

PROFESSIONAL  READING LIST

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## AFFORDABILITY AND COST

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## ***The \$5 Billion Misunderstanding: The Collapse of the Navy's A-12 Stealth Bomber Program***

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**Author(s):**

James P. Stevenson

**Publisher:**

Naval Institute Press

**Copyright Date:**

2001

**ISBN:**

978-1557507778

**Hard/Softcover:**

Hardcover, 484 pages

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**Publisher Summary**

In April 1990 the U.S. Navy's A-12—a replacement aircraft for the outdated A-6 Intruder—had the support of the Secretary of Defense before Congress. Nine months later Secretary Cheney cancelled the A-12, making it the largest weapons program ever terminated by the Pentagon and the first cancelled for default with the Pentagon making demands that the contractors return the money already paid them. Years later, questions remain unanswered and lessons are still to be learned.

With access to a wealth of government and contractor documents and more than a hundred players at all levels of involvement, James Stevenson takes readers into the once-forbidden world of classified “special access” programs to examine the demise of the A-12, charging that the documents exposed fraudulent and even illegal activity. He faults the navy not just for mismanagement but for ignoring the statutes and regulations that require Congress to appropriate money before entering into contracts. Rather than a single big mistake, he finds the A-12's path from honor to derision to be littered with hundreds of mistakes and attempts to right wrongs or cover them up. In recounting the events that eventually led to the Stealth bomber's cancellation, Stevenson cites countless examples of the mismatch between perception and reality experienced by navy program managers, the defense

department, Congress, and the contractors. In the process of telling the story, he takes on the entire defense acquisition process and its responsibility for the program that cost American taxpayers billions yet produced not a single airplane for their defense.

## Review

In the first few pages of *The \$5 Billion Misunderstanding*, the reader is immediately immersed in the author's disbelief, anger, and disappointment with the actors and events leading to the cancellation of the A-12 Avenger II Carrier-Based Strike Aircraft Program in January 1991. The ramifications of that cancellation still send uncomfortable ripples of emotion throughout the U.S. defense acquisition community. The turbulence of the A-12 program found itself against the backdrop of the reorganization of the Department of Defense (DoD) under the Goldwater-Nichols Act of 1986; force posture reductions by Army General Colin Powell (then Chairman of the Joint Chiefs of Staff) toward the end of the Cold War; and during the first Gulf War in the early 1990s. Author James P. Stevenson provides a well-documented, well-researched, and a highly technical account of the beginnings of stealth aircraft technology; the costly technical challenges of the nearly \$5 billion A-12 program; and the intertwined actors involved in the fateful program including DoD officials; defense contractors from Northrop Grumman, McDonnell Douglas (now Boeing), and General Dynamics; and members of the U.S. Congress.

Stevenson's central thesis was his assessment of how senior-level officials within the Department of the Navy violated the Anti-Deficiency Act through their awarding of a contract to develop the A-12 aircraft without the legal authorizations, or appropriations from Congress. The author crafts a story of the doomed A-12 program like a mystery novel, where he uncovers an alarming lack of awareness among several senior-level officials at the Office of the Secretary of Defense (OSD) regarding the most troubling aspects of the A-12 program. Stevenson also describes how many lower echelon Navy and OSD policy and cost officials willingly provided misinformation, and, at times, false information to those senior officials, including then-Secretary of Defense Cheney.

*The \$5 Billion Dollar Misunderstanding* raises the ongoing debate around the appropriate use of contract types: firm-fixed price (FFP) development contracts and cost-reimbursement contracts. Under an FFP development contract, requirements are stable, prices are fixed, the technologies are mature, and contractors have the capability to absorb necessary costs. With a cost-reimbursement contract, requirements are less defined, costs and technical integration issues are undetermined, and the U.S. Government

collaborates with contractors on a cost-share ratio basis at a pre-established cost ceiling. The author notes that senior-level Navy leadership had a fundamental misunderstanding of the two contract types, believing they awarded a cost-reimbursement contract when they, in fact, awarded the winners of the A-12 contract to the McDonnell Douglas-General Dynamics team with an FFP development contract. This misunderstanding proved detrimental where the Navy neither defined its requirements nor addressed the immature stealth technologies, aircraft weight challenges, and composite materials designed for the A-12. Simultaneously, the contractor team could not absorb the massive cost overruns in its attempt to employ those untested technologies. As a result of the A-12 program, the passage of the 1988 National Defense Authorization Act (NDAA) by the Reagan Administration placed a prohibition on FFP development contracts for programs over \$10 million (which was later reversed by the 2007 NDAA).

*The \$5 Billion Dollar Misunderstanding* is an excellent tome for those wanting to learn the lessons of the cancelled A-12 program. However, the reader must be steeped in defense acquisition and federal contracting principles such as acquisition phases and milestones, Pre-Planned Product Improvement (now called Evolutionary Acquisition), or advanced payment contracting vehicles. In addition, the reader would have benefited from an enumerated list of all the actors and their roles in the A-12 program such as then-Secretary of the Navy Larry Garrett (who later resigned in the wake of the Tailhook scandal), or Les Aspin (then-Chair of the House Armed Services Committee during the Congressional A-12 investigation, who later became Secretary of Defense). Despite these shortcomings, *The \$5 Billion Dollar Misunderstanding* should be required reading for the defense acquisition workforce at all certification levels.

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## ***Megaprojects and Risk: An Anatomy of Ambition***

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**Author(s):**

Bent Flyvbjerg, Nils Bruzelius, and  
Werner Rothengatter

**Publisher:**

Cambridge University Press

**Copyright Date:**

2003

**ISBN:**

978-0521009461

**Hard/Softcover:**

Softcover, 215 pages

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**Publisher Summary**

*Megaprojects and Risk* provides the first detailed examination of the phenomenon of megaprojects. It is a fascinating account of how the promoters of multibillion-dollar megaprojects systematically and self-servingly misinform parliaments, the public and the media in order to get projects approved and built. It shows, in unusual depth, how the formula for approval is an unhealthy cocktail of underestimated costs, overestimated revenues, undervalued environmental impacts and overvalued economic development effects. This results in projects that are extremely risky, but where the risk is concealed from MPs, taxpayers and investors. The authors not only explore the problems but also suggest practical solutions drawing on theory and hard, scientific evidence from the several hundred projects in twenty nations that illustrate the book. Accessibly written, it will be essential reading in its field for students, scholars, planners, economists, auditors, politicians, journalists and interested citizens.

## Review

Megaprojects have some distinct characteristics: Unusually large by definition, they require significant amounts of capital expenditure (hundreds of millions of dollars) and human resources; they produce complex systems with high levels of technological innovation; and they have the potential to change their surrounding economic, social, and organizational environment.

Projects and programs are developed through assets and knowledge, and those assets and infrastructure enable the necessary operations and supply chains. Clearly, they are important for the organizations, individuals, economy, and society. However, it is also clear that the performance record of megaprojects is quite poor, with significant cost and schedule overruns.

The authors look at the performance record of megaprojects from around the globe through a risk “lens.” They provide an in-depth analysis of three transport megaprojects: the Channel Tunnel between the United Kingdom and France; the Great Belt bridge/tunnel in Denmark; and the Øresund Bridge between Denmark and Sweden. They focus on the front-end part of the projects, that is, the feasibility/appraisal stage. These detailed analyses are complemented with data from other major projects in both the public and private sectors, including the transport, information technology, oil and gas, and aerospace sectors.

Through their analyses, the authors critique the “conventional approach to megaproject development” (p. 86) and come up with a number of interesting findings. For example, “cost estimates used...in decision making...are systematically and significantly deceptive” (p. 20); “over optimistic estimates of project viability in the initial planning stage and inadequate analysis of risk and uncertainty” (p. 41); and “accountability is low for parties involved in project development and implementation” (p. 45).

The main reasons for poor performance identified by the authors include the poor consideration of risks; institutional issues (such as lack of stakeholder involvement or a lack of clearly defined roles); and a lack of accountability in the project decision-making process. The authors call, perhaps optimistically, for a mechanism that will enforce accountability and transparency. To this end, they provide an overview of a number of instruments that might help.

This book is of interest to the defense acquisition community, in part because it shows that overruns are not limited to defense projects alone, but also because it argues that the cause of cost growth is not due solely to “unrealistically optimistic estimates,” as M. Schwartz (2010, p. 16) cites in *The*

*Nunn-McCurdy Act: Background, Analysis, and Issues for Congress* (CRS Report No. 7-5700). Rather, other dynamics are at play here that contribute to project escalation: organizational, cultural, behavioral, and cognitive. Through understanding these dynamics, the problems surrounding project escalation can begin to be addressed more effectively.