

DECEMBER 1, 2009

## ESTIMATING FUNDING FOR AFGHANISTAN

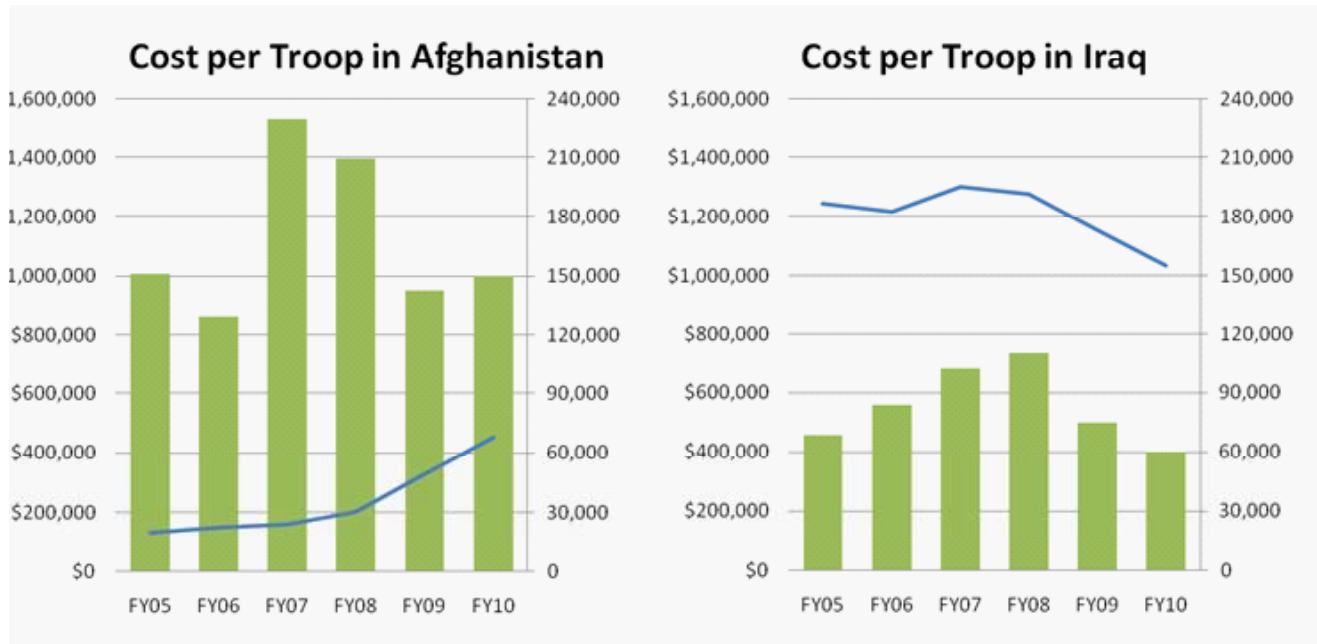
By Todd Harrison

The deployment of additional troops to Afghanistan over the coming months will require additional funding in Fiscal Year 2010 (FY10). It is difficult to precisely estimate the cost that will be incurred by the deployment due to a variety of factors including the composition of the forces deployed and the specific mission they are given. The adversary also has a say in determining the operational tempo of our forces, and thus the costs incurred in terms of such items as fuel, ammunition, and equipment. Still, historical trends in the cost of the wars in Iraq and Afghanistan can provide a useful guide for making such an estimate.

### Cost Per Troop:

The table below lists the budget authority and average number of troops deployed by fiscal year for operations in both Iraq and Afghanistan.<sup>1</sup> For both wars, there is a fairly strong correlation between budget authority and number of troops deployed.<sup>2</sup> This suggests that while there are many other factors at play in determining costs, including fixed costs for bases and other infrastructure items, a driving factor is the number of troops deployed.

<b>AFGHANISTAN</b>	FY05	FY06	FY07	FY08	FY09	FY10
Number of Troops Deployed	19,850	22,100	24,080	30,200	49,175	68,000*
Budget Authority (in billions)	\$20.00	\$19.00	\$36.90	\$42.10	\$46.90	\$68*
Cost per Troop	\$1,007,557	\$859,729	\$1,532,392	\$1,394,040	\$953,737	\$1,000,000
<i>Correlation Coefficient:</i>		<i>0.9274</i>	<i>Avg. Cost per Troop:</i>	<i>\$1,124,576</i>		
<b>IRAQ</b>	FY05	FY06	FY07	FY08	FY09	FY10
Number of Troops Deployed	186,600	182,225	195,100	191,275	173,250	155,000*
Budget Authority (in billions)	\$85.50	\$101.60	\$133.60	\$140.90	\$86.50	\$62*
Cost per Troop	\$458,199	\$557,552	\$684,777	\$736,636	\$499,278	\$400,000
<i>Correlation Coefficient:</i>	<i>0.8586</i>		<i>Avg. Cost per Troop:</i>	<i>\$556,074</i>		



In Afghanistan, the cost per troop since FY05 has varied between \$860 thousand per year and \$1,532 thousand per year with an average annual cost of \$1,125 thousand. The cost per troop in Iraq has been consistently lower, ranging from \$458 thousand per year to \$737 thousand per year with an average annual cost of \$556 thousand. In both cases, the costs per troop peaked in FY07 and FY08. This corresponds to changes in the guidance for what was considered a war cost.<sup>3</sup> As a result, many non-war-related items were included in the war funding for these years, such as costs associated with the permanent increase in the size of the Army and Marine Corps and the planned modernization of equipment. In the FY10 war funding request, many of these non-war-related items, which the Department estimated to total some \$13 billion, were removed.

### Afghanistan Is Not Iraq

There are several possible explanations for the substantial difference in the cost per troop deployed in Iraq versus Afghanistan. One explanation is that economies of scale exist, since until recently the number of troops deployed to Iraq has exceeded the number in Afghanistan by nearly a factor of ten. Another explanation is that the operating conditions in Afghanistan are more challenging due to the nature of the terrain and lack of infrastructure. Roads in Afghanistan are often in poor condition or are nonexistent and resupply routes must run long distances over land, making support of deployed troops more costly.

### Fuel Consumption

Another significant factor is fuel consumption. According to one recent study, troops deployed in Iraq and Afghanistan are consuming on average 8,000 gallons of fuel per

troop per year. This is due to the high operational tempo, the employment of high fuel consumption weapon systems (such as helicopters and fighter jets), and the extensive use generators to provide electrical power at bases. Moreover, the delivered cost of fuel is estimated to range from \$25 to \$45 per gallon. The high cost is due primarily to the air and ground forces needed to protect fuel convoys along their supply routes. According to these figures, fuel costs alone make up some \$200-350 thousand of the cost per troop per year.

## **Conclusion**

Given these factors and the historical data available, it is reasonable to expect that the deployment of some 30,000 additional troops to Afghanistan will increase costs by approximately \$30 billion per year. Since the administration's FY10 budget request of \$68 billion for operations in Afghanistan did not include funding for this additional surge in troops, the administration will likely need to request a supplemental appropriation in the coming months. The precise amount of the supplemental for FY10 will depend on the pace at which additional troops are deployed to Afghanistan, as well as the specific composition of the forces and the mission they are given.

## **Notes**

1. Numbers of deployed troops are averaged from the quarterly military personnel statistics reported by the DoD (accessed at <http://siadapp.dmdc.osd.mil/personnel/MILITARY/miltop.htm>). The budget authority figures for each year by operation are from the Congressional Research Service. \* Figures for FY10 are estimated based on the administration's FY10 budget request and projections for the number of troops deployed. FY10 figures do not include increases associated with the proposed surge in Afghanistan.
2. The correlation coefficient (R) is a measure of the strength of correlation between variables, in this case the annual cost of operations and the number of deployed troops. A coefficient of +1 is a perfect correlation, 0 is no correlation, and -1 is a negative correlation. For Afghanistan  $R=+0.93$ , and for Iraq  $R=+0.86$ .
3. CRS Report, "The Cost of Iraq, Afghanistan, and Other Global War on Terror Operations Since 9/11", May 2009, pp. 27-8.

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