THE SIZE OF THE U.S. ARMED FORCES DURING WORLD WAR II: FEASIBILITY AND WAR PLANNING

Michael Edelstein

ABSTRACT

The size of the American armed forces in World War II resulted from early decisions which reflected the nature of the threat, the capital intensity of American combat strategy, the immediate need to aid the heavily engaged Allies, and the degree of American popular commitment. A key decision followed the feasibility dispute of 1942. In this dispute the immense supply demands of the President, the War Department and the Navy Department were challenged by the GNP and labor force analysis of Simon Kuznets and Robert Nathan of the War Production Board. Based on an examination of War Production Board documents, this paper shows how Kuznets and Nathan used the infant theory and practice of GNP accounting to frame the case for the infeasibility of the first war plans. Kuznets and Nathan not only had an immediate impact on war spending in 1942 and 1943 but the standard of living constraint that they identified remained a crucial element in the economic shape of America's entire war.

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I. INTRODUCTION

The size of the American armed forces in World War II resulted from early decisions that reflected both the size of the threat and the degree of commitment of the American people to the cause. It also reflected early decisions to help equip Allied industry and armed forces, and to conduct a highly capital intensive style of warfare. Later developments permitted the early decisions to hold through the end of the war. The most important of these developments were the success of Russian industry and arms, the effectiveness of Allied air power when tasked to precision bombing and close support of ground operations, the successful concentration of naval and other forces based on code-cracking, and the immense power of the atomic bombs.

When the United States entered World War II in December 1941, victory was likely given the imbalance in human and industrial resources between the Allies (the United Kingdom, the U.K.'s Dominions, the U.S.S.R, and the United States) and the Axis powers (Germany, Italy, and Japan). Yet, time, as well as human and industrial resources, was important. World War II ended 44 months after the U.S. joined the Allies. A significant part of this elapsed time was due, in part, to the lack of preparedness of the U.S. But it was also due to the type of war the U.S. chose to fight, a capital intensive war that necessitated considerable time to set up and produce the required hardware. The prolonged and murderous trench warfare of World War I profoundly influenced this factor bias but the early victories of the Germans with concentrated and highly mobile tank and air offensive forces in France, Poland, and Russia made a capital intensive factor bias a necessity for any American combat victory.

In comparison with other major World War II belligerents, it is significant that the American electoral process continued throughout World War II. Pre-war American isolationist sentiment, the sharp fall in American living standards throughout the 1930s, and the lack of a direct air or combat threat to the lower 48 states thus had the potential to affect the speed and degree of wartime economic and social mobilization. Of course, the unemployement of the early 1940s meant that there was a possibility that the nation could produce both more guns and more butter. In the event, the U.S. did produce more guns and roughly unchanged levels of consumption goods and services but it also had a lower degree of war mobilization than other major combatants. In 1943, the U.S. devoted about 31% of its labor force to war production and the military while Germany committed 38%, Britain, 45% and Russia, 54%.

The immense material and manpower demands of World War II, even before American entry, forced the U.S. government to consider the fundamental shape of the nation's prospective war economy. The Victory Plan, initiated by

Roosevelt in the Spring of 1941 and secretly completed in September 1941, has been closely analyzed by Kirkpatrick, a military historian, but neither Kirkpatrick nor other historians of the Victory Plan have carefully examined the subsequent economic analysis of the Plan by Robert Nathan and Stacy May at the Office of Production Management, delivered just before Pearl Harbor. Perhaps better known is the controversy called the "feasibility dispute" which erupted during the Summer and Fall of 1942, pitting the Armed Forces' supply commanders against the economists of the War Production Board. The bureaucratic politics of this secret dispute have been analyzed by Brignane (1950) and Ohl (1994) but neither historian examined the full economic analysis of Simon Kuznets' memos.

The purpose of this essay is to analyze the nation's production possibilities as they evolved from 1940 through 1945. One contribution of this essay is to analyze the full set of secret macroeconomic feasibility studies produced in 1940, 1941, and 1942. World War II was the first American war in which economists had available the tool of national income accounting to analyze the nation's production possibilities. From 1940 onward, the nation's most experienced national income accountants were deeply involved in these feasibility studies. These feasibility studies had an important impact on the shape of World War II's war and civilian production, as well as the shape of American combat. In analyzing these feasibility studies, an attempt is made to compare their forecasts of production capability with the war's actual production effort.

II. PRODUCTION POSSIBILITIES

The U.S. mobilization for World War II can be usefully framed employing a production possibility curve. Figure 1 displays a production space where an economy produces combinations of military goods and services and civilian goods and services. The frontier represents the maximal combinations which can be produced by labor and other resources using the most efficient proven technologies. Usually praised as a simple analytical tool, the social behaviors it seeks to illustrate are revealed as highly complex social constructions in the context of World War II.

The production possibility curve frames a fundamental social choice of an economy during wartime. Once at the frontier, a society can only have more military goods and services or more civilian goods and services but not both. On the one hand, military leaders are trained to raise and use massive and overwhelming force at key battle fronts - to maximize the chances of victory and minimize casualties. The massive slaughter on WW I's static battle fronts
led post-WWI military innovators to incorporate mobile armored naval, air, and ground forces to affect rapid concentration for successful attack plans. On the other hand, a democracy's leadership must try to support these demanding military goals by maximizing civilian support for the war in a context where some anti-war sentiment may carry over from before the war, where military demands may lead to reductions in the civilian standard of living, and where casualty rates directly confront civilians with the cumulating and most devastating costs of a war.

A second, equally important, social choice concerns the location of the production frontier itself. Ordinarily, longer term social forces affecting population growth, physical and human capital formation, and technical change push the U.S. production possibility frontier out a few percentage points each year on average. Implicit in these longer term growth forces are a fairly stable set of social and individual attitudes concerning labor force participation, the gender and other social divisions of labor, intensity of work effort, savings, risk bearing, and the creation and acceptance of technical change. These social and individual attitudes affecting the amount and character of resource supply can be dramatically altered by a war's threat to life and liberty. For example, if a war is widely and strongly supported, the reservoirs of labor in the nation's households might be tapped beyond normal participation rates in terms of hours of work or the intensity of work effort per hour. The nation could then have more of everything, except perhaps leisure.

To add complexity, there are in fact several types of war that could be fought. Furthermore, different arrays of war goods and services have implications for the timing of battle activities. In 1941 and 1942 there existed a variety of possible shapes to American war participation. In principle, America could participate by supplying a great deal of war goods to its Allies and fielding a small uniformed armed force. Alternatively, it could supply few goods to its Allies, and raise a very large American military force. Or, it could place itself somewhere in between these extremes by supplying some goods to its Allies and still reaping a significant American military force.

Another dimension of military choice was the capital intensity of warfare. The Spanish Civil War and the early victories of the Germans in Europe showed that concentrated tank and air offensive forces were extremely effective in overwhelming more lightly-armed enemies. Furthermore, in carrying the war across two oceans, the U.S. had no choice but to build military capital goods to project and protect the massive movements of men and material on the sea and land. Such capital takes time to build and this implies there were trade-offs between how quickly a combat army could be raised vs. how much labor was needed to produce a stockpile of war goods and machines.

### III. EARLY MOBILIZATION

In 1940, with U.S. defense efforts barely beginning, the U.S. employment rate stood at 47.8% of the non-institutional population aged 14 and older (hereafter NIPOP), of which 0.5% were employed by the military (see Table 1). The

<table>
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<tr>
<th>Year</th>
<th>TLF/NIPOP</th>
<th>TAE/NIPOP</th>
<th>CTEMPE/NIPOP</th>
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<td>46.7</td>
<td>0.5</td>
<td>0.7</td>
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<td>1942</td>
<td>5200</td>
<td>46.7</td>
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Abbreviations:
- TLF = Total Labor Force
- TAE = Total Armed Employment
- CLF = Civilian Labor Force
- NIPOP = Non-Institutional Population
- CLFPE = Total Civilian Employment

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Participation rate in 1940 was 56.0% of NIPOP. Unemployment thus stood at 8.1% of 1940 NIPOP, 8.13 million men and women idled by the nation's poor economic performance in the late 1930s. By 1941 with home and foreign demand for U.S. military and civilian goods rising, participation rates and employment rates rose to levels similar to the highest rates of the 1920s and 1930s (Lebergott, 1964, Table A-3, p. 512). Simply put, the economy had moved from Pt. A to Pt. B in Fig. 1.

The next year, 1942, the economy clearly exceeded the peak activity levels of the interwar peacetime economy. The 1942 participation rate stood at 58.8% of NIPOP and the total employment rate was 56.3% of NIPOP. Peak interwar participation rates had been around 56% of NIPOP and peak employment rates were 53.3–53.4% of NIPOP. Thus, by 1942 the unemployed of 1940 had been absorbed and then some. And, as Table 1 shows, the high rates of total participation and total employment continued to rise through 1944 and were still well above interwar peak rates in 1945. The resulting abnormal levels of output might be illustrated by Pt. C in Fig. 1.

IV. THE FIRST FEASIBILITY STUDY

The first signs of these tradeoffs and opportunities appeared in 1941. As the War and Navy Departments sought military hardware and munitions to equip and train their enlarging peacetime defense forces, the civilian economy was also trying to fill orders from Britain and France for food, raw materials, capital goods and munitions. One result was that the newly forming field divisions of the U.S. Army were strikingly under-equipped with basic arms and field equipment, let alone tanks and aircraft.5

To discover which agency or analyst produced the first study of the macroeconomic feasibility of WWII defense spending is very likely an impossible task. Annual estimates of national income at factor cost were readily available from Department of Commerce publications and the size of total defense appropriations was openly debated in Congress. Any curious economist working for the Department of Commerce, the Federal Reserve Board, the House and Senate budget committees, or the first defense agencies, the National Defense Advisory Committee or the Office of Production Management could calculate the percentage of national income going to aggregate defense spending in 1940 and 1941 and discuss its macroeconomic feasibility (e.g. Gilbert, 1941, 1942; Gilbert & Bangs, 1942a, b).

However, a detailed analysis of defense spending components with a consequently higher level of accuracy on the strains to particular industrial
sectors would have been difficult without access to confidential defense munitions and financial totals. Thus, it seems likely that the first economic analysis of a detailed defense budget was "Defense Production Requirements, 1940-1942, and Potential Economic Capacity", issued on April 4, 1941 by the Office of Production Management. Reviewing the materials and appropriations needed for a two million man army, a two-ocean navy and the Lend-Lease Act, the anonymous author of Memo No. 34 saw an "unprecedented load on American industry for the calendar years 1941 and 1942."

Congressionally approved defense spending totaled $44.3 billion in current 1940 prices for 1940-1942, covering airplanes, airplane parts and accessories, naval vessels, merchant ships, ordnance, industrial facilities, other production, Army and Navy pay and subsistence, British food and other non-industrial goods. Analyzing each of these expenditure categories, particularly with regard to their raw material and capital requirements, Memo No. 34 suggested that an additional $1.4 billions for industrial facilities would be required.

Distributed over time, the $45.7 billion total would require $3.9 billion in 1940, $19 billion in 1941 and $22.8 billion in 1942. Noting that actual national income in 1940 was $75 billion, Memo No. 34 forecasted that with the additional defense spending, national income would be $95 billion in 1941 and $105 billion in 1942.

Next, Memo No. 34 raised the issue of the possibilities of success. The largest previous absolute increase in national income had occurred between 1935 and 1936 and involved a $9 billion increase. With regard to World War I's economy, it was noted that national income increased but slightly after 1916.

The increased output of war materials after the entry of the United States into the war (WWI, that is) was brought about principally by reductions in civilian consumption, in non-defense construction, and in output of non-defense equipment, and by the transfer of productive resources thus released to war production. These reductions were brought about largely by a sharp rise in prices rather than by deliberate controls designed to that end (U.S. Office of Production Management, 1941, p. 9).

Taking into consideration the current monthly rate of national income in early 1941 and the factors just mentioned, Memo No. 34 estimated that national income might be $88 billion in 1941 and $95 billion in 1942 if there were no major price changes. To reach the defense spending goals "some curtailment of consumer income or the production of durable non-defense goods, or of both, clearly will be needed" (U.S. Office of Production Management, 1941, p. 9). If these estimates proved correct, defense would be 22% of national income in 1941 and 24% in 1942, "a modest goal" "in comparison with the corresponding ratios of the various belligerent countries. While Memo No. 34 did not directly say so, it was clear that the author thought some government intervention would be necessary.

In sum, in this first OPM feasibility study, the feasibility issue was centered on deciding whether the absolute size and time frame of specific types of defense production were feasible. The national income forecasting apparatus was quite simple. With a sensible caveat with regard to major price changes, utilizing historical and comparative defense and national income data, this April 1941 memo concluded that the size and timing of current defense spending goals were feasible.

V. THE VICTORY PLAN: MANPOWER FEASIBILITY

The massive German attack on the Soviet Union in June 1941 prompted Roosevelt to give immediate priority to lend-lease support for the reeling Soviet armed forces but he was aware that these new demands on American factories could easily strain the national economy. On July 9, 1941, President Roosevelt directed the War and Navy Departments to make an estimate of the nation's war production and military manpower needs, with due consideration for the needs of the Allies and merchant shipping. The Victory Plan, delivered on September 10, 1941, was the response to the President's request. Charged with drafting the Army's plan, Major Albert C. Wedemeyer asked first how much of the nation’s population could be called upon to serve in the fighting forces and how much labor had to be left in the civilian economy to produce civilian and military goods and services. Wedemeyer's approach to these grand strategic questions was quite unique in American military circles. In previous wars when events permitted long range planning, military planners first investigated the number, location, and quality of the enemy's forces and then drew up strategies for engagement and victory. Estimates of manpower and equipment requirements followed directly from these strategic decisions. Broadly read and educated in military and political affairs, with a long tour of duty attached to the Wehrmacht in the late 1930s, Wedemeyer uniquely saw the problem in terms of the availability of American manpower resources. Only after this assessment did Wedemeyer analyze the enemy's forces and allocate the pre-determined military manpower total to their various military uses and their potential arenas.

To assess the availability of American manpower resources, Wedemeyer consulted the Bureau of the Census and other government specialists. He also
admitted that after these consultations, "I stuck my neck out and said the armed forces could use approximately 10% of the population." 12 Wedemeyer thought that 10% was the maximum mobilization possible without seriously disrupting the economy (Weigley, 1973, p. 317; Kirkpatrick, 1990, pp. 78–79).

The 1940 Census estimated that the United States had a population of 132.1 million. To assess the availability of manpower, Wedemeyer assumed a population of 140 million, an estimate of the U.S. population a few years into the future (Kirkpatrick, 1990, p. 78). Given his 10% maximum mobilization rate, this meant that the nation had 14 million able-bodied men available to serve in the armed forces. 13 Wedemeyer estimated that of these 14 million, 8.8 millions would serve in the U.S. Army and Air Corps, 4 million in the Navy, and 1.2 millions would be essential for war production needs. 14 Wedemeyer’s Army plan called for 197 field divisions. Reflecting Wedemeyer’s tour of duty as an observer with the Wehrmacht in the late 1930s, two million of the Army’s 8.8 million were to be employed by Army Air Corps while 61 of his planned 197 ground divisions were to be armored and 61 to be mechanized. 15 At peak strength in May 1945 the American armed forces reached 12.3 millions of whom 8.3 million were serving in the Army and 4.0 million in the Navy. Thus, Wedemeyer’s estimate of 12.8 million in the armed forces appears to have been quite prescient.

Even apart from whether Wedemeyer’s Victory Plan estimate served as an important guide for military and political planning, a matter that will be shortly addressed, there is the simple fact that the labor of young adult males was not the only American factor of production. While the American military and American society believed that young adult males were an essential, non-substitutable resource for combat and many other military jobs, their subtraction from the non-military sector did not define the production potential of the rest of the economy. Longer hours from both capital and the (remaining) labor, less product variety and longer production runs, additional participation from the household economy, and the fuller use of the latest production technologies would help to define what was the economic potential of the American economy in 1941 and later, not just the number of young male adults. Indeed, this was a recognized value of national income estimates, a measure of the size of the nation’s economy which measured the contributions of all currently utilized factors of production outside the household. It was not the full measure of the nation’s potential output because resources could be drawn from the unemployed, the household economy, and idle capital, but for purposes of analyzing the potential of a militarized economy it was a significantly better measure than young male adults alone.

VI. THE VICTORY PLAN: MACROECONOMIC FEASIBILITY

These points were widely accepted by the nation’s economists and certainly by Robert Nathan who, with Simon Kuznets, was a key economist dealing with war production feasibility issues in Washington in 1941 and 1942. Nathan was assigned to national income estimation at the Department of Commerce when it started in 1932 and was chief of its National Income Division from 1934 to 1940. 16 In June 1940 he shifted to the National Defense Advisory Commission to lead research on military requirements. By the Fall of 1941 Nathan was chief of the Military and Civilian Requirements Branch, Bureau of Research and Statistics, Office of Production Management (OPM). 17

With the circulation of the secret Victory Plan in late September 1941, Nathan took on the task of analyzing its economics. Nathan completed a 14-page typescript draft on November 21, 1941, entitled “Feasibility of the Victory Program” (U.S. Office of Production Management, 1941b). On December 4, 1941, his boss, Stacy May, forwarded an edited version of Nathan’s memo to Donald M. Nelson, the Director of the OPM, adding a page of suggested first steps “which appear essential to the success of the Victory Program” (U.S. Office of Production Management, 1941c, p. 9).

The Nathan-May memo of December 4 contains an estimate of the total cost of the Victory Plan, and an analysis of the plan’s relation to national income, raw materials, industrial facilities, and labor supply. Nathan’s financial analysis revealed that the total cost of the Victory Plan would be, barring major price change, $142–150 billion, for delivery by September 30, 1943. At that time, currently authorized defense appropriations totaled $61 billion. The memo estimated that critical spending needs for the U.S. and the U.K. specified in the Victory Plan would cost an extra $59 billion. In addition, Nathan’s analysis of the Victory Plan led him to estimate that associated Army, industrial facility and other needs for a balanced operational army, air force, and navy would add another $22–30 billion.

Conjecturing that 1941 national income would total around $92 billion and defense disbursements would reach $16 billion, Nathan compared the resulting one-sixth of U.S. national income devoted to defense to the one-half or more then allocated by Great Britain and Germany. Nathan noted that the ability to fulfill the Victory Plan would depend on foreseeable rises in national income to perhaps $100 billion in 1942 and $110 billion in 1943 at current prices. If the nation utilized its labor forces as it had in WWI in 1917, national income could reach $130–140 billion and “certainly such a goal should be set for 1943.” 18
Were such an effort made, 75% of the Victory Plan could be completed by September 30, 1943, and the remainder by early 1944. The resulting radical acceleration in defense production would be similar to recent rates of expansion of defense production in Great Britain, Germany, and Canada.

The Nathan-May memo balances several aspects of the feasibility of augmented defense production, the potential size of the U.S. economy, and its capacity to plan and execute the required defense production. The text does not discuss which element was the more significant binding constraint leading to the 75% fulfillment forecast for September 31, 1943, and its completion in early 1944. The memo treats augmenting raw material production, reassigning existing factories and machine tools, and creating additional machine tools as distinctly problematic, requiring time and leadership. Yet the memo also notes that "civilian production will hardly fall below $60 billion per year"..., "far above the low year of the depression and only slightly under the 1935-39 average national income" (U.S. Office of Production Management, 1941, p. 8.) The Nathan-May memo notes, "the impact of the defense program on civilian consumption will mean severe curtailment of durable goods output perhaps to new lows, whereas food, clothing furniture, and services may in the aggregate exceed all previous peaks" (U.S. Office of Production Management, 1941, p. 8.) The estimated size of the U.S. economy thus implied that the nation's standard of living was also deemed an active constraint.

Curiously, Wedemeyer's assumption that 10% of the population would be in uniform by the end of 1943 is not mentioned or analyzed at all in the Nathan-May memo. The memo twice states that if the economy utilized labor at rates similar to 1917, the conjectured national income for 1943 could rise to $130-140 billion, 22% above the forecasted $110 billion. Yet, it is clear that Nathan either had an extremely poor estimate of 1917 aggregate participation and employment or, more likely, he was factoring in other labor supply elements to get his 22% increase in national income. In his section on labor supply Nathan suggests that 2-3 million were still unemployed in late 1941, conjectures that perhaps 6 million might move into the work force from the nation's homes and schools and another one million might be moved from farms and other self-employment. With an extra 10 million persons there would be "enough man-power to carry out the production part of the Victory Plan, even if defense employment were added to present employment levels" (Lebergott, 1964, p. 8.)

While an extra 10 million men and women might lift national income 22%, it is difficult to imagine the same result if, as of September 1943, something close to 10% of the population was serving in the Army and Navy. Thus, it seems implicit in Nathan's view that the Victory Plan's uniformed employment level was incompatible with the Victory Plan's military production program. While Nathan does not make this observation, it seems very doubtful that Nathan missed this issue. It is more likely that he did not want to confront the military planners in print.

In sum, there seem to be several threads in the Nathan-May December 4, 1941 memo supporting their forecast that the Victory Plan would be 75% fulfilled by September 1943, with the rest forthcoming by early 1944. With September 1943 as the target delivery date, Nathan and May found some limits on the economy's capacity to execute the production plans within the given period of time. There were certain levels of civilian good production which would be maintained and, implicitly, some portion of the planned military force levels would be met from an increased labor force but definitely not Wedemeyer's assumed 10% of the population. Implicitly, that too would be delayed. On this basis, the Victory Plan was deemed feasible.

VII. THE PRESIDENT'S "MUST LIST": THE FIRST WAR-TIME PLANS

While Wedemeyer's Victory Plan analysis and estimates may have raised the sights of U.S. Army and Navy planners and the White House in late 1941, there is considerable reason to doubt whether the Victory Plan served as an important guideline for U.S. military planning and war production activity following December 7, 1941. Significantly, the Army's first troop strength plans formulated immediately after Pearl Harbor appear to have largely ignored the Victory Plan.21

The first Army manpower plan after Pearl Harbor was built into a request on December 29, 1941 by the Army Assistant Chief of Staff, General Brehon B. Somervell, for a recomputation of Army supply requirements. The requested recomputation assumed that by the end of 1942 the Army would have 4.15 million troops; by the end of 1943, 8.89 million; and by the end of 1944, 10.38 million (Smith, 1959, p. 140). If Somervell had his eye on the Victory Plan's peak total strength of 12.8 million for both the Army and the Navy, Somervell seems to have imagined either a smaller Navy and Marine Corps in 1944 than the recently presented Victory Plan or a much larger total military labor force than the Plan proposed. However, before the War and Navy Departments could begin to put their revised plans into operation their Commander-in-Chief, President Roosevelt, offered his own stunning military economic program.

With the attack on Pearl Harbor and the American declarations of war against Japan and Germany, Prime Minister Winston Churchill of the United
Somervell later stated that initially "civilian production experts were optimistic about the prospect of meeting Roosevelt's "must" goals" (Ohl, 1994, p. 57). What was the basis of Somervell's impression is unclear. Certainly, all of the pre-war memos on feasibility were encouraging, although the last feasibility analysis, the Nathan-May memo, was hedged to an important degree. But, the pre-war memos involved lower munitions production targets and smaller uniformed force levels. It is also possible that all of Washington, including both Somervell and the War Production Board, had their spirits lifted by the President's optimism, an essential quality of the nation's first third term President.

In any event, once the Planning Committee of the War Production Board (hereafter WPB) looked closely at the War Munitions Program a cautionary note appeared. Evidence of the WPB's new caution came with a brief memo dated February 23, 1942, in which Frederick Sears, Jr. noted that whatever the Victory Program production goals imbedded in the Nathan-May memo of December 4, nothing had been done to implement the Victory Plan in the intervening period. Hence, 2 ½ months had been lost of the time the Nathan-May memo allotted for completion! Second, consideration had to be given to current experience with the time it was taking to contract, the time to build, and the time to coordinate inputs so that outputs were completed in appropriate sequence. Sears was clearly focusing on priorities and scheduling. In his judgment there were significant imbalances and delays in the system. He concluded that "the program will not be completed within the time set by Mr. May, or anywhere near it" (U.S. War Production Board, 1942a, p. 4). A letter from John J. Corison, Director of the U.S. Employment Service, to Robert Nathan, chief of the Planning Committee also raised feasibility issues (U.S. War Production Board, 1942b). The letter, circulated as a WPB memo on Feb 26, offered quantitative estimates of labor shortages in certain regions and skills. It could easily have suggested to Nathan and the WPB that increasing the intensity of output demand would lead to significant feasibility issues.

Importantly, sometime in late January or February, Simon Kuznets joined the staff of the Planning Committee of the War Production Board and it appears that his first assignment was to perform an economic analysis of the War Munitions Program, similar in scope to the work of Nathan on the pre-war Victory Program. Kuznets, a Professor of Statistics at the University of Pennsylvania (later Nobel Laureate), was the nation's leading academic expert on national income accounting, having inaugurated and advised the Department of Commerce on its GNP accounts from their inception in 1933.

Kuznets' first WPB memo, based on very rough figures and assumptions concerning military costs, was issued March 14, 1942 (U.S. War Production Board, 1942b, p. 4). These numbers were not substantially revised and the economic analysis of the WPB was nearly all Kuznets' work. What was wanted in actuality was an economic analysis of the War Production Board's plan for the production of the military equipment, consisting of aircraft, tanks, ships, and other large-scale equipment.
VIII. THE "FEASIBILITY DISPUTE"

Disagreement between WBP planners and Somervell's Army Services Supply Board's Munitions Program Staff began in late 1942. One source of the friction was the Army's demand for a new, multifunctional ammunition type, the "must list." The President's Munitions Program staff sought to improve the Army's munitions stocks, including large calibers and armor-piercing rounds. The Army, on the other hand, wanted to ensure that its forces had a balanced inventory of offensive and defensive weapons.

In the spring of 1943, Somervell's Munitions Program staff began to assess the feasibility of producing a new ammunition type that could be used in both tanks and antitank guns. The Army, however, was concerned about the cost and feasibility of producing such a round, which would require significant changes to existing production lines.

In July 1943, the President's Munitions Program staff presented its findings to the War Production Board, recommending that the new ammunition type be produced. The Army, however, was not satisfied with the proposal and continued to insist on a more balanced inventory.

The dispute continued throughout 1943, with the Army and Munitions Program staff engaged in a series of negotiations and arguments. In the end, the Army was able to obt
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Table 3. The Growth and Re-allocation of Gross National Product, 1941–1943.

Panel A: Kuznets 1942 Forecast, Billions of 1941$.

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<th>Year</th>
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<th>PCE (2)</th>
<th>GDPJ (3)</th>
<th>NE (4)</th>
<th>GYFM (5)</th>
<th>GVC (6)</th>
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<td>11.4</td>
<td>45.0</td>
<td>4.9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1943A</td>
<td>143.0</td>
<td>58.3</td>
<td></td>
<td>74.7</td>
<td></td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>1943B</td>
<td>150.0</td>
<td>58.3</td>
<td></td>
<td>81.7</td>
<td></td>
<td>10.0</td>
<td></td>
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</table>

Panel B: U.S. War Production Board 1946 Estimate, Billions of 1939$.

<table>
<thead>
<tr>
<th>Year</th>
<th>GNP (1)</th>
<th>PCE (2)</th>
<th>GDPJ (3)</th>
<th>NE (4)</th>
<th>GYFM (5)</th>
<th>GVC (6)</th>
<th>GPDI + NE + GVC (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1941</td>
<td>111.1</td>
<td>69.7</td>
<td>16.6</td>
<td>1.7</td>
<td>10.4</td>
<td>12.7</td>
<td>31.0</td>
</tr>
<tr>
<td>1942</td>
<td>121.4</td>
<td>67.2</td>
<td>6.6</td>
<td>-0.1</td>
<td>36.6</td>
<td>11.1</td>
<td>17.6</td>
</tr>
<tr>
<td>1943</td>
<td>131.6</td>
<td>66.6</td>
<td>3.5</td>
<td>-1.9</td>
<td>53.0</td>
<td>10.5</td>
<td>12.1</td>
</tr>
</tbody>
</table>

Panel C: Kuznets 1961 Estimate, Billions of 1929$.

<table>
<thead>
<tr>
<th>Year</th>
<th>GNP (1)</th>
<th>PCE (2)</th>
<th>GDPJ (3)</th>
<th>NE (4)</th>
<th>GYFM (5)</th>
<th>GVC (6)</th>
<th>GPDI + NE + GVC (7)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1941</td>
<td>138.7</td>
<td>96.4</td>
<td>18.9</td>
<td>0.4</td>
<td>11.1</td>
<td>11.9</td>
<td>31.1</td>
</tr>
<tr>
<td>1942</td>
<td>154.7</td>
<td>94.7</td>
<td>9.8</td>
<td>-1.1</td>
<td>40.0</td>
<td>11.2</td>
<td>20.0</td>
</tr>
<tr>
<td>1943</td>
<td>170.2</td>
<td>97.3</td>
<td>4.7</td>
<td>-3.2</td>
<td>62.2</td>
<td>9.2</td>
<td>10.7</td>
</tr>
</tbody>
</table>


which would emerge more clearly when the raw materials problems were reduced (U.S. War Production Board, 1942d, pp. 4–5). There also were serious current imbalances between plan and production with regard to machine tools production and new facilities but these, Kuznets ventured, would abate by mid-1943 (U.S. War Production Board, 1942d, pp. 78–82).

Total labor demand was estimated using forecasts of the labor force needed for both war and civilian production. In these calculations Kuznets assumed
Table 3. Continued.

<table>
<thead>
<tr>
<th>GPA</th>
<th>PCE</th>
<th>GPDFI</th>
<th>NE</th>
<th>GVFEM</th>
<th>GVC</th>
<th>GPDFI+NE+GVC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1944</td>
<td>263.7</td>
<td>182.3</td>
<td>41.6</td>
<td>0.4</td>
<td>296</td>
<td>20.4</td>
</tr>
<tr>
<td>1945</td>
<td>353.7</td>
<td>162.8</td>
<td>61.8</td>
<td>12.1</td>
<td>333</td>
<td>25.0</td>
</tr>
</tbody>
</table>

% Increase from 1944

|  |  |  |  |  |  |  |  |  |
| 27.8 | 0.2 | -89.5 | 90.9 | -23.0 | 51.2 | 61.1 |

Source: See Table 3.

Kuznets found that the uniformed forces would require 5.2 million by December 1942 and 7.6 million by December 1943. However, his estimate was based on pre-war employment patterns and did not allow for a significant increase in civilian employment. Kuznets provided no justification for the assumed armed forces total. They were clearly not under the 10.84 million total found in the official U.S. Army's 1943 Troop Basis. Based on Kuznets' analysis of military and civilian labor requirements, he forecast that the additional demands for
organization that were infeasible. In effect, Kuznets' argument was that in demanding 120% of what could be produced, only 90% would get done. By reducing demands to 100% of capacity, there was a much better chance 100% would get produced.

Kuznets' second WPB report was immediately circulated to the White House and certain war agency executives, including Leon Henderson, Administrator of the Office of Price Administration. In mid-September, it was sent to the Army's supply chief, General Somervell, who reacted with an angry letter to Nelson which was quite insulting to the agency's national income accountants. Somervell reacted most belligerently to a separate memo in which Kuznets proposed a super-planning body (U.S. War Production Board, 1942e). Somervell believed that grand strategy was and should be the unchallenged domain of the Joint Chiefs of Staff and that he was, as chief Army supply officer, both their chief advisor on all Army supply matters and the fully authorized agent of their strategy in any discussions with the civilian agencies. Somervell was also openly contemptuous of the economic analysis contained in the feasibility memo. Somervell had two objections to the WPB feasibility analysis. First, he was convinced that there was no good evidence on the nation's productive capacity and hence the feasibility of the military munitions program, particularly with regard to the problems of adapting civilian industry to war production. For Somervell, time would test whether and when there would be limits. Second, he firmly believed, as did the President, that incentive goals might stretch the actual outcomes.

Yet, it is clear that having spent considerable time and energy since his November 1941 appointment establishing clear lines of authority and organization for the Army's supply administration, he had a shorter fuse with regard to the proposed super-planning committee which would, in all likelihood, have left him out. The dispute soon reached White House and other ears, and the White House made it clear that Nelson and Nathan would have to make their case at a WPB meeting as soon as possible (Brigante, 1950, p. 90).

With a certain amount of both heat and light, the feasibility dispute was resolved at two meetings of the WPB in early October 1942. At the first meeting, Nathan summarized the Kuznets memo and then General Somervell replied for the armed forces. In the ensuing discussion General Somervell, Admiral Robinson and Undersecretary of War Patterson "seemed likely to prevail by default", until Leon Henderson of the Office of Price Administration noted that the $90 billion desired by the Army and Navy for military orders in 1943 constituted the entire U.S. national production for 1933 and 1934. Henderson also stated that if the generals and admirals could not make war with the resources Kuznets thought available, perhaps the Joint Chiefs of Staff ought to be replaced. He followed this with an unprecedented diatribe directed at Somervell for what Henderson viewed as Somervell's persistent uncooperative behavior towards his and every other war planning agency and the meeting ended shortly thereafter (Brigante, 1950, pp. 94–95).

A day later Undersecretary of War Patterson wrote a memo to General Somervell. In so many words Patterson accepted the Kuznets view of the infeasibility of the 1942 and 1943 Army munitions program and told Somervell that he would have to act accordingly with regard to setting requirements and budget (Brigante, 1950, pp. 102–103). A week later the WPB met and at Somervell's suggestion, it was decided to officially inform the Joint Chiefs of Staff that its war supply plans were infeasible and there was a need to scale back production plans.

IX. THE CONSEQUENCES OF THE FEASIBILITY DISPUTE

A variety of consequences flowed from the resolution of the feasibility debate. One of the most important was that by lowering the demand for war material to more feasible levels it was possible to organize the allocation of scarce raw materials and produce a balanced set of immediately usable capital and final goods. With production set closer to 100% of the feasible output, the chaos of unbalanced production and resulting idle factories was avoided. This deserves a fuller discussion elsewhere. Here the focus is on the consequences of the feasibility dispute for the amount and mix of the nation's output and labor resources.

A. Measuring Real GNP in Wartime: Some Analytics

A recent article by Robert Higgs raises several questions concerning what estimates should be used to quantify the total size of the economy during World War II (Higgs, 1992). First, there is the question of whether the price indices used to deflate nominal national income, product or expenditure totals reflect the appropriate rates of transformation, that is, the appropriate factor prices or market prices. Writing immediately after WWII, Kuznets himself noted that the price-setting mechanism changed from the peacetime economy to the wartime economy and he thought this required some corrective action (Kuznets, 1945, p. 45). The official price statistics collected by the Bureau of Labor Statistics (BLS) took little notice of the war's price regulation and quantity rationing. As Friedman and Schwartz remarked, from early 1942 to mid-1946 during the period of general price control,
there was a strong tendency for price increases to take a concealed form, such as a change in quality or in the services rendered along with the sale of a commodity or the elimination of discounts on sales or the concentration of production on lines that happened to have relatively favorable price ceilings. Moreover, where price controls were effective, "shortages" developed, in some cases—such as gasoline, meats, and a few other foods—accompanied by explicit government rationing. The resulting pressure on consumers to substitute less desirable but available qualities and items for more desirable but unavailable qualities and items was equivalent to a price increase not recorded in the indexes. Finally, there was undoubtedly much legal avoidance and illegal evasion of the price controls through a variety of devices of which the explicit "black market" was perhaps the least important. The result was that "prices" in any economically meaningful sense, rose by decidedly more than the "price index" during the period of price control (Friedman & Schwartz, 1963, pp. 557–558).

In later work, Friedman and Schwartz produced a revised net national product (NNP) deflator (1929$) which they felt roughly adjusted for the problems associated with price controls. In measuring real consumption expenditures during WWII Higgs uses the Friedman-Schwartz 1982 deflator (Higgs, 1992, pp. 49–50; Friedman & Schwartz, 1982, p. 107).

A second issue for Higgs concerns whether war goods are part of total product conceived as a measure of welfare. This is a problem on which Kuznets himself took several stands in his published work. Prior to 1942, Kuznets and the Department of Commerce presented a single measure of the total size of the economy, national income, measured at factor cost. Government expenditures were only included to the extent of direct taxes paid by households plus government capital formation. Milton Gilbert pointed out when he became chief of the national income division at the Commerce Department in 1941 that it was anomalous to take national income measured at factor cost, subtract defense expenditures which were largely measured at market prices, and declare the rest of net national income available for civilian use. The appropriate aggregate, Gilbert suggested, had to be total output measured at market prices to make a consistent calculation, useful for feasibility and anti-inflation government policy (Gilbert, 1941).

In the Spring and Summer of 1942, the Department of Commerce introduced quarterly and annual estimates of gross national product at market prices, summing expenditures on personal consumption, gross private investment, federal, state, and local government and net exports. The revised U.S. accounts also showed the equality of the new measure of total expenditure at market prices and the old national income measure plus business taxes and depreciation allowances.

Before and after WWII, Kuznets' measures of national income in effect left out much government service, preferring to define them as intermediate goods.

However, Kuznets had no such problem with Federal expenditures on war goods during the war. In his feasibility memos for the WPB Kuznets used the new Commerce measures of output at market prices, including war goods. And he clearly understood that there was a production trade-off between these war goods, civilian consumption, and private investment goods. At least on the product side, Kuznets had no problem seeing a marginal rate of transformation.

But it is also clear that Kuznets felt that WWII's federal war expenditures were final goods serving consumer welfare. Notably, Kuznets deducted the Department of Commerce estimates of state and local expenditures from his "output" measures in his two WPB studies (U.S. War Production Board, 1942c, 1942d). In the Spring and Summer of 1942 as Kuznets was analyzing estimates of real GNP for the WPB the news from the Pacific, North Africa, and Eastern Europe was fairly grim. Kuznets was, indeed, quite close to the real issue of deciding whether U.S. military expenditures were contributing to a "life and death struggle" and thus a final good for the nation. And, notably, some federal military expenditures were still included in his NBER publications in 1944 and 1945 when the battlefield news was far better.

In any event, however approximate the measures of total income and product used during World War II, the war presented significant macroeconomic problems to be addressed by the economists hired for government service. National income accounting was deemed the best tool available to assess the size and composition of the economy's total economic effort and potentials. Measuring the achievement of war production with lists of the number and type of aircraft, tanks, ships, etc. may yield estimates which are less subject to measurement error. Yet, wartime planners had a tool to estimate the total and thus advise the nation on the feasibility of the total program. And Kuznets did not flinch from using it.

**B. Production Outcomes: Total Output**

Given his analysis of available raw materials, capital goods, labor and organizational arrangements, Kuznets forecast a growth of real output (1941$) of 28.7–35.0% from 1941 to 1943. Table 3 provides post-World War II estimates of real gross national product growth using 1929$, 1939$ and 1958$ deflators. Friedman and Schwartz estimate that real net national product (1929$) rose 24.4%, 1941–1943, very similar to the Kendrick real GNP (1929$) in Table 3.

Whenever output shares change radically and price movements are negatively correlated, Laspeyres and Pasche output indices can display quite
different total output movements. From 1940 onward, military output rose radically and as production runs lengthened their prices declined. Index number theory has shown that when output shares are negatively correlated with price movements, the later deflators provide a better estimate of the growth of production potential in the new (defense heavy) output mix. It is thus not surprising that the growth rates of Table 3 using 1929$ and 1939$ prices are lower than Kuznets’ (1941$) forecast while the growth rate using 1958$ is at the lower end of Kuznets’. It thus seems fair to give high marks to Kuznets for estimating the growth potential of a U.S. war economy.

C. Production Outcomes: Military Goods and Consumption

How then was the nation’s production allocated between military goods and services and civilian goods and services? In order to have military output rise 567%, 1941–1943, Kuznets forecast consumption had to fall 22.9% and other, non-war expenditure items would drop by 58.9%. The actual outcome was that aggregate civilian consumption remained at 1941 levels in 1943 while military output rose somewhere around 400%. The actual outcome in 1943 is thus quite clear: military orders were not permitted to reduce civilian consumption! (See also Table 4).

Kuznets forecast that personal consumption and military expenditures were on a collision course vying for the nation’s productive potential, and if military spending was to hit anywhere near the levels set by current military contracts, consumption would have fallen significantly. Clearly, the Kuznets memo found supporters in the White House, presumably supporters who took seriously the potential political and ultimately military consequences of substantial civilian consumption deprivation, as well as the need to prevent the economic and military chaos of infeasible output targets. As is clear from the fateful October 1942 meeting of the WPB, an important Kuznets’ supporter was Leon Henderson, a major figure in price control affairs, another arena where the impending collision was apparent and potentially worsening.

D. Labor Force Outcome

Given these output decisions, what were the implications for the size and allocation of the nation’s labor resources? The feasibility dispute and the subsequent budget revisions of the Army and Navy operated to place limits on both war production and the armed forces’ manpower demands. Army and Navy manpower demands for 1943 and 1944 were immediately reduced in November of 1942, partly because the equipment and munitions for training and fighting were going to be produced at a lower rate. Yet, the Army and Navy’s total armed forces planned requirements for December 31, 1943 remained above 10 million after defense budget reductions, well above the 7.6 million Kuznets assumed in his analysis of the war labor force.

However, Kuznets’ analysis showed that there was a reserve of 8 million in American homes, of which 4.3 millions would be absorbed in increased military and civilian labor demands according to Kuznets forecast for 1943. Hence, Kuznets’ numbers suggested an additional 3.7 million were available to
join the civilian economy, in turn potentially releasing 3.7 million for an
increase in the armed forces. This was clearly enough to meet the Army and
Navy planners end-of-1943 uniformed force target. Indeed, between the needs
of labor for war production and civilian consumption (including the continued
household care of the elderly and children less than 13 years of age), Kuznets
calculations provided for a total U.S. armed force of roughly 11.3 million.

The American armed forces did rise above this number to 12.3 million by
May 1945, but from late 1944 onward the civilian economy was releasing labor
from construction and other sectors where increased capacity was no longer
required (see Tables 1, 5, 6). Thus, it appears that the labor force limits

Table 5. Population and Military Manpower (000s), 1939–1948.

<table>
<thead>
<tr>
<th>Year</th>
<th>TAF</th>
<th>Civ. W&amp;N</th>
<th>War Related</th>
<th>NIPOP</th>
<th>Col.</th>
<th>Col.</th>
<th>Col.</th>
<th>Col.</th>
<th>% of NIPOP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mil.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>1939</td>
<td>370</td>
<td>183</td>
<td>3995</td>
<td>194</td>
<td>99206</td>
<td>0.4</td>
<td>0.2</td>
<td>0.2</td>
<td>0.8</td>
</tr>
<tr>
<td>1940</td>
<td>540</td>
<td>168</td>
<td>251</td>
<td>4202</td>
<td>100380</td>
<td>0.5</td>
<td>0.3</td>
<td></td>
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<tr>
<td>1941</td>
<td>1620</td>
<td>281</td>
<td>518</td>
<td>4660</td>
<td>101520</td>
<td>1.6</td>
<td>0.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1942</td>
<td>3970</td>
<td>940</td>
<td>1272</td>
<td>5483</td>
<td>102610</td>
<td>3.9</td>
<td>1.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1943</td>
<td>9020</td>
<td>2494</td>
<td>1881</td>
<td>6060</td>
<td>11109</td>
<td>103660</td>
<td>8.7</td>
<td>1.8</td>
<td>10.7</td>
</tr>
<tr>
<td>1944</td>
<td>11410</td>
<td>5542</td>
<td>1868</td>
<td>6043</td>
<td>10051</td>
<td>104630</td>
<td>10.9</td>
<td>1.8</td>
<td>9.6</td>
</tr>
<tr>
<td>1945</td>
<td>11430</td>
<td>7447</td>
<td>1705</td>
<td>5944</td>
<td></td>
<td>105520</td>
<td>10.8</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>1946</td>
<td>3450</td>
<td>1335</td>
<td>1030</td>
<td>5955</td>
<td></td>
<td>106520</td>
<td>3.2</td>
<td>1.0</td>
<td></td>
</tr>
<tr>
<td>1947</td>
<td>1590</td>
<td>680</td>
<td>689</td>
<td>5474</td>
<td></td>
<td>107608</td>
<td>1.5</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>1948</td>
<td>1456</td>
<td>538</td>
<td>707</td>
<td>5650</td>
<td></td>
<td>108632</td>
<td>1.3</td>
<td>0.7</td>
<td></td>
</tr>
</tbody>
</table>

Sources:

The Size of the U.S. Armed Forces During World War II

Table 6. Labor Force and Employment during WWII.
(000s of persons 14 and over)

A. Total Labor Force and Employment, 1940–1945

<table>
<thead>
<tr>
<th>Year</th>
<th>1940</th>
<th>1941</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIPOP</td>
<td>100380</td>
<td>101520</td>
<td>102610</td>
<td>103660</td>
<td>104630</td>
<td>105520</td>
</tr>
<tr>
<td>Tot. Labor Force (TLF)</td>
<td>56180</td>
<td>57530</td>
<td>60380</td>
<td>64560</td>
<td>66040</td>
<td>62290</td>
</tr>
<tr>
<td>Armed Forces (TAF)</td>
<td>540</td>
<td>1620</td>
<td>3970</td>
<td>9020</td>
<td>11410</td>
<td>11430</td>
</tr>
<tr>
<td>Civilians Labor Force (CLF)</td>
<td>55640</td>
<td>55910</td>
<td>56410</td>
<td>55340</td>
<td>54630</td>
<td>53860</td>
</tr>
<tr>
<td>Unemployed (CUEMP)</td>
<td>8120</td>
<td>5560</td>
<td>2660</td>
<td>1070</td>
<td>670</td>
<td>1040</td>
</tr>
<tr>
<td>Employed (CEMP)</td>
<td>47520</td>
<td>50350</td>
<td>53750</td>
<td>54470</td>
<td>53960</td>
<td>52820</td>
</tr>
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</table>

B. Cumulative Changes over 1940

<table>
<thead>
<tr>
<th>Year</th>
<th>1941</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIPOP</td>
<td>100380</td>
<td>101520</td>
<td>102610</td>
<td>103660</td>
<td>104630</td>
</tr>
<tr>
<td>Due to Pop. Growth*</td>
<td>638</td>
<td>1249</td>
<td>1387</td>
<td>2380</td>
<td>2878</td>
</tr>
<tr>
<td>Excess over Pop. Growth</td>
<td>712</td>
<td>2951</td>
<td>6543</td>
<td>7480</td>
<td>6232</td>
</tr>
<tr>
<td>Unemployment compared to 1940</td>
<td>-2560</td>
<td>-5460</td>
<td>-7050</td>
<td>-7450</td>
<td>-7080</td>
</tr>
<tr>
<td>Employment increase over 1940</td>
<td>2830</td>
<td>6230</td>
<td>6950</td>
<td>6440</td>
<td>5300</td>
</tr>
<tr>
<td>Civilians</td>
<td>1080</td>
<td>3430</td>
<td>8480</td>
<td>10870</td>
<td>10890</td>
</tr>
<tr>
<td>Armed Forces</td>
<td>1080</td>
<td>3430</td>
<td>8480</td>
<td>10870</td>
<td>10890</td>
</tr>
<tr>
<td>Total (Civil + Mil.)</td>
<td>3910</td>
<td>9660</td>
<td>15430</td>
<td>17310</td>
<td>16190</td>
</tr>
</tbody>
</table>

C. Accounting for Annual Changes in Total Employment**

\[ \Delta L_{TEMP} = \Delta L_{TAF} + \Delta L_{CEMP} = \Delta L_{POP} + \Delta L_{EXC} - \Delta CUEMP \]

<table>
<thead>
<tr>
<th>Year</th>
<th>(1940–1941)</th>
<th>(1941–1942)</th>
<th>(1942–1943)</th>
<th>(1943–1944)</th>
<th>(1944–1945)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\Delta L_{POP})</td>
<td>1080</td>
<td>638</td>
<td>712</td>
<td>-2560</td>
<td>2830</td>
</tr>
<tr>
<td>(\Delta L_{EXC})</td>
<td>2350</td>
<td>610</td>
<td>2240</td>
<td>-2900</td>
<td>3400</td>
</tr>
<tr>
<td>(\Delta CUEMP)</td>
<td>5050</td>
<td>588</td>
<td>3592</td>
<td>-1590</td>
<td>720</td>
</tr>
<tr>
<td>(\Delta CEMP)</td>
<td>4730</td>
<td>543</td>
<td>977</td>
<td>-400</td>
<td>-530</td>
</tr>
<tr>
<td>(\Delta L_{TAF})</td>
<td>1080</td>
<td>638</td>
<td>712</td>
<td>-2560</td>
<td>2830</td>
</tr>
</tbody>
</table>

Notes: * Labor force growth due to population increase is estimated from the increase in NIPOP times the 1940 participation rate, 56.0%.
** \(\Delta = \text{year to year change in.}
Sources: See Table 1.
The Size of the U.S. Armed Forces During World War II

E. Feasibility and the Mix of Military Goods

The portion of the war budget most clearly affected by the feasibility dispute were the allocations for Army ground forces. As of April 15, 1943, the Army's requirements were $313.6 billion. The sharp drop after the October 1943 determination of Army requirements by the A-1, represented the greatest single reduction during the life of the Army Program. To accomplish the reduction, the Army revised its troop basis, decreasing its planned strength for 1943 and 1944 by some 200,000 men and affecting the reduction in its ground forces. The A-1, however, was also affected by the feasibility dispute, which caused it to recommend a cut of $38 billion in Army requirements for 1943 and 1944. This cut was not accepted by the Office of the Army Engineer, which increased the Army's requirements by $16 billion. The A-1's decision to reduce Army requirements was based on the assumption that the Army could not produce the full complement of ground forces, and that the Army should therefore be allowed to use its forces more efficiently. The Office of the Army Engineer, on the other hand, believed that the Army could produce the full complement of ground forces, and that the A-1's decision to reduce Army requirements was based on an incorrect assumption. The feasibility dispute thus had a significant impact on the Army's requirements for the war, and it set the stage for the debate over the Army's role in the war that would continue throughout its duration.
Table 7. Army Ground Forces Requirements in Successive Editions of ASP. (Billion $s)

<table>
<thead>
<tr>
<th>Date of Edition</th>
<th>1942</th>
<th>1943</th>
<th>1944</th>
<th>1945</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 6, 1942</td>
<td>16.1</td>
<td>31.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>September 1, 1942</td>
<td>28.1</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>November 12, 1942</td>
<td>22.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 1, 1943</td>
<td>24.3</td>
<td>26.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>August 1, 1943</td>
<td>20.4</td>
<td>21.7</td>
<td>19.3</td>
<td></td>
</tr>
<tr>
<td>February 1, 1944</td>
<td>18.3</td>
<td>17.8</td>
<td>15.8</td>
<td></td>
</tr>
<tr>
<td>October 1, 1944</td>
<td></td>
<td></td>
<td></td>
<td>17.3</td>
</tr>
</tbody>
</table>


armored, motorized, airborne and infantry divisions, as well as in tank battalions, field artillery units, and tank destroyer battalions” (Smith, 1959, p. 156).

On the whole, it appears that the U.S. Army Air Force, Navy and Merchant Marine gained a larger share of the equipment budget than originally envisioned by the Victory Plan or the Army and Navy plans of 1942 (Greenfield et al., 1947, pp. 198–212). Wedemeyer’s Victory Plan of September 1941 called for 62% of the ground army divisions to be armored or motorized. Army planning in December 1942 called for a third of the ground army’s divisions to be armored or motorized (Smith, 1959, p. 177). At peak, with less than half the divisions Wedemeyer envisioned but close to Wedemeyer’s total in Army uniforms, 18% of the combat divisions were armored and none was designated motorized (Kirkpatrick, 1990, p. 107; Smith, 1959, p. 177; Palmer et al., 1948, p. 491). The imbalance between plan and outcome in total number of divisions was dominated by the large needs for service and support personnel, unanticipated by Wedemeyer and everyone else. Still, it is clear that Wedemeyer and other early Army plans wanted a large fraction of the ground army to be armored or motorized and the actual outcome fell considerably short. This shift was the consequence of budget and manpower constraints.

F. Lend-Lease and the Mix of Military Goods

Another constraint on the size and character of U.S. armed forces was lend-lease. Between July 1, 1940 and August 31, 1945, a total expenditure of $315.8 billions was made by the War Department, Navy Department, Maritime Commission, War Shipping Administration, and overseas purchases and Treasury-procured lend-lease. Of this total, $179.9 billions went to the War Department and $30.8 billions to overseas purchases and lend-lease. Since nearly all of the overseas purchases and lend-lease were shipped and protected by Allied naval forces on the high seas, it seems plausible to assume that at most $30.8 billion could have been directed toward augmenting the ground combat forces of the Army or Marine Corps, that is, increasing their budgets by 20%. Given that the United States Army fielded 89 Army divisions of various types and front line service length during World War II, one hypothetical reallocation of U.S. resources could have been an additional 19 American combat divisions of average type and front line service. Alternatively, a disproportionate amount of lend-lease funds could have gone for tanks, ground transport, and air force equipment. For a significant period the American capacity to produce these items was limited. Thus, the armored forces of the U.S. Army were especially slighted by lend-lease. The U.S. Army fielded 16 armored divisions in World War II. If all lend-lease funds had been redirected towards equipping and maintaining additional armored divisions, the U.S. could have doubled its armored forces. The net impact of this hypothetical reallocation on the ultimate outcome is not obvious. Presumably, in the absence of lend-lease, British, French, and Russian forces would have been either smaller or less effective and the Nazis would have put more troops in the path of the hypothetically more armored and more powerful American forces.

X. SOCIO-ECONOMIC CONSTRAINTS

If maintaining the standard of living was an important constraint on the nation’s war efforts in the factory and the field, the question which must be asked, is why wasn’t consumption pushed lower? Put slightly differently, why did neither the military share of U.S. GNP nor the military share of U.S. manpower resources reach the levels achieved by Britain, Russia or Germany or close to peak in 1943? A slight revision of Harrison’s recent estimate of resource mobilization found in Table 8 is instructive. U.S. war labor mobilization rose to 32.5% of the total U.S. labor force in 1944, but the point remains that American labor and spending mobilization for war did not reach the levels elsewhere. Simply put, the U.S. reallocated less from consumption and the home economy.

Certain fundamental social factors which limited American war involvement must be considered. First, the lower 48 states of continental United States were never seriously and directly threatened. Absent this threat, there were limits on
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It is reasonable to assume that the under-utilization of Afro-Americans in combat and in the American civilian economy also reflected, to some degree, the relative lack of threat. The reluctance to use Afro-American army units did lessen as labor became more scarce in 1944. It is likely that if there had been a greater sense of threat earlier, racial prejudice would have been set aside to a greater degree. There is historical precedent for this effect. Increased reliance on black combat troops by the Union occurred in the later stages of the American Civil War and even the Confederacy discussed the possible use of Afro-American slave troops towards the end of the war.

Finally, as labor grew scarcer in 1942 and 1943 some Washington leaders called for a National Service in order to control the allocation of both male and female labor within the civilian war economy. This never received serious White House or Congressional support. Britain, another country with deep antagonism to large standing armies and any limits on the freedom of labor, established a National Service for civilian labor allocation early in World War II. But Britain faced invasion and was being bombed nightly. The Soviet Union already had a centrally controlled system of labor allocation before World War II, but control tightened as soon as the Nazis penetrated Russian territory.

A second socio-economic constraint was fear that the slaughterhouse of WWI's trench warfare would be repeated. Even though American participation in World War I was relatively brief, casualties per month were significant. One can only hazard a guess as to what the reaction of the American electorate would have been if World War I had lasted longer. In any event, as the full dimensions of World War I's murderous campaigns emerged in the 1920s, public support for isolationism and pacifism soured. The Neutrality Act of 1935 embodied, among other sentiments, a repugnance with World War I's horrendous infantry sacrifices. The consequence for World War II was that the nation, as well as its military leaders, wanted American soldiers to be as well equipped as possible and to avoid battlefield tactics that relied on massive sacrifices of American lives.

In his 1948 memoirs, Supreme Commander Eisenhower wrote, "In all the campaigns and particularly in Western Europe, our guiding principal was to avoid at any cost the freezing of battle lines that might bog down our troops in a pattern similar to the trench warfare of World War I" (Eisenhower, 1948, p. 449). Artillery, air and naval bombardment were to be massive, limiting the material supplies of the enemy and restricting the movement of enemy relief forces. General Simpson commanding the U.S. Ninth Army in France wrote that it was a rule in his army to "never send an infantryman in to do a job that an artillery shell can do for him" (quoted in Ellis, 1990, p. 384). American commanders also chose their battlefields carefully. This is not to say that

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Table 8. Comparative Resource Use, 1943.

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>United States</td>
<td>47</td>
<td>53</td>
<td>31.2</td>
</tr>
<tr>
<td>Great Britain</td>
<td>57</td>
<td>47</td>
<td>45.3</td>
</tr>
<tr>
<td>Russia</td>
<td>76</td>
<td>58</td>
<td>54.0</td>
</tr>
<tr>
<td>Germany</td>
<td>76</td>
<td>60</td>
<td>37.6</td>
</tr>
</tbody>
</table>

Note: Harrison's estimates of the military labor force and the war production labor force in the United States for 1943 are not consistent with source cited; U.S. War Production Board (1945b). The U.S. estimate provided in this table is based on Table V-1 estimates of total labor force and military employment and Table V-5 estimates of total war production employment. Harrison's estimates of war production employment in Britain, Russian and Germany ignores civilian employment in government war and navy administration and the U.S. estimate in this table follows suit. In the U.S. case, if civilian employment in the War and Navy Departments is included, total war labor mobilization is 34.1% of the labor force and 21.2% of NIPOP (Table V-3). Harrison's Estimate I of military spending is amounts used, regardless of origin and thus in the U.S. case net exports (overwhelmingly war related) are excluded; Estimate II of military spending is amounts produced, irrespective of utilization, and thus in the British, German and Russian cases less net imports.


the deprivation, social change, and disruption which Americans were willing to tolerate, relative to sacrifices tolerated by the Russians, for example. 69

Perhaps the clearest indication of the limits set by the lack of direct threat was the United State's unwillingness to mobilize and utilize more than a limited portion of the population for the uniformed services and its limited use of direct measures to push adults into war work. Only males 18–35 were drafted into the American armed forces. Initial health and mental requirements were fairly high but eventually relaxed as draft calls in 1943 found bachelors under 35 scarce and the nation showed a severe reluctance to draft men with dependents. After September 1943, men with dependents were drafted in large numbers. Even if older men and women, as well as some of the rejected inductees, were deemed ineligible for combat, there were millions of military jobs in the service forces which could have been filled with little productivity loss by these men and women. The Russians used women more extensively in the armed forces, and both the Russians and Germans were willing to extend the age range of conscription to younger and older men.
American Army and Marine infantry forces did not engage in intense and sustained firefights with high casualties; hence, two Jima, and Okinawa, did not participate in the guerilla warfare campaigns of the war, as did the Soviet and Chinese forces in World War II. However, the United States fought in a manner that was more effective than expected. The Army and Navy, after the Allied victory in the Pacific Ocean, began to concentrate on the rear of the Japanese mainland. The Okinawa campaign, which lasted for nearly ten months, was the most costly and most prolonged of the war.

The decision to invade Okinawa was made after the successful invasion of the Philippine Islands, which was carried out in conjunction with the invasion of the Palau Islands. The invasion of Okinawa was launched on April 1, 1945, with the objective of capturing the island and serving as a staging area for the invasion of the Japanese mainland. The Okinawa campaign was one of the bloodiest and most costly campaigns of the war, with both sides suffering heavy casualties. The battle resulted in the destruction of the Japanese forces on Okinawa and the capitulation of the Japanese government.

The campaign on Okinawa was a significant event in the Pacific War, as it marked the beginning of the end of Japan's isolationist policy and the eventual surrender of the country. The Okinawa campaign was also a turning point in the war, as it marked the end of the Japanese resistance and the beginning of the final stages of the war. The campaign was a great victory for the Allies, and it paved the way for the eventual defeat of Japan and the end of the Pacific War.

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U.K.'s WWI population and total military employment data were easily available in U.K. government documents and statistical compendia in 1941.

13. In August of 1941, as Wedemeyer was preparing his estimates, the Army modified the male age range for selective service induction from 21-35 to 21-27. A major reason for the modification was Congress had legislated a 900,000 ceiling on the number of serving draftees and this number could be filled from a smaller, younger pool. It is unlikely Wedemeyer viewed the lower limit of 21 as a binding limit. Any plausible estimate of the manpower reservoir available for service in Rainbow 5, the contingency plan that involved all of the Axis powers as enemies, would treat the minimum relevant reservoirs as males, 18-35. In 1940, around 14% of the population was male, aged 18 to 34 and not alien. With an assumed future population of 140 millions, this would mean 19.6 millions were in the relevant age range. This was 5.6 million more than Wedemeyer's estimate of 14 million available for armed forces service. However, Wedemeyer had to assume that some portion of the eligible population would not be physically or mentally fit to serve. Of those examined in the First World War, 75% were inducted, a bit above the implicit induction rate embodied in Wedemeyer's 14 million total. Contemporary commentators, such as Senator Truman, assumed the Victory Plan's estimate of total armed force employment was wholly based on demographic and in later interview Wedemeyer never suggested any other criteria such as civilian labor demands; see Kirkpatrick (1990, pp. 78-79, 115).

14. Kirkpatrick (1990, pp. 78-79, 115). Weigley (1973, p. 317) writes that a concurrent Navy study called for 1.5 millions in Navy uniforms. The evidence is clear, however, that Wedemeyer assumed a four million person Navy and was a lot closer to the eventual outcome than this Naval study.


16. Nathan was a student of Kuznets at the University of Pennsylvania in the late 1920s, taking several courses in national income accounting. At that time Kuznets was a Professor of Statistics and fully engaged in developing national income estimates at Pennsylvania's Bureau of Economics; Nathan (1994).

17. The Office of Production Management was created by Executive Order 6269 on January 7, 1941, absorbing large parts of the National Defense Advisory Council bureaucracy with a stronger mandate to manage the nation's escalating war production.

18. U.S. Office of Production Management, 1941c, p. 4. How Nathan arrived at the $130-140 possibility for 1943, 20%+ higher than his forecast for 1943, based on the labor force data is not very clear. By the time Nathan compiled his November 1941 memo, participation rates were virtually the same as 1918. The monthly average unemployment rate in 1918 was 7.0% of NIPPO, 4.8 percentage points lower than the average 1941 rate. It is hard to imagine how GNP could rise 20%+ from a 10% rise in the number employed alone.

19. Using Lebergott's (1964) estimates, the 1917 labor force stood at 56.6% o NIPPO, 55.7% employed in civilian work, 1.0% in the military, and 2.6% of NIPOI unemployed. The same source has monthly averages for 1941 yielding a labor force participation rate at 56.7%, 49.6% employed in civilian work, 1.6% in the military, and 5.5% unemployed. Even assuming the unemployment rate moved to 7% in 1943, the
rate which prevailed in 1918, this would only raise aggregate U.S. employment by about 10%, half the conjectured increase in national income for 1943.

20. Lebergott, 1964, p. 7. Nathan says this would not exceed the WWI participation ratio but, as noted in the text, modern labor force estimates suggest that this is completely wrong.

21. The following discussion of the feasibility disputes of 1942 has benefited significantly from Ohl (1994), at once a professional biography of Brehon Somervell and a solid institutional history of the Army Service Supply, Somervell's command during World War II. The best previous discussion of the 1942 feasibility disputes was Brigante (1950) where the disputes were analyzed as a case study in public administration conflict. Ohl's study provides a careful and detailed narrative of Somervell's ideas and activities at the War Department during the feasibility dispute, covered to some degree by Brigante but with far less understanding of Somervell's background and his other responsibilities and problems. Ohl demonstrates a good understanding of WPB ideas and politics but he spends little time on the actual memos produced by the WPB, that is, the economic analysis that underpinned WPB ideas. This essay attempts to add that part of the puzzle.

22. The War Production Board was created by Executive Order 9024 on January 16, 1942, succeeding the peace-time Office of Production Management. The Planning Committee was created immediately within the WPB, led by Robert K. Nathan, the national income accountant. The President's order gave the WPB more power to plan and control the war economy than the peace-time OPM. However, as with most economic facets of World War II, the President left a substantial overlap and fuzziness in the lines of authority covering the several civilian and military branches concerned with the delivery of military munitions planning, contracting, production and delivery.

23. Brigante (1950, pp. 45-60). These first expressions of the War Production Board in March and April 1942 were met with some sympathy by the War Department because the War Department thought that a part of the President's tank demands should be reallocated to other, more immediately needed vehicles. There was, however, no Army sympathy for reducing the overall supply requirement budget. The President's wariness with regard to Nelson and Nathan's position on feasibility was supported by War and Navy Departments' view that the civilian economy could be pushed much harder; Brigante (1950, pp. 32-33, 44-45, 47-51, 57-60).

24. U.S. War Production Board (1942d). Kuznets wrote the overall summary analysis, as well as the summary analyses of each section. The detailed section appendices were authored by Goldenthal (dollar evaluation of military production), Abramovitz (raw materials), Goldsmith (facilities) and Wood (labor).

25. Note that the 1943 Troop Basis was slightly less than the 8.89 millions which Somervell assumed in his very first supply plans in December 1941.

26. U.S. War Production Board (1942d). These quarterly and annual estimates of gross national product at market prices were first introduced by the Commerce Department in the Spring and Summer of 1942, a wartime innovation in the nation's accounting estimates. See Carson (1971, pp. 142-188, esp. pp. 170-185) for an excellent discussion of ideas and estimation behind the 1941-1942 revisions in the official Department of Commerce estimates. Kuznets did not accept the revisions wholesale in his 1942 WPB memos; he deducted the Commerce Department's estimates of state and local expenditures from his estimates of national output. A fuller discussion of these revisions may be found later in the text.

27. U.S. War Production Board (1942d, pp. 9-13). Kuznets did not explicitly discuss the impact of increased productivity in his 1942 and 1943 forecast. However, his real GNP and total employment data for 1939 and 1941 show that both reduced unemployment and increased productivity underpinned GNP growth across these years. In a recent private conversation, Abramovitz affirmed that Kuznets expected productivity increase in 1942 and 1943 and incorporated it in his 1942 and 1943 GNP forecasts.

28. U.S. War Production Board (1942d, pp. 3-4). Kuznets' forecasts for the second half of 1942 and 1943 were made in 1941 prices.

29. U.S. War Production Board (1942d, pp. 26-28). Kuznets' Table 6 shows that in the first half of 1942 aggregate expenditure on personal consumption (PCE) was at an annual rate of $72 billion (1941$). According to Kuznets' calculations, if the existing military orders for 1942 were completed, assuming they could be, this implied that PCE for 1942 would have to drop to $51.5 billion (1941$), a 29% drop in annual consumption expenditures.

30. Brigante (1950, pp. 82-83, 91). Indeed, a Bureau of the Budget study of the development and administration of the war program immediately after the war makes it clear that the Army and Somervell expected a very high degree of control over the civilian economy for war production when the war started and “never gave up the effort to increase its control in these areas;” Bureau of the Budget (1944, pp. 129-130).

31. Somervell was also irritated at the WPB economists in reversing their opinions about productive capabilities of U.S. industry in January and February 1942. Why this was still held against the WPB economists when Somervell's own staff also changed their minds raises a question of Somervell's judgment. However, Ohl (1994) repeatedly notes that Somervell had developed a reputation for taking quick and unshakable dislike for subordinates who Somervell deemed were thwarting his programs. Yet, however arrogant and self-promoting, Somervell was probably far better educated in the workings of a national economy than most at the War or Navy Departments. On a one year leave Somervell directed and wrote a comprehensive survey of the Turkish economy, submitted in May 1934 to the mission's final leader, Professor Kemmerer of Princeton; Ohl (1994, pp. 20-21).

32. Brigante (1950, pp. 91-95) presents a fairly complete record of the meetings based on interviews with several who attended. The official minutes of this meeting are brief and do not record the most heated exchanges; U.S. War Production Board (1942f, g). See also Ohl (1994, pp. 80-82).

33. The $90 billion mentioned by Henderson appears to be a rounding of the $87.7 billion which was Kuznets' estimate of munitions output and construction objectives of the War and Navy Departments, the Lease-Lease Program and the Merchant Marine for 1943; U.S. War Production Board (1942e, Table D-1, p. 34). It is unclear what i Henderson's definition or source for "national product" in 1933 and 1934. Standan recent estimates have gross national product for 1933 and 1934 in current prices at $56.6 billion and $65.6 billion, respectively; U.S. Department of Commerce (1986 T1.1, p. 1). National income (gross national product less capital consumption and indirect taxes) in current prices was $39.4 billion and $48.0 billion, respectively; U.S. Department of Commerce (1986 T1.12, p. 43).

34. As Ohl (1994, p. 82) carefully discusses, the call for a super agency decision strategy and production dropped out of sight.
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35. Friedman & Schwartz (1972, pp. 103-104, 107-108, 173) developed their NNP deflator as a way to study monetary problems during WWII. The Friedman & Schwartz view is that the NNP deflator (GNP deflator) was constructed as a 'total' NNP deflator (GNP deflator) in order to reflect the full effects of inflation on the economy. The change in the deflator over time is due to changes in the relative prices of goods and services. The deflator is calculated as the ratio of current prices to constant prices (base year).

36. A key idea in the model is that the deflator is a 'total' deflator of the economy, reflecting the full effects of inflation on the economy. The change in the deflator over time is due to changes in the relative prices of goods and services. The deflator is calculated as the ratio of current prices to constant prices (base year).

37. As mentioned, the deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

38. The deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

39. As mentioned, the deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

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41. As mentioned, the deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

42. The deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

43. As mentioned, the deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

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46. The deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

47. As mentioned, the deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

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49. As mentioned, the deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

50. The deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.

51. As mentioned, the deflator is calculated as the ratio of current prices to constant prices (base year). The change in the deflator over time is due to changes in the relative prices of goods and services.
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The Size of the U.S. Armed Forces During World War II

The decision to concentrate on Europe should any significant proportion of the U.S. military be deployed to the European theater. The decision was made early in the war, even before the United States entered the conflict. The U.S. military was much smaller than the military of the Allied powers, and it was not until late 1943 that the U.S. military began to expand significantly. The decision to concentrate on Europe was based on the belief that the European theater was more important than the Pacific theater, and that the U.S. military was better equipped to fight in the European theater.

The decision to concentrate on Europe was also based on the belief that the European theater would be the site of the decisive battle of World War II. The Allied powers were confident that they would be able to defeat Germany and its allies in the European theater, and that this would be the decisive battle of the war. The U.S. military was primarily tasked with supporting the Allied forces in the European theater, and with providing supplies and matériel to the Allied forces.

The decision to concentrate on Europe was also based on the belief that the U.S. military was better equipped to fight in the European theater. The U.S. military was equipped with modern weapons and matériel, and it had a large number of trained soldiers. The U.S. military was also able to draw on the resources of the United States, which was a much richer country than any of the other Allied powers.

The decision to concentrate on Europe was also based on the belief that the European theater was more important than the Pacific theater. The European theater was the site of the decisive battle of World War II, and it was the site of the decisive battle of the war. The U.S. military was primarily tasked with supporting the Allied forces in the European theater, and with providing supplies and matériel to the Allied forces.

The decision to concentrate on Europe was also based on the belief that the U.S. military was better equipped to fight in the European theater. The U.S. military was equipped with modern weapons and matériel, and it had a large number of trained soldiers. The U.S. military was also able to draw on the resources of the United States, which was a much richer country than any of the other Allied powers.
ACKNOWLEDGEMENT

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