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0521352029 - Debt Games: Strategic Interaction in International Debt Rescheduling

Vinod K. Aggarwal

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International debt rescheduling has been marked by complex bargaining both historically and in the contemporary epoch. In this process, there has been significant variation in the amount of economic adjustment undertaken by debtors, the concessions made by private lenders, and the type of intervention by creditor governments and international organizations. Professor Vinod K. Aggarwal develops an original formal model that explains these phenomena and predicts debt rescheduling outcomes over the last 170 years in Mexico, Peru, Argentina, and Brazil.

The theoretical core of *Debt Games* develops a pathbreaking “situational theory of bargaining,” consisting of two components. The first element, a situational theory of payoffs, focuses on each actor’s individual situation, defined by its political and economic characteristics. The effects of these individual situations in constraining actors’ basic goals are examined to construct “debt games,” which are then solved to predict debt rescheduling outcomes. The second element, a situational theory of change, shows how actors attempt to improve their negotiating position to secure more favorable future outcomes. Professor Aggarwal rigorously tests this model in 61 cases, which include all instances of Mexican and Peruvian debt rescheduling from the 1820s to the present, and Argentina and Brazil in the 1980s and 1990s. The rich empirical material draws on archival research, interviews, and an exhaustive analysis of secondary sources.

This novel combination of formal modeling, game theory, and historical analysis yields a valuable study that points to future directions for research in international political economy, the modeling of international bargaining, and the systematic use of case materials for theory testing.

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Debt games

**Strategic interaction in international debt
rescheduling**

VINOD K. AGGARWAL

University of California, Berkeley



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To Sonia

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Preface

This book examines international bargaining over debt rescheduling among debtors, lenders, governments, and international organizations. It examines the cases of Mexico and Peru over the last 170 years, and focuses on Argentina and Brazil in the 1980s and 1990s. Although my primary objective has been to understand this important empirical problem, my research has also been driven by what I find to be several theoretical lacunae in the literature on international politics and economics.

Recent studies by political scientists and economists who emphasize single variable explanations of international political and economic phenomena provide a valuable corrective to the excessive eclecticism of historical studies. By focusing on the theoretical mileage that a particular factor gives us, these scholars have allowed us to move away from primarily descriptive studies to more analytical accounts of international political and economic events. But the pendulum now seems to have swung too far in the direction of uncausal explanations. As a result, we have seen fewer integrative approaches that carefully build on the fertile insights of these analysts. In my earlier work on international regimes, *Liberal Protectionism*, I made an effort to construct a synthetic account of the evolution of such arrangements. In this new book on debt rescheduling, although my focus is not on international regimes, I have pursued my earlier interest in integrated explanations by developing a more formal and rigorous explanation to explain international bargaining outcomes. By systematically showing how we might incorporate both political and economic variables that point to the role of both international and domestic factors in developing my model, I have made an effort to build on the insights of scholars who have focused on specific variables in their studies.

The recent emphasis on game theoretic approaches to international political and economic relations has yielded a host of important insights on strategic action among different types of actors. This work has advanced our understanding of how decisionmakers respond to differing constraints and incentives in an interdependent context when their choices are influenced by what they think their counterparts are likely to do. At the same time, I am concerned by the excessive focus on method and technique at the expense of empirical relevance and applicability. In attempting to show how game equilibria might be found through various mathematical techniques, some have lost sight of the more fundamental issue of how such bargaining games may be constructed in the first place. While finding solutions to bargaining problems is no doubt a crucial task, our primary mission as scholars of international political economy must be to carefully specify the problem to which we subject our analytical techniques. In this

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book, I make an effort to derive actors' preferences over outcomes by drawing on basic economic and political variables. This approach allows me to specify the debt games in which actors find themselves and then to analyze these games for equilibria to predict actors' likely policy choices.

In this context, much recent work on optimal strategies in iterated Prisoner's Dilemma games has given us considerable insight into prospects for cooperation in international politics. These studies have also shed light on the role of institutions in facilitating mutually beneficial outcomes. Yet a key question with respect to ongoing strategic interaction has been overlooked by many analysts. Often, rather than restricting themselves to strategic choices within a context of repeated games, actors have attempted to alter the bargaining games in which they find themselves. An important focus of this book is to examine the changes they try to implement to improve their bargaining position as well as the types of resources that decisionmakers utilize in this effort.

Finally, while we have gained much from "illustrative" case studies that draw upon theoretical insights, the systematic testing of hypotheses has often been slighted. While all scholars need not be involved with all facets of the collective research enterprise, I feel that it is incumbent upon those who develop formal models to devote intellectual resources to the central enterprise of connecting our theoretical insights with the real world. By examining debt rescheduling in 61 cases across both time and countries in this book, I hope to provide a more substantial test of my modeling effort.

My own efforts to address some of these concerns represent only one step in the direction in which we must collectively go. While I am less concerned with advancing the specific formulation of my model, I do hope that the general thrust of this book will contribute to setting a course to better understand the complex international political economy of which we are a part.

Portions of the empirical material in this book and some of the theoretical ideas have appeared earlier. A version of the theoretical argument on deriving game payoffs presented in Chapter 3 and its application to a few cases from Mexico's debt rescheduling history appeared as "Interpreting Mexico's Historical Debt Crises," in Barry Eichengreen and Peter Lindert, eds., *The International Debt Crisis in Historical Perspective* (Cambridge, Mass.: MIT Press, 1989). Much of the co-authored chapter with Maxwell Cameron on contemporary Peruvian debt rescheduling has appeared as "Modelling Peruvian Debt Rescheduling in the 1980s" in *Studies in Comparative Development*, Summer 1994.

In writing this book, I have incurred many debts. In contrast to the regrets that many countries have had after borrowing from the banks, I am pleased to acknowledge the considerable aid I have received from a large number of individuals and institutions. My only hope is that my creditors will be generous in providing me with a sufficiently long repayment schedule to service my obligations.

My greatest debt is to the many scholars and students at Berkeley, as well as the institutional support that this university has provided me over the years in

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completing the bulk of this work. Several colleagues in the Department of Political Science contributed to this project in many different ways. David Collier has pushed me to clarify my ideas and writing and has provided moral support. His vast store of knowledge of Latin America has also helped to enrich my empirical work. Ernst Haas inspired me to combine theoretical analysis with rigorous empirical research. Gregory Luebbert, whose untimely death took from me a close friend and brilliant colleague, challenged me to be bold and innovative. I am also grateful to Kenneth Waltz, Harold Wilensky, Martin Landau, Ruth Collier, George Breslauer, and Steve Weber for many valuable discussions. Colleagues in other departments also helped guide my thinking. In particular, I am indebted to John Harsanyi for illuminating the intricacies of game theory and thankful to Barry Eichengreen and Albert Fishlow for sharing their knowledge of international debt problems with me.

I am grateful to many current and former Berkeley graduate students for their research help and comments on the manuscript. I have co-authored the chapter in this book on Peruvian debt rescheduling in the 1980s and 1990s with Maxwell Cameron. His insights and intricate knowledge of Peru have greatly strengthened the empirical analysis in that chapter. And I benefited greatly from the help that Cédric Dupont, although not formally a Berkeley student, provided me when he spent a year at the university. Cédric, who worked with me first as a research assistant at the Graduate Institute of International Studies in Geneva, and now as my professional colleague, helped me to clarify my thinking on game theory, and willingly read numerous drafts of my theoretical chapters. Gregory Linden's expertise in the technical aspects of game theory proved to be of great help in tying my work to mainstream treatments of debt rescheduling.

I greatly appreciate the editing assistance I received from Jenny Lind. Faith Raider willingly and skillfully has edited the entire manuscript. Her talent in eliminating jargon is much appreciated. I also received a great deal of help from many other graduate students at Berkeley. These include Leslie Armijo, Eileen Doherty, James Fearon, Amy Gurowitz, Ronald Gutfleish, Wade Huntley, David Kang, Timothy Kessler, James Mahon, Carol Medlin, Deborah Norden, Elizabeth Norville, Amy Rauenhorst, Kenneth Shadlen, David Stuligross, Arun Swamy, Takahiro Yamada, and Yu-Shan Wu. I am pleased to recognize the contributions of two former undergraduates, Theodore Chan and David Platt, who helped in many facets of this work. Others who were involved with various phases of the project include Heidi Assigal, Shashikala Bhat, Roger Chan, Ben Chu, Colin Forth, Amy Gurowitz, Stacy Kravetz, In Lee, Muir MacPherson, Rose Razaghian, and Andrew Wong.

Finally, at Berkeley, the Institute of International Studies and Center for Latin American Studies generously provided me with travel grants to conduct research and helped to fund several of my graduate assistants. In addition, I greatly benefited from the rich resources at the main university library as well as the specialized Latin American collection of the Bancroft Library.

In the early stages of my research for this book, the Rockefeller Foundation

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granted me a generous fellowship that allowed me to conduct interviews with participants in the contemporary debt crisis. This support also enabled me to spend a productive year as a Visiting Fellow at the Brookings Institution. In conducting my research, I interviewed over 70 bankers and officials from debtor and creditor countries, and international organizations. Because they requested anonymity, I cannot mention them by name. I am grateful, however, to their willingness to graciously share their experiences and insights with me.

Several professional colleagues and friends commented on large parts of the manuscript. My greatest debt is to my friend and fellow scholar Pierre Allan, who helped me to hone my ideas on modeling international bargaining. In addition, he and I collaborated on part of the research in Chapter 4 on types of resources that actors might use to improve their bargaining position. We have also worked together on developing the more general approach to examining international bargaining outcomes that I discuss in my concluding chapter. For all his help, and particularly his friendship, I am deeply grateful. Mark Zacher and I spent many hours together as I attempted to work out an approach to understanding the problem of examining debt rescheduling. His generosity in offering advice despite his own busy schedule is much appreciated. Robert Keohane continues to help me with his keen insights and has provided me with much needed advice as my work has moved in new theoretical and empirical directions. My academic career has been greatly enriched by his sustained support.

While teaching at the Graduate Institute of International Studies in Geneva, I benefited from a grant that I received with Pierre Allan from the Swiss National Science Foundation that partially supported this work. In Geneva, I received valuable research assistance from Brook Boyer, Lars-Erik Cederman, Catherine Kuchta, and Stephanie McLeod.

I am pleased to recognize the many individuals in the broader community of scholars who have contributed to this enterprise. These include Christopher Achen, Jonathan Bender, Bruce Bueno de Mesquita, Stuart Chemtob, William Cline, Benjamin Cohen, Henry Ergas, Kenneth Flamm, Alexander George, Paolo Guerrieri, Peter Katzenstein, Stephen Krasner, David Laitin, Robert Lawrence, Jeffrey Leonard, Peter Lindert, Urs Luterbacher, David Mares, James Morrow, John Odell, Guillermo O'Donnell, Samuel Pickens, Robert Pringle, Duncan Snidal, Robert Solomon, John Steinbruner, Shibley Telhami, Daniel Verdier, and Kent Weaver.

A few changes in the final version of this book were completed while I was a Visiting Fellow at the East-West Center in Honolulu. For providing me with the opportunity to avail myself of a very hospitable working environment, I am grateful to Charles Morrison and Michel Oksenberg, the Director of the Program on International Politics and Economics and the former President of the Center, respectively. I also benefited from the research assistance of Kristine Davidson and Sylvia Donati.

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My family has been a source of enormous support. I had innumerable discussions with my brother, Sudhir Aggarwal, which helped me to clarify many of my ideas. My sister, Bina Murarka, has been an important source of encouragement. Both my mother, Saroj Aggarwal, and father have supported this complex enterprise from its inception. My father, Om Aggarwal, has been a continuous source of intellectual and moral support. Without his help, I would not have been able to complete this book. My wife, Nibha Aggarwal, has been understanding of the demands that this book has made on both of our lives. Although this project has been in progress since well before the birth of our five-year-old daughter Sonia, her growth has markedly outpaced that of the book. She has also been a stern taskmaster despite her young age. When I took breaks from my writing, she would say: "Daddy, go to work." I hope that she will someday find the hours I have taken from our time together to have been productively spent.