

## Guns and Butter?\*

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*... when the army engages in protracted campaigns, the resources of the state will not suffice. The Art of War, Sun-Tzu.*

*War may sometimes be a necessary evil. But no matter how necessary, it is always an evil, never a good. Nobel Prize Acceptance Speech}, Jimmy Carter.*

It has long been recognized that war has many true costs, only some of which are financial. There are, however, two ways to calculate the economic cost of a war: a direct method and an indirect one. Examples of the direct approach are typically more common. For example, in a thorough study written prior to the war with Iraq, Professor William Nordhaus of Yale University provides and documents a range of estimates for the conflict in Iraq.<sup>1</sup> Nordhaus estimates that if the war were to be “short and favorable” it would cost \$50 billion in direct spending and a net \$49 billion in “follow-on costs”, for a total of \$99 billion dollars.<sup>2</sup> He also estimates that if the war were to be “protracted and unfavorable”, the costs would likely jump 20 fold to just under 2 trillion dollars.

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<sup>1</sup> William D. Nordhaus, “The Economic Consequences of a War with Iraq,” Chapter 3, in War with Iraq: Costs, Consequences and Alternatives, American Academy of Arts and Sciences, 2002. This paper is available at: [http://www.econ.yale.edu/~nordhaus/homepage/AAAS\\_War\\_Iraq\\_2.pdf](http://www.econ.yale.edu/~nordhaus/homepage/AAAS_War_Iraq_2.pdf). Also see a non-technical version of this paper in the December 5<sup>th</sup>, 2002 issue of the New York Review of Books. This paper is available at: <http://www.nybooks.com/articles/15850>.

<sup>2</sup> Follow-on costs include the costs of occupation and peacekeeping, reconstruction and nation-building, humanitarian assistance, impact on oil markets and the macroeconomic impact. For the short and favorable scenario, these latter two costs are negative (i.e. they provide economic benefits) though for the protracted and unfavorable scenario this is not the case.

In another study conducted economists prior to the conflict in Iraq, Professors Steven Davis, Kevin Murphy and Robert Topel of the University of Chicago also price the direct cost of conflict in Iraq.<sup>3</sup> Citing a CBO study, an analysis from the House Budget Committee (Democratic Staff), as well as Nordhaus's study, they argue that the likely direct cost of conflict will run in the \$50 billion to \$60 billion dollar range, while the indirect costs will likely be equal to the direct costs. Davis, Murphy and Topel (2003) settle on a conservative estimate of \$125 billion for the expected cost of the war with Iraq.

However, while the cost of war is likely to be substantial, so too may be the cost of not going to war. To investigate this point, Davis, Murphy and Topel (2003) take their analysis further by also estimating the cost of merely "containing Iraq". In essence, they are pointing out that while it may be important to price the cost of undertaking a conflict with Iraq, one must also establish what the cost of the next best alternative is: namely, containment. They estimate that the annual costs for containing Iraq without a war would run approximately \$19 billion dollars per year. Even allowing for the Hussein Regime to end on its own, they calculate that the present discounted cost to the U.S. of containing Iraq at \$380 billion. Hence, the cost of war is deemed to be far less than the cost of not going to war and just containing the Hussein regime.<sup>4</sup>

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<sup>3</sup> Steven J. Davis, Kevin M. Murphy and Robert H. Topel, "War in Iraq versus Containment: Weighing the Costs," March 2003, available at: <http://gsbwww.uchicago.edu/fac/steven.davis/research> .

<sup>4</sup> Davis, Murphy and Topel (2003) also report that the Iraqi people's economic welfare will rise 50% in the long run by the removal of Hussein. This is due to the fact that during his regime the economy was ruined due to his alarming propensity to engage in conflict over the past 25 years. In fact, in Hess (2003) I estimate the potential economic benefits from living in a peaceful world for each country. The country who would pay the most is Iraq, where the average person would pay a permanent payment of 65% of all that they currently consume to live in peace. Interestingly, averaging over all countries who had been engaged in a conflict from 1960-1990, each citizen would permanently give up to 8% of their current level of consumption to live in a peaceful world. **THAT'S A LOT OF BUTTER?**

My own work, Hess (2003), also supports the view of Nordhaus (2002) and Davis, Murphy and Topel (2003): namely, that the expected cost of the conflict with Iraq is likely to be in the \$150 billion range.<sup>5</sup> In contrast to the direct approach of estimating the cost of conflict, I adopt an indirect approach that estimates the effect of war on consumption growth. Why consumption growth? The reason is that what economists typically consider as the cost of war is how much butter individuals will have to forego in order to finance the conflict. And just as in our own lives, when our level of resources becomes permanently re-directed, we revise down our consumption. In principle, both the direct procedures for measuring economic costs and the indirect one of measuring foregone consumption should generate equivalent answers for the cost of war in Iraq.

In the empirical work in Hess (2003), I also allow for different types of conflicts (e.g. both big and small ones and those fought at home or on foreign soil) to have different types of impact on consumption. As one might expect, I find that big wars fought on one's home soil lower consumption much more than do small or even big wars fought away. Nevertheless, big wars fought on foreign soil also significantly lower growth. Averaging across all countries in the world over the time period 1960-1990, I estimate that a big war fought away on foreign soil lowers consumption growth about 2.3 percentage points in the initial year of the conflict and thereafter has no statistically significant effect. Hence, one can think of big wars fought away from home as having a temporary impact on a country's rate of consumption growth while having a permanent effect on its level of consumption.

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<sup>5</sup> Gregory D. Hess, "The Economic Welfare Costs of Conflict: An Empirical Assessment," CESifo Working paper # 852, available from [www.CESifo.de](http://www.CESifo.de).

To estimate the expected cost of the war with Iraq, note that in 2002 the level of consumption in the U.S. was about \$7 trillion, so that a 2.3 percentage point one time loss to the level of consumption is approximately equal to \$150 billion.<sup>6</sup> This indirect estimate of the cost of the conflict is roughly equal to the direct estimates that have been used to measure the costs of the war in Iraq.

As further evidence that this indirect measure of the costliness of conflict is roughly equivalent to the more direct calculations discussed above, note that personal consumption growth averaged 3.9% on an annual basis from the first quarter of 1998 through the third quarter of 2002. In contrast, consumption growth in the fourth quarter of 2002 and the first quarter of 2003 has averaged 1.6% on an annual basis. This decline in the growth of consumption around the time period of the conflict is just over 2% on an annualized basis, which is pretty close to the estimated average loss in consumption from a large scale war fought on foreign soil that I discussed above. Of course, the weak retail sales numbers for April 2003, a decline of 0.1% for the month, is further evidence to this point.

Taken together, while consumption growth has been the mainstay of the U.S.'s "investment-less" recovery throughout 2001 and most of 2002, even it has appeared to stall over the last two quarter. Clearly consumers are responding to both the uncertainty cost and resource cost associated with the conflict in Iraq. However, now that there appears to be some initial resolution to the situation and the costs of conflict have become more limited and less uncertain, consumption growth and confidence will begin to recover to a more modest range. In turn, output growth will recover modestly in the near

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<sup>6</sup> If we allow for plus or minus one standard deviation (estimated to 1.2 percentage points) around this estimated average effect of 2.3 percentage points, then a corresponding range of estimates of the cost of conflict is between \$80 billion and \$220 billion.

term. However, since the recent shortfalls in output and investment have in large part been due to factors other than the conflict in Iraq, the initial resolution of this conflict, by itself, is unlikely to cure all of our economic ills.