

An Introduction to Political Economy: Economic Models of Politics

The first book in the series: An Introduction to Political Economy.

This book covers the use of economic and formal mathematical
modelling in studying political phenomena

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Preface

This book is the first book in an introduction to the field of Political Economy - the use of economic tools, such as econometrics and game theory, applied to the study of political topics.

This first book in the series focuses on how we can use economic and formal mathematical models to explore political phenomena. The book starts out with an introduction to the field of Political Economy, as well as some necessary probability theory. Then, I introduce the concept of economic modelling, also called formal mathematical modelling, game theory, or formal theory. Finally, I apply the models we have covered to selected topics in Political Economy research.

This book is meant to be a relatively approachable introduction to the field. However, as Political Economy depends on many economic tools, an rough understanding of Algebra, Single Variable Calculus, and simple Linear Algebra is required. You do not need to be a math wizard, or even good at solving mathematical problems - you simply need an understanding of the intuition behind some key techniques. This book comes with a companion manual - Essential Mathematics for Political Economy. It is recommended that anyone interested in Political Economy glance at the topics covered in the manual, to ensure that they have the mathematical background necessary to succeed.

I created this book as a way to revise for my exams, as well as provide a handy booklet where I could reference all the things I learned throughout my undergraduate and postgraduate degrees. I hope that this guide to Political Economy can be useful to not just me, but others also interested in the field.

Part I

Fundamentals and Background

Chapter 1

Introduction to Political Economy

Political Economy is a term that has many different uses. Historically, the term Political Economy was used to describe the field we know today as Economics. This was particularly the case prior to the mathematical turn that the field of Economics took starting in the 20th century. Famous writers such as Adam Smith, Karl Marx, and John Locke, often identified themselves as Political Economists.

Today, Political Economy still has many different meanings. There are currently three major approaches to Political Economy - who all agree that Political Economy is somewhere between Political Science and Economics - but disagree on the approaches to studying this intersection of disciplines. First, there is the more “economics” side of Political Economy, focusing on how government and power inequalities affect economics and the distribution of resources. Second, there is the field of International Political Economy, which studies how economics interacts with International Relations. Finally, there is the field that applies economic models and methods to the study of Political and Economic phenomena.

This book mainly focuses on the third approach of Political Economy. For this book, Political Economy is a field that uses tools from economics, primarily game theory and econometrics, and applies these tools to study how political institutions, actors, and choices affect political and economic outcomes.

However, what exactly does that mean? How do we use these methods?

In the Social Sciences, there are two parts to any research - the hypothesis/theory, and the empirical data that either supports or refutes the theory. Economic tools perfectly fit into this framework. Political Economists will often use game theory and formal mathematical models to make predictions about potential outcomes of political situations. Then, Political Economists will gather real-world data, and test their hypothesis with statistical/econometric methods.

This first book is just one of three in this series: An Introduction to Political Economy. The first book focuses on the economic modelling and creating hypotheses part of Political Economy Research. The next two books in the series focus on the other side of Political Economy Research - testing our hypotheses with empirical data using econometric methods.

This first book begins by exploring the fundamentals of Game Theory and Formal Mathematical Modelling. These include the properties of games, solution concepts, as well as different types of common games. After the introduction to economic modelling, we will apply what we have learned to model current issues in Political Economy research.

Let us begin!