## MICHAELE. PORTER



# THE COMPETITIVE ADVANTAGE OF NATIONS

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Michael E. Porter

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### OMichael Porter, 1990

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First published 1990 by THE MACMILLAN PRESS L ΓD London and Basingstoke

Associated companies in Auckland, Delhi, Dublin, Gaborone, Hamburg, Harare, Hong Kong, Johannesburg, Kuala Lumpur, Lagos, Manzini, Melbourne, Mexico City, Nairobi, New York, Singapore, Tokyo

### **British Library Cataloguing in Publication Data**

Porter, Michael E

The competitive advantage of nations
1 Industries Competitiveness International aspects
1 Title
338 6'048

ISBN 0-333-51804-7

Printed in Hong Kong

### **Preface**

Why do some social groups, economic institutions, and nations advance and prosper? This subject has fascinated and consumed the attention of writers, companies, and governments for as long as there have been social, economic, and political units. In fields as diverse as anthropology, history, sociology, economics, and political science, there have been persistent efforts to understand the forces that explain the questions presented by the progress of some entities and the decline of others.

In recent years, much of the work on this subject has been concerned with nations, examined under the standard of what is commonly called "competitiveness." The striking internationalization of competition in the decades after World War II has been accompanied by major shifts in the economic fortunes of nations and their firms. Governments and firms have inevitably been drawn into a heated debate about what to do.

I have come to this question somewhat reluctantly, having spent most of my professional career to date concentrating not on nations but on companies. My central concern has been with the nature of competition in industries and the principles of competitive strategy. My early research, summarized in Competitive Strategy (1980), was on the structure of industries and the choice of position within them. The book Competitive Advantage (1985) presented a framework for understanding a company's sources of competitive advantage and how competitive advantage could be enhanced. In Competition in Global Industries (1986), I extended the framework to address the challenges of international competition. Though strategy for competing internationally has been an essential part of the equation, my principal units of analysis have been the industry and the firm. The nation, and its government, had a role in my framework, but a limited one.

This began to change when I was appointed by President Ronald Reagan

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to the President's Commission on Industrial Competitiveness, a group of business executives, labor leaders, academics, and former government officials charged with examining the competitiveness of the United States. The Commission, appointed amidst a highly politicized debate about the need for "industrial policy" in America, studied the question for over a year and issued a considered and balanced report.

What became clear to me during the term of the Commission was that there was no accepted definition of competitiveness. To firms, competitiveness meant the ability to compete in world markets with a global strategy. To many members of Congress, competitiveness meant that the nation had a positive balance of trade. To some economists, competitiveness meant a low unit cost of labor adjusted for exchange rates. Partly because of these differences, much energy has been expended in the United States debating whether there is a competitiveness problem at all. The Commission's report, instead of providing a consensus for action, had little effect. The debate about competitiveness raged on, and still does today.

Whichever the definition of competitiveness adopted, an even more serious problem has been that there is no generally accepted theory to explain it. Innumerable characteristics of nations and firms have been proposed as important, but there has been no way of isolating and integrating the most salient ones. In addition, many explanations are based on assumptions far removed from actual competition, raising questions about their relevance and generality. It was difficult to reconcile many of the explanations with my own experience in studying and working with international companies.

Nor has there been a shortage of recommendations for improving competitiveness through both company strategy and government policy. These recommendations have been as diverse and inconsistent as the implicit or explicit views of competitiveness on which they are based. Many of these recommendations seemed to me, again from the perspective of one with close familiarity with firms, to be counterproductive.

Having said all this, however, I developed a strong conviction that the national environment does play a central role in the competitive success of firms. With striking regularity, firms from one or two nations achieve disproportionate worldwide success in particular industries. Some national environments seem more stimulating to advancement and progress than others. I became convinced that understanding the role of the nation in international competition would be as valuable for firms as it would be for governments, because it would yield some fundamental insights into how competitive advantage was created and sustained.

In this book, I have set out to make my contribution to understanding the competitive advantage of nations, or the national attributes that foster competitive advantage in particular industries, and the implications both for firms and for governments. At the core of my theory are the principles Preface xiii

of competitive strategy in individual industries. This should come as no surprise to those familiar with my previous work. While we can identify national characteristics that apply to many industries, my experience has been that these are overshadowed in actual competition by particular and often industry-specific circumstances, choices, and outcomes.

While much can be learned through an aggregate, economy-wide approach to understanding the competitive success of a nation, I seek here a different starting point. My theory begins from individual industries and competitors and builds up to the economy as a whole. The particular industry—passenger cars, facsimile machines, accounting services, ball bearings—is where competitive advantage is either won or lost. The home nation influences the ability of its firms to succeed in particular industries. The outcome of thousands of struggles in individual industries determines the state of a nation's economy and its ability to progress. There are some intellectual pitfalls in moving from industries to the entire economy that we must be careful to avoid, but the approach offers, I believe, an enriched understanding of a nation's economic progress.

The theory presented in this book attempts to capture the full complexity and richness of actual competition, rather than abstract from it. I have sought here to integrate the many elements which influence how companies behave and economies progress. The result is a holistic approach whose level of complexity may be uncomfortable to some. I believe, however, that greater simplification would obscure some of the most important parts of the problem, such as the interplay among the individual influences and their evolution over time.

The theory draws on and spans several fields. At its core is the theory of competitive strategy, but there are also important insights to be gained from ongoing research in such fields as technological innovation, industrial economics, economic development, economic geography, international trade, political science, and industrial sociology, that are not usually combined.

Given the large number of disciplinary literatures that bear in some way on my subject, it was simply not possible to provide complete references. Nor can I attempt here a full intellectual history of my subject. I have, however, noted some of the most important antecedents to my approach in various fields, as well as some of the individual works I found most compelling.

In order to develop a comprehensive theory of the competitive advantage of nations and to demonstrate its relevance, I set out to study a wide range of nations and, within each of them, to investigate the details of competition in many industries. Research based on only one or two nations or a handful of industries runs the risk of mistaking what may be exceptional for general principles. I selected ten nations for my research with widely differing characteristics and institutions.

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One outcome of both the nature of my theory and the approach I have taken to present and verify it is a very long book. Its length is something I regret inflicting on the reader but found I could not avoid if I were to test my theory against sufficient evidence and develop its implications for business practitioners and policymakers. Part I of the book presents the theory itself, providing enough of an overview of the principles of competitive strategy to establish the needed background. In Part II, I apply the theory to explain the histories of four representative industries selected from the many we studied. I also apply the theory to the service sector, long an important sector but one where international competition has been little studied but is of growing importance. In Part III, I apply the theory to nations. For eight of the ten nations investigated, I provide a detailed profile of the internationally successful industries in the economy and how the pattern has been changing. I use my theory to explain both successes and failures as well as the evolution of the nation's economy in the postwar period. The collective experience of the nations allows me to extend the theory to explain how entire national economies advance. Part IV develops some of the implications of the theory for company strategy and government policy. The final chapter illustrates how the theory can be used to identify some of the issues that will govern the future development of each nation's economy.

Readers may, however, wish to take shorter paths through the book depending on their particular appetites. Most readers should cover the first four chapters, at a level of detail that will depend on their background and degree of comfort with theory. Part II will be of greatest interest to those seeking a demonstration of the theory in particular industries. Business executives should read most of Part II, and the general reader should at least dip into it. Understanding the process by which a national industry is formed and achieves international competitive success, in at least a few specific cases, is an important frame of reference for later chapters.

Part III offers the opportunity to select from among the nations I discuss according to the reader's particular interests. All readers, however, should look at the introduction to Chapter 7, which explains the methodology and the structure of each country description, as well the concluding section of Chapter 9, which compares the nations as a group. Readers can then select their home nations, nations where important competitors are located, or other nations of interest for study. After reading about some or all the nations, all readers should look at Chapter 10, which extends the argument to develop a theory of how entire national economies progress. The concepts in Chapter 10 will be particularly important in considering the agendas facing each nation, the subject of Chapter 13.

Part IV can also be traversed in a way that reflects the reader's frame of reference, though the implications of the theory for business executives

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will inform policy makers and vice versa. Business executives will want to read Chapter 11, which is about the implications of my theory for company strategy. Those readers concerned with or participating in public policy formulation should read Chapter 12. Chapter 13, which sets forth some of the issues facing each nation if its economy is to progress further, can be read selectively depending on the reader's interests. Since an important purpose of Chapter 13 is to illustrate how to apply the theory to identify constraints to national economic advancement, however, readers will benefit from not only the discussion of their own nation but also from understanding the problems facing other nations with differing circumstances. The book concludes with a brief Epilogue which contains some of my personal reflections on the study.

The text of the book contains the basic argument and my empirical findings presented in a form accessible to the serious reader. Scholars will find most of the references to literature, as well as the more technical commentary on the theory and its relationship to previous work, in footnotes. The methodology is described in Chapter 1, Chapter 7, and Appendix A.

My aim here is not a book about any single nation but one about a set of principles that apply more broadly. Though some readers may feel that an American bias may be found, I have tried to avoid this. I hope too that no reader will focus exclusively on what I have to say about particular nations, especially in Chapter 13. As I have tried to make clear, my knowledge of any one nation cannot approach that of an expert. Nor would I presume to claim a comprehensive understanding of all of the complex political and social trade-offs that guide individual policy choices. The purpose here is not to provide authoritative detailed recommendations for each nation or to discuss every relevant problem but to illustrate a useful way of thinking that can be applied to any particular nation. My hope is that readers, with their various backgrounds and perspectives, will be able to go further in drawing implications in their areas of interest.

This book is being completed during a period of exciting and unusually significant developments within individual nations and across groups of nations that bear importantly on the issues discussed here. Among the most notable are the measures designed to introduce greater European economic unification in 1992, a free trade agreement between Canada and the United States, a stream of new policy initiatives in Britain, proposed taxation changes in Japan and Germany, a controversial new American trade bill, and the social and political upheavals in Eastern Europe with their as yet unpredictable economic consequences.

My purpose here, however, is not to analyze current events but to create a theory that can be used to do so. Indeed, one of the findings from our historical research is that there has been more stability in the determinants of national competitive advantage than I originally supposed, even though xvi Preface

the extent of internationalization has grown. Many of the principles are independent of the concerns of the moment. I will make references to implications of my theory for important developments such as Europe 1992 where they arise, but will leave a full analysis of current developments to other forums.

Some will find the views presented here controversial. My purpose has not been to seek nor to shy away from controversy but to develop a robust theory backed by a broad array of evidence. Upon completion, I must note that my findings cut across positions conventionally associated with such labels as liberal and conservative, whose view of the problem tends to reflect particular philosophical positions. I find, consistent with the traditional liberal position, for example, that strict antitrust laws, tough health and safety regulations, and heavy investment in training human resources are beneficial. But my evidence seriously questions the wisdom of intervention to resurrect sick industries, regulation that limits competition, most efforts to restrict imports, and policies to tax long-term capital gains. While I suspect that few readers will be entirely happy with my findings, I am hopeful that many will be persuaded.

\* \* \*

This study could not have been completed without an extraordinary amount of assistance from a wide variety of individuals and institutions. It has truly been a global study, involving a breadth of industries and nations that sought to represent the richness of international competition. The working seminar of my project team held at Harvard in 1987 to discuss our preliminary findings provides some indication. There were twenty-four attendees representing nine nationalities. The Korean team and the Japanese team competed to see who could work later into the night. The Swedish and Danish teams traded insights about the similarities and differences of their neighboring countries. The German, Swiss, and Italian researchers traded data and discussed the differing positions of their nations in industries such as printing and packaging machinery. All the participants learned much about their nation by learning about others that had been studied using a common methodology.

Michael J. Enright served as the overall project coordinator. He helped structure and organize the entire project, and spent one year abroad shuttling among nations providing supervision and critique for the individual country efforts. He conducted a great deal of research personally and was a source of ideas, comments, and counsel throughout the research phase as well as during the preparation of the manuscript. He is a gifted researcher in his own right, and a study of this magnitude would simply not have been possible without him. He is completing his doctorate now at Harvard and

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promises to make important contributions to this subject through his own research.

A U.S.-based research team was involved not only in the U.S. portion of the study but played a broader and essential role in other phases of the project. I am grateful to Cheng Gaik Ong for her prominent role throughout the study and also to William McClements, Thomas Lockerby, Thomas Wesson, and Mari Sakakibara. Alice Hill also deserves my thanks for providing research assistance.

Local research teams based in many of the nations conducted much of the country-based research and contributed significantly to the findings and conclusions about their country. I am especially grateful to the team leaders for their energy and insight. The Japanese team was led by Professor Hirotaka Takeuchi of Hitotsubashi University. Team members were Hiroshi Kobayashi, Hiroshi Okamoto, Laura Rauchwarg, and Ryoko Toyama. The Swedish team was led by Professor Örjan Sölvell of the Institute of International Business of the Stockholm School of Economics. Ivo Zander was the principal Swedish researcher and also spent a period in residence at Harvard. Also contributing to the Swedish research were Thomas Gyllenmo, Maria Lundqvist, and Ingela Sölvell. The Korean team was led by Professor (and Dean) Dong-Sung Cho of Seoul National University. Researchers who contributed to the study were Chol Choi, In-Chul Chung, Dong-Jae Kim, Junsoo Kim, Sumi Kim, Dae-Won Ko, Seung Soo Lee, Ho-Seung Nam, Ki-Min Nam, Gyu Seok Oh and Joo-chol Om. The Danish team was led by Henrik Pade, in collaboration with Kim Møller and Klaus Møller Hanson (both associate professors at the Copenhagen School of Business). Other Danish researchers contributing to the study were Claus Bayer, Bent Dalum, Birgitte Gregersen, Patrick Howald, Henrik Jensen, Frederik Pitzner Jørgensen, Ulrik Jørgensen, Bodil Kühn, Morten Kvistgaard, Mogens Kühn Pedersen, Bent Petersen, Henrik Schaumberg-Müller, Jesper Strandskov, and Finn Thomassen. Much of the Swiss research was conducted by Edi Tschan, then performing doctoral studies at the University of St. Gallen, in collaboration with Michael Enright. Professor Silvio Borner of the University of Basel took over leadership of the Swiss effort, and additional Swiss research was performed by Rolf Weder.

The German research was most ably conducted by Claas van der Linde, who also contributed to the data analysis in the broader study. He is continuing to apply the theory to the West German economy in his Ph.D. dissertation at the University of St. Gallen. Dennis deCrombrugghe also contributed to the Swiss and German research. The Italian research was the responsibility of Paolo Tenti, who was a source of insight throughout the study. Michael Enright also participated heavily in both the German and Italian research. The British research was conducted largely by myself and Michael Enright and was assisted by Terry Phillips. In a number of nations, country-specific

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publications are in preparation which describe the research in greater detail.

I received the extremely generous assistance and support of the Harvard Business School in carrying out this study. The School offers a unique environment for carrying out large-scale, multidisciplinary research projects and for gaining access to institutions and companies throughout the world. Dean John McArthur, a friend and a source of counsel and support for many years, deserves my special thanks. I also received a great deal of help and financial backing from Jay Lorsch and his staff at the Division of Research. Funds provided by the Shell Companies Foundation constituted part of the budget for this study, for which I am grateful.

One or more cooperating institutions in each nation provided assistance in obtaining infrastructure, help in gaining access to companies and government officials, and in some cases financial support. I am extremely grateful for their contribution, though they bear no responsibility for my findings and conclusions:

Denmark	Copenhagen School of Economics	
	and Business Administration,	

Henrik Pade & Associates<sup>2</sup>

Germany Deutsche Bank Italy Ambrosetti Group

Japan Ministry of International Trade and

Industry, Hitotsubashi University,

Industrial Bank of Japan

Korea Seoul National University
Singapore Economic Development Board
Sweden Institute of International Business,

Stockholm School of Economics

Switzerland University of Basel, University of St.

Gallen, Union Bank of

Switzerland

United Kingdom The Economist

United States Harvard Business School

Particular individuals in these institutions and others to whom I bear a special debt are Hans-Peter Ferslev and Dr. Jürgen Bilstein (Deutsche Bank), Alfredo Ambrosetti and Giovanna Launo (Ambrosetti Group), Shinji Fukukawa, Wataru Aso, Hirobumi Kawano, and Shin Yasunobe (MITI), Yoh Kurasawa, A. Yatsunami, Naoya Takebe (Industrial Bank of Japan), Professors Ken-ichi Imai, Ikujiro Nonaka (Hitotsubashi University), Philip Yeo and Tan Chin Nam (Singapore Economic Development Board), Dean Staffan Burenstam Linder and Professor Gunnar Hedlund (Stockholm School of

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Economics), Dr. Werner Rein and Dr. Beat Schweizer (Union Bank of Switzerland), and David Gordon and Rupert Pennant-Rea (*The Economist*). I would also like to thank Databank and the Istituto per la Ricerca Sociale (Italy) for assistance in providing Italian data, and Nixdorf Corporation for help in securing company access in Germany.

A number of colleagues at Harvard and elsewhere gave generously of their time in reading and critiquing the entire manuscript or large portions of it. In addition to Michael Enright, I would like to thank Richard Caves, David Collis, Herman Daems, Pankaj Ghemawat, Thomas McCraw, Richard Tedlow, and David Yoffie, all at or visiting Harvard. In addition, I would like to thank Silvio Borner, Thomas Craig, Roger Martin, Richard Rawlinson, Peter Schwartz, Paul Schwarzbaum, James Stone, and Mark Thomas.

Others provided valuable suggestions on portions of the manuscript or to presentations about it. I would like to thank Roger Bohn, Alfred D. Chandler, Jr., Joseph Fuller, Mark Fuller, David Gordon, Heather Hazard, Steve Kelman, Donald Lessard, John Nathan, Fabrizio Onida, Cuno Pümpin, Rupert Pennant-Rea, Garth Saloner, and Malcolm Salter. Seminars at Northwestern, MIT, Stockholm School of Economics, University of Zurich, the Japanese Ministry of International Trade and Industry, the Forum for Structural Reform (Japan), the German Council of Economic Advisors, a special policy forum organized by the Danish sponsor, and Harvard yielded useful comments, as did presentations at meetings of the Strategic Management Society, the Planning Forum, and other business groups. The members and staff of the President's Commission on Industrial Competitiveness and the Council on Competitiveness provided a valuable education in economic policy issues.

Literally hundreds of other business executives, labor leaders, academics, consultants, industry experts, bankers, and policy makers gave freely of their time. They consented to interviews and provided valuable insights into their industries and countries. Some provided extensive comments on individual case studies or country write-ups. This project could not have been carried out without their help and cooperation. It is unfortunate that space precludes acknowledging each one individually. I am most appreciative of all of their help.

Administering this large multinational study and preparing such a bulky manuscript involved unusual challenges. I want especially to thank Lyn Pohl, my assistant, for shepherding this long project from start to finish. Her help in planning, scheduling, organizing meetings, preparing the manuscript, and editing has been invaluable. I would also like to thank Denise Zaccagnino, Kathleen Kenahan, and especially Linda Estes for their fine work in production, chart preparation, and editing.

I benefited greatly from a good deal of help in crafting the manuscript and improving its clarity. Erwin Glikes, President of The Free Press and

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my editor, was a source of friendship, inspiration, and countless suggestions and insights. I am also grateful to Robert Wallace and Barbara Ankeny for thoughtful reviews of the entire manuscript and to Ann Hirst for her careful copyediting.

Finally, I would like to thank my wife Deborah, to whom this book is dedicated. She has been involved in this all-consuming project since its inception. She accompanied me during an extended period of residence abroad, and provided ideas, encouragement, and moral support throughout this effort. I simply could not have done it without her.

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### 1

### The Need for a New Paradigm

Why do some nations succeed and others fail in international competition? This question is perhaps the most frequently asked economic question of our times. Competitiveness has become one of the central preoccupations of government and industry in every nation. The United States is an obvious example, with its growing public debate about the apparently greater economic success of other trading nations. But intense debate about competitiveness is also taking place today in such "success story" nations as Japan and Korea. Socialist countries such as the Soviet Union and others in Eastern Europe and Asia are also asking this question as they fundamentally reappraise their economic systems.

Yet although the question is frequently asked, it is the wrong question if the aim is to best expose the underpinnings of economic prosperity for either firms or nations. We must focus instead on another, much narrower one. This is: why does a nation become the home base for successful international competitors in an industry? Or, to put it somewhat differently, why are firms based in a particular nation able to create and sustain competitive advantage against the world's best competitors in a particular field? And why is one nation often the home for so many of an industry's world leaders?

How can we explain why Germany is the home base for so many of the world's leading makers of printing presses, luxury cars, and chemicals? Why is tiny Switzerland the home base for international leaders in pharmaceuticals, chocolate, and trading? Why are leaders in heavy trucks and mining equipment based in Sweden? Why has America produced the preeminent international competitors in personal computers, software, credit cards, and