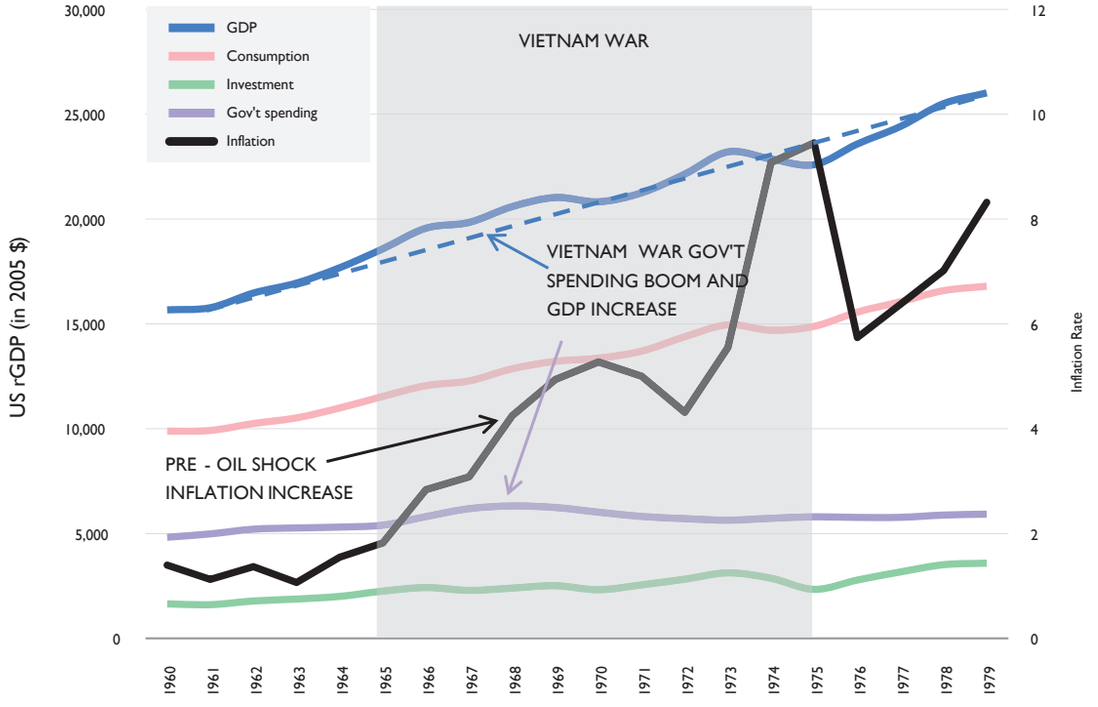
14 Refer to Daggett, S (2010) http://www.fas.org/sgp/crs/natsec/RS22926.pdf page 2 for details of the method of calculation for this costing.

15 Labonte, M (2004) http://www.ndu.edu/library/docs/crs/crs_rl31176_27apr04.pdf

The slight fall in government spending after 1969 and up to 1973 can be attributed to falling military expenditure that outweighed the increases in non-military expenditure. Consumption was negatively affected by rising unemployment and inflation after the 1973 oil shock, while prior government attempts to rein in inflation with price and wage controls also kept investment almost flat through most of the 1970s.

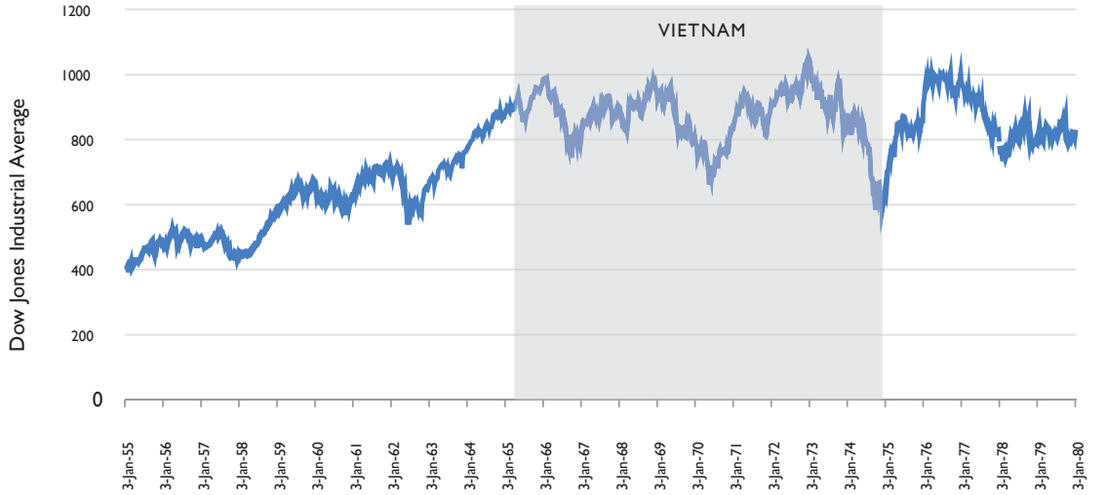
As can be seen in figure seven, the financing method of the Vietnam War via inflation did not help policymakers who later had to deal with stagflation brought on by the 1973 oil crisis.

Figure 7: The Vietnam War helped push up inflation before 1973



During the ten-year period 1965-1975, the DJIA did fluctuate. The oil shock and ensuing period of stagnation depressed the market, falling to 1963 levels in 1975. It was only once inflation leveled off after 1980 that stock prices started to increase, suggesting the inflationary role of the Vietnam War did not help expectations in the market.

Figure 8: The Dow Jones Industrial Average stagnated during the inflationary period of Vietnam

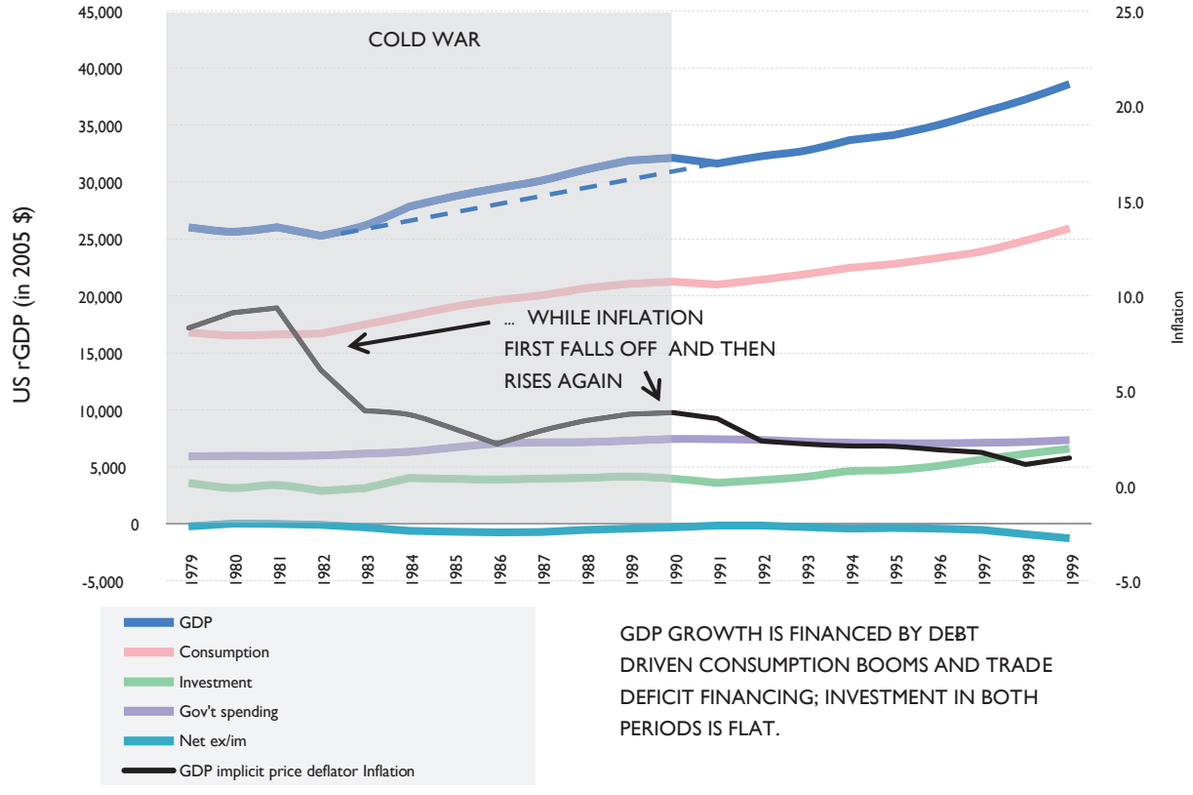


COLD WAR

The increasing tensions between the U.S. and U.S.S.R. in the late 1970s through to the mid-80s saw another military build-up under President Reagan. The size of military spending, while large in absolute terms, was however relatively smaller than the preceding spending during the 'hot' wars of World War II, Korea and Vietnam. Military expenditure as a percentage of GDP reached its peak in 1986 at 6.2% of GDP which was about half the size of non-military expenditure which reduced from 14.9% of GDP in 1981 to 12.4% of GDP in 1988.

The dominant economic narrative at the start of this period was the need to reduce inflation from the very high levels of the late 1970s. This had been achieved by 1983, but at the expense of economic growth, causing a sharp recession in 1980. While inflation was no longer a serious problem in 1983, unemployment had risen to 10.8% by the end of 1982 and remained above 10% for half of 1983. Reagan's key policies of higher military spending and lower taxes, increased budget deficits from 2.6% of GDP in 1981 to 6% of GDP in 1983. The effect of Reagan's dual commitments was a debt driven consumption boom which was accompanied by high interest rates which then caused trade deficits. [16]

Figure 9: Cold War spending was financed by debt, fuelling inflation pressures which helped keep interest rates high resulting in a trade deficit



In spite of the growing budget deficit, military expenditure remained well above pre-1980 levels until the breakup of the Soviet Bloc. By 1984 GDP growth had reached 7.6% of GDP. Subsequently, the United States had budget deficits until 1998.

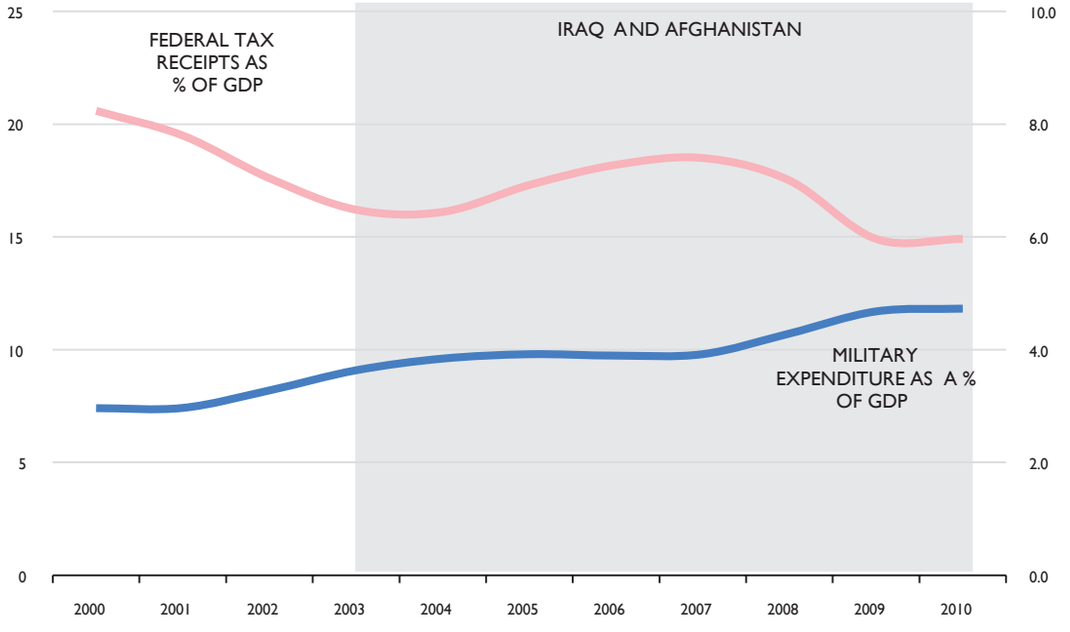
16. Refer t According to Labonte (2004), the deficit spending that Reagan committed to resulted in debt driven growth and pressure on inflation. In response to the threat of high inflation, the fed kept interest rates high. However, the effect of the higher rates was to attract foreign capital which caused an increase in the trade deficit.

IRAQ AND AFGHANISTAN WARS

Following on from the recession of 2001 to 2003, the Iraq and Afghanistan Wars started amidst weak economic conditions. [17] The peak year for military spending during the Iraq war was 2008 at 4.3% of GDP. The commitment to the Afghanistan war grew slowly with the estimated peak year of the conflict occurring in 2010 where the cost of the Afghan war was US$297 billion or approximately 2% of GDP. Notably, like all costs quoted in this paper, this does is not include the considerable costs associated with veterans' benefits, interest on war-related debt, assistance to allies and country reconstruction. When accounting for all of these associated costs, not just the budgetary costs outlined above, the total number is evidently much greater as described by Stiglitz and Bilmes in their book, the Three Trillion Dollar War: The True Cost of the Iraq Conflict. Stiglitz and Bilmes counted budgetary costs, resources spent to date, resources expected to be spent in the future, budgetary costs to government, as well as costs borne by the rest of the economy. [18] The most conservative estimates put the cost of the war at one trillion dollars while further updates on the Stiglitz and Blimes work now put the cost at five trillion dollars.

Unlike the Cold War period, where military outlays were somewhat offset by increases in taxation rates, the Iraq and Afghanistan conflicts were entirely financed by debt. Military outlays increased while the Bush tax cuts saw taxation revenue fall significantly. This was the first time in American history that the Government cut taxes as it went to war. This is shown in figure ten, with the federal tax receipts and military expenditure lines converging.

Figure 10: The Iraq and Afghanistan wars was the first time taxes were lowered alongside increases in military expenditure



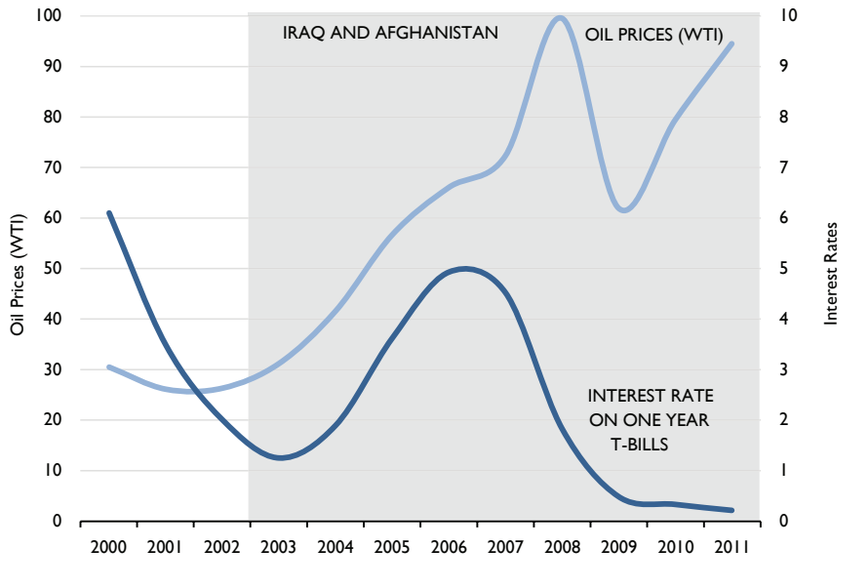
The resulting budget deficit imposed major constraints on the economy and limited the scope of options that were available to policymakers. This resulted in serious negative effects for the rest of the decade.

17. Not considered in this analysis is the economic effect of the Desert Storm Operation which is unique in the sense it did actually involve an increase in military outlays as a percentage of GDP. Military spending actually fell in 1990 and 1991, and despite the fact there was a recession in 1990-1991, most economists do not attribute this to the war. Some have suggested the war was a part cause of the oil shock which affected confidence in an already weak economy.
18. Stiglitz, J. & Blimes, L. (2011) Estimating the costs of war: Methodological issues, with applications to Iraq and Afghanistan. Chapter 13, Oxford Handbook of the Economics of Peace and Conflict pp8

Significantly, Stiglitz and Bilmes argue the Iraq War played a direct role in increasing the cost of oil which went from $23 a barrel just before the war to $140 at its peak. While not attributing all of the increase to the War, the higher oil price had the effect of muting domestic demand in the U.S. while also increasing inflationary pressures globally. The occurrence of increased oil prices during the war is shown in Figure 11.

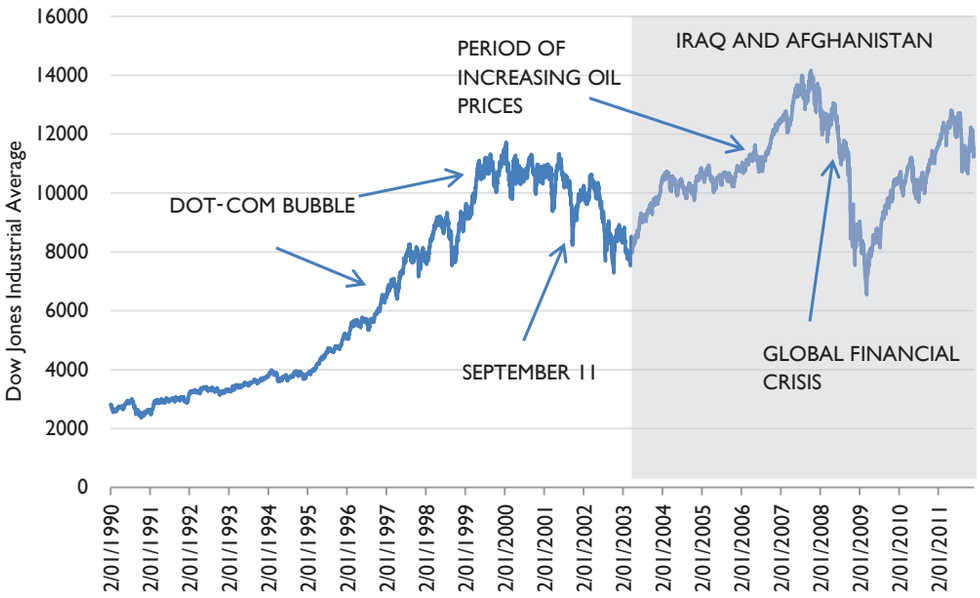
While inflation was muted in the U.S. due to existing weak economic conditions, policymakers were limited by the large budget deficit and did not use fiscal policy as a lever to boost effective demand until the Global Financial Crisis in 2008. This ensured the Federal Reserve carried the burden of keeping the economy growing, which it did via low interest rates, a flood of liquidity and lax banking regulations which in turn helped fuel the housing bubble. Figure 11 also shows the increase in interest rates in 2006 and 2007 that were implemented in an attempt to contain the housing bubble prior to the financial crash.

Figure 11: Oil Prices significantly increased during the Iraq War



It can be seen in figure 12 that stock market prices were significantly affected by the busting of the speculative bubble in information technology which started in late 2000. The collapse of the bubble and subsequent recession was closely followed by the events of September 11. The share market rallied from the start of the Iraq war in 2003 and continued its rally increasing in value by over 75%. This Bull Run ended with the Global Financial Crisis where the stock market fell at the height of the crisis to the same levels as 1997.

Figure 12: Stock market events during the period



FINANCING THE WARS

For each of the periods described in this paper, various financing methods were utilized by policymakers. Wars inevitably involve governments increasing expenditure, and this can be done in at least four different ways;

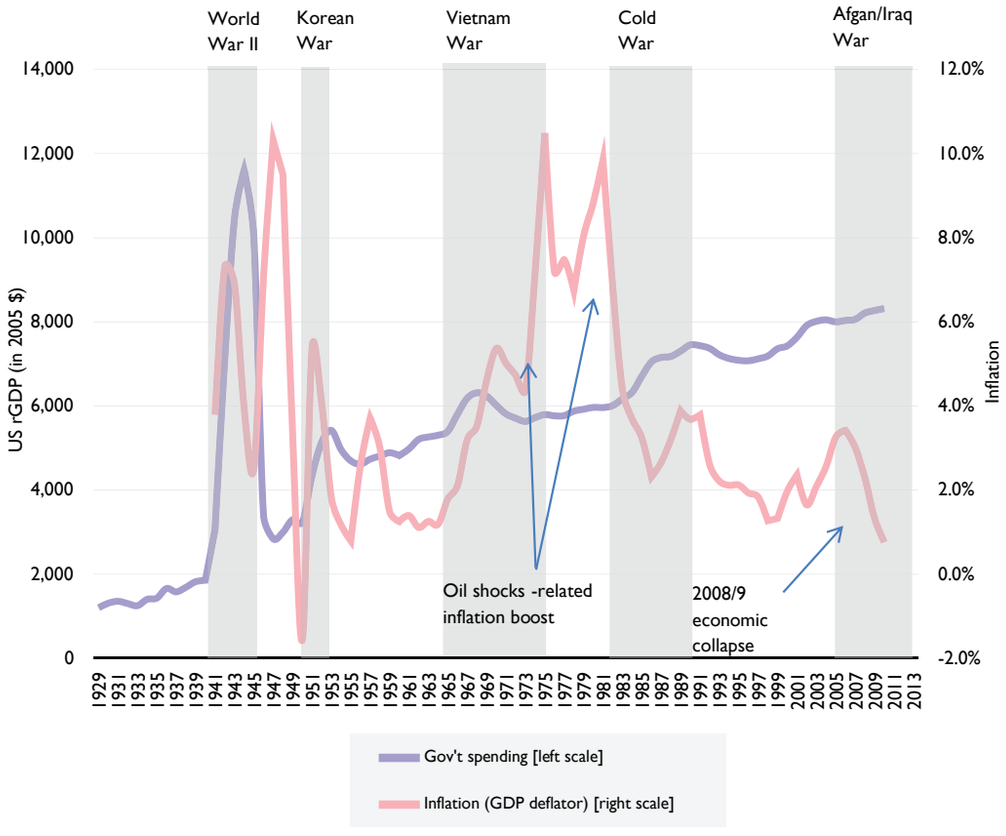
- Increasing taxation
- Reducing non-military spending to pay for military outlays
- Government borrowing from the public through War bonds or issuance of U.S. Treasury securities (debt)
- Money creation.

The U.S. has used a combination of these methods to finance its wartime activities, as shown in figure 13. The chart shows the history of government spending and inflation since 1929 and the relation between the various wars and the trend in inflation. Note the increases in government spending which correspond with each major war.

The major increase in debt during World War II shows it was largely financed by debt while the Korean and Vietnam wars were financed primarily by taxation and inflation, respectively. In the latter part of the 1980's debt levels started to rise with increased borrowing to finance the Cold War. The same has happened with the Afghan and Iraq wars in recent years.

It can be seen in spite of the various financing methods, the wars discussed here have all consistently increased pressure on inflation. While inflation may be good for reducing the debt burden, overall it has many negative and harmful effects, such as purchasing power redistribution and erosion of international competitiveness. [20]

Figure 13: Wars Boost Inflationary Pressure



20. Why price stability?, Central Bank of Iceland, Accessed on 3 January, 2012. http://www.sedlabanki.is/?PageID=195

CONCLUSION

Military spending, like other forms of government spending, can be an important source of economic demand during times of low confidence and downturn. It can lead to the development of new technologies, generate new industries and create sources of demand and employment. If military spending is funded by progressive taxation, as it was during World War II, it can indirectly result in more efficient income distribution. The flattening of income distribution after 1945 helped facilitate the creation of a large consumer oriented middle class which was the foundation stone for the long post-war boom that underpinned the U.S.'s subsequent political economic pre-eminence.

While huge spending during World War II ended unemployment and rebuilt confidence, consumption and investment declined during the period due to structural changes that were needed to the market economy to focus on the war effort. Nonetheless, the end of excess capacity and the high levels of unemployment was an undisputed positive.

However, analysis of the macroeconomic components of GDP during World War II and in subsequent conflicts show heightened military spending had several adverse macroeconomic effects. These occurred as a direct consequence of the funding requirements of increased military spending. The U.S. has paid for its wars either through debt (World War II, Cold War, Afghanistan/Iraq), taxation (Korean War) or inflation (Vietnam). In each case, taxpayers have been burdened, and private sector consumption and investment have been constrained as a result. Other negative effects include larger budget deficits, higher taxes, and growth above trend leading to inflation pressure. These effects can run concurrent with major conflict or via lagging effects into the future. Regardless of the way a war is financed, the overall macroeconomic effect on the economy tends to be negative.

For each of the periods after World War II, we need to ask, what would have happened in economic terms if these wars did not happen? On the specific evidence provided, it can be reasonably said, it is likely taxes would have been lower, inflation would have been lower, there would have been higher consumption and investment and certainly lower budget deficits. Some wars are necessary to fight and the negative effects of not fighting these wars can far outweigh the costs of fighting. However if there are other options, then it is prudent to exhaust them first as once wars do start, the outcome, duration and economic consequences are difficult to predict.

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