

Principles of Conflict Economics

Charles H. Anderton
and John R. Carter



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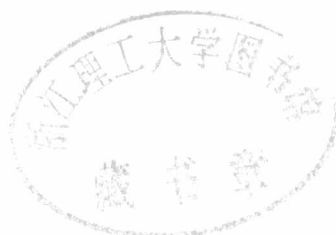
A Primer for Social Scientists

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Preface

Now the earth was corrupt in God's sight and was full of violence.

Genesis 6:11

Throughout recorded history, violent conflict has been a conspicuous aspect of the human experience. In recent decades, terrorism, civil strife, nation-state warfare, and the proliferation of weapons of mass destruction have dominated the headlines. It might at first appear that economics has little to say about such realms of conflict. After all, most economics textbooks restrict their attention to the behavior of consumers, producers, and governments operating peacefully in secure environments. Fortunately, however, the rapidly developing field of conflict economics can contribute greatly to an understanding of conflict in two important ways. First, conflict economics rigorously applies the concepts, principles, and methods of economics to the study of diverse conflict activities. Second, conflict economics treats appropriation as a fundamental economic activity, revealing how conflict both shapes and is shaped by the traditional economic activities of production and trade.

This book provides the reader with an accessible overview of the basic principles and major themes of conflict economics. Following an introduction to the field in Chapter 1, Chapters 2 through 4 survey many of the economic concepts and methods applied in subsequent chapters. These chapters will be useful to readers who either have no formal training in economics or would like to review economic principles with a focus on conflict. Chapters 5 through 11 explore major topics in conflict economics, including the bargaining theory of war; conflict between states; civil war and genocide; terrorism; the geography and technology of conflict; arms rivalry, proliferation, and arms control; and alliance behavior. These chapters provide a balanced mix of theoretical and empirical content. Chapter 12 is more

theoretical and treats appropriation as a fundamental economic activity, joining production and trade as a means of wealth acquisition. Bibliographic notes are provided at the ends of chapters to help readers who want to pursue topics in greater depth. Two appendixes are also available – a primer on statistical analysis and a bargaining model of conflict.

Given our training and background, we concentrate on economic aspects of conflict. Although we recognize and incorporate contributions from various disciplines, especially political science, we defer to specialists in other fields to convey those contributions more thoroughly. Our emphasis on economic aspects of conflict can be valuable to both economists and non-economists. For economists, the book shows numerous ways in which economic methods can be applied to conflict issues. Moreover, the book's treatment of conflict as a fundamental category of economic activity will help economists reduce the gap that now exists between textbook models of peaceful production and exchange and real economies subject to potential or actual violence. The book should also appeal to those with backgrounds in fields other than economics. Non-economists are naturally drawn to incorporate economic variables in their studies of conflict, and our book offers coverage of such variables from the perspective of the economist. Also, many models and methods central to conflict economics (e.g., rational choice theory, game theory, and econometrics) are of growing importance in disciplines other than economics.

Much of the academic work in conflict economics is theoretical and abstract, but we take steps to increase the accessibility of the text. In addition to the overview of economic fundamentals in Chapters 2 through 4, the book contains extensive coverage of conflict data, intuitive narratives, relatively simple algebra and graphs, and summaries of empirical evidence on conflict phenomena. Furthermore, the book is organized so that the more accessible chapters occur early and the more difficult chapters later. The book should be useful to scholars, policy makers, and practitioners from a variety of disciplines and backgrounds, including economics, political science, international relations, peace studies, military sciences, and public policy. It should likewise be suitable in undergraduate or beginning-level graduate courses on the economics of conflict and in courses on war and peace at universities and military service schools.

The social science literature on conflict is massive. Hence, we are selective in the topics covered, theories emphasized, empirical articles reviewed, and bibliographic notes provided. The particular empirical articles that we choose to review are selected because they are relatively recent and highlight the importance of economic variables in conflict analysis. Thus, we do not necessarily choose seminal empirical studies for review, nor do our

summaries of results necessarily reflect ongoing empirical controversies within topic areas. Finally, although the book covers issues pertinent to many contemporary conflicts such as those in Iraq, Afghanistan, and Sudan-Darfur, we do not attempt to focus the book on current events and policy debates. Instead, our goal is to emphasize principles of conflict economics that will be as useful in exploring conflicts yet to emerge as they are in studying historical and contemporary events.

Over the years, many scholars have shaped our thinking about conflict economics and encouraged our attempts to contribute to the field. We regret that we can mention only a few, but they include Jurgen Brauer, Keith Hartley, Jack Hirshleifer, Michael Intriligator, Walter Isard, and Todd Sandler. We also wish to acknowledge our former students, especially those in Experimental Microeconomics and Economics of Peace, Conflict, and Defense, both upper-level courses taught in the Department of Economics at the College of the Holy Cross. Their questions and comments have contributed greatly to our understanding of pedagogy in general and conflict economics in particular.

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Introduction: Definition and Scope of Conflict Economics

For many people, in many places, violent or potentially violent conflict is part of the human experience. Headline stories of civil strife, insurgency, nation-state warfare, terrorism, and the proliferation of weapons of mass destruction document the prevalence of conflict as a basic fact of life. Less dramatic indications of conflict include deadbolt locks, gated residential communities, electronic security systems, and handgun sales, to name a few. At first blush, it might appear that economics has little if anything to say about life's harder side. Economics textbooks typically restrict their attention to the peaceful behavior of consumers, producers, and governments in the marketplace. Thus, it might seem that potential and actual violence over resources, goods, and political power lie outside the domain of economics. But this is a misperception, as is demonstrated by the rapidly developing field of conflict economics.

1.1. What Is Conflict Economics?

Conflict economics has two defining characteristics. First, it maintains that the concepts, principles, and methods of economics can be fruitfully applied to the study of conflict activities. Thus, diverse phenomena like war, arms races, alliances, and terrorism are analyzed and understood as outcomes of purposeful choices responsive to changes in underlying incentives. As just one example, economics explains how consumers shift purchases from one good (say orange juice) toward another (say grape juice) when the price of one rises relative to that of the other. Similar economic forces are at work in many conflict settings: when one type of weapon is constrained by arms control, another type is substituted; when political targets are hardened, terrorists turn to less costly civilian targets;

and when entrepreneurs of local violence lose access to land mines, they employ young males armed with assault rifles.

But conflict economics is more than the application of economics to conflict. It also involves a gradual reconstruction of the core of economic theory to take account of conflict. Conflict of the sort considered in this book ultimately involves intended or realized appropriation, where the term “appropriation” refers to a taking that rests on force or the threat of force. As its second defining characteristic, conflict economics treats appropriation as a fundamental economic activity, joining production and exchange as a means of acquiring wealth. Traditional economic models assume that economic behavior is peaceful. Yet in real economies, conflicts over goods and resources abound. Conflict economics seeks to close this gap between theory and reality. Thus, a range of appropriative activities has been modeled, including resource conflicts, piracy, and extortion. These models reveal how conflict both shapes and is shaped by the traditional economic activities of production and exchange.

For the purposes of this book, we define conflict economics as (1) the study of violent or potentially violent conflict using the concepts, principles, and methods of economics and (2) the development of economic models of appropriation and its interaction with production and exchange activities. By including the qualifier that conflict on some level be violent, the definition intentionally excludes the analysis of ordinary market competition and, more tentatively, activities like litigation and rent seeking. Clearly included by the definition is the study of what might be called macro conflict, comprising interstate conflict (e.g., war between states), intrastate conflict (e.g., civil war, domestic terrorism), and extra-state conflict between states and external non-state actors (e.g., international terrorism, colonial wars). Also included is the study of micro conflict, meaning conflict activities among private persons and organizations (e.g., theft, extortion, human trafficking). In the next section, we begin to document empirically the enormity of conflict in the human experience.

1.2. A Look at Conflict Large and Small

Macro Conflict

Interstate, intrastate, and extra-state conflicts are the primary subject matter in conflict economics. Based on data from the *Correlates of War*