CREATING MODERN CAPITALISM



How Entrepreneurs,
Companies, and Countries
Triumphed in Three
Industrial Revolutions

Edited by THOMAS K. McCRAW

UREATING MODERN CAPITALISM

HOW ENTREPRENEURS, COMPANIES, AND COUNTRIES TRIUMPHED IN THREE INDUSTRIAL REVOLUTIONS

EDITED BY
Thomas K. McCraw

HARVARD UNIVERSITY PRESS

Cambridge, Massachusetts, and London, England

Copyright © 1995, 1996, 1997 by the President and Fellows of Harvard College

All rights reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the copyright holder.

Printed in the United States of America

Third printing, 2000

Library of Congress Cataloging-in-Publication Data

Creating modern capitalism: how entrepreneurs, companies, and countries triumphed in three industrial revolutions / edited by Thomas K. McCraw.

p. cm.

Includes bibliographical references and index.

ISBN 0-674-17555-7 (cl : alk. paper).

ISBN 0-674-17556-5 (p: alk. paper)

1. Capitalism. 2. Industrial revolution. 3. Economic history.

I. McCraw, Thomas K.

HB501.C785 1997

338.09--dc21 97-15334

PREFACE

What is capitalism? How has it evolved over time? Why have some entrepreneurs, companies, and countries been able to make it work for them while others haven't?

This book gives a unique perspective on these questions. On one level, the answer to "What is capitalism?" is obvious, because capitalism's main benefits are so clear: a steady increase in incomes and a broadening of opportunity. The negative side is equally obvious: capitalism exalts material values over spiritual ones, and its market forces can have harsh consequences.

Beneath these manifest traits lie questions that are more subtle. Is capitalism the "natural" way to organize an economy? If it is, then why did it become ascendant so late in human history? Why did it develop in some cultures and countries but not others? Does capitalism require a certain mind-set—a preoccupation with the future rather than the past? Is there a national example of capitalism in its purest form, which might serve as a model for other countries? Is that example the United States? Japan? Germany? Britain? Some other country? Does capitalism go hand in hand with democratic government? Must it be preceded by democracy, or can authoritarian regimes better push developing countries down the capitalist path?

These questions are as challenging today as they were three centuries ago, when capitalism began to dominate a few national economies and then to spread gradually throughout the world. More recently, in the late twentieth century, the sudden collapse of socialism and communism has given new urgency to the questions. In the "emerging" national economies of Asia, Latin America, Africa, and Eastern Europe, policymakers and business leaders have begun to look more closely for models of successful capitalist development. For thoughtful people everywhere, understanding the anatomy of capitalism has become a crucial part of coming to terms with the modern world. No educated person can afford to neglect it, regardless of his or her attitude toward capitalism.

VI PREFACE

How should one pursue this understanding? The subject has many aspects: economic, cultural, political, aesthetic, and so on. Capitalism can be approached through academic disciplines that specialize in each of these areas. It can be usefully studied through biographies of great entrepreneurs, histories of successful companies, and analyses of important industries. It can be explored with theoretical models developed by economists, sociologists, political scientists, and others.

The most penetrating students of capitalism—Adam Smith, Karl Marx, Max Weber, R. H. Tawney, Joseph Schumpeter, John Maynard Keynes, Joan Robinson, R. H. Coase, Robert Heilbroner, Alfred D. Chandler Jr.—have all taken mixed approaches. All have written about several aspects of capitalism. Schumpeter once said that any worthwhile analysis of economic phenomena must contain elements of history, theory, and statistics.

This book, *Creating Modern Capitalism*, contains each of Schumpeter's three elements; but above all, it is a book of history. It has four sweeping chapters that examine the economic development of Britain, Germany, the United States, and Japan. Its other chapters are full of biographical sketches of remarkable people, such as Josiah Wedgwood, August Thyssen, Henry Ford, and Sakichi Toyoda. The book contains compelling histories of notable companies, among them Rolls-Royce, the Deutsche Bank, IBM, and Seven-Eleven Japan. All of these stories—whether of countries, companies, or people—have strong elements of drama. All are memorable. And all help us to understand the nature of economic success in the midst of constant change.

During the three years that the authors spent conceiving, researching, and writing this book, we came to certain conclusions about capitalism. We now think—in fact, we *know*—that there is no one best way to organize a capitalist system. Certainly there are a few essentials, such as private property and the rule of law. But as a general economic system, capitalism is flexible and adaptable in the extreme. It can operate effectively within diverse national contexts. Countries with profoundly different resource endowments, histories, religions, and cultures can accommodate a capitalist economy.

But constructive human agency cannot be taken for granted. Nor does economic progress come easily or automatically—to countries, companies, or people. It has to be pursued with energy and will. It requires

PREFACE

purposeful acts and strenuous toil. It has to be constantly promoted or it will not be sustained.

At the most basic level, capitalism is best understood as an expression of human creativity. It is propelled by the dreams, aspirations, and efforts of individuals. So the authors of this book have taken care to show exactly who did what. Most of the book is about the entrepreneurs, companies, and governments that made four national economies prosperous. Fundamentally, the book is about *ideas and systems that worked* in the creation of modern capitalism.

CONTENTS

1 Introduction / 1 Thomas K. McCraw

- 2 Josiah Wedgwood and the First Industrial Revolution / 17
 Nancy F. Koehn
- **3** British Capitalism and the Three Industrial Revolutions / 49

 Peter Botticelli
- 4 Rolls-Royce and the Rise of High-Technology Industry / 94

 Peter Botticelli
 - **5** German Capitalism / 133 *Ieffrey Fear*
 - **6** August Thyssen and German Steel / 183 *Jeffrey Fear*
 - 7 The Deutsche Bank / 227

 David A. Moss
 - 8 Henry Ford, Alfred Sloan, and the Three Phases of Marketing / 264 Thomas K. McCraw and Richard S. Tedlow
 - 9 American Capitalism / 301 Thomas K. McCraw
 - 10 IBM and the Two Thomas J. Watsons / 349

 Rowena Olegario

X CONTENTS

- 11 Toyoda Automatic Looms and Toyota Automobiles / 396

 Jeffrey R. Bernstein
 - 12 Japanese Capitalism / 439 Jeffrey R. Bernstein
 - 13 7-Eleven in America and Japan / 490 Jeffrey R. Bernstein
 - 14 Retrospect and Prospect / 529
 Thomas K. McCraw

Appendix:

Statistics / 545 Time Lines / 555 Basic Economic Definitions / 559

Notes / 561

About the Authors / 684
Acknowledgments / 686

Index / 693



INTRODUCTION

Thomas K. McCraw

For most of human history until about the seventeenth century, economic stagnation seemed to be the natural order of things all over the world.¹ People at every social level took it for granted and arranged their lives accordingly. They gave little thought to what later generations called "economic and social mobility." The idea of an "industrial revolution" or a "consumer economy" would have seemed incomprehensible to them. In Europe during the thousand years before 1700, per capita income grew at the minuscule rate of about 0.11 percent per year, or just over a tenth of a percent. There is no substantial reason to think that the rate was much more or less than that in most other parts of the world.²

In many countries, the coming of industrialization and the creation of modern capitalism ended this long economic stagnation and transformed the mind-set that went with it. As Karl Marx and Friedrich Engels wrote in 1848, a scant hundred years of capitalism had already "created more massive and more colossal productive forces than have all preceding generations together." And even as they wrote, the forces of capitalism were just beginning to gather steam. At the old annual growth rate of 0.11 percent, per capita income had doubled about every 630 years. But between 1820 and 1990, a period of only 170 years, it multiplied by a factor of about 10 in Great Britain, 15 in Germany, 18 in the United States, and 25 in Japan. The capitalist era, especially the period since 1820, has been unique in human history, a time of spectacular economic growth.³

This book explores some aspects of how that growth occurred, and particularly what entrepreneurs and business firms had to do with it.

The book's structure is a little unusual, with four chapters focusing on countries and eight others on companies. The chapters entitled "British

Capitalism," "German Capitalism," and so on, survey the evolution of each nation's business system. Here our vantage point is long-range, as from an orbiting satellite taking continuous time-lapse photographs. These country chapters provide an overview of the innovation and constant change that are the defining characteristics of capitalist systems.

The economist Joseph Schumpeter (1883–1950), one of the most astute of all analysts of capitalism, called it a process of "creative destruction"—an incessant sweeping out of old products, old processes, and old organizational forms by new ones. Schumpeter wrote that "The atmosphere of industrial revolutions—of 'progress'—is the only one in which capitalism can survive." He went on to say that "stabilized capitalism is a contradiction in terms." The contents of this book support his conclusions.⁴

The tumultuous process of creative destruction was carried out mostly by entrepreneurs operating through business firms. So, between the country chapters, we drop from the satellite view to helicopter height and examine the histories of at least two companies in each country: Wedgwood and Rolls-Royce in Great Britain; Thyssen Steel and Deutsche Bank in Germany; Ford, General Motors, and IBM in the United States; Toyota Motor and Seven-Eleven in Japan.

Each of these companies has been a champion performer in its particular industry. In choosing the firms to include in this book, we looked not only for top performers but also for examples that capture some of the essence of each country's economy. No company is necessarily "typical" of its national business system, because the systems themselves are too varied. But these firms are not atypical. It's hard to imagine the story of Rolls-Royce occurring anywhere other than Britain, or that of Ford anywhere but the United States.

A third component of the book is its comparative reference tools. These include a statistical appendix that also contains some time lines setting forth the chronology of each country's and company's development. Both the statistics and the time lines are indispensable to understanding the four countries' experience with capitalism, and they're worth your close attention.

Why do we focus on Britain, Germany, the United States, and Japan? Because all four countries have achieved outstanding economic growth, and are champions in their own right. Equally important, each has also exemplified a distinctive variety of capitalism. Britain, having started to

industrialize in the late eighteenth century, represents the earliest instance of modern capitalist development.⁵ Germany and the United States came next, exploding to world prominence late in the nineteenth century. Japan, which began to industrialize just before the twentieth century, became a significant force in certain industries by the 1930s. Then, in the generation after 1950, it achieved sensational growth.

All four of these countries are "capitalist," but their versions of capitalism are not identical. Nor do the four together exhaust the list of possible models. The historical record shows that there are many paths to capitalist success.

"Capital" and "Capitalism"

The term "capital" first appeared in its modern sense in about 1630. The Oxford English Dictionary gives a succinct definition: "accumulated wealth reproductively employed." Throughout history, human beings had quickly consumed almost all of what they produced. Sometimes they accumulated a little wealth, but they customarily spent it on displays that weren't very useful in improving common people's living standards. The pyramids of Egypt represented an enormous amount of accumulated wealth, but it was devoted to the afterlife of pharaohs. It produced a good deal of employment, but not with the continuing developmental effect that would have come if the same money had been spent on roads and canals. The pyramids are only one example of the practice of traditional societies all over the world.

Often the use of accumulated wealth did have the worthy result of producing spiritual inspiration through priceless art and architecture: the pyramids, the Forbidden City of China, the Parthenon of Greece, the cathedrals of medieval Europe. But accumulated wealth put to these uses wasn't "reproductively employed." So it didn't represent "capital" in the modern sense. Ironically, it did so later, when these monumental structures started attracting hordes of tourists.

"Capitalism" is a newer term than "capital," and it's harder to define. The word didn't come into existence until the 1850s, when it appeared as an antonym of "socialism." What exactly does "capitalism" mean?

At a minimum, a capitalist system is organized around a market economy that emphasizes private property, entrepreneurial opportunity, technological innovation, the sanctity of contracts, payment of wages in

money, and the ready availability of credit. Under capitalism, property must be "alienable," that is, freely bought and sold. The "value" of a good or service means whatever price someone will pay for it. Previously, there had been widespread quasi-religious notions of a "just price" above which one charged at the peril of one's soul. And buying anything on credit, even for purposes of investment, was often regarded as questionable. The transition from the old mind-set to the new was a long, gradual process that even today is not complete. We ourselves feel vestiges of the old virtues in our guilt (often appropriate) about the unrestrained use of consumer credit.

Capitalism relies heavily on investment credit as a means of financing innovation. In this respect the term "capitalism" goes beyond the dictionary definition of "capital," which is an economic concept and a factor of production common to all economies. Capitalism characteristically employs not only accumulated wealth but also financial resources that don't yet exist in tangible form. It employs "money of the mind," as credit has aptly been called. Banks, the primary sources of credit, lend out money far beyond their cash reserves, on the expectation that borrowers will employ the money, pay interest on it, and repay the principal in the *future*. In so doing, banks create money out of nothing but faith and informed expectation, subject of course to reserve requirements imposed by banking authorities. Entrepreneurs and companies borrow this money. To get still more of the capital they need, they may also issue stocks and bonds, often backed by nothing except the anticipation of a future return on the companies' products.

"Capitalists," then, are people who make bets on the future. The essence of capitalism is a psychological orientation toward the pursuit of future wealth and property. It's all about aspiration and striving, measured by gains and losses in wealth and income. It rests on a belief that economic growth, even substantial growth, is possible and desirable—for an individual, a family, a business firm, an industry, even an entire country.

Today most of us take this belief for granted. It is an unstated assumption behind much of what we do. But for many centuries, such a belief did not enter the minds of most people. Economic growth did not necessarily seem desirable, let alone possible. Nor was it commonly seen as related to individual effort. There was little expectation of change in

any circumstance of life, economic or otherwise. Most people looked on the changes that did occur as the consequences of some outside force. They explained catastrophes such as the Black Death, which wiped out about ε third of Europe's population during the fourteenth century, as God's punishment.⁷

Many ethical systems contained stern warnings about how the pursuit of riches imperiled the soul. "Many evil men are rich, and good men poor," the Athenian statesman Solon observed in the sixth century B.C. "It is easier for a camel to go through the eye of a needle, than for a rich man to enter into the Kingdom of God," cautioned the Gospel of Matthew. In some religions, including Christianity and Islam, lending money at interest was forbidden as sinful. In Japan as late as the mid-nineteenth century, merchants had the most money but the lowest status. They ranked not only below the samurai (warrior class), but also below craftsmen and the mass of agricultural peasantry. They stood at the bottom of Japanese society because their lives centered around buying low and selling high.

For much of human history, and in most societies across the world, the prevailing mind-set was antimaterialistic and antigrowth. Even people with strong acquisitive tendencies, ranging from the conqueror Genghis Khan to the Medici bankers of Florence, bent their efforts toward gaining a larger share of what was thought to be a pie of fixed size. Their gain was regarded as another's loss, by definition. Life was viewed as a seesaw. If someone went up, someone else had to go down. That's one reason why acquisitive people were often relegated to low social status, unless their success came from military conquest or was truly spectacular. Even in eighteenth-century England, a relatively modern capitalist society, most people thought it unseemly that merchants should try to become "gentlemen." Gentlemen devoted themselves to their lands and surrounding communities, or to the church, the army or navy, or the civil service. They didn't pursue money as an end in itself.

Partly because of this kind of mind-set, there was minimal economic growth in most of the world for several thousand years. Although life was "solitary, poor, nasty, brutish, and short," as the English philosopher Thomas Hobbes put it, life was not necessarily filled with hard labor. Most people tended to work in "lumps"—assiduously at planting and harvest periods, lackadaisically during the winter. Their sense of time

came not from clocks but from the sun and the seasons.8 Circumstances didn't encourage or even permit them to work in a way we would regard as efficient. As a result, individual incomes didn't rise.

Social mobility was extremely low. Few people were "free" in the sense that we now use that term. In 1772, the English economic writer Arthur Young estimated that the world contained about 775 million people, only 33.5 million of whom were "free." The rest—96 percent of the total—were serfs, slaves, or vassals of some kind. They owed their loyalty and part of their labor to those above them in the social order, and ultimately to authoritarian kings, chieftains, or warlords.

Most agricultural lands in Europe were "entailed." They were parts of unitary feudal estates. They couldn't be sold or subdivided for ownership by individual farmers. Occupational and geographical mobility remained low. One usually did what one's parents had done. One lived where they had lived. A large proportion of the earth's people never in their lifetimes traveled more than thirty miles from their birthplaces. Incentives for change were very small. Institutional structures weren't geared toward economic growth. And so not much growth occurred.

One essential condition of a dynamic economy, and of capitalism itself, is a relatively free labor market. Individuals must have some control over the disposition of their work. They must have a choice about whom they wish to "sell" it to. They should also be able to keep most of their wages for themselves and their families. Yet for thousands of years, almost no free labor markets existed. Few jobs paid cash wages, and a portion of the returns of everyone's work went to the landlord, the chieftain, the king, the warlord.

Capitalism, by contrast, opened up labor markets and fostered cash wages systems. More broadly, capitalism promoted a dynamic, flexible, and future-oriented way of thinking. It injected a pattern of ceaseless and merciless competition into nearly every aspect of life. Politics, the military, even religion became more competitive, following the lead of the economic system and occasionally moving in advance of it. Martin Luther and John Calvin openly challenged the Church of Rome, which had dominated Europe's religious life for centuries. Their doctrines competed not only against Catholicism and Judaism, but against each other. And all of this religious competition tended to widen the opportunities for market forces to operate, and thereby to strengthen the spirit of capitalism even more.¹⁰

Capitalism as an economic system did not necessarily go hand in hand with democracy. It did not, by itself, "free" anyone from anything, except from some of the old social and familial bonds of mutual obligation. Capitalism did promote the dissolution of feudal restrictions, and helped to promote freer labor markets. But in so doing, it tended to facilitate a new form of exploitation, which its opponents came to call "wage slavery." A number of writers, following Karl Marx's original definition of capitalism, have emphasized that a capitalist system is not merely a market economy, but that it also implies a political system ruled by, or in the interests of, capitalists.¹¹

There's a good deal of truth in this definition. In precapitalist systems, political power was determined mostly by noneconomic yardsticks. Military strength, inherited lands, and intricate systems of reciprocal obligations were the organizing principles of society. But once the market began to replace these older customs, political power began to gravitate toward those with new fortunes, and a series of wrenching social adjustments followed in train. That process is still going on, and the adaptations continue down to the present day.

Historically, some of these adaptations have been profound, and have gone in the wrong direction. Each of the four countries analyzed in this book has an embarrassing historical underside of which it is ashamed, or ought to be: Britain of its cruel treatment of subjugated peoples in parts of its empire; Japan of atrocities against East and South Asian peoples before and during World War II; the United States of whites' enslavement of African-Americans; Germany of the Holocaust, which in its organized mass murder was among the ghastliest episodes in all of human experience. But this book is a business history. It can't adequately cover those topics except to note that they proceeded right alongside capitalist development in each country. Capitalism didn't produce these tragedies in a direct sense. But it facilitated some of them, and it certainly didn't prevent them.

Over the very long term, one of the central problems of capitalist societies has been the vexing question of how to distribute equitably the bountiful fruits of economic growth. Where, exactly, does justice lie? Should early industrialists have been allowed to squeeze extravagant profits from the sweat of their workforce, which included large numbers of children? Should workers have had to labor endless hours in the squalor of "dark Satanic mills," as the poet William Blake called them? In the

nineteenth century, should the Rothschilds of Europe and the Rockefellers of America have been allowed to become so colossally wealthy? In our own lifetimes, could it possibly have been proper for the American investment banker Michael Milken to have "earned" \$550 million in the single year 1987?

These are old kinds of questions, in part because the roots of capitalism go back a long way, to about the eleventh century. At that time, a few merchant families in southern Europe started to become wealthy enough to challenge the feudal nobility. But it was not until the sixteenth and seventeenth centuries that a more widespread capitalist class emerged. And not until the eighteenth did most of the other conditions of modern capitalism (credit systems, cash wages, incessant innovation) begin to flower. When Adam Smith published The Wealth of Nations in 1776, he showed how materialism and the pursuit of individual gain could be the central motivating principles of a new kind of society. In such a society, the economic pie need not be of fixed size. It could constantly grow. Commercial exchange could benefit the buyer, the seller, and the community as a whole. The more production and exchange, the better.

Best of all, such a trend was already under way. By the time his book appeared, Adam Smith's "invisible hand"—that powerful symbol of a market process in which millions of individual producers and consumers continually make economic decisions in their own self-interest, and thereby benefit society as a whole—was already guiding the economies of Britain and a few other parts of Europe. Of course, this was still capitalism in its infancy. Smith could hardly have predicted all of the potent forces it eventually would unleash. Nor could he have imagined that capitalism would take hold in so many different places and in so many different forms. Surely he would have been astonished at the phenomenal growth it produced in some nations' economies in the 200 years after his death in 1790.

Capitalism and Economic Performance

In the world's community of nations, each of the four countries covered in this book has been a star performer. Three brief tables will put their achievements in perspective.

In Table 1.1 we see the gulf between the economic performances of

Table 1.1 Gross Domestic Product per Capita on the Basis of Purchasing Power Parity: A Sample of 12 Countries (U.S. = 100; absolute amount in current dollars = \$25,880)

High-Income Economies		Middle-Income Economies		Lower-Income Economies	
U.S.	100.0	South Korea	39.9	China	9.7
Japan	81.7	Thailand	26.9	India	4.9
Germany	75.3	Poland	21.2	Nigeria	4.6
U.K.	69.4	Brazil	20.9	Rwanda	1.3

Note: Purchasing Power Parity is a measure that converts incomes into dollars not on the basis of current exchange rates but according to their ability to purchase a standardized bundle of goods. On the basis of current exchange rates, the United States ranks as the fifth-richest country, behind Switzerland, Japan, Denmark, and Norway.

Source: World Development Report 1996 (New York: Oxford University Press for The World Bank, 1996), pp. 188–189, 223–225. The year reported is 1994.

the richest and poorest countries as of the mid-1990s, with the United States at the top, Rwanda at the bottom, and a huge variation in between. Of the 133 countries in the world with populations of over a million each, only 25 are "high-income" nations. All 25 are capitalist economies. No country with a communist economy has ever made it into the top tier, and only by a severe definitional stretch would there be any socialist economies in the high-income group. A capitalist economy is not a sufficient condition for sustained national affluence, and plenty of capitalist countries have never made it into the top tier. But it does seem to be a necessary condition.

The poorest group of countries includes the vast majority of the human population—the great masses of people in China, India, Indonesia, Pakistan, Bangladesh, most of Africa, and much of Latin America. Of a world population of about 5.6 billion, about 4.8 billion live outside the high-income countries. This is 85 percent of the world's people. About 1.6 billion live in "middle-income" countries, and well over 3 billion, or about 60 percent of the world's total, live in poor countries. So the rich countries comprise only 15 percent of the earth's population. Most of the other 85 percent are now trying to harness the forces of capitalism for their own economic development.

Table 1.2 shows the growth performance over 170 years of the four countries covered in this book. The big story here is in the far right-hand column, the 1989 number as a multiple of the 1820 number. As men-