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# TAX EFFICIENCY AND QUALITY/QUANTITY TRADE-OFFS IN DEFENSE PROCUREMENT*

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## Abstract

In the defense policy literature, it is widely believed that there is a pronounced bias towards the procurement of a less than optimal number of excessively sophisticated weapons. In this paper, we consider the possibility that this perceived bias is the result of the timing and informational structure of defense procurement decisions, and the interrelationship of this structure with overall fiscal policy. Specifically, this paper presents a model that suggests that tax smoothing considerations of the type first articulated in Barro (1979) could lead social welfare maximizing decision makers to choose a higher level of weapon quality than would be optimal if government revenue could be raised without resort to distortionary taxation.

*The authors would like to thank Alan Viard of the Dallas Federal Reserve Bank, participants in the 2005 Ne'eman Institute Seminar in the Economics of National Security at Tel Aviv University, and two anonymous referees for their comments and insights.

Keywords:

Defense procurement | Weapon quality | Tax smoothing

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# Notes

*The authors would like to thank Alan Viard of the Dallas Federal Reserve Bank, participants in the 2005 Ne'eman Institute Seminar in the Economics of National Security at Tel Aviv University, and two anonymous referees for their comments and insights.

[1]A number of observers, including the authors of this paper, regard the AICVAl/AIMVAL results with great skepticism. All engagements were in daylight and good weather, negating the F-15s superior night/adverse weather capabilities. Ground radars guided the aircraft to each other, negating the value of the F-15s superior radar. Furthermore, all engagements were near USAF bases, eliminating the F-15s advantage in range. In short, the F-15 was unable to demonstrate its qualitative superiority because the structure of the trials forbade it from doing so.

[2]See Hildebrandt (1999) for an excellent discussion of military production functions and how they differ from utility functions.

[3]Relaxation of this assumption in no ways alters the model’s results.

[4]Strictly speaking, in the context of the present analysis E(c) is valid only for .

[5]Not only are statistics on defense spending notoriously unreliable, but the budget categories identified as being for research, procurement, training, and manpower do

not always correspond to the usage applied in the paper. For example, the salary of a research project's 'program manager' may be counted as a manpower cost, although in reality this expense represents an investment in weapon quality. Meanwhile, research expenditures could include investments in R&D infrastructure or could even be masking the funding of intelligence agencies and special operations units.

[6]It may be argued that our results do not hold for LDCs since few of these countries design or manufacture their own weapons. This is not the case. Many LDCs actually do produce much of their own weaponry, including Brazil, China, Egypt, India, Iran, Israel, Russia, South Africa, South Korea, and Turkey.

[7]Following publication of Bohn (1990), a vibrant literature has developed regarding the use of government debt management as a tool in facilitating tax smoothing.


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