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PAUL POAST

The Economics of War

Paul Poast





THE ECONOMICS OF WAR

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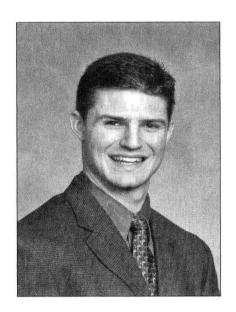
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About the Author



Paul Poast teaches economics and international studies at The Ohio State University. He began his research into the economic aspects of war in response to heightened student interest after the September 11, 2001, terrorist attacks on New York and Washington D.C. Paul holds degrees from Miami University (Oxford, Ohio) and the London School of Economics. He has published journal articles in both political science and economics journals. Paul and his wife Julie currently reside in Dublin, Ohio.

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War fascinates scholars, intrigues the general public, changes lives and shapes history. Yet, as important as it may be to study Lee's tactics at Fredericksburg, or Eisenhower's plans for the D-Day invasion, it can be forgotten that war is also an economic enterprise. "War is a matter not so much of arms as of expenditure, through which arms can be made of service," remarked the ancient Greek war historian Thucydides. "Money," according to the first-century Roman historian Tacitus, "is the sinew of war." More directly, Louis XIV of France believed that "the last guinea will always win." The crux of their statements is simple; throughout history, wars have been fought for money, and money has enabled wars to be fought.

This book offers an introduction to war economics. Though a single topic covered in one of this book's chapters could, by itself, fill an entire book or course, offering such detail is not the intention of this text. Instead, this text has two objectives. First, to enable all those interested in economics, political science, and related social sciences and humanities (both scholars and members of the general public) to understand how economics relates to warfare and national defense. Second, this text seeks to provide instructors of economics a tool by which they can offer exciting real-life applications of core economics concepts.

TEACHING POINTS

Geared to a wide audience of scholars and students, this book can serve as a stand-alone text or as an outstanding supplement to a variety of economics and political science courses, particularly principles and intermediate economics and international political economy. To bolster the text's pedagogic value, several educational features are provided. First, rather than simply summarizing the main points of a chapter, the final section of the chapter is called the "Key Points" section. This "Key Points" section specifies which major topics in the chapter are of a microeconomic focus, and which are of a macroeconomic focus. Next, the "Key Points" section offers a listing of the key terms found in the chapter. Finally, the section ends with a grouping of material-based and critical-thinking questions. The questions can serve as the basis for exam, homework, or bonus questions.

To assist instructors and students in matching key economic principles with the lessons of this book, please refer to Table I. It presents a listing of core macro and microeconomic concepts, the sections of the book in which those are addressed, and the defense issue used to instruct the concept.

Each chapter contains "Historical Perspective" boxes. Though the book is full of historical examples, these boxes use history to offer unique information that can be applied in or outside the context of the chapter's text. These perspectives are especially helpful for instructors of economic or military history.

Thucydides, The History of the Peloponnesian War, Book 1, Ch. 83.

² Plender, John. "The Sinews of War." Financial Times, March 20, 2003.

Table I
Core Economic Concepts and Corresponding Defense Concepts

Coro Magragonomio Concent	Book Section	Defense Concept	
Core Macroeconomic Concept Disposable Income	3.4	Defense Concept Economic Impact of Disarmament	
Inflation (causes, impact, quantity theory of			
money, equation of exchange)	1.3	Impact of War on Economy	
Production Function (National Security Function)	3.5	Economic impact of Arms Races	
Crowding Out	2.3 and 3.4	Economic Impact of Disarmament	
Phillips Curve	2.3	Financing of Vietnam War	
Bond Market	2.2	Financing of World War II	
Operation of the Federal Reserve	2.2, 2.3, and 7.6	Financing of World War II; Financing of Vietnan War; response to September 11, 2001 terrorist attacks	
Unemployment	1.3	Impact of War on Economy	
Gross Domestic Product	1.3	Impact of War on Economy	
Macroeconomic Identity [C+I+G+(X-M)]	1.2 and 3.4	Impact of War on Economy, Crowding Out by Government Expenditures	
Marginal Propensity to Consume	3.4	Economic Impact of Disarmament	
Marginal Propensity to Save	3.4	Economic Impact of Disarmament	
Core Microeconomic Concept	Book Section	Defense Concept	
Comparative Advantage	4.3 and 8.5	Conscription vs. All-Volunteer Force; Supplying Countries with Nuclear Technology	
Dead Weight Loss	5.3 and 5.4	Domestic Arms Market; Global Arms Market	
Economies of Scale	5.4	Global Arms Market	
Efficiency Wages	4.6	Private Military Contractors	
Gains From Trade	8.5	Bartering to Supply Countries with Nuclear Technology	
Game Theory	3.5, 7.4, and 8.6	Arms Races, Resorting to Terrorism; Failure of Treaties	
Impact of Quotas and Transfer Payments (subsidy) on Supply and Demand	5.4	Global Arms Market	
Indifference Curves	3.6 and 7.4	Economic impact of Arms Races; Suicide Bombing	
Labor Demand and Labor Supply Curves	4.3	Conscription vs. All-Volunteer Force	
Marginal Cost and Marginal Benefit Analysis	4.3 and 6.6	Military Labor Market; Peacekeeping	
Marginal Productivity of Labor	4.3	Conscription vs. All-Volunteer Force	
Monopoly and Monopsony	5.2 and 5.3	Domestic Arms Market	
Opportunity Cost	3.3, 4.3, 6.3 and 8.5	Economic Impact of Disarmament, Conscription vs. All-Volunteer Force; Poverty and Civil War; Supplying Countries with Nuclear Technology	
Principal-Agent Model	5.3	Domestic Arms Market	
Production Possibilities Frontier	3.3 and 3.6	Economic Impact of Disarmament; Economic impact of Arms Races	
Public Goods (free-riding, common resources)	4.6, 6.6, and 8.6	Private Military Contractors; Peacekeeping; Treaties	
Supply and Demand Curves	5.3 and 8.5	Domestic Arms Market; Determinates of Nuclear Black Market Price	

For ease of understanding, this text makes extensive use of graphs, figures, and tables. Graphical economic analysis is particularly important to students, because it is through graphs that many undergraduates become familiar with economics.

The book's bibliography contains a section dedicated to those sources that can be accessed, for free, via the web, along with web addresses.

TEXT ORGANIZATION

This book is divided into three units. Unit I explores the economics of war economies. Unit I seeks to lead students through a determination of whether or not war benefits the economy; and, if not, why not. Chapter 1 presents the economic theory underpinning the Iron Law of War—the idea that fighting wars can provide a boost to an economy (if the war is not fought on that country's soil). This theory will lead to the creation of a four-point scheme for evaluating the economic impact of war. Chapter 2 applies this scheme to a variety of major American wars from the 20th century and today. The evidence that these case studies present indicates that the Iron Law of War, though valid in the past, does not hold today. These case studies also bring out the two reasons why wars no longer induce the same strong, positive economic response of early 20th century wars: the existence of a permanent military industry and the nature of modern warfare.

Unit II explores the fact that because the United States is continually maintaining a military establishment, the onset of a war no longer induces massive mobilization and drastic increases in government expenditures. Prior to World War I, the U.S. government only incurred military expenditures at times of war. Today, military spending is the single largest discretionary (i.e., adjustable) expenditure of the U.S. government and many governments maintain high levels of military expenditures during times of war and peace. As such, modern war does not offer a large and sustained boost in government expenditures and mobilization of resources.

Chapter 3 details the level of military expenditures in the United States and around the world, the economic implications of military spending, and the reasons why countries will maintain such high levels of military expenditure. Chapters 4 and 5 look in-depth at what exactly is purchased with these expenditures, in both personnel and equipment. Chapter 4 surveys the economics of recruiting and training military personnel, while Chapter 5 looks into weapon systems procurement.

Unit III focuses on another reason why wars now lack the ability to boost an economy's performance—the unique and limited nature of modern warfare. At the close of the Cold War, political scientist John Mueller wrote, "From a rational perspective then, war among developed states seems to have become unthinkable—rejected because it's unwise [given the presence of nuclear weapons], a thoroughly bad and repulsive idea." Though Mueller's thesis focuses primarily on the existence of nuclear weapons, he and others recognize that increasing economic interdependence through trade and financial flows have also contributed to war's irrationality: "Why would we [the U.S.] go to war with China? We would have to close all the Wal-Marts." However, nuclear weapons and economic interdependence did not bring about the cessation of war.

As instances of international war have declined, many developing countries have more frequently succumbed to civil war. In turn, if these countries' central governments can no longer provide public goods and services, enforce the rule of law, and/or hold

³ Mueller (1989), p. 219.

⁴ Lawrence Korb, in an interview in Hallet, Joe and Tory, Jack. "Are World Wars Obsolete?" *Columbus Dispatch*, June 6, 2004, p. A1.

ultimate sovereignty, these countries can prove fertile grounds for housing terrorist organizations that have a global reach. The industrialized world has responded in two ways, by stabilizing failed states through peacekeeping operations, and by neutralizing terrorist organizations through cutting off their funding. Even still, a greater potential threat remains—the proliferation of weapons of mass destruction. Though the probability of a chemical, biological, and nuclear attack is smaller than a terrorist strike, the great destructive power of these methods makes imperative that developed countries seek to prevent such weapons from falling into the hands of terrorists, or states with a low threshold for deploying such weapons.

Chapter 6 considers the economic causes and consequences of civil conflict in the less developed world and the use of peacekeeping operations as a response to such conflicts. Chapter 7 uses economics to analyze terrorism's existence, impact, and prevention. Chapter 8 concludes the unit by outlining the economic costs and motivations faced by countries that wish to develop and proliferate weapons of mass destruction, particularly nuclear weapons.

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■ UNIT ONE ■

The Economic Impact of War

Chapter 1:

The War Economy in Theory

1.1 INTRODUCTION

Shortly before the war in Iraq began in 2003, an unemployed man who was frustrated over his inability to secure a job told me, "What this economy needs is a good war!" Why would he say such a thing? Wouldn't war disrupt the peaceful process of wealth creation? Well, that depends; World War II, for example, is widely regarded as having helped pull the United States economy out of the Great Depression.

This brief chapter presents theoretical reasons for how war can help or hurt an economy. Section 1 explores the Iron Law of War—the idea that war produces economic booms. Section 2 presents a four-point scheme that can determine to what extent a war impacts an economy and, if so, whether that impact will be positive or negative. This scheme will create a framework for analyzing in Chapter 2 various major U.S. wars.

1.2 THE IRON LAW OF WAR

The man who spoke to me was reflecting on a common belief that I will call the **Iron Law** of War. This law, conceived primarily from the experience of the United States during two world wars, asserts that war is good for the economy. The law's logic is simple: in order to fight a war, a government must raise an army and produce weapons. Both tasks put people to work, either directly in the armed forces or in a factory, producing armaments. Yet, is this piece of conventional wisdom true? Answering that question requires an exploration of the two ways that war influences the economy: first, that war scares people (**psychological effect**) and, second, that war is expensive (**real effect**). Both of these effects can be best captured by the standard macroeconomic relationship Y = C + I + G + (X - M), where Y = national income, C = consumption, I = business investment in new equipment and factories, G = government spending, and (X - M) is net exports (which, for the sake of simplification, is assumed to be relatively small).

1.2.1 War Scares People

The psychological effect of fear results in a decline in economic confidence (both of households and corporations). Consumer sentiment surveys since the 1970s have measured this effect. Unfortunately, such surveys are not available for earlier times. As an alternative, we can turn to stock market valuations. Because the valuation of company stock is based in large part on expectations about the future, the performance of the stock market can be a useful, though imperfect, indicator of economic expectations. Table 1.1 shows the performance of the Dow Jones Industrial Average immediately following major U.S. national security crises. Because the onset of a crisis creates uncertainty about the future, the stock market typically declines. This fear reduces the willingness of people to spend, thereby lowering consumption, *C.* and business investment, *I.* If all other variables (*G. X.*, and *M*)

Table 1.1
U.S. Stock Market Performance at the Onset of Major National Security Events
(Dow Jones Industrial Average)

			% Change for		
Event	DATE	DAY	Day**	6 Months Later	1 Year Later
Invasion of Iraqi Freedom	3/19/03	Wednesday	0.26%	17.90%	25.60%
Invasion of Afghanistan	10/7/01	Sunday	-0.57%	12.63%	-18.61%
Terrorist Attack	9/11/01	Tuesday	-7.12%	10.47%	-10.66%
Oklahoma Bombing	4/19/95	Wednesday	0.68%	14.92%	32.46%
WTC Bombing	2/26/93	Friday	0.17%	8.41%	14.07%
Somali Crisis	12/4/92	Friday	0.57%	7.80%	12.63%
Operation Desert Storm	1/16/91	Wednesday	4.57%	18.73%	30.14%
Kuwait Invasion*	8/2/90	Thursday	-6.31%	-5.81%	3.69%
Panama & Noriega	12/15/89	Friday	-1.53%	7.17%	-5.32%
Hostage in Grenada	10/25/83	Tuesday	-0.69%	-7.1%	-3.31%
Reagan Shot	3/30/81	Monday	-0.26%	-14.56%	-17.12%
Iran Crisis	11/4/79	Sunday	-0.77%	-0.32%	14.44%
Tonkin Gulf Attack	8/4/64	Tuesday	-0.9%	7.58%	5.18%
Kennedy Assassination	11/22/63	Friday	-2.89%	12.04%	21.58%
Cuban Missile Crisis	10/22/62	Monday	-1.85%	25.05%	31.41%
Sputnik Launched	10/4/57	Friday	-2.01%	-4.59%	15.60%
Korean War	6/25/50	Sunday	-4.65%	2.36%	9.34%
Pearl Harbor	12/7/41	Sunday	-3.5%	-9.48%	-1.37%
Lusitania Sinks	5/7/15	Friday	-4.54%	36.01%	32.75%
U.S.S. Maine Explodes	02/15/1898	Tuesday	-2.14%	14.91%	24.90%

Source: Dow Jones Indexes at www.djindexes.com/jsp/events.jsp. Six-month and one-year values for Operation Iraqi Freedom calculated based on data from EconStats Stock Market data available at www.econstats.com/eqty/eq__d2.htm and Economagic Stock Prices data at www.economagic.com/sp.htm.

are held constant, a crisis will force Y to decline. In short, crises initially scare people and this fear, in turn, forces the economy to slow down.

However, the initial dampening effect of fear on consumer spending soon dissipates. Table 1.1 shows that, with a few exceptions, the performance of the stock market typically improves over the six months and over the first year following the crisis. This dramatic result is either because the course of the conflict soon heads in a favorable direction or the public returns to a normal daily routine in spite of the ongoing conflict.

1.2.2 War is Expensive

The psychological effect of fear is typically overwhelmed by the real effect of wartime conversion. The real effect entails a large and sustained increase in government military expenditures, plus the mobilization of physical and labor resources. If such expenditures represent an increase in defense spending (and/or an increase in resource mobilization), then in the short term, the war-related boost in government spending, G, will increase national income, Y^3 The exact process by which this real effect takes hold will be discussed next.

^{*}The 6.31% drop is over three trading days: 1.2% on the day of the invasion, followed by a decline of 1.92% on Friday and 3.32% on Monday,

^{**}If the event occurred after the U.S. market closed (or on a non-trading day), the percent change for day reflects the next trading day's activity.