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**IS WAR NECESSARY FOR ECONOMIC GROWTH?  
MILITARY PROCUREMENT AND TECHNOLOGY  
DEVELOPMENT**

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## **PREFACE**

In this book I examine the impact of military and space related procurement on the commercial development of six general purpose technologies. In an earlier book, *Technology, Growth and Development: An Induced Innovation Perspective* (Oxford, 1991), I discussed several examples but did not give particular attention to the role of military and space procurement.

A major generalization that emerged in my earlier work was that the public sector had played an important role in the research and technology development for almost every industry in which the United States was, in the late 20<sup>th</sup> century, globally competitive.

During the winter 2002/03 academic year, commitment to present several seminars led to a reexamination of what I had written in *Technology, Growth and Development*. It became clear to me that defense and defense related institutions had played a major role in the research and technology development of many of

the general purpose technologies that I had discussed in the earlier book.

The military procurement issue was sitting there in plain sight but I had been unable or unwilling to recognize it! It was with considerable reluctance that I decided to write this book. I shared the view advanced by Professor John U. Neff in his classic book, *War and Human Progress* (Harvard 1950) that the impact of war on military technology was to due to the intensification of military procurement during wartime that drew on the accumulation of earlier advances in scientific and technical knowledge.

The purpose of this book is to demonstrate that military and defense related procurement has been a major source of technology development across a broad spectrum of industries that account for an important share of United States industrial production. Some colleagues and reviewers have urged me to give more attention to the analytical and policy issues typically included in research in the field of defense research and development. Others have urged me to develop a more comprehensive economic history of military and

defense related technology. My interest is both broader and narrower than these suggestions.

My focus on the impact of defense procurement on commercial technology development captures a much more inclusive range of research and technology development than defense research and development. My focus on the impact of defense and defense related procurement on commercial technology development is narrower than, for example, a comprehensive economic history of the development of the military and commercial aircraft or the computer industries.

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