Is War Necessary for Economic Growth?: Military Procurement and Technology Development

Vernon W. Ruttan
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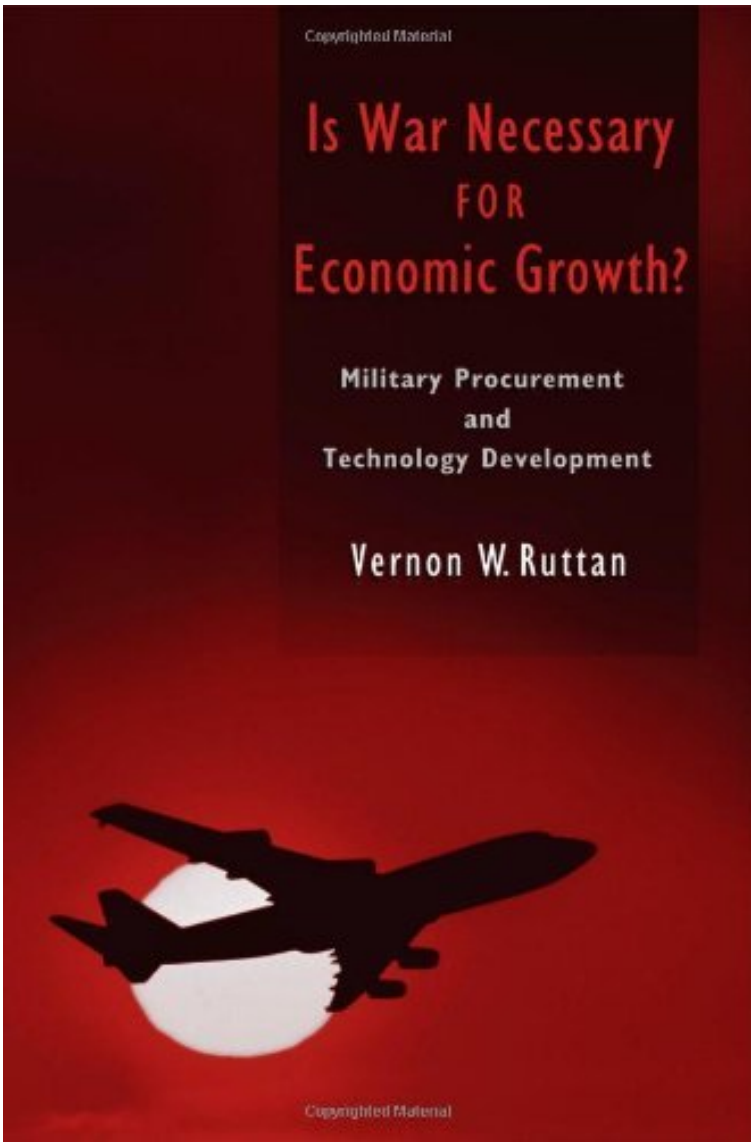

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Vernon W. Ruttan : Is War Necessary for Economic Growth?: Military Procurement and Technology Development before purchasing it in order to gage whether or not it would be worth my time, and all praised Is War Necessary for Economic Growth?: Military Procurement and Technology Development:

12 of 13 people found the following review helpful. mythology debunked: The military and technological innovationBy Arnulf GrueblerThis book is about military RD and procurement and technology development (forget

the first title chosen by the publisher's marketing department; rather use the author's subtitle that tells you exactly what to expect).It is an important, thorough, dispassionate, and easy to read book all in one.Vernon Ruttan, distinguished economist of technological change has struck again and addressed a topic that is as explored little by scholars as it is ideologically and politically laden. Proponents try to justify any military expenditures with the (uncertain) promise of civilian "spin-offs" (in addition to ex ante declared military requirements --remember "star wars"?), and critics always highlight failures (remember nuclear powered aircrafts?) as well as excessive costs of military technologies ignoring their early life cycle nature of almost one-of-a-kind technology and the indeed substantial (even if often unplanned or unintended) civilian application potentials.Vernon Ruttan reviews through seven careful case studies of socalled general purpose technologies the history and the economic implications of a number of military technologies that have yielded far reaching civilian applications with enormous economic and social significance: interchangeable parts in rifle manufacturing that give birth to the socalled American "system of manufacturing" (and invented in Army armories rather than in Eli Whitney's "lab"), military aircraft and propulsion systems (jet engines in particular), nuclear power (reactors), computers and semiconductors, the internet (in case you did not know, it all started with military RD money), and finally the space industries (satellites).What makes this book so eminently readable is its succinct and dispassionate review of all what we know about these technologies: their origins, the role of the military RD and procurement in its development as well as how they spread out to civilian applications and the economic significance of their applications. Few succeed as formidably as Vernon Ruttan in condensing voluminous literature into a clear and understandable summary within less than 200 pages (a formidable achievement in itself in our present times of 600 plus pages monographs). Throughout his analysis he remains objective, clear headed and with analytical rigor, at times even with candor. There is no better book than this one to dispel any one-sided claim about the importance/usefulness of military RD and procurement.My personal principal take-away from Ruttan's analysis (from his highly original counterfactual history for computers, semiconductors and the internet) is that despite the enormous importance and significance of the military in the development of all the technologies reviewed, we would have gotten them anyway even without the military - even if substantially later and perhaps less highly developed. The only exception seems to be nuclear power, which in all likelihood would not be around without the military (and which many would agree is a mixed blessing at best). But judge for yourself. The reading is easy and fun, and the analysis worth every of your minutes!Arnulf Gruebler, IIASA and Yale University1 of 1 people found the following review helpful. The Military-Industrial Complex: Responsible for more than you thinkBy BMIn a highly readable attempt to understand the relationship between the military and technological innovation, the late Vernon Ruttan demonstrates that defense spending has been instrumental in the development and diffusion of paradigm shifting technologies such as airplanes and the computer. The book is non-technical and light on theory, which is largely reserved for the first and final chapters.0 of 0 people found the following review helpful. Ethan Baumgartner's Review of Vern Ruttan's "Is War Necessary for Economic Growth?"By Arthur M. Diamond, Jr.[[VIDEOID:moORMKA24CFVE7]]Ethan Baumgartner's review was made as part of a critical review assignment for the Spring 2013 Economics of Technology seminar at the University of Nebraska at Omaha, taught by Art Diamond. (The course syllabus stated that part of the critical review assignment consisted of the making of a video recording of the review, and the posting of the review to .)

Military and defense-related procurement has been an important source of technology development across a broad spectrum of industries that account for an important share of United States industrial production. In this book, the author focuses on six general-purpose technologies: interchangeable parts and mass production; military and commercial aircraft; nuclear energy and electric power; computers and semiconductors; the INTERNET; and the space industries. In each of these industries, technology development would have occurred more slowly, and in some case much more slowly or not at all, in the absence of military and defense-related procurement.The book addresses three questions that have significant implications for the future growth of the United States economy. One is whether changes in the structure of the United States economy and of the defense-industrial base preclude military and defense-related procurement from playing the role in the development of advanced technology in the future, comparable to the role it has played in the past. A second question is whether public support for commercially oriented research and development will become an important source of new general-purpose technologies. A third and more disturbing question is whether a major war, or the threat of major war, will be necessary to mobilize the scientific, technical, and financial resources necessary to induce the development of new general-purpose technologies.When the history of United States technology development in the next half century is written, it will focus on incremental rather than revolutionary changes in both military and commercial technology. It will also be written within the context of slower productivity growth than of the relatively high rates that prevailed in the United States in the 1950s and 1960s or during the information technology bubble that began in the early 1990s. These will impose severe constraints on the capacity of the United States to sustain a global-class military posture and a position of leadership in the global economy.

"We owe Ruttan a debt of gratitude for demonstrating yet again the importance of public sector support in the development of many major technologies."--Journal of Economic LiteratureAbout the AuthorVernon W. Ruttan is Regents Professor Emeritus in the Department of Applied Economics and Adjunct Professor in the Hubert H. Humphrey Institute of Public Affairs, University of Minnesota. His research has been on technology development and economic growth. He is the author (with Yujiro Hayami) of Agricultural Development: An International Perspective (1985); United States Development Assistance Policy (1996); and Technology, Growth and Development; An Induced Innovation Perspective (OUP, 2001).