

*The economics of defense or defense economics is a subfield of economics, an application of the economic theory to the issues of military defense. It is a relatively new field. It is a relatively new field.*

Louis Johnston and Samuel H. Preparedness Agencies To oversee this growth, President Roosevelt created a number of preparedness agencies beginning in 1940, including the Office for Emergency Management and its key sub-organization, the National Defense Advisory Commission; the Office of Production Management; and the Supply Priorities Allocation Board. None of these organizations was particularly successful at generating or controlling mobilization because all included two competing parties. On one hand, private-sector executives and managers had joined the federal mobilization bureaucracy but continued to emphasize corporate priorities such as profits and positioning in the marketplace. War Production Board In January 1942, as part of another effort to mesh civilian and military needs, President Roosevelt established a new mobilization agency, the War Production Board, and placed it under the direction of Donald Nelson, a former Sears Roebuck executive. Nelson understood immediately that the staggeringly complex problem of administering the war economy could be reduced to one key issue: Though neither Nelson nor other high-ranking civilians ever fully resolved this issue, Nelson did realize several key economic goals. He thereby also established a precedent for planning war production so as to meet most military and some civilian needs. The CMP obtained throughout the war, and helped curtail conflict among the military services and between them and civilian agencies over the growing but still scarce supplies of those three key metals. Office of War Mobilization By late 1942 it was clear that Nelson and the WPB were unable to fully control the growing war economy and especially to wrangle with the Army and Navy over the necessity of continued civilian production. Beneath the highest-level agencies like the WPB and the OWM, a vast array of other federal organizations administered everything from labor the War Manpower Commission to merchant shipbuilding the Maritime Commission and from prices the Office of Price Administration to food the War Food Administration. Taxation However, these agencies were often quite successful in achieving their respective, narrower aims. Beginning in 1942, the government extended the income tax to virtually all Americans and began collecting the tax via the now-familiar method of continuous withholdings from paychecks rather than lump-sum payments after the fact. The number of Americans required to pay federal taxes rose from 4 million in 1940 to 43 million in 1945. Over that same period, federal tax revenue grew from about 8 percent of GDP to more than 20 percent. The average income tax rate peaked in 1945 at 70 percent. Though the bonds returned only 2 percent. Bonds served as a way for citizens to make an economic contribution to the war effort, but because interest on them accumulated slower than consumer prices rose, they could not completely preserve income which could not be readily spent during the war. Price Controls and the Standard of Living Fiscal and financial matters were also addressed by other federal agencies. Between April and June 1945, the period of the most stringent federal controls on inflation, the annual rate of inflation was just 3 percent. With wages rising about 65 percent over the course of the war, this limited success in cutting the rate of inflation meant that many American civilians enjoyed a stable or even improving quality of life during the war. Kennedy, Improvement in the standard of living was not ubiquitous, however. In some regions, such as rural areas in the Deep South, living standards stagnated or even declined, and according to some economists, the national living standard barely stayed level or even declined Higgs, Labor Unions Labor unions and their members benefited especially. By 1945, approximately 30 percent of the workforce was unionized. The War Economy at High Water Despite the almost-continual crises of the civilian war agencies, the American economy expanded at an unprecedented and unduplicated rate between 1940 and 1945. The gross national product of the U.S. War-related production skyrocketed from just two percent of GNP to 40 percent in 1945. As Table 2 shows, output in many American manufacturing sectors increased spectacularly from 1940 to 1945, the height of war production in many industries.

## Chapter 2 : The Cold War Economy: Independent Institute

*A sound, well-informed survey -- one of the very best in the field of war economy. One might have wished perhaps that the author, associate professor of economics at Harvard, had not foreborne to enter the field of politics with which, after all, Wehrwirtschaft is indissolubly linked.*

Reaganomics President Ronald Reagan unveils a new tax program, calling it "a second American Revolution for hope and opportunity. The media called it Reaganomics. He claimed an undue tax burden, excessive government regulation, and massive social spending programs hampered growth. The bulk of the cut would be concentrated at the upper income levels. The economic theory behind the wisdom of such a plan was called supply-side or trickle-down economics. Here, a rocket sends a military satellite into the heavens. Tax relief for the rich would enable them to spend and invest more. This new spending would stimulate the economy and create new jobs. Reagan believed that a tax cut of this nature would ultimately generate even more revenue for the federal government. The results of this plan were mixed. Initially, the Federal Reserve Board believed the tax cut would re-ignite inflation and raise interest rates. This sparked a deep recession in and The high interest rates caused the value of the dollar to rise on the international exchange market, making American goods more expensive abroad. As a result, exports decreased while imports increased. The defense industry boomed as well. Reagan insisted that the United States was open to a "window of vulnerability" to the Soviet Union regarding nuclear defense. Reagan even proposed a space-based missile defense system called the Strategic Defense Initiative. Scientists were dubious about the feasibility of a laser-guided system that could shoot down enemy missiles. Critics labeled the plan "Star Wars. A deficit occurs when spending exceeds revenues in any year. The drop you see at the end of this chart represents recent attempts to achieve a "balanced budget" â€” a spending plan where the funds available for use equal the funds spent by the federal government. Economists disagreed over the achievements of Reaganomics. Tax cuts plus increased military spending would cost the federal government trillions of dollars. Reagan advocated paying for these expenses by slashing government programs. In the end, the Congress approved his tax and defense plans, but refused to make any deep cuts to the welfare state. Even Reagan himself was squeamish about attacking popular programs like Social Security and Medicare, which consume the largest percentages of taxpayer dollars. The results were skyrocketing deficits. The national debt tripled from one to three trillion dollars during the Reagan Years. The President and conservatives in Congress cried for a balanced budget amendment, but neither branch had the discipline to propose or enact a balanced budget. The growth that Americans enjoyed during the s came at a huge price for the generations to follow. The Rise of Supply-Side Economics Although unaffiliated with any major institution or agency, this site provides one of the clearest and most interesting introductions to the subject out there on the web. A very helpful site that exposes several common misconceptions and assumptions surrounding Reaganomics.

**Chapter 3 : U.S. Department of Defense**

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Economic history of the United States Colonial era and 18th century[ edit ] The economic history of the United States began with American settlements in the 17th and 18th centuries. The American colonies went from marginally successful colonial economies to a small, independent farming economy, which in became the United States of America. As a result, the U. GDP per capita converged on and eventually surpassed that of the UK, as well as other nations that it previously trailed economically. The economy maintained high wages, attracting immigrants by the millions from all over the world. Most of the manufacturing centered on the first stages of transformation of raw materials with lumber and saw mills, textiles and boots and shoes leading the way. The rich resource endowments contributed to the rapid economic expansion during the nineteenth century. Ample land availability allowed the number of farmers to keep growing, but activity in manufacturing, services, transportation and other sectors grew at a much faster pace. Thus, by the share of the farm population in the U. The Panic of was followed by a five-year depression, with the failure of banks and then-record-high unemployment levels. Many firms grew large by taking advantage of economies of scale and better communication to run nationwide operations. Concentration in these industries raised fears of monopoly that would drive prices higher and output lower, but many of these firms were cutting costs so fast that trends were towards lower price and more output in these industries. Lots of workers shared the success of these large firms, which typically offered the highest wages in the world. Ideas about the best tools for stabilizing the economy changed substantially between the s and the s. From the New Deal era that began in , to the Great Society initiatives of the s, national policy makers relied principally on fiscal policy to influence the economy. Yet, even in the United States, the wars meant sacrifice. During the peak of Second World War activity, nearly 40 percent of U. GDP was devoted to war production. Decisions about large swaths of the economy were largely made for military purposes and nearly all relevant inputs were allocated to the war effort. Many goods were rationed, prices and wages controlled and many durable consumer goods were no longer produced. President and the Congress. The "Baby Boom" saw a dramatic increase in fertility in the period "â€"; it was caused by delayed marriages and childbearing during depression years, a surge in prosperity, a demand for suburban single-family homes as opposed to inner city apartments and new optimism about the future. The boom crested about , then slowly declined. Other significant recessions took place in "â€"58, when GDP fell 3. In most cases, this has been due to moving the manufacture of goods formerly made in the U. In other cases, some countries have gradually learned to produce the same products and services that previously only the U. Real income growth in the U. Great Recession The United States economy experienced a recession in with an unusually slow jobs recovery, with the number of jobs not regaining the February level until January Homeowners were borrowing against their bubble-priced homes to fuel consumption, driving up their debt levels while providing an unsustainable boost to GDP. When housing prices began falling in , the value of securities backed by mortgages fell dramatically, causing the equivalent of a bank run in the essentially unregulated non-depository banking system, which had outgrown the traditional, regulated depository banking system. Many mortgage companies and other non-depository banks e. These measures helped the economy recover, as households paid down debts from "â€", the only years since where this occurred, [83] presenting a significant barrier to recovery. Income inequality peaked in and fell during the Great Recession, yet still ranked 41st highest among countries in i.

**Chapter 4 : The Southern Argument for Slavery [calendrierdelascience.com]**

*he military and defense industry is a significant driver of economic development in communities throughout the country. The positive benefits from military installations impact every citizen. Often overlooked, the companies that support the military are major employers and tax generators.*

An Economic Force in the U. The positive benefits from military installations impact every citizen. Often overlooked, the companies that support the military are major employers and tax generators. A report prepared by Deloitte and sponsored by the Aerospace Industries Association AIA earlier this year assessed the contribution and financial impact of the U. The indirect and induced employment associated with the U. The report does not include the users of these products and services. However, the Department of Defense DoD reports that it employs , civilian employees and 2. It has approximately , facilities or assets in the U. Communities adjacent to defense installations are distinct places. This drives further economic growth and opportunities in a region. Local governments and states work to support the military at active installations. Defense communities may also have closed or realigned installations, and new uses are often identified for those facilities or assets. The military is often the single largest employer in a community that has a major installation. However, the amount of economic activity varies by state and tremendously by region. In some communities, defense-related spending accounts for a majority of economic activity. In other communities, the amount of spending is spread among other industries. And the economic impacts from these communities benefit other non-defense communities all over the country. Defense communities are attractive to companies looking to expand or relocate. It results in driving further activity, increasing employment and investment in a region. Economic development officials often look at strategies at a military installation to create other opportunities. Military Plays a Significant Role in Northeast Florida Northeast Florida is fortunate to enjoy a diverse economy with strengths in multiple industries. However, the military and defense industry certainly plays a significant role in its economy and serves as the largest employer in the region. Many of these companies have facilities and operations at the largest industrial park in the Southeast, Cecil Airport and Cecil Commerce Center. Airport and community leaders promote this 1,acre mega-site, which has one of the longest runways in the country. With a work force of 4, military, civil service and contract personnel, the Fleet Readiness Center Southeast FRCSE provides aviation maintenance solutions in support of the war-fighting customer by performing in-depth overhaul, repair and modification of aircraft, engines and aeronautical components. Mayport is one of only two East Coast Navy homeport areas, and there are more than 50 companies in the area that support Navy ship repair " BAE Systems is one of those companies. Four area military installations provide employment to nearly 46, active-duty, reserve and civilian men and women. Of the personnel who exit the military each year, more than 3, choose to remain in the region, providing a steady stream of skilled workers for area business. The economic impact of the installations includes: All this activity improves the ability to attract business in not only the region but the entire state. What Is Often Not Captured Having a significant military presence changes the dynamics of a community. The military brings a large population of children. It makes the schools more diverse. These quality citizens and families are more involved. Parents want their kids to do well in school. Volunteer associations thrive because they have a larger support system. They have the training and are a huge asset to employers," says Stevenson. For many defense communities, there are a significant number of servicemen and women exiting the military every month. These individuals are highly skilled, community-oriented citizens that provide a continuous work force for private companies. In Jacksonville, there are exiting military personnel each month choosing Jacksonville as their home. For regions that have a lower cost of living and high quality of life, it is common for them to stay where they were based, and it is a significant asset for economic development efforts. Navy, Aaron has an extensive career in the military and defense industry.

**Chapter 5 : The American Economy during World War II**

*The American defense industry is being squeezed on multiple fronts, but just how important is the defense sector to the overall strength of the American economy?*

The Southern Argument for Slavery Southern slaveholders often used biblical passages to justify slavery. Those who defended slavery rose to the challenge set forth by the Abolitionists. The defenders of slavery included economics, history, religion, legality, social good, and even humanitarianism, to further their arguments. Defenders of slavery argued that the sudden end to the slave economy would have had a profound and killing economic impact in the South where reliance on slave labor was the foundation of their economy. The cotton economy would collapse. The tobacco crop would dry in the fields. Rice would cease being profitable. Defenders of slavery argued that if all the slaves were freed, there would be widespread unemployment and chaos. This would lead to uprisings, bloodshed, and anarchy. Some slaveholders believed that African Americans were biologically inferior to their masters. During the 1830s, this argument was taken quite seriously, even in scientific circles. Defenders of slavery argued that slavery had existed throughout history and was the natural state of mankind. The Greeks had slaves, the Romans had slaves, and the English had slavery until very recently. Defenders of slavery noted that in the Bible, Abraham had slaves. Defenders of slavery argued that the institution was divine, and that it brought Christianity to the heathen from across the ocean. Slavery was, according to this argument, a good thing for the enslaved. Calhoun said, "Never before has the black race of Central Africa, from the dawn of history to the present day, attained a condition so civilized and so improved, not only physically, but morally and intellectually. They said that their owners would protect and assist them when they were sick and aged, unlike those who, once fired from their work, were left to fend helplessly for themselves. James Thornwell, a minister, wrote in 1837, "The parties in this conflict are not merely Abolitionists and slaveholders, they are Atheists, Socialists, Communists, Red Republicans, Jacobins on the one side and the friends of order and regulated freedom on the other. Such unrest was used by many as a reason to continue slavery. When a society forms around any institution, as the South did around slavery, it will formulate a set of arguments to support it. The Southerners held ever firmer to their arguments as the political tensions in the country drew us ever closer to the Civil War. The Peculiar Institution Quiz What invention led to the increased concentration of slavery in the South?

**Chapter 6 : Economics of Taxation**

*Defense economics, field of national economic management concerned with the economic effects of military expenditure, the management of economics in wartime, and the management of peacetime military budgets.*

During the war 17 million new civilian jobs were created, industrial productivity increased by 96 percent, and corporate profits after taxes doubled. The government expenditures helped bring about the business recovery that had eluded the New Deal. War needs directly consumed over one-third of the output of industry, but the expanded productivity ensured a remarkable supply of consumer goods to the people as well. America was the only that saw an expansion of consumer goods despite wartime rationing. BY , as a result of wage increases and overtime pay, real weekly wages before taxes in manufacturing were 50 percent higher than in . The war also created entire new technologies, industries, and associated human skills. The war brought full employment and a fairer distribution of income. Blacks and women entered the workforce for the first time. Wages increased; so did savings. The war brought the consolidation of union strength and far-reaching changes in agricultural life. Housing conditions were better than they had been before. In addition, because the mobilization included the ideological argument that the war was being fought for the interests of common men and women, social solidarity extended far beyond the foxholes. Public opinion held that the veterans should not return jobless to a country without opportunity and education. That led to the GI Bill, which helped lay the foundation for the remarkable postwar expansion that followed. The war also made us more of a middle-class society than we had been before. It is no exaggeration to say that America won the war abroad and the peace at home at the same time. But we have much to learn from that achievement as we face our troubles today. Historians, economists, and politicians have long wondered why this remarkable social and economic mobilization of latent human and physical resources required a war. The answer, I think, is partly ideological. World War II provided the ideological breakthrough that finally allowed the U. Despite the New Deal, even President Roosevelt had been constrained from intervening massively enough to stimulate a full recovery. By he had lost his working majority in Congress, and a conservative coalition was back, stifling the New Deal programs. When the economy had begun to bounce back, FDR pulled back on government spending to balance the budget, which contributed to the recession of . The war was like a wave coming over that conservative coalition; the old ideological constraints collapsed and government outlays powered a recovery. For a time the government became the purchaser of one-half of all the goods produced by the American people. The stereotype of FDR as a regulation-lover flies in the face of experience in the s, when Roosevelt ended his cold war with business. Wartime planning was far more corporatist than New Deal planning, with far less class warfare. Eleanor Roosevelt was still much more anti-business than Franklin, and was often furious at him. After , antitrust enforcement virtually shut down. Despite the entente with business, FDR was still willing to go forward on the employment of blacks and women, in part because he believed that full productivity and wartime morale required it. He also continued to advance trade unionism. He did insist, for example, that Ford Motor Company live up to its responsibilities under the Wagner Act. When Ford refused, Roosevelt cancelled a lucrative government contract. This helped to produce the momentum for the big Ford strike in the spring of that brought the first union into Ford. But on other regulatory issues FDR compromised. A government that depended on these businesses to mobilize during the war could not be slapping them with antitrust suits at the same time. Basically, Roosevelt made the decision that he had to mobilize the proprietors of the mines, the factories, and the shops. He realized Congress could provide the money, but it could not build the planes, design the tanks, or assemble the weapons. Without the cooperation of industry, massive production would never get off the ground. He recognized also that private business could not find all the capital required for the expansion of the plants nor take the risk that the end of the war would leave them with no orders and excess capacity. So the federal government, through the Reconstruction Finance Corporation, advanced the necessary money to expand the factories, often leasing them to industry. The government developed new sources of supply for raw materials and created quick mass transportation. The government also went into the business of producing synthetic rubber and aluminum, as well as other emerging industries,

and helped stimulate new technologies. Contrary to the stereotype of a wartime "command economy," there was a remarkable entrepreneurial spirit in sharp contrast to the situation in Germany or in socialist, centrally planned economies. He allowed business to realize profits. He used government to create markets and to help business set up new plants and equipment, which business often leased and later bought cheaply after the war. It is hard for us to imagine today how such an entrepreneurial spirit could co-exist with war mobilization, but one did. One reason, of course, was the opportunity to profit, though the wartime tax on excess profits prevented the kind of windfalls made during World War I. More fundamentally, a spirit developed within each business enterprise to produce better than its competitors to serve the country. In his fireside chats, Roosevelt explained to the people over and over again why their productive genius had to be mobilized to win the war. Buoyed by the strong morale the president fostered, business and labor worked together to get the "E-for-excellence" citations that he spread around. It was not just producing more than your competitor, it was producing more than you did the previous quarter, and the quarter before that. Overall, the economy grew at a rate of 11 or 12 percent annually throughout the war. When he was being urged by his military advisers to function more as an economic czar, Roosevelt rejected that role. The military was constantly urging him to institute compulsory national service, in which people had either to enlist or work in one of the military plants to which the government would assign them. Roosevelt successfully resisted that idea throughout the war, on the theory that, somehow, the momentum of democracy would be sufficient: If the jobs were out there, people would put their mattresses on top of their cars and go to where the jobs were. He had this extraordinary vision of the highways filled with people going south, going west. In one fireside chat, he advised people to get maps. And the Hammond company in New York sold out their entire stock of 2, maps in a single morning. Even though the mobilization was chaotic and there were sometimes too many people in some places and too few people in other places, it worked. And America still produced more than any other country without the regimented manpower that some in the military wanted. Roosevelt resisted and delayed most of the decisions that concentrated government power. For example, in the spring of 1942, when there was a rudimentary system of wage and price control, Harold Smith, his budget director, declared it was time for comprehensive controls. But the president was worried that it was adding up to an overly regimented economy, and he rejected the proposal. Despite the mobilization, large segments of the economy were unaffected by the controls. No one was told where to move or work. Production for the government was still freely entered into by producers and government in a contractual arrangement; and business argued about those contracts all the time. Private property remained predominant throughout the country and still there were profits. In the World War II experience, the things we revere about capitalism the parts that spur energy, efficiency, and entrepreneurial skill were still in place. What the war did was tap that energy, not constrain it. In the early years of the war, Roosevelt consciously pursued a conversion program to shift industry to a wartime footing. Lingerie factories began making camouflage netting, baby carriages became field hospital food carts. Lipstick cases became bomb cases, beer cans went to hand grenades, adding machines to automatic pistols, and vacuum cleaners to gas mask parts. Behind these shifts was planning; someone had to perceive the similarity between lipstick cases and cartridges. Though FDR delayed converting large consumer industries, such as autos, as long as possible, there was a clear and deliberate plan. But it was not without a measure of planning. But the Cold War has now ended, and there is not even a shred of a conversion policy. And one of the dominant lessons of World War II is that unless there is a plan for conversion or reconversion, people are subject to the whims of the free market. Wartime conversion was not without hardships, but most of them resulted from too little planning, not too much. In 1945, after delaying, the government finally had to force the automobile industry to convert their plants to the manufacture of planes. Four hundred thousand automobile workers were thrown out on the streets until that conversion could take place. All the auto dealers and salespersons were suddenly out of jobs. Eleanor Roosevelt had an altercation with General Motors Chairman William Knudsen because he had been unwilling to accept a plan a year earlier. What made it finally work was the recognition that there had to be a plan, that the government was behind the plan, and the plan had public support. In 1945, despite all the talk about it, there is no collective effort to plan for the aftermath of the Cold War. World War II produced remarkable social gains. At war production plants, attempts to boost morale such as holding more softball

games, and building additional canteens and health clubs also fostered a sense of community. The logic of mobilization produced a logic of social advance. She proved that absentee rates were high in the factories because worried women were going home to care for their children. She got restaurants to prepare hot meals so women could bring home hot dinners. The productivity rates soared as a result of these measures. When Henry Kaiser built his big shipyard in California, the government paid for a twenty-four-hour child care center. It was a state-of-the-art facility with the best nursery school teachers, because it was seen as a pioneering test of early education. Workers on every shift could bring their children. If they worked at night they could bring their children to sleep. If they worked the day shift their children received an education that they had never had before. The children, especially those from lower class families, showed enormous gains. But when the war ended, all the centers were shut down.

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Excluding the years from the long term, one finds that the long-term tendency was for the G-NM share to gain exclusively at the expense of the military share, as the private share remained approximately constant over the long period. Thus, if the United States during the Cold War was simultaneously a warfare state and a welfare state, it is clear that the welfare part expanded much more robustly than the warfare part after the initial military surge of the early s. The answer is clear. There was no systematic tendency at all for the G-NM share to fall when the G-M share rose during mobilizations. In fact, during military buildups the government nonmilitary share of GNP was more likely to rise than to fall. The G-NM share was higher in than it had been in , and higher in than it had been in . During the Carter-Reagan buildup the G-NM share fluctuated in a narrow band, sometimes rising and sometimes falling, but the share at the end . The behavior of the private share was quite different. Changes in the G-M and P shares were almost exactly offsetting. Deletion of the years from the data set has no effect on this conclusion. Figure 3 plainly shows the two offsetting changes to be deviations from a horizontal line representing a zero sum of the two changes. In short, during the Cold War the private sector alone bore the full cost of annual increases in the military share of total output as conventionally defined. In the metaphors explained above, one may describe the buildup of as completely butter-sacrificing and the demobilization of as completely butter-enhancing. But because the magnitude of the military upswing greatly exceeded that of the subsequent retrenchment, over the full cycle of the net change of the private share was . The buildup of was also completely butter-sacrificing. The ensuing demobilization was 50 percent butter-enhancing if considered complete in , and 59 percent butter-enhancing if considered complete in . Over the complete cycle of the net change of the private share was . The Carter-Reagan buildup of was 89 percent butter-sacrificing: During the Reagan portion of the buildup alone, from to , the mobilization was 76 percent butter-sacrificing, as the private share fell by one percentage point while the military share rose by 1. The post demobilization has continued into the early s, so its ultimate character remains to be seen. Unconventionally Viewed To this point my analysis has proceeded by making use of the conventional categories of the national income and product accounts. I now take a different tack. The soundness of this accounting practice can be, and often has been, questioned. The challenges apply in some cases to the accounting treatment of all government spending;<sup>21</sup> in other cases, to defense spending in particular. Among the several bases for rejecting the usual accounting conventions, the following may be noted. What do they mean? If not, why should the actual prices paid be regarded as appropriate weights for the purpose of aggregating physically incommensurable goods and services? Second, even if the pricing problem be disregarded, defense purchases measure input not output. Obviously, what people value is national security, not the mere devotion of resources to the ostensible production of national security. Because no one knows the production function for national security, and because under certain conditions e. Third, defense output, even if it were measurable, ought to be regarded as an intermediate rather than a final good, and on this basis excluded from GNP. If there were no external threat, all defense spending could be eliminated and no one would be the worse. To the extent that defense spending serves to preserve the social and economic framework within which nondefense production can go forward, its value is already incorporated in the market prices of civilian goods. Hence, at the margin the observed defense spending amounts to transfer payments rather than payments for net additions to the real national product. At least three Noble laureates in economic science Kuznets, Tobin, and Buchanan are on record as proponents of some or all of the preceding arguments, and many other respectable economists also have subscribed to them. Especially weighty is the position of Simon Kuznets in opposition to the now-standard way of treating defense spending in the national product accounts, because Kuznets was the acknowledged leader in the original development of the accounts. The two series exhibit a similar upward tendency. Between and , real GNP grew at an average rate of 3. Again, growth

rates are obtained from linear regressions of log output on time. On the basis of this difference, one has little to choose, as the growth rate of orthodox total output and that of civilian output alone differed by just 0. Notwithstanding the similarities of their long-run trends, the two series moved quite differently in particular years and, on one occasion, over the course of a conventionally demarcated business cycle. Empirical macroeconomists appear to be oblivious to this issue. As Figure 4 shows, the differences tended to diminish with the passage of time. The early s witnessed the greatest deviations between the growth rate of orthodox real GNP and that of civilian real GNP. The differences were considerably smaller from the mids to the mids, then even smaller between and . To some extent, the diminution reflected the diminishing share of military spending in GNP Figure 2 above. For the early s the choice of an output concept makes a major difference in the description of the business cycle Figure 5. The conventional concept gives rise to a description that shows an expansion from through , a mild recession in , and a strong recovery in . The year looks the same for both measures, but does not. Both series show strong recovery in , with civilian growth outpacing that of GNP including the military component. The year was far better for guns than it was for butter or roads. The year saw only minuscule growth of road output and actual decline of butter output; the year , a bad one for guns, brought slight improvements in the rates of output of both roads and butter. What we call these differences matters little, so long as we are clear. But appreciating the existence of the differences is important for understanding and evaluating the actual performance of the economy during the Cold War. I shall focus on issues related to ideology, information, and the conflict between governing elites and the public. Consider first the profile of resource allocation to the military during the Cold War. Until the late s the answers seem fairly transparent. The high base level of spending resulted from the Cold War ideology of global anti-communism and the foreign policy doctrines and military commitments that flowed from that ideology. The spending deviations were associated with the extraordinary costs of engagement in two major shooting wars in Asia. Set in motion by a unique combination of external events, astute partisan political action and information management, kept in motion by executive determination and bureaucratic tenacity, it bore little resemblance to the two preceding buildups. One may conclude that the establishment of the full-fledged Cold War regime caused real defense spending almost to treble. This staggering sum is equivalent to the entire GNP of the United States in the two-year period . Countless political cartoons, featuring bloated generals bedecked with rows of medals, promoted precisely such an attitude. Citizens did not need to be natural cynics. The problem of creeping skepticism was inherent in the remoteness of the subject from their immediate experience. Citizens [could] only spend and hope. In a perceived crisis, public opinion became volatile. Many people suspended their reason, critical faculties, and long-term judgments, reacting emotionally and with heightened deference to political leaders. But usually the world did not supply such clear-cut cases, and the national security managers had to take matters into their own hands. Of the fearsome Soviet divisions, a third were undermanned and another third were ill-equipped militia. All were revealed in due course to have been false alarms. Meanwhile the American people received an almost wholly fictitious account of an incident in the Gulf of Tonkin in , which stampeded Congress into giving its blessing to what soon became a major war. Claims about gaps placed the burden of argument on relatively ill-informed opponents of military spending. But nothing in the workings of U. The Iran-Contra affair and the Pentagon bribes and influence-peddling brought to light during the late s were only the latest of a long series of actions shielded by self-serving mendacity. These operations caused a variety of radioactive and other toxic contaminations of the surrounding air, water, and soil, yet the managers of the facilities repeatedly misrepresented and lied about the hazards to citizens living nearby. If they could have, retrenchments of the military establishment would not have occurred after the buildups. Certainly the steep decline of , especially its later phase, which defense interests stoutly opposed, would not have been so steep. The fact that the allocation of resources to defense did sometimes fall, and fall substantially, refutes radical arguments that allege the exercise of hegemony by the national security establishment. It lost some political battles, too. That is why during the late s, notwithstanding the preceding buildup, the defense share of GNP never exceeded 7 percent Figure 2 above. Defense interests had the political savvy to appreciate that proposals or actions widely perceived as excessively grasping and strategically unjustified would be imprudent and counterproductive. More important, however, were the

domestic factors that constrained the defense managers in spite of their unique control of information and their consequent ability to mold, rather than respond to, public opinion. Those were the most evident forms taken by the costs of extensive commitments of resources to military purposes. Of the two, death was the more important. Something had to give. Of the political factions struggling over the three grand categories of GNP, the pro-military faction proved the weakest, at least until . . . . . When the national security elite lacked persuasive rationales to present to the public, they could only draw on the pool of patriotism. But that was not a bottomless reservoir, and without replenishment from sources that the public could understand and support, it tended to run dry. As the opinion balance became strongly negative, it worked its way through political processes, reaching both Congress and the administration, to affect the allocation of resources to the military. Despite the gaps in the record, the figure shows clearly the positive but sometimes just barely positive support for increased spending in the s and s through , the strong preference for reduced spending at least from until the late s, the strong support for increased spending from through , and the substantial balance in favor of reduced spending thereafter. The Korean War made President Truman increasingly unpopular as it dragged on. Before World War II the allocation of resources to military purposes remained at token levels, typically no more than one percent of GNP, except during actual warfare, which occurred infrequently. The old regime ended in . . . . . The massive mobilization of the early s drove the military share of GNP to more than 41 percent at its peak in . . . . . The trend tilted slightly upward for absolute real spending, slightly downward for spending as a share of GNP. Increases in the military share of GNP during the Korean and Vietnam wars came entirely at the expense of the private share. The government nonmilitary share increased during the first two post-World War II military buildups and remained approximately constant during the third. The largest discrepancies occurred during the early s.

**Chapter 8 : The Way We Won: America's Economic Breakthrough During World War II**

*In Virginia—the most defense-dependent state in the country economically—defense spending reaches some 13 percent of state output. In Hawaii, the figure is nearly 11 percent.*

More and more Americans now considered themselves part of the middle class. The growth had different sources. The automobile industry was partially responsible, as the number of automobiles produced annually quadrupled between and . A housing boom, stimulated in part by easily affordable mortgages for returning servicemen, fueled the expansion. The rise in defense spending as the Cold War escalated also played a part. After the major corporations in America grew even larger. There had been earlier waves of mergers in the s and in the s; in the s another wave occurred. New conglomerates -- firms with holdings in a variety of industries -- led the way. Large corporations also developed holdings overseas, where labor costs were often lower. Workers found their own lives changing as industrial America changed. Fewer workers produced goods; more provided services. By a majority held white-collar jobs, working as corporate managers, teachers, salespersons and office employees. Some firms granted a guaranteed annual wage, long-term employment contracts and other benefits. With such changes, labor militancy was undermined and some class distinctions began to fade. Farmers, on the other hand, faced tough times. Gains in productivity led to agricultural consolidation, as farming became a big business. Family farms, in turn, found it difficult to compete, and more and more farmers left the land. Other Americans moved too. In the postwar period the West and the Southwest continued to grow -- a trend that would continue through the end of the century. By California had more people than New York. An even more important form of movement led Americans out of inner cities into new suburbs, where they hoped to find affordable housing for the larger families spawned by the postwar baby boom. Developers like William J. Levitt built new communities -- with homes that all looked alike -- using the techniques of mass production. As suburbs grew, businesses moved into the new areas. Large shopping centers containing a great variety of stores changed consumer patterns. The number of these centers rose from eight at the end of World War II to 3, in . With easy parking and convenient evening hours, customers could avoid city shopping entirely. New highways created better access to the suburbs and its shops. Television, too, had a powerful impact on social and economic patterns. Developed in the s, it was not widely marketed until after the war. In the country had fewer than 17, television sets. Three years later consumers were buying , sets a month, and by three-quarters of all families owned at least one set. In the middle of the decade, the average family watched television four to five hours a day. Americans of all ages became exposed to increasingly sophisticated advertisements for products said to be necessary for the good life.

**Chapter 9 : Economics of defense - Wikipedia**

*Economics and National Security: Issues and Implications for U.S. Policy Congressional Research Service Summary* As the world begins the second decade of the twenty-first century, the United States holds what should be a winning hand of a preeminent military, large economy, strong alliances, and democratic values.

Defense economics, field of national economic management concerned with the economic effects of military expenditure, the management of economics in wartime , and the management of peacetime military budgets. First, there is the human cost in loss of life and in the physical and psychological maiming of healthy people. While the personal cost of such loss is immeasurable, the economic cost to society can be estimated. This measure was first proposed by a French economist, Jean-Baptiste Say , in He asserted the principle that war costs more than its direct expenses, for it also costs what its casualties military and civilian would have earned throughout their lifetimes if they had never participated in war. Second, war has economic costs arising from the destruction of buildings, productive farmlands and forests, public services such as waterworks, electricity-generating and distribution systems, roads, bridges, harbours, and airfields, and all manner of personal and corporate property such as homes, possessions, factories, machinery, vehicles, and aircraft. War, therefore, destroys physical capital that has been created by previous economic activity. Reconstruction after war is a particular economic burden because the finance, imported capital goods, and labour used in reconstruction merely restore the losses a country has sustained, rather than adding to the stock of capital available to its economy. Thus, even if it manages to restore all its physical losses, it uses scarce resources that would otherwise have been available for extending and improving economic activity. War also costs a great deal in goods and services to create the weapons of war and to supply the people engaged in the war effort. Metal used to make a tank cannot be used to build bridges, fuel used to transport military supplies cannot be used on school buses, cement used to construct ammunition dumps cannot be used in house construction. This constitutes the opportunity cost of war—that is, the extent to which the economy foregoes the opportunity to commit these resources to alternative peaceful uses. The opportunity cost of war is also felt in the future. Resources diverted to war cannot be used to create new productive capacity for future consumption, and this reduces the living standards of the population below what they otherwise would have been in the future. In summary, the total costs of war include the cost of the foregone use of the economic resources used up in the conflict. These include the cost of the foregone lifetime earnings of those killed in the war, the cost of lifetime medical care for those permanently incapacitated by the war, the cost of replacing the physical capital destroyed or damaged by the war, the cost of supplying the armed forces with the weapons of war, the cost of sustaining the armed forces and those in support functions including their pay and pensions , and the losses to the economy caused by the diversion of resources from peaceful investment in future economic capacity. In the absence of a universally binding and verifiable agreement to abolish war, the best option is to deter those countries prone, by their history or by the policies of their governments, to resolve disputes by resorting to war. Deterrence has two aspects. In this way the costs to the aggressor of initiating a war will far exceed any likely gains. Second, by making credible its willingness to use military force, should it prove necessary to do so, the nation aims to leave potential aggressors in no doubt of the consequences they will suffer if they are tempted to launch an attack. Deterrence, while expensive, is incomparably less expensive than war. The study of its expense constitutes the subject matter of defense economics. Measuring the burden Adam Smith , the founder of economics as a discipline in the social sciences, was the first economist to theorize about the economics of war. In his major work, *An Inquiry into the Nature and Causes of the Wealth of Nations* , Smith considered a perennial problem of defense management, namely, the increasing expense of war-fighting equipment. He noted that changing technology raised the costs of war—for example, that the musket was a more expensive item to acquire than its predecessor, the javelin. In the same way, a modern jet fighter is much more expensive than its propeller-driven predecessor. The rising cost of weapon technology does not mean that defense costs d necessarily rise as a proportion of gross domestic product GDP; the sum of all expenditures made in one year. Although the unit costs of specific weapons rise as technology adds to their

capabilities, high-cost solutions to one form of a military threat for example, the use of expensive tanks to defend against a massed tank attack usually become vulnerable to low-cost alternatives such as the relatively cheap antitank missile and precision-guided munitions, which either alter the nature of the threat or make redundant the high-cost solution. In a developed economy, the annual costs of defense procurement and logistics typically take up more than half of the defense budget, the rest being spent on personnel. In the underdeveloped economies, the balance is reversed: This difference reflects the gap in available war-fighting technology between the developed and the underdeveloped worlds. Yet most wars are fought in low-income countries between relatively poorly equipped armed forces. Moreover, the inability of low-income countries to maintain sophisticated weapons to the operational standards of their manufacturers fully explains the many logistical problems the armed forces of poor countries have faced in their wars. Importing sophisticated weapon systems does not guarantee a sophisticated defense capability if the support system fuel, spares, ammunition, repairs, and overhaul procedures is either less than satisfactory or less than adequately funded. Defense capability is inseparably linked to the cost of maintenance. Defense is a public good; that is, once deterrence is achieved, all citizens benefit from the avoidance of war and no citizen can be excluded from enjoying the benefits. People who could not be excluded from a public benefit would, if given the choice, rationally choose not to contribute toward its cost. For this reason, defense in all countries is paid for by taxation, a burden that is borne by all citizens, and in all countries the military force considered necessary for deterrence is under the direct and exclusive control of the government. Comparing burdens Settling on a standard International comparisons of how governments arrange their defense spending are fraught with conceptual discrepancies. Capitalist economies, which use the GDP, measure economic activity differently from communist economies, which use a net material product NMP system. This complicates comparisons between these systems. Defense expenditures themselves are subject to controversy. Others, such as the Soviet Union, exclude defense-related research and development, frontier guards, and paramilitary reserves, thereby reducing the nominal defense expenditure by up to 30 percent. Even if agreement could be reached on what constitutes defense expenditure, this would still leave countries with a measure denominated in their domestic currencies. But the act of converting each currency into, for example, U. Thus, two countries with similar amounts in dollars spent on defense, and therefore in balance in their defense capabilities, could face a growing imbalance in their dollar-based defense expenditures purely because one of their currencies has changed its exchange rate with the U. Comparisons of the absolute amounts each country spends on defense are prone to error and must always be used with caution. Ratios can be compared across countries and in different time periods. Defense burdens worldwide Security expenditures for both external defense and internal law and order account for major shares of government expenditures. The higher-income countries, while spending higher absolute amounts on defense, tend to spend smaller proportions of state expenditure under 15 percent and smaller proportions of GDP under 5 percent. Given the perilous security situation in the lower-income regions of the world, these discrepancies are understandable if also regrettable in view of their other pressing needs. An economist would seek explanations for this in the perception of a threat indicated by the public statements of the government concerned. It is likely that the intelligence services of neighbouring countries would draw similar conclusions from the economic data. Within the higher-income countries there are notable differences in the amounts spent on defense. The United States and Britain have spent relatively high proportions 5 to 10 percent of their GDP on defense since, compared with Japan, which has spent less than 1 percent of GDP over the same period. Germany and France also have tended to spend a smaller proportion of their GDPs than Britain on defense though the absolute amounts have been similar, since they have larger GDPs than Britain. The Japanese case is interesting because of the differences in economic achievement between Japan and the big defense spenders. There is no doubt that it benefited enormously from limited defense spending particularly while it could free ride under the military protection of the United States, since resources not allocated to defense went into economic investment, to the direct benefit of civilian employment and output. However, at the same time Japan also spent much less about half as much of its GDP on general government expenditure than the United States and western Europe. This releases a higher flow of savings into the economy, enabling higher investment ratios to be maintained. The Soviet Union has long

spent a high proportion of its national resources on defense. If defense spending competes with economic growth in the capitalist economies, contributing to inflation, low investment, and lower living standards, then it must have a devastating impact on poorer economies such as the Soviet Union. The need to compete with the United States at all technological levels across the weapons spectrum has been met at the cost of heavy distortions in the rest of the Soviet economy. This has compelled the Soviet Union to review its priorities and to consider whether its security is best assured by continually raising the military ante with the West or by living at some lower level of military tension with a reduced offensive military capability. Those charged with preparing a defense capability tend to be more cautious about the level of capability than those who eventually have to pay for it. In fact, the very success of deterrence—a high probability of nonattack throughout a long period of peace—tends to reduce the amount of defense spending that the electorate considers necessary to achieve deterrence. The managers of the armed forces tend to increase the contingencies they wish to prepare for, while skeptical taxpayers tend to question whether certain preparations are absolutely essential. In democracies this tension forms the permanent agenda of the defense debate. Stocks and flows Defense expenditures are made on an annual basis, the government allocating so much of its total budget to personnel costs, so much to the procurement of weapon systems, and so much to general support. The pay and allowances of defense personnel are consumed within the year; that is, they spend their wages, allowances, and pensions on consumer goods and, in so doing, add to total demand in the economy. Procurement, on the other hand, is somewhat different. A tank lasts much longer than the single year in which it is purchased. That defense capability is, in economic terms, a stock, while the annual expenditure is called a flow. The government can still draw on the stock paid for by previous defense budgets, which is manifested in its tanks, aircraft, ships, communications systems, trained personnel, and expertise in military affairs. The analogy is with a bath that is filling with water while the plughole is open. As water pours into the bath, water also drains from the plughole. It is the difference between the rates at which water flows in and out that determines whether the bath fills or empties. If the flows in and out are equal, the water level will remain constant. Likewise with defense capability: The gap in military capability between any two countries is known as the threat, and estimates of the threat constitute the major input into defense planning. If the defending country does not invest in overcoming each new threat to its capability—by technology, new types of weapons, increasing the stock of current weapons, or all three options simultaneously—it will risk a reduction in the probability of nonattack—that is, its deterrence capability will be compromised. While NATO planners considered their own forces to be technologically superior to the Soviet forces, they were nevertheless mindful that the Soviet Union had a decisive quantitative superiority in conventional forces more tanks, armoured vehicles, artillery, combat aircraft, and troops. The threat of a land-based invasion by Soviet forces, which the planners considered to be virtually unstoppable, led directly to the decision to deploy nuclear weapons as the ultimate deterrent against an invasion of western Europe. Nobody could survive a major nuclear war in Europe. The damage to the Soviet Union from an American nuclear strike would be matched only by the damage to the United States from a Soviet nuclear strike. Because each country has maintained sufficient nuclear forces to respond in kind to a first strike by the other, a nuclear exchange would be suicidal for both. Whatever the rhetoric, therefore, both countries have a strong interest in preventing war of any kind from breaking out on the continent of Europe. To underline the credibility of the threat of nuclear retaliation, NATO commanders were issued battlefield nuclear weapons, which NATO governments might or might not release for immediate use, with or without warning. As long as the risk of the horrendous consequences of a nuclear war exceeded the prospects of potential gain from launching an attack, the probability of nonattack on western Europe by the Soviet Union remained at an acceptable level. The economics of conventional deterrence The possession of nuclear weapons by some NATO countries the United States, Britain, and France did not obviate the need for expenditure on conventional armed forces. To abandon conventional forces would risk having to use nuclear weapons as soon as the first Soviet forces crossed the German border or some naval incident occurred in any part of the world. This escalation from a small incident to the end of the world in one short step was unacceptable; hence, NATO countries invested resources in conventional capabilities in addition to nuclear weapons. Matching conventional forces to Soviet conventional capabilities had to take note of two

facts: First, the Soviet Union had overwhelming superiority in conventional forces. Military doctrine holds that concentrating superior force at a single point can overwhelm the defense, and the Soviet Union had the capability to achieve such a strategic advantage at a time and place of its choosing. Second, while NATO had advantages in military technology, there was a constant effort by the Soviet Union to close the technological gap. Also, there is some point at which a quantitative advantage acquires a qualitative dimension, and this advantage cannot be neutralized solely by relying on a technological gap between the weapon systems themselves. Thus the paradox of NATO defense spending. The alliance was constantly trying to widen the technological gap to compensate for its disadvantage in numbers, while at the same time it was required to maintain large quantities of its existing systems to redress the ever-widening gap in numbers that the Soviet Union was believed to be creating across the German border.