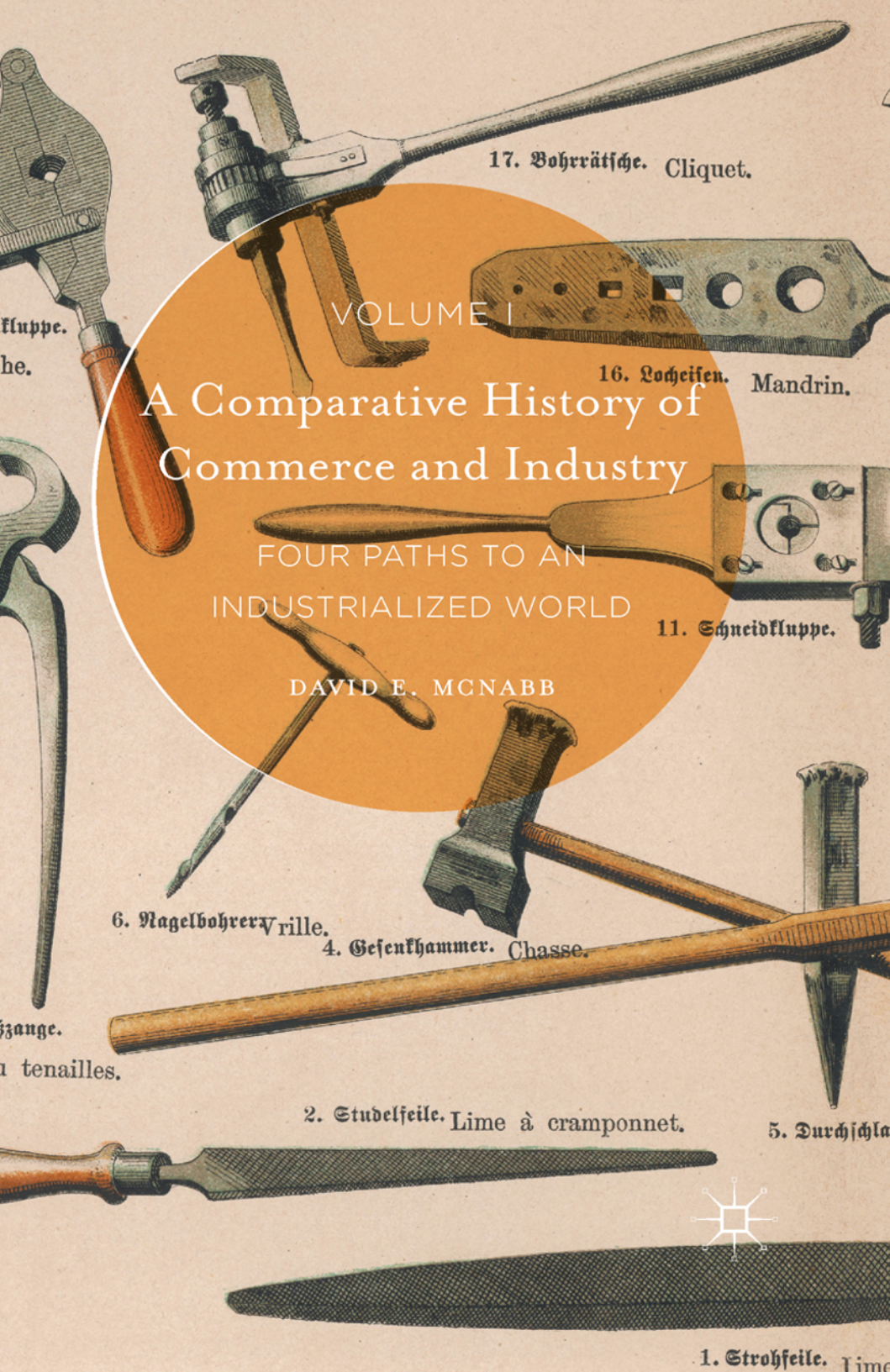

VOLUME I

A Comparative History of Commerce and Industry

FOUR PATHS TO AN INDUSTRIALIZED WORLD

DAVID E. MCNABB

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For my family

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Preface

This volume and the one to follow are pointedly a subjective review of how the cultural, social, and economic institutions of commerce and industry evolved in the four industrialized nations of Great Britain, Germany, Japan, and the United States to produce the institution we now know as the business enterprise. The books are, therefore, a synthesis of ideas and concepts from a variety of streams of scholarship. For example, my efforts to understand national cultural foundations and traditions led to searches of sources in anthropology, history, sociology, applied psychology, organizational dynamics, and political economy, among others. My search for an understanding of national character required investigations into the literature of culture, religion, philosophy, political science, and economic history. In looking at how ideology shaped national character, it was necessary to examine each nation's economic system from the viewpoints of philosophy, political science, anthropology, sociology, politics, and social psychology. Richard Lehne (2006) touched on the focus problem in his series of texts on government and business when he wrote: "In designing [and describing] national business systems, there are no permanent solutions and no final victories." He included comparisons between the U.S. business system and those of Great Britain, Germany, and Japan, as I have sought to do here.

The research focus follows an investigation of multisource contributions for answers to chief research questions: (1) how and why did each nation's economic system evolve in the way it did, and (2) to what extent does the development of the business system of the countries examined reflect their individual cultural and social foundations. No single disciplinary point of view could supply a complete answer, nor was any contribution excluded a priori. This focus could only be maintained by following a multidisciplinary approach. Throughout the work my goal has been to describe in the best way possible how human thoughts and deeds have shaped—and continue to shape—national character in the context of the social, cultural, and economic institutions they adopt.

David E. McNabb
Harstene Island, Washington

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I want to thank Dr. Gundar J. King, Dean Emeritus of the PLU School of Business, and the PLU business school's founding Dean Emeritus Dr. Dwight J. Zulauf, for their support for this and other research projects and publications. I owe these two visionary management education leaders a deeply felt debt of gratitude for their inspiration and continuous encouragement throughout the research and writing of this narrative. As the result of generous summer research grants awarded by the School of Business at Pacific Lutheran University, I was able to benefit greatly from extended periods of postdoctoral research at the library of Harvard University's Baker Business School, at the British Library in London, and the library of Cambridge University in the United Kingdom. I wish also to thank the current Dean of the School of Business Administration, Dr. Nancy Albers-Miller, for her support for this and other research.

Part I

The Beginnings of Commerce and Industry

Chapter 1

Introduction

Historical accounts of social institutions such as this one are inherently selective. Moreover, they reflect the experiences, background, and points of view of the analyst. This history of the institution of business is no exception. I have included the historical events and trends that I feel have contributed most to making each country's business system what it is today. If others' explanations or preferences have been omitted, there remains room in the fertile, but often ignored, field of business history for yet another treatment of the material. The comparative historical research approach reflects these core themes: "Comparative historical researchers explicitly analyze historical sequences and take seriously the unfolding of processes over time. . . . because events are themselves located in time, comparative historical analysts explicitly consider the effects of the timing of events relative to one another" (Mahoney and Rueschemeyer 2003, 12).

From the conceptual base described in the Preface, the final form and structure of the narrative has been framed through my experiences with three separate but related points of view. First, it is a broadly based, but necessarily selective, analysis and interpretation of the societies studied; I compare and contrast selected aspects of the selected nation's underlying economic ideology, social structure, institutions, and management philosophy. The book is not intended to be a comprehensive, point-by-point comparative evaluation of all of these components. I do not intentionally exclude any factors, but instead focus on what my academic experience and research interests include and concepts I felt were important enough to write about. The points included in the comparison reflect my own interests and biases. I have gained much insight from this research into ideas, culture, values, and national character.

Margaret Mead, a pioneer in the comparative analysis of nations' culture and national character, recommended that human cultures be looked at as "historically patterned systems" in a society. That concept has been followed in this comparative examination of commerce and industry systems and institutions in Great Britain, Japan, Germany, and the United States. The research for and writing of this book follow comparative historical analysis methodology. It has been said that the process of coming to an understanding of a society today best begins by looking at earlier manifestations of the society in its historical context. It therefore follows that the way to understand an institutional system in a society is to begin by looking at earlier manifestations of the institution for, as Trygve Tholfsen has pointed out in his study of modern business systems in Europe, every society is the product of its own history, and each is formed by permanence and change through time. Moreover, each retains elements created in the past.

Careful readers will note that woven throughout the narrative is the common warp of political economics. It is no accident that much of today's best research and writing on the history has been done by economic historians. If we are to believe Van Doren, all serious history is economic history—any history worthy of the name must deal with economic facts, whatever else it deals with. It is has certainly been my intent throughout the endeavor of researching and writing that this should be considered a serious work.

Structure of the Book

Volume 1 is organized into four parts, each with three chapters. Part 1, "The Beginnings of Commerce and Industry," includes this introduction and a chapter on the birth and evolution of commerce and trade in Europe and Asia, which serves as a means of organizing and guiding the story of economic and social conduct. Part 2, "Entrepreneurial Commerce and Industry in Great Britain," focuses on the evolution of the economic system of Great Britain. Part 3, Managed Commerce and Industry in Germany," does the same for Germany, Great Britain's great continental industrial competitor. Part 4, "Networked Commerce and Industry in Japan," looks at the development the trade and commerce system of Japan. The history of Japan's economic growth is in many ways a reflection of all that is both good and bad in the business systems of Western business systems, but is at the same time a unique creation of its own cultural and economic antecedents. Part 5, "Competitive Commerce and Industry in the

United States," examines the management system of Great Britain's rebellious ideological and economic offspring.

Chapter 2, "Commerce and Trade in Early Civilization," is an overview of how and where modern business began—as both a social institution and an economic system. The material presented in this chapter focuses primarily on the developments in trade and commerce as it evolved in the Mediterranean Basin and Europe.

Chapter 3 provides a description of pre–industrial revolution English commerce and trade. Chapter 4 relates the story of Great Britain's rise to a seemingly unshakable position of world economic and manufacturing dominance. In Chapter 6 the focus shifts from Britain to Germany. Germany's industrialization began nearly a century after than the birth of the industrial revolution in Great Britain. After an introductory review of the foundations of the German business system in the early nineteenth century, the section goes on to describe in Chapter 7 German industrialization and an economic system that evolved into what has been called organized capitalism. Chapter 8 describes Germany's shift from organized capitalism to what became known as social capitalism.

Chapter 9 reviews some of the major ideological concepts and traditions that have shaped not only the Japanese business system, but its society in general. The story of Japan's system of commerce and industry reaches back to its centuries-long period of almost complete isolation. Among the four countries studied, such isolation was experienced only by Japan. An understanding of the reasons for that isolation and the often bitter resentment of its forced elimination is presented to help Western readers gain some understanding of why Japan's business system developed the way it did. The other chapters in this section cover the key events or periods that characterize the major stages in the development of business in Japan. The first of these is the Kamakura shogunate era described in Chapter 10, followed by the Tokugawa period in Chapter 11. These three eras were characterized by almost complete isolation from other nations; they also saw the ascendancy of the samurai. Patterns of Japanese society during this period corresponded roughly to the feudalism of Europe in the Middle Ages.

Chapter 12 provides a review of business in the Colonial and Revolutionary periods. Business in the United States emerged in its early modern form after the Civil War (Chapter 13), as the first great period of railroad construction kicked off demand for steel, locomotives, and other industrial goods, and produced the nation's first trained

professional managers. Chapter 14 covers this period of rapid growth and the emergence of big business and the evolution of modern business.

Events that shape commerce and industry are moving far more rapidly today than ever before. Therefore, any projection of the future of the business system and business institutions must be seen as simply one author's prognostication. However, historical trends do tend to follow relatively constricted pathways, moving in one direction within a limited range of variation. This work is my interpretation of the evolution of the business systems of the past and present in the four cases analyzed. The second volume in his two-volume series carries the story of commerce and industry in these four nations up to and including developments in the globalization of business at the close of the twentieth century and early years of the twenty-first century.

Chapter 2

Commerce and Trade in Early Civilization

This book, the first in a two-volume set, is one author's story of the history of commerce, trade and industry in four regions of the world: the United Kingdom, particularly what we know as England and Wales; of the Holy Roman empire and its modern manifestation, what we now know as Germany; the early Asian economic power of Japan; and of the North American colonies that became the United States of America. The story focuses on the evolution of economic activity in those regions of the world, including the institutions of business, commerce, trade, and industry. "Business" has been defined by Pride, Hughes, and Kapoor (2010, 9) as the "organized effort of individuals to produce and sell, for a profit, the goods and services that satisfy society's needs." "Commerce" is used as a broader term and incorporates all the activities necessary to facilitate the exchange of goods and services. It can be carried out by businesses, nonprofit organizations, or governments.

"Trade" is used to refer to the buying and selling of goods and services by wholesalers and retailers for money or for other goods of monetary value. When trade takes place within a nation it is internal or domestic trade; when it occurs across national borders it is external or international trade, and is documented as either exports or imports (Figure 2.1). "Industry" refers to the individuals or organizations that in some manner or to some degree process raw materials into components or finished products for other than their own use. It is also used to identify a particular class of manufacturing, such as the steel industry or the automobile industry. Thus, "industry" is both

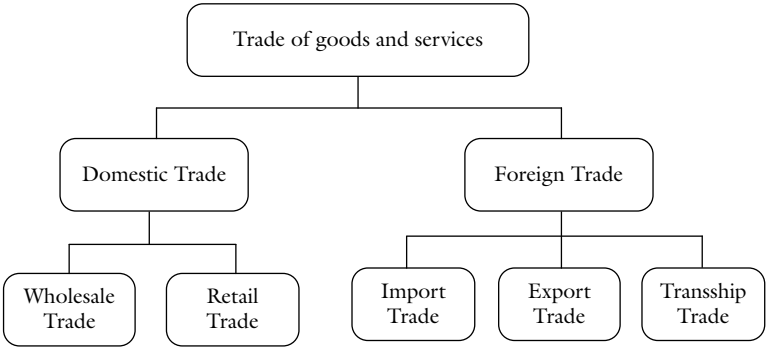

Figure 2.1 Different levels and types of trade.

an activity and an institution of economic activity. Trade was the chief business activity for centuries before human ingenuity invented the industrial method of producing goods, mass production, and mass distribution—the hallmarks of modern economic activity.

Seeds of Civilization

The first seeds of recognizable Western civilization probably emerged roughly some 10,000 years ago in three grain-growing regions: between the Tigris and Euphrates rivers in modern-day Iraq, along the Indus River Valley in what is modern-day Pakistan, and along the lower Nile River in what is now Egypt. Hunter-gatherers settled down to begin to irrigate and farm the land in these fertile regions. Because of the fertility of the flood-deposited soil and dependability of the water supplies, they were able to produce food surpluses for the first time in the history of mankind. Those relatively consistent food surpluses made it possible for the first permanent settlements to be built. Out of these farm villages were born the world's first cities. These first towns were governed by a *theocracy*, that is a government led by a class of priests. These spiritual leaders existed as much to control planting, harvesting, and distribution of surpluses in times of need as they did to foster worship of whatever god or gods that particular society believed in. Neither the priests nor the people condoned business, however. The practices of trading, selling, or lending at a profit was often scorned or flatly forbidden in many early societies.

Human beings had been around for a long time before they settled in these river valleys. Anthropologists now believe that the first

humanlike primates—animals with characteristics similar to people today—may have evolved on the African continent as far back as five million years ago, and possibly even earlier; proto-human primates may have appeared as early as 20 million years ago. The first traces of primate development have been traced back for something like 60 million years. To use a business analogy, modern man can be said to be just the latest model in a long, long process of "product development."

The earliest humans foraged for their food like all other animals. They slept on the ground without shelter of any kind or, at best, huddled in caves. Their possessions were limited to what they could carry. Life continued that way for millions of years, with changes occurring only very slowly and in very small increments. Theirs was a constant battle for survival. It is only in the last several hundred years that has there been any respite for more than a privileged few.

The great early civilizations of India, Mesopotamia, Greece, Phoenicia, and Rome, were all periods of hardship and back-breaking labor for most human beings. By the Middle Ages, the pattern of civilization had been set: very brief spates of feast followed by long periods of famine. War brought tribute, territory, and other rewards. It also brought destruction, famine, and disease; life was never easy.

A Constant Struggle

Whether we approach human history from 12 million, 200,000, or only 10,000 years ago, for the great majority of human beings who have ever lived, life has been a constant struggle to find enough food to eat each day and a safe, dry place to sleep each night. It was only until our grandparents' grandparents time that it became possible for more than a very few isolated individuals to dream of enjoying a decent standard of living. Life for those thousands of centuries was, according to Rosenberg and Birdzell, "a story of almost unrelieved wretchedness," with the majority of society living in "abysmal squalor." Or, as Thomas Hobbes said in 1651, mankind lived lives that were "solitary, poor, nasty, brutish, and short."

Homo sapiens migrated to Europe from the Middle East before the last ice age. They had evolved enough to begin painting on the walls of caves in France and Spain some 20,000 years ago. About the same time, other branches of this new line of humanity moved slowly across all of Asia. Some even roamed across the then-existing land bridge to what became Alaska and subsequently occupied all of North and South America.

It seems logical to assume that with this very long time for modern humans to evolve, commerce and trade would have had a long and rewarding history. Not so. Despite the very long history of humankind on our planet, the institutions of commerce and trade are only about five thousand years old, probably having emerged around 3000 BCE in Mesopotamia. On the scale of human evolution, economic and social institutions are clearly relatively new inventions; they are truly modern inventions.

During the several hundred years since the discovery of the Americas, Europe, the United States, Canada, Australia, Japan, and a few other places have enjoyed one of history's infrequent periods in which progress and prosperity have touched the lives of somewhat more than the upper tenth of the world's population. And this happened despite several horrendous global wars. For most of the preceding centuries, most people were forced to suffer through long periods of famine or near famine, only periodically eased by very brief spans of relative feast.

Conditions for the Growth of Trade

Humanity has experienced slowly but steadily increasing prosperity for only several brief periods during the last three or four millennia. For most of the passage of time before and following these brief growth spurts, the concept of a decent standard of living for all citizens was simply unthinkable. The change in living standards that have occurred is so great that it is completely revolutionary; it is so different from what when on before and happened so quickly and recently that we must stop and ask ourselves just how and why it really happened. What caused the world to change so dramatically in such a short period of time? To find answers, we must go back in time nearly two thousand years as the conditions necessary for the start of this short period of economic growth were established. The first commerce and trade activities emerged during three relatively short spurts of economic activity.

The first of these growth spurts took place during the several hundred years of the Roman Empire. With the *pax Romana* there came unprecedented improvements in infrastructure, such as the roads, central and regional storage facilities, port construction, and other extensive capital improvements. These were developed to enable Roman civilization to exploit two continent's natural resources. While this exploitation was taking place, Romans disseminated advanced techniques for agricultural production, storage and distribution, and

managerial administration. Roman engineers designed systems to bring safe, clean water to population centers and made it possible for most citizens to enjoy some benefits of a civilized society.

A strong government bureaucracy provided continuity for Roman-dominated society regardless of the bloody fights for control at the highest levels of government. Few upper-class Romans engaged in commercial activities, leaving the pursuit of business profits to the many subjugated people who eagerly accepted the role. Upper-class Romans preferred the relative luxury of their farm estates, punctuated by brief but intense bouts of political infighting. Meanwhile, traders, government purchasing agents, and private businessmen of all Roman lands followed the civilizing Roman legions, taking full advantage of Roman roads and growing Roman markets. Modern business is, in many ways, clearly a Roman invention.

Commerce after Rome

The early Roman government-sponsored social and commercial infrastructure collapsed when the Roman Empire ended in the fifth century CE. For most of mankind, the next 500 years fell into what we now call the Dark Ages. Life became even bleaker than it had been before the Roman flowering. Certainly, traders continued to operate, albeit at a much reduced rate. Self-sufficient manor-based society emerged to replace the economy created by Roman conquest. However, around the end of the tenth century, a second period of slow economic progress began, this time fueled by a slow but steady increase in population, but even more so to growth in the number and strength of towns. As towns grew in size as well as numbers, they in turn fueled steady increases in the technology of warfare, architecture, transportation, and agriculture.

This brief period peaked during a time that coincided with formation of the Hanseatic League, a loose association of independent, highly commercial cities spread across all of northern Europe, and with the emergence of powerful Italian trading and banking families such as the Medici. The Hanseatic League evolved from the practice of groups of German traders banding together for mutual protection during the Middle Ages. In Germany, this type of mutual benefit society was called a *hanse*. During the twelfth century, German hanses were formed in most of the important ports of the Baltic and North seas, including branches in the British Isles. Eventually the hanse groups in Lübeck (Poland) and Cologne (Germany) joined together to form what became a Hanseatic League of nearly 100 towns.

At its peak, this league controlled almost all of the foreign trade of Denmark, Norway, Sweden, England, and the states bordering on the Baltic Sea. The trade that took place between the cities of the league and other regions was largely a barter system. For example, German grain was sent to Scandinavia in exchange for amber, furs, fish, and naval stores. Scandinavian salted fish and furs were shipped south along the Rhine, Elbe, and Oder rivers to be traded in central and southern Europe for wool, metal goods, and spices from the Middle East and beyond. Many of these goods may have passed through Eastern Europe or the Middle East on a long overland journey from the East.

In this way, the league's partners developed a trade system and information network never before seen. Yet, even as the trade and trading networks were slowly but steadily chipping away at feudal restrictions and institutions, just over the horizon lurked a series of man-made and natural disasters that would bring almost all trade to a halt. The league began to lose most of its power due to growing competition from continental powers and fears of foreigners and loss of markets brought on by the spread of the Black Death. Beginning with a series of particularly devastating wars, famine and the plague slammed the door on economic growth.

In the fourteenth century a series of disasters, not the least of which was the plague, decimated populations in the West, with economic and social development again stagnating. An estimated 25 million Europeans died from the plague. This was also the time of the Hundred Years' War waged between France and England from 1377 to 1453. By 1600, the Hanseatic League had become only a shadow of its former self. The world was plunged into darkness for almost 200 years (Clapham 1957).

Stages of Economic Transition

Kenneth N. Cameron (1973) has suggested that once most industrialized societies passed through the traditional or subsistence level, went through three socioeconomic stages: feudal, commercial-feudal, and commercial-capitalist. This study of business systems begins with a look at some aspects of life during the time of feudalism. During the purely feudal period in Europe, business hardly existed. However, by about the thirteenth century, strong roots of commercial activity had begun to establish themselves deeply in much of feudal society. As the Middle Ages came to a close at the end of the sixteenth century, commercial life rather than agricultural endeavors tended to dominate economic activity, if not society itself.

When tracing the development of business systems, a good place to begin is at a point when these and all other economies were equally poor. For us, this means beginning our investigation at the start of the Middle Ages in Europe. This roughly coincides with the Kamakura period in Japan (1192–1333). The Kamakura period saw the rise of the samurai warrior caste and extended through most of Japan's Age of Civil Wars (1467–1567). Just as in Europe, feudalism in Japan was characterized by fiefs, vassalage and a strong military standard, both in politics and culture.

Feudalism was not unique to Europe. For both European and Japanese society, at the start of the twelfth century, feudalism was firmly entrenched. As the dominant social system, it had existed in pretty much the same form everywhere, from Egypt to India and China. It arose in Japan in the same centuries that it took form across Europe.

Initially, feudalism meant a system in which occupants of land held it only as tenants of a sovereign in exchange for supplying military service. It later evolved to mean ownership of people—serfs—as well as land. Laborers were wedded to their lord's fief and required to follow the same occupation as their parents. Agricultural workers were bound to the land in a system of serfdom, a hereditary status assumed at birth, and they had no right to select a more attractive occupation or location.

Feudalism can best be understood by looking at three of its dominant characteristics. First, the economy of the region or nation was centered overwhelmingly on agricultural pursuits. As much as 90 percent of the population of the time remained rural, and most earned their livelihood by agricultural work. Certainly, some towns and villages existed, although mobility from farm to town, or from town to town, was virtually nonexistent.

Second, in the rural areas as well as the few towns and villages, political and economic authority was combined in the same institutions: the country manor and the town guild. In Japan, such power rested with powerful samurai families who lived similar lives in manor-like estates. Making a living in a town or village meant spending one's life working in a trade, the mastery of which one gained only after serving a lengthy apprenticeship. The choice of occupation or apprenticeship was usually arranged by one's father, and more often than not, occurred in the father's guild.

Third, the medieval way of determining price or value was by custom, usage, and law, not by negotiation between traders or power of the market. Exchange was usually compulsory. Artisans and farmers both were obligated to supply their products and services on terms

dictated by custom or law; no one had the right to decline business at the fixed rates.

The Feudal Manor

As a form of economic organization, manors had three major features worth recognizing: (1) control over the political and economic aspects of human activity, (2) the use of servile labor, and (3) a high degree of self-sufficiency. These features were not created by the manorial system. Rather, they were manifestations of ancient and nearly uniform practice. People believed implicitly that this was the way life was, the way it had always been, and the way it would and should always be.

Manorialism was a key component in the larger feudal society. The lord of the manor served as local chieftain and father figure; his was a role established in the earliest of primitive societies. The relationship between leader and led was wrapped up in a complex network of family, clan, and tribal loyalties. These primitive relationships took on more ritualistic forms with the emergence of the first ancient kings and priest-kings in the early Near Eastern civilizations. As the manor developed, the lord came to control all political and economic decisions, such as what to plant where, when to go to war against whom, when to work on roads or bridges, and so on. The lord of the manor was also judge, sheriff, and banker, in addition to his role as local commander-in-chief. The only activity of life in which any autonomy existed was in the religious life of the manor, as priests remained part of a hierarchy outside legitimate manorial authority.

Compulsory labor was a fundamental characteristic of the manorial system. In exchange for their labor in cultivating the majority of land under the lord's dominion, peasants received the right to farm small plots for their own benefit. Peasants were also required to devote a set number of days to such tasks as road and bridge building and repair, ditching, repair of manor buildings, and other tasks. Such compulsory labor was not limited to farm peasants. A miller or a smith was a miller or a smith for life and, like the peasant's dues to his lord, the fees charged for such service were customary, not based on supply or demand. Changes of any kind in the manor system were a major event, affecting the whole network of manorial obligations. As a result, they did not occur often.

Money, although extremely limited in supply, played a role in the manorial system. Within the manor, the fundamental exchange involved the trade of labor for the use of land, but the peasant was also forced to pay for a host of other services provided only by the

lord of the manor. These included grain milling, use of the oven for bread baking or the press for apples or grapes, the sawmill, and others services. There also existed a slate of fines for failure to perform customary duties or for other infractions. Money was also required for services and goods purchased or sold in towns and at fairs. Some portion of church tithes was also paid in coin, particularly by town residents. In this way, towns rather than countryside manors eventually became the centers of commercial activity and capitalism.

Medieval Towns and Villages

Since the dawn of civilization, towns have been formed as centers for administrative activities, as ecclesiastical centers, or for military purposes, which included the formation of transportation networks, such as the need to, say, guard a major river ford. Whatever the reason, the towns that were always less self-sufficient were feudal manors. For example, they could not grow enough food to feed themselves within their protective walls. As a result, towns were forced to become centers for both local and long distance trade. Residents of towns had to import food and export their finished products and services. Their raw materials, such as lumber, leather, wool, flax, iron, stone, and clay, came from the countryside, as did the wood, coal, or peat used for fuel. Access to such resources was usually only possible at the sufferance of local lords, who controlled all land.

Towns remained small and relatively unimportant until sometime in the late Middle Ages, when their importance to the economy of the countryside had become such that eventually new relationships had to be forged with nobility and other land owners. Soon, a few towns were able to attain their own charters from their sovereigns. This gave them special privileges and powers of self-government that were not enjoyed by manors.

Typically, whatever autonomy a town gained was achieved by purchasing a charter from the sovereign who was chronically in need of cash to support increasingly large and expensive armies. Details of the charters were individually negotiated, not always without first some show of violence. The charters conferred varying degrees of self-government that were specific to the town; no general model existed. In return, towns obligated themselves to supply cash, men, arms, and other goods or services as needed or demanded. These went to the person or persons who promised most in return, not always to the nobility on whose land the town existed. In England, France, and Spain, for example, towns tended to ally themselves with rising monarchies

in struggles between the monarch and feudal nobles. Thus, with the close of the Middle Ages, as feudal lords lost both political and economic power a form of that power was gained in turn by towns.

Towns in Japan

In Japan, towns were established for much the same reason as they were in Europe. They were first central points for tax collecting, then as market centers. During the Time of Civil Wars, central authority disappeared in many parts of Japan, with local peasant bands joining together to protect themselves from warring samurai. Mason and Caiger (1972) note that the most successful bands of peasants held together for as long as a century, with agricultural villages in many parts of the country becoming self-governing. As long as they paid their taxes, the towns were pretty much left alone. Another category of town emerged to provide for the needs of local strongmen. Called "towns-below-the-castle," they served as a gathering place for warrior vassals, merchants, and artisans, where readily taxable markets took place. Despite this growth of towns in Japan, it must be recalled that the bulk of the population remained rice farmers, just as European peasants remained tied to their farms.

Power of Tradition

The business activities that took place within the increasingly important towns both in Europe and Japan hold only faint resemblance to business systems today. In Europe, most lines of industry and trade were the exclusive monopolies of the guilds. The Church's long-dominant notions of a "just price" and a "just wage" gave moral sanction to regulations controlling prices, wages of apprentices and journeymen, standards of product quality and workmanship, admission to the trade, and a duty to ply one's trade at the established prices and wages. Guilds quickly gained and exercised the political authority to make binding rules, and to judge, fine, and punish violations of their rules.

In Japan, all major wealth-producing activities, such as wholesaling of rice, mining, and mineral production, were tightly controlled by local warlords (*daimyo*). Merchants and artisans, while strictly controlled, remained independent. Feudalism granted land tenure in return for military responsibility. In Europe and Japan, all other things being equal, the lord's tenure on the land, along with his obligation to perform military service, stayed with the family. In the East outside of Japan soldiers were given only a life interest in the land. Upon the

death of the soldier, his land was redistributed among his military successors. Thus, absolute power remained in the hands of the highest sovereign.

Feudalism's Contribution to Business

Despite very real shortcomings and heavy social costs, the feudalism practiced both in Western Europe and Japan seems to have contained the seeds of social arrangements suited to sustain economic growth and entrepreneurial activity. The development of towns and the small class of professional merchants and traders that they produced is one of the threads that can be traced more or less continuously from the Dark Ages to the present. But another aspect of feudalism that may be even more fundamental to political and our economic development is the sense of pluralism the system promoted.

The European and Japanese systems resulted in a plurality of power centers, each combining some degree of military strength with the local economic base necessary for its support. Both sides' powers and responsibilities were spelled out by law and custom.

The Decline of Feudalism

Feudal institutions were directed toward security and stability rather than to change and growth. As Western society moved from that stability to growth, feudalism could not keep pace. With the innovations in the art of war that appeared near the end of the Middle Ages, the feudal castle became obsolete as a military stronghold; there was no longer any reason to continue their costly upkeep, or to provide a place of refuge. Feudal chivalry gave way to professional armies using a combination of cavalry, crossbows, pikes, and cannon. With no economic justification, manors could not compete with the growing towns to pay for these new professional armies. Also, larger towns and larger armies required changes in agricultural production, which manorial methods of small plots and compulsory labor could not meet. Furthermore, events beyond anyone's control soon hastened the end of the feudal system.

Carried by fleas on rats and spread by following trade routes from China to the West, by 1348 the Black Death epidemic appeared in France, Italy, Germany, and England. Within just a few years, nearly a quarter of Europe's population had died. A tremendous shortage of labor resulted, with wages rising enormously. Surviving workers gain political and economic power, finally making it possible for workers

to have some say in what kind of work they wanted to do and where they wanted to live. The beginning of feudalism's eventual demise came about with the new power gained by the survivors of the plague.

Discovery Brings New Growth

A third period of growth began in the West during the sixteenth century, this time spurred by the first great voyages of discovery, Europe's colonization and exploitation of the New World, and establishment of spice and silk trade routes to Asia by sea rather than over land. This period established a firm foundation for the remarkable events that were to take place in the eighteenth century, exemplified by the industrial revolution. However, the changes took several hundred years to fully take hold. It was only during the eighteenth and nineteenth centuries that the world we recognize emerged. *What* happened when it happened has been pretty well documented. However, there is less agreement as to *why* the events occurred as they did. Some suggested reasons include the flowering of science and invention, the availability and knowledge for exploiting natural resources, psychological causes, the misconduct of the periods' "robber barons," and simply due to good luck.

The Contribution of Science and Invention

Advances in science and invention are the most often stated reasons for the last 200 years of unprecedented growth and prosperity for much of humanity. The first, key developments in science occurred in the seventeenth century and led to what became a new way of looking at the world. According to Van Doren, science was the major invention of the seventeenth century. Men of that time learned how to measure, explain, and manipulate natural phenomena in the way that today is called the scientific method. It would not take long for science and the scientific method to be put to work for economic gain.

While these new ways of thinking about the world were taking shape across Europe, most of the continent was only just turning from feudalism. For the several hundred years following 1500, it was China and the Islamic nations that were the leaders in science and invention, not Europe. However, once the West took the lead, it never gave it back. Only in the last quarter century have Asian nations begun to retake their ancient lead in discovery and global economic leadership

Easy access to their own natural resources, such as coal in Great Britain and Germany, or to other sources at reasonable cost, such as

from colonies, has often been mentioned as a reason for growth taking off in the West. More probably, however, it was the efficient use of natural resources together with the availability of capital that enabled these nations to industrialize. These factors have certainly played a major role in the economic growth of the twentieth century.

The Concept of Human Rights

Business firms developed as a result of a number of rights that private individuals or groups of persons successfully demanded or negotiated between the sixteenth and mid-nineteenth centuries. That the negotiations were successful can be traced to the slow but steady increase of power and independence by towns, and the citizens of those towns. These included first the artisans and craftsman who produced clothing, metal goods, and similar essentials. These artisans soon banded together in guilds, which gave them even power. Traders and merchants joined the artisans and, together, were able to negotiate even greater concessions from the nobility.

Of all the concessions and rights that private citizens gained, four stand out. First, people gained the right to form enterprises with fewer political or religious restrictions. Second, these new enterprise groups negotiated the right to acquire goods and hold them for resale, again with little or no interference or restriction. Third, in what turned to be a reverse for artisan's guilds, enterprises gained the right to add new and different activities to their earlier strictly limited business charters, as well as the right to switch from one activity to another with little or no restriction. Finally, while the assets of the enterprise and its profits continued to be taxed at what to us might seem to be extraordinarily high rates, its property came to be regarded as immune from arbitrary seizure or expropriation by political authorities.

These developments made possible the promise of reward necessary for individuals and groups to take the risks involved in setting up and conducting a business enterprise. And it was these same rights that set the stage for the eventual emergence of joint stock companies—what we now recognize as the corporations. The stage was set for modern business systems to emerge.

Conclusion

The cultural institutions of commerce and trade are relatively new in the history of mankind. These early social and economic activities evolved through millions of years of evolution, from simple trading

with one's neighbors to eventually emerge about half way through the 10,000 years of civilization as what are easily recognizable endeavors.

For the first half of that period, the great majority of people lived lives that have been described as *almost unrelieved wretchedness.* Only in the last 200 years or so have large numbers of people been able to enjoy a high level of prosperity. Economists can agree, in general, with Rosenberg and Birdzell's conclusion that innovations in trade, technology, and (business) organizations, in combination with increased capital, labor, and applied natural resources that were the immediate engines driving the industrialized world's four or five centuries of economic growth. The emergence of privately held business firms and the profit motive working together in a social system founded on individual achievement and reward made the years of growth possible.

Despite the many restrictions placed upon business by both religious and secular authorities, the period of the Middle Ages was not a total disaster for business; it was instead a time of steady if slow growth in international trade. More and more autonomous enterprises reached out across the old boundaries of local authority, local religion, and local custom. A new merchant class conscious of its own interests emerged, envious and contemptuous of the old aristocracies and of the power exercised by the Church.

Trade has always involved two elements: the goods and commodities being traded and the people doing the exchanging. Trading activity means buying, handling and selling of products, as well as some form of social system to foster and facilitate the types of relationships within which trade takes place. Thus, trade means the sharing of new ideas, of communicating, and of new knowledge and technology. Out of the disasters of the fourteenth century were sown the seeds of the social and economic systems of today.

Discussion Questions

1. What was the *pax Romana*, and how did effect the growth of commerce and industry?
2. What was feudalism? How did it influence early trade?
3. How did the power of tradition shape early commerce and industry?
4. How did discovery change the way commerce and industry was conducted in much of the known world?
5. What was the role of science and invention in the growth of early business?

Part II

Entrepreneurial Commerce and Industry in Great Britain

Chapter 3

Foundations of Commerce and Industry in Britain

To understand how and why Great Britain came to be a great trading nation and the first country to make the shift from an agricultural to an industrial economy, one must begin with its position as an island nation. Located some twenty miles off the coast of France and separated from northern Europe by the North Sea, Britain was close enough to be able to take advantage of a huge continental market, but far enough away to evolve in a slightly different pattern. It was not forced to trade just with its immediate neighbors, nor was it restricted by neighbors' trade restrictions, tolls, or tariffs. From the beginning, when it wanted to communicate with other societies, it had to turn to the sea. Its comparative advantage of location was augmented by seafaring skills. In later years, when local north-south continental trade gave way to long-distance, east-west international trade, British traders were particularly well equipped to take advantage of the new business opportunities.

Early Commerce and Trade

Sometime between 6000 and 5000 BCE, English Channel and North Sea land bridges disappeared under an advancing Atlantic Ocean. This act of nature left a thickly forested, very thinly populated island cut off from the mainland. Other than a small number of hunter-gatherers, the land was hardly inhabited. The first real ancestors of the British people were seamen invaders, pioneers bearing new beliefs and techniques. They may have come to the island from the continent initially

in search of the tin and copper for which the land was well known; the Cornish Peninsula is pitted with shallow tin mines, some of which were worked right up into modern times.

Another group of migrants were tribal families from somewhere on the Iberian Peninsula or in southern France. They moved overland across Europe and finally across the short twenty-mile-wide English Channel to settle in southwestern Britain. These newest immigrants brought with them knowledge of agriculture, including grain growing and animal husbandry, weaving and pottery. They built settlements, carved small farm plots out of the dense forests, and quarried flint for chipping into scrapers, knives, ax heads, and spear points. Some built large burial mounds for use as common graves.

These flint-using invaders were followed to the islands by groups originating on the steppes of Asia, where they developed livestock herding into an art. Having passed through northern Europe on their slow journey to Britain, these later settlers brought with them wooden plows and introduced bronze weapons, taking advantage of the tin and copper they found in Britain. These settlers came to dominate southern Britain, and did so for a thousand years or so. During that time, they constructed the great stone circles at Avebury and Stonehenge. As they farmed the chalky English soil, they also remained true to their earlier traditions of animal husbandry, thus establishing a direct link to the sheep growers and wool weavers of a later Britain.

Around a thousand years before Christ a new group entered Britain from Gaul. A tall, blue-eyed, red-haired people, they, too, had entered Europe from the east, settling first in northern France and giving their name to the country. Over five or six centuries they slowly migrated across the straits to settle in Ireland and Britain. They soon became the dominant people in both islands. To survive, earlier peoples were absorbed or driven into the hills and moors of Wales and Cornwall.

Trade between the groups, based on special skills honed over centuries, began slowly. Metal goods were particularly valuable trade goods. The invaders from Gaul brought smiths, who introduced the Iron Age to Britain. They forged swords, spear points, and chariot wheels. But more important, they also introduced oxen-pulled iron plows. For the first time, the tough soil of Britain, which had been so hard to farm with hand hoes and wooden plows, gave way to the plow. Farm productivity increased and population growth followed.

The new iron users were the first to construct permanent fields and villages in Britain. Their successes at warfare and agriculture enabled them to multiply and expand, so that they eventually occupied about a sixth of the country numbered about a half-million. The rest of the land, still covered in dark, thick forests, was for all intents unoccupied.

Roman Invasion

The Romans entered Britain in the first century of the Common Era. The Roman invaders under Julius Caesar who first arrived in 55 BCE found the place occupied by formidable tribesmen who painted

Figure 3.1 Administrative districts and roads in Roman Britain in 410.
Source: Courtesy of the University of Texas Libraries, the University of Texas at Austin.

their faces with woad, which gave their skin a bluish color. The next Roman invasion began in 43 CE when some 40,000 troops came to stay. They brought with them ordered, powerful armies, paved roads, stone bridges, and walled cities, as well as the laws and administrative bureaucracy they had perfected over 400 years of expansion and colonization. Roman farms became the breadbasket for Roman armies that were often in battle with Gauls and other tribes that regularly rebelled against Roman rule on the continent.

Roman armies, farmers, and tradesmen remained in Britain for nearly another 400 years. At their peak, they had established more than 50 substantial cities across southern Britain. To protect themselves from the depredations of the earlier peoples they had pushed northward into Scotland and constructed the great seventy-three-mile-long stone fortification across the width of Britain, Hadrian's Wall. They also imposed a new religion on the land, building temples to the Roman gods and eventually instituting worship of the Roman emperors.

Trade under the Romans

Possibly the most important contribution of the Romans to Britain after their laws and roads was a complex system of international trade. Local grains, minerals including tin and copper, hunting dogs, and slaves were traded south for jewels, statues, wine, olive oil, perfumes, mosaics, glass, and pottery. Under Roman tutelage, Britain came to be known as the granary of the north (Bryant 1984). By the end of the fourth century, however, the Roman period in Britain came to an abrupt halt. Barbarians were at the gates of Rome itself, and all legions were needed to defend the capitol. The last Roman troops sailed from Britain around 406 and never returned.

Even while Rome ruled Britain, parties from northern Europe were periodically raiding the island. When Rome's legions left, some of those raiders came to stay. By the start of the seventh century, the largest groups of these invaders from northern and western Germany, the Saxons and the Angles, had completely vanquished the few Romans who had stayed behind, as well as the earlier Britons who had been moving back onto lands that had been theirs before the Roman invasions. The Anglo-Saxon invaders soon controlled all the country south of Hadrian's Wall. Their new kingdom also took on a new name. It was no longer known as Britain, but was thereafter to be called England.

These Anglo-Saxons brought with them excellent metal-working skills, necessary for their fine swords and armor, but also for their iron plows and axes. They cleared forests, drained swamps, and terraced

hillsides. They established new villages and spread deeper into the disappearing forests.

The Danes, who carved a kingdom of their own out of eastern Britain for a while, and Vikings from Norway and Sweden all played varying roles in the formation of England from the eighth to the eleventh centuries. The last really successful invaders of the island arrived from the south in 1066. They were the Normans, led by William the Conqueror. Eventually, fewer than 200 French-speaking barons and from five to 6,000 Norman knights became owners of almost all English land. Originally invaders from Scandinavia, the Norman invaders quickly formed a new ruling caste in England. In less than a decade they controlled all of England from their Norman castles and feudal manors. William and his followers were the last armies to successfully invade the British island.

COMMERCE IN MEDIEVAL ENGLAND

The Doomsday Book survey, which William the Conqueror ordered in 1085, recorded that more than 95 percent of the English population lived in the country and made its living from the soil. The word "country" may be somewhat misleading, however. England was not a country of isolated farmsteads. Rather, most of the country's poor made their homes in villages and hamlets. More often than not, they chose to do so for collective security. Often the village was built around a fortified manor house or castle. Farm workers walked each morning to the fields or to labor on their lord's manor, bridges, roads, buildings, mill, or smithy, or to take up arms under their lord's leadership.

No regular hours were set for serfs to work on their lord's lands. The lord might require as much as two days work in one week, three in another, and even four days another week. Serfs' tasks included fieldwork in the summer and road, ditch, or wall repair, woodcutting, building repair, or hauling in winter. Others worked in the lord's mill, smithy, or tannery. Wives and children also worked in the fields, particularly during harvest times. Women tilled home gardens and labored as servants in the lord's manor house, in addition to keeping their own house and raising children.

Towns and villages were also the place of residence of stone masons, tailors, smiths, shoe and harness markers, and, of course, food processors of all types, from brewers to mead makers and meat salters, to name just a few. Usually, the only really free men living in the village were clergy or, later, craftsmen or merchants.

At the beginning of the Middle Ages, British farmers tilled the soil much as their ancestors had, using a two-field system inherited from

antiquity (Dahmus 1968). Arable land was divided into two roughly equal fields. In one year, a crop such as grain was raised on one of the fields, while the other was allowed to remain fallow for the year. It may have been plowed once or twice during the year to keep down weeds. In the following year, the fallow field was rotated. Without fertilizers or legumes, leaving the land fallow for a year was the only way to renew its productivity.

By the fourteenth century the three-field process came into use, and was soon adopted on most farms in Britain, as well as in France, Germany, and the Low Lands. Under this system, tillable soil was divided into thirds. One field was planted in the spring, the second in the fall, and the third left fallow. Spring crops included oats, peas, beans, and barley, none of which were practical under the old two-field system.

Despite the increase in yields from the three-field system, the tradition of strip-farming continued to limit gains in productivity. Each serf farmed a series of one-acre or half-acre strips. Strips were spread across two, three, or more different fields. Thus, a farmer might work as many as thirty or more small strips, each of which was surrounded by the strips of others. It was thus impossible to attempt much innovation or farm improvement. Nor could the land be partitioned or fenced.

Effects of the Plague

Like their counterparts on the European continent, the population of Britain was decimated in the fourteenth century by a series of outbreaks of plague. The first wave hit in 1348 and 1349. This was followed by further attacks in 1361 and again in 1368–69. Prior to the first outbreak, Britain's population had been somewhere around 4.5 million. By the end of this tortured century, that population had been halved to number only a little more than two million (Briggs, 1983). This terrible disease, spread by fleas carried on rats, wracked all of Europe of and on until the final outbreak, which occurred in the middle of the seventeenth century.

In addition to the Bubonic plague, other disasters helped to make this and the next century unbearable for Great Britain. Beginning in 1313, a series of animal plagues attacked the nation's sheep and cattle. Chroniclers of the time reported how famine drove the poor to eating dogs, cats, rats, and even worse, to cannibalism. This was also the beginning of a mini-ice age. Temperatures dropped dramatically, severely reducing the growing season and curtailing farm yields. Between 1315 and 1317, a series of great floods caused severe

destruction and dislocation across the nation. The English countryside became one of deserted villages and abandoned fields.

Not all the effects of these disasters were negative, however. They helped to put an early end to the feudal system, which had been planted on British soil by the Norman invaders in the eleventh century. The shortage of labor made it impossible to reinstate serfdom's labor services. Customary wage rates also went out the window, thus improving the quality of life somewhat for many of the surviving poor. On the other hand, the great disruption also began to tear at the country's social structure and stability.

Beginning in 1381, a series of violent revolts rocked an England that was also engaged in the Hundred Years' War with France. A peasants' revolt was followed by a number of armed religious protests. Throughout the fifteenth century, factional conflicts resulted in political instability and disorder, leading eventually to civil strife, which erupted in the War of the Roses (1455–1485). The turmoil also led to defeat in France. By 1453, Britain has lost all of its French possessions except the city of Calais, the main entry port for British exports, particularly wool.

As the fifteenth century was coming to a close, some prosperity returned to Britain. Although the export of English raw wool had peaked a century earlier, it continued to be the country's important crop. However, raw wool exports were now supplanted by domestically manufactured wool cloth. By the last decades of the century, the country's largest sheep flocks had grown to number as many as 9,000 sheep, and to more than 13,000 fewer than a century later.

Forming a Nation

In 1536, an act of union brought Wales and England together into a single nation. Another such act was passed in 1707, this time uniting England and Wales with Scotland. From then on, despite two attempts by some Scots to place a Catholic Stuart king on the combined throne, the unified nation of Great Britain was able to turn its energies outward, and in the process become first the world's greatest trading nation and later its leading source of manufactured goods. Fortunes founded on the global trade of British textiles and re-exports of colonial products such as tobacco earned the country the capital needed to make the country's industrialization possible (Macfarlane 1988).

The nearly 200 years of war between Britain and France were fought over trade and commerce. At the time of the 1707 Act of Union, France was a much larger and stronger nation than Britain.

However, by the end of the century, Britain had developed an insurmountable lead in the transition from an agricultural to an industrial economy. England and Wales had enjoyed a competitive advantage in the production of wool from as far back as the Middle Ages. English wool was the key raw material that fed the great Flemish (French and Belgian) cloth industry. Many great English fortunes were based on this trade. However, it became apparent to some suppliers of raw wool that they were wholly dependent upon continental buyers for their livelihood. Raw English wool was sold at markets in Belgium, France, and the Netherlands.

Continental wards involving these and other powers often cut the English wool growers and merchants off from those markets. Allowing continental processors to finish their wool, converting it first to cloth and then to clothing, gave others profits that the English felt were rightly theirs. In time, a major shift occurred in the nature of the wool industry. English wool merchants began to farm their raw wool out to English spinners and weavers, then substituting unfinished woolen cloth for raw wool exports. Before long, the export of raw wool and unfinished wool cloth gave way entirely to the export of finished woolens and worsteds. *Finished* textiles means fabric that has been bleached, dyed, woven, and fulled (beaten woolens that have been purposely shrunk to make the fabric thicker). Woolens use a softer, shorter, less tightly spun yarn similar to that used in sweaters and coats; worsteds use a hard, long, tightly spun yarn such as that used in cloth for suits and the like. Both were to become extremely valuable exports of early Great Britain.

The Importance of the Merchant

The greatest benefit from substituting the export of processed wool cloth for raw wool is the added value resulting from the many tasks necessary in its production. In addition to shepherding and shearing, the tasks of carding the raw wool, spinning it into yarn, weaving, bleaching, dying, and fulling were required. Only one thing did not change; the most important occupation remained that of the merchant. Merchants identified demand, transported finished goods to market, stored excess goods for later sale, and also managed supply. They were medieval Britain's most important entrepreneurs. The merchant owned the wool through all its various stages, and distributed it to cottage workers for their labor contribution. More often than not, the merchant also owned the tools used, leasing or renting them to the independent laborers. This "putting out" system characterized

the woolen industry for nearly 400 years, until the first factories came on the scene in the eighteenth century.

From the late 1400s to the mid-1600s, business in Great Britain underwent a period of slow but steady growth. It was driven by three major changes taking place in society. The first of these was the reformation of the church in England. The second was a dramatic growth in population and the third was an unprecedented inflationary rise in prices. The Reformation may have been the greatest change. Under Henry VIII, the church was separated from its ties to Rome. The church and state became one, with the king now the leader of the Church of England in addition to being ruler of the nation. Church properties were confiscated and, over a 20-year period or so, were distributed among the king's favorites or sold to secular landholders.

Population growth became an important factor when after 1470 the number of people in the nation began to rise for the first time since the Black Death epidemics of the 1300s. The growth in population was made possible first by better diets, which a number of factors helped to make possible. The first of these was the slow warming of the climate, thus lengthening the growing season, reducing crop failures, and improving farm yields. A second factor was the change taking place in the practice of agriculture, including "scientific" improvements in animal husbandry, which increased the size of livestock, new crops, and changes in field rotation and nitrogen-fixing crops. Wage increases that followed the plagues made it possible for the poor to be better fed, clothed, and sheltered.

Wage increases helped to exacerbate the third factor, inflation. As producers' costs rose, so did their prices. However, a greater impact on prices was the influx of gold and silver pouring into Europe from the New World. Before long, too much money was chasing too few goods. Prices rose with demand. This eventually whittled away at the gains made by the working poor, but it never reduced their quality of life to the state it had reached during the thirteenth century. Famine was never to be a society-wide problem in Britain. Furthermore, Britain's growing leadership in international trade and the new manufacturing and processing that trade profits encouraged and often financed maintained robustness in the British business system that prevailed until the twenty-first century.

Commerce and Town Growth

Why should a survey of the development of business institutions be concerned with the growth of towns? The answer is, of course,

because trade and industry could not and would not have developed without towns. Towns and cities provide two key requirements for business. First, the gathering together in one convenient location of a large number of individuals provides a market for traders' goods. This was particularly important before advances in transportation made it possible to serve customers outside of a local area. Second, towns served as havens for farm workers who were either forced off their lands by technological developments in agriculture or had fled their farm roots seeking freedom and opportunity elsewhere. In this way, a steady pool of labor became available to ambitious craftsmen and traders who wanted to expand their operations and earn even greater profits.

Commerce and industry had been developing together in towns as far back as the first cities of Mesopotamia and the Indus Valley. Those earliest towns permitted collective security and facilitated the collection, storage, and distribution of farm surpluses. Agricultural surpluses in turn contributed to demand for more sophisticated domestic products, while security needs forced development of more and better weapons. Potters, weavers, leather and metal workers, jewelers and the like became established in the towns to meet the needs of the collective society (Snooks 1996). Similar factors contributed to the growth of towns in Britain.

With a total population of just five to five–and-a-half million persons, England and Wales at the beginning of the eighteenth century was still a land of hamlets and small villages. Just a few real towns were sparsely spread around, and most of these were in the south. Other than London, which in 1700 already boasted a population of nearly half a million, only a handful other towns of any size existed. The more important ones were Manchester, Liverpool, Sheffield, Leeds, Halifax, Birmingham, and Coventry. Even these in many ways still resembled more the sprawling villages they had been just 50 years earlier than the dynamic industrial centers they were soon to become. The country remained largely agricultural: a full four-fifths of the population toiled in agriculture (Ashley 1961).

British Georgian Era Commerce

Tired of the strife over religion that raged during the War of the Roses, in 1714 Britons invited the Hanoverian George I to rule the nation. This began the long period of rule by kings George I, II, III, and IV. The Georges gave name to the period from 1714 to 1830, known

today for its style in architecture and design. During the Georgian era Britain took on many of the characteristics that brought it from its long history as an agrarian society through a tradition-shattering industrial revolution and the forging of a world empire. The Georgian kings accepted the transfer of a government controlled by a monarchy to one in which a parliamentary system reigned supreme. Rather than being called to convene only when a monarch needed funds, the British parliament now met regularly. The new kings removed many old monopolistic restrictions on commerce and trade and encouraged the formation of individual entrepreneurial and joint-stock enterprises. With an empire more or less secured by its Royal Navy, the door was opened to access foreign raw materials and food supplies and for foreign markets for goods being produced in abundance by the evolving industrial system in Britain. It was not always a period of peaceful transformation, however.

During much of this period, Britain was engaged in acquiring and securing its empire. Colonies in North America, the West Indies, India, Africa, and the Pacific needed nurturing. During much of the period, Britain was at war with France, the Netherlands, and Spain. A navy needed ships, men, canon, and supplies; an army needed men, weapons, uniforms, horses, wagons, and supplies. All were costly items, the provision of which helped build industries that designed and produced them.

Throughout the early Georgian period, from 1714 to 1760, most people still lived in hamlets, villages, and small towns, most of which were concentrated in the south of England and in Wales (Harrision 1973). Other than London, only two other towns had populations of 20,000 or more: Bristol and Norwich. This was Old Britain, the stuff of atavistic fiction.

BIRTH OF AN INDUSTRIAL SOCIETY

Events after roughly 1760 changed society in Britain forever (McCloskey 1981). The most far reaching of these were the advent steam power and the resulting Industrial Revolution and the new turnpike and canal networks that facilitated production and distribution. Britain was on its way to transforming from a settled agrarian society to a turbulent industrial one. The hope of bettering one's position in life, together with a diminishing need for agricultural workers after the 1760s, drew more and more people to growing urban centers like Liverpool, Manchester, and Birmingham, as well as to the largest of

all, London. As noted by Plumb (1950), these early towns functioned as deadly magnets, drawing new migrants into their midst like moths to a flame:

> Small as they were, they ate up men, women and children and their population was only maintained, let alone increased, by the steady immigration from the country, and in the northwest, from Ireland . . . The first noticeable thing about these towns would have been the stench. There was no sanitary system; an open cesspool in [a] court often served the richer inhabitants; the poor . . . made a public convenience of every nook and cranny. The unpaved streets were narrow, often only six-feet wide . . . [often] too small for carts. All houses and cellars were desperately over crowded—ten to a room was common in Manchester . . . Disease was rampant and unchecked: smallpox, typhus, typhoid and dysentery made death a commonplace . . . In the early part of the century, only one child in four in London survived; and infant mortality was higher in the mushroom towns of the north. In the midst of death, the people sought palliatives and found them in drink, gambling and violence. And yet, the towns drew an endless stream of emigrants from the countryside. (pp. 10–13)

This growth of towns in the early half of the nineteenth century continued at an even greater pace in the latter half. For example, Liverpool grew from 82,000 in 1801 to more than 200,000 just 30 years later. Leeds grew from 53,000 to 123,000; Sheffield and Birmingham doubled in size; Manchester increased from 95,000 to 238,000; and Glasgow grew from 77,000 to 193,000. The new populations in these and other British towns came from the surrounding countryside, and in some areas from Ireland (Woodward 1962).

Yet most British workers still earned their living either as farmers, as laborers in small industries, in retail activities, or in rural districts, in a combination of farming and cottage workshops. Townspeople still followed traditional occupations, such as boot making, tailoring, retailing, food processing and brewing. Women and girls entered into domestic service. The building trades employed the greatest number of laborers. Workers in the textile industries were still largely independent and worked at home. Only in the cotton industry, particularly in spinning, were enough workers gathered together under one roof to be considered even remotely as "factory" workers. Shipbuilding, which was dominated by the Royal Navy's shipyards, was an important industry, but its workers were mostly individual artisan-craftsmen carrying out traditional occupations.

In the first half of the 1700s agriculture had been overwhelmingly the primary economic activity across Britain, although trade was

becoming increasingly important. The enclosures of English fields had not yet begun in earnest; yields of most crops were restricted by the inefficient strip-planting system. Most animals had to be slaughtered each autumn because there was never enough winter forage to feed the herds, nor were the roads good enough in winter to drive them to market. The root crops that would change the traditional way of farming were not yet widely planted. Furthermore, researchers have found that the carcasses of animals slaughtered at that time were tiny—less than a third of the size they would be in just a little more than 50 years. Most of the nation was not far from starvation most of the time.

None of the great improvements in transportation and communication that would appear before the century was over had yet been constructed, let alone planned. Later in this century, canal and turnpike construction would lead the revolution in transportation, and in the process help to establish a tradition of investment and joint-stock financing, in addition to procedures for managing widely spread, large enterprises. Railways would not appear until the next century, the first being constructed in 1825. Until then, the backs of horses, mules, and men, together with slow movement on unimproved rivers that were often too low in summer and frozen in winter, provided the most common means of transportation for goods and people. Roads were unimproved, a morass of mud or dust most of the time, and could not support heavily laden wagons.

On the plus side, however, the English merchant fleet was well on its way to becoming the largest and farthest traveling in history. Goods could be shipped on coastal vessels relatively easily and cheaply to most population centers. These coasters regularly sailed up the Thames River directly into the heart of London. Trade in English woolens, the country's first valuable proto-manufacturing industry, was well established and enjoyed an excellent reputation on the European continent and beyond. The trade of these woolens to northern Europe served as a training school for future expansion around the globe. Furthermore, England was an island nation, protected in her isolation from such continental catastrophes as the Thirty Years' War of the early seventeenth century. No foreign troops ravished English towns or the countryside during that war as they did in Europe.

From this foundation, then, the early business system of Britain was primed to take advantage of the great changes in social and economic conditions that were to begin around the middle of the eighteenth century. It was Britain's entrepreneurial traders who grasped the new opportunities presented to them.

One very important development made possible by town growth in the seventeenth and eighteenth centuries was the emergence of a

new medium of communication. Improvements in communications helped to make business easier to conduct as it also helped to improve the quality of life for many Britons. Publications of all kinds sprang into life during the early 1700s. Many of these lived for a few days or weeks, but others continued for decades (Turner 1952; McNabb 1991). Usually founded with very little capital, the publications were forced to sell advertisements. This development helped to greatly accelerate growth of the country's already rapidly growing retail distribution system. These early newspapers and periodicals typically had very small circulations, but the tradition of sharing them at the many new coffee houses made their reach far greater than expected. Many were used as captive organs by the government's opposition. Their stridency brought on an effort to curb them; government initiated a stamp tax on each paper sold, as well as a tax of one shilling on each advertisement carried. Many of the young journals were put out of business, although many others found a profitable advertising niche in the market and survived.

Out of this beginning grew several papers with the word *Advertiser* somewhere in their masthead. The products most often advertised were those desired by Britain's slowly growing merchant class, as well as the country's aristocrats, of course. These products, which also illustrate some of the scope of the country's foreign trade, included coffee, tea, turtles (for turtle soup), books, wines, wigs, purges, patent medicines, magical cures, lottery tickets, lodgings, and the plays, concerts, and other cultural events of the day, among others.

Many of the papers were published by booksellers; books on hundreds of topics, from collections of sermons to instructions in all manner of subjects, including fiction and fake health nostrums. More important to this story is the large number of books being published that described the many new locations opening to British traders and adventurers. The publications grew both in number and scope throughout the nineteenth century, and in turn helped to influence the British public's demand for all types of domestic and foreign goods. Without them, Britain's trade might not have grown as rapidly as it did.

The Merchant Trader

Modern business institutions have many sources, beginning with the first civilizations of Mesopotamia, India, and Egypt. Trading skills were passed on and improved century after century, to reach full flowering under the great Italian merchant traders of the Middle Ages.

Industrialization in the developed societies of the world, however, stems more directly from the fundamental changes and traditions that began in England and to a somewhat later date in France, from the end of the seventeenth through the nineteenth centuries.

Beginning in the 1600s, English merchant adventurers regularly sailed from their island to trade with the merchants of the Baltic for naval stores; to the north coast of Europe for amber, metal goods, finished cloth, grains, lumber, and other products; to the coast of France, Spain, and Portugal for wines and spirits; and to the Mediterranean countries for the transshipped spices and other riches of the Far East.

These English traders' first valuable trade good was wool and wool cloth. Before long, a three-way trade route of manufactured goods to Africa; slaves from Africa to the West Indies and southern American colonies; and sugar, cotton, tobacco, naval stores and other goods back to England was established. Later, rum shipped north to New England from the West Indies was added, as were pig iron and naval stores from New England to the mother country. New England salted cod also became an important product shipped first to British ports and then re-exported to Catholic countries in Europe and beyond. American tobacco and cotton were also becoming important exports to Britain. The growth of British trade is clearly seen in the record of trade values from England and Wales from 1726 to 1785 shown in Table 3.1. Of note are the relatively constant trade levels between continental European destinations; a tripling of trade with Ireland, the Channel Islands, and the Isle of Man, and the British West Indies; and steep drop of trade with the North American colonies during the revolution.

Of course, the English did not invent short- or long-distance overseas trade. It had existed long before Britain's entry into the field. German traders had traded goods from south of the Alps northward and eastward into the Baltic, Russia, and beyond since before the twelfth century, founding in the process the long-successful Hanseatic League of northern European trading cities. Before then, trading vessels from the great Italian trading states such as Venice and Genoa had dominated European trade around the Mediterranean and the Near East, then shipping it across the Alps northward.

With the opening of the New World, however, the direction of European trade shifted from the old north-south focus, giving way to east-west trade with the West Indies, and North and South America. At the same time, English, Dutch, Portuguese and a few French traders were opening up the more exotic parts of the world to trade: India,

Table 3.1 Exports from England and Wales, average annual values, 1726–1775 (£ thousands)

Destination	1726–30	1731–5	1736–40	1741–5	1746–50	1751–5	1756–60	1761–5	1766–70	1771–5	1776–80
Western Europe (France, Flanders, Holland, Germany)	3,570	3,341	3,701	4,275	4,593	4,945	3,354	4,880	3,921	4,410	3,715
Southern Europe (Spain, Portugal, Straits, Turkey, Venice)	2,400	2,861	2,868	1,920	2,748	3,136	3,380	2,831	1,572	2,790	2,002
Northern Europe (Denmark, Norway, Sweden, Russia, Poland, Prussia)	254	247	269	339	353	376	329	494	472	525	565
Ireland, Channel Islands, Isle of Man	545	701	788	875	999	1,203	1,052	1,672	2,086	2,092	1,825
British West Indies	473	383	494	728	732	710	952	1,119	1,174	1,353	1,244
North American Colonies	524	595	758	771	1,025	1,301	2,052	2,065	2,135	835	1,291
Africa	198	161	207	130	180	227	217	399	569	244	244
East Indies	112	154	262	455	522	787	817	976	1,100	912	930

Source: Langford, 1989, 169, from data in E. B. Shumpeter 1960, Table V.

the Spice Islands, and even China. English traders were ideally situated to take full advantage of this trade shift, and were not long in doing so.

The seeds of England's growth into full industrialization were planted during the seventeenth century and in the first half of the eighteenth century. British merchant traders and explorers sailed from her shores early in the 1600s to begin the process of founding an empire. By the middle of the eighteenth century, the transition to Britain's great commercial expansion was well underway.

When the 1700s began, most of the nation's business infrastructure had yet to be installed. Banks were small and few; little if any insurance was available; joint-stock companies, while permitted, were not widely adopted; little long-term capital for investment was available. Retailing occurred mostly from temporary stalls in the towns and villages, in booths at local fairs, or from packs of itinerant peddlers. Wholesalers did not exist, other than a few royally chartered companies formed to trade in exotic products from even more exotic locales. It was the height of the age of English mercantilism; products traded to England and her colonies had to be carried in English, or in a few cases, colonial vessels. Colonies were prohibited from manufacturing products made in the mother country or from purchasing any quantity of goods from any other country.

With the advent of the seventeenth century, England was solidly on the path toward commercial expansion. This was led by trade, the avenue to wealth most open to British commoners and aristocracy alike. The opportunity to engage in some aspect of trade was available to anyone, provided they were tough, vigorous, and had access to a modicum of capital. Despite the fact that international trade was still dominated by the large chartered companies, including the East India, South Seas, African, Russian, and the Levant companies, many smaller merchants successfully invaded the territories of the monopolies.

Trade became an English preoccupation, and the constant concern both of parliament and the king's government. Trade was wealth and wealth was power. Both parliament and the king agreed that trade was the primary cause of England's growing wealth. Extremely rich and varied, trade was based on things grown on English soil and processed or manufactured in the homes and cottages of English farm workers, in addition to an increasing quantity of products imported from England's colonies and re-exported to continental markets.

To protect and encourage trade, the government removed all restrictive controls on the export of English manufactured goods and allowed entry of necessary raw materials free of import duty.

At the same time, however, they established a wide slate of measures designed to protect domestic manufactures, a move commensurate with mercantilist thinking.

What really drove the increase in trade was growing demand both at home and overseas, itself driven by tremendous increases in population and wealth from the New World. Rising quickly to meet that demand was a host of middlemen marketers, led by such innovators as the potter Josiah Wedgwood and others like him (Hower 1932). These middlemen, wholesalers, and retailers dealing in cloth, coal, fodder, spice, coffee and chocolate, tea, sugar, china, and a thousand-and-one other items became the dominant figures in English industry over the first 50 years of the eighteenth century.

Wool, tin, and corn (the latter was the English term for all types of grains) were the country's leading exports. Naval stores, foods, wines and spirits, raw materials, and some Indian cotton goods were among the more essential imports. But English trade still revolved around woolens, which remained Britain's most valuable export product.

Importance of the Cloth Trade

During the first half of the century the cloth trade dominated English commerce. The major contributor remained the production of woolens. The importance of the woolen industry is exemplified by a law passed that forbade the shearing of sheep within four miles of any coast, in case the fleece should be smuggled overseas. Reminders of wool's importance to the country can still be seen today in the form of large wool-filled hassocks in parliament.

The manufacture of woolens for most of the century remained dependent upon England's rural population for spinning and weaving. These tasks were carried out in the workers' own homes, not yet in factories. The cottage, not the factory, remained the center of English country life. There were three great areas of woolen production: East Anglia, where the fens (bogs) would soon be completely drained; the southwest of England including Cornwall; and, the West Riding region of Yorkshire.

Wool became Britain's most important export as early as the twelfth century. By the end of the thirteenth century, wealthy landowners could argue with their king that wool made up over half of the country's wealth (Briggs 1983). With enclosures, flocks continued to grow in size on the larger estates, while improvements to the various animal breeds were also taking place. The greatest market for English wool was Flanders, where the cloth trade was responsible for the wealth and power of cities such as Bruges, Ghent, and, later, Antwerp.

When enterprising Britons turned to converting the nation's raw wool into cloth during the thirteenth century, additional income was introduce into the rural English economy. Soon, fulling mills using water power were established across central and southern England, and farm laborers augmented their meager incomes by spinning and weaving, creating that important cottage industry.

Growing Importance of Cotton

Wool was about to lose its precedence to cotton as the most important contributor to the wealth of the nation. It occurred first as the processing of cotton cloth imported from the Levant and the West Indies and later from India, but was soon surpassed by the spinning and weaving of cloth from raw cotton imported from England's American colonies. According to Perkin (1969), cotton became the leading industry of the industrial revolution because it clearly suited the demands of the age. It was versatile and, when produced in such volume as it was about to be, much cheaper than woolens. It was possible to dye cotton in many vibrant colors and to produce it in many patterns and textures; therefore it could be accepted into any house or salon. Not only was it hard wearing, it was also washable, which for the first time made it possible for a gentleman to appear in public with a clean shirt every day (Smellie 1962).

The manufacture of cotton cloth in England was originally held back by passage of a series of laws designed to protect the all-important wool industry. Soon, however, the demands of the market enabled cotton to make serious inroads into wool's importance. The beginnings of a cotton industry were established in Lancashire, where both wool and cotton cloth were woven. As more cotton cloth appeared, English workers became adept at dying, printing, and finishing the cloth.

The success of England's cloth industry naturally served as incentive to develop improvements in spinning and weaving. These improvements, and more importantly the philosophy and way of thinking behind them, served as the foundation of the industrial revolution which would quickly follow. The first major improvement came in 1733, with the invention of the flying shuttle. This enabled the worker to use a wider loom and nearly doubled the speed of production. Invention of the spinning jenny in 1764 enabled one worker to work a number of thread spindles at the same time.

The water-frame in 1768 made cloth faster to produce and improved the quality and strength of twisted yarn. The combination of the mule , the spinning jenny, and the water frame made it possible to produce a finer yarn than ever before. The water frame was powered by water power; the mule was worked by hand initially, but was

soon also adapted to water power. These innovations led to the eventual installation of the first rotary steam engine adapted for use in the British textile industry, which was installed in a textile factory in 1785.

Acceleration of Change

For the great majority of British citizens, living conditions at the beginning of the eighteenth century had not changed much since the Middle Ages. Most economic activity was based on the farm, which in England consisted mostly of small holdings and commons farmed by free workers who paid their lord in kind rather than cash. Production was primitive and storage almost nonexistent. Years of famine followed years of glut and waste. Many farm workers augmented their meager earnings through cottage labor in various cloth-making procedures, from spinning to weaving; since northern European markets were adamant about adding value themselves, little dying or fulling was done on the exported cloth in England. Farmers still operated as their forbears had. The wasteful open-field strip system was still common almost everywhere; stock breeding was unselective, and the majority of commons and pastures were overstocked with lean sheep and undernourished cattle. In the first decade of the eighteenth century, only one enclosure act was passed by Parliament. However, around 1700 dramatic changes in the British farmers' way of life were introduced that were soon to put an end to the stability of centuries.

Throughout the English countryside important innovations such as crop rotation, the invention and application of the seed drill, and early introduction of root crops heralded the change. While enclosures were still few and far between, other changes very quickly improved farm yields. The changes really took off when enclosures became more common. They triggered a profound social revolution (Porter 1982). The number of enclosure acts increased slowly at first: eight in the second decade of the century, 33, 35, and 38 in the third, fourth, and fifth decades respectively. The figure jumped to 156 between 1750 and 1760 and 424 in the next 10 years. In the first decade of the nineteenth century, 906 enclosures were enacted. Enclosures meant a shift from the inefficient growing of grains in long, narrow strips to a greater emphasis on animal husbandry, particularly of sheep. Because husbandry required fewer workers than strip-farming, those pushed off the land had to seek other employment. Enclosures created the face of the English countryside that is seen today: enclosed fields, hedgerows and stone fences, and scattered farms.

The changes in farm productivity were dramatic. The average weight of livestock brought to market more than doubled, and in some cases nearly tripled, over the first 60 or so years of the century. Porter (1982) noted that in 1710 the average weights of livestock sold at a country market were: oxen, 370 pounds; calves, 50 pounds; and sheep, 38 pounds. In 1765, the average weight of stock sold at the same market had increased to 800 pounds for oxen, 150 for calves, and 80 for sheep.

The most profound effect of the enclosures was to drive workers off the farm and into English towns and a few cities. Most ended up in London. These former farm laborers became the workers that the soon-to-be installed factory system would require to function. The enclosures and introduction of potatoes, turnips, and similar root crops made it possible for the growing numbers of townsfolk to be fed, so that a labor force was available as new industries and businesses emerged. And, as a middle class developed, many former country folk found employment as servants. Thus, England's growing towns, while indeed warranting their reputation as cesspits of poverty and disease, were also critical centers of opportunity for the displaced agricultural poor.

CONCLUSION

While it is difficult to identify or even narrow down to one an exact cause or set of causes for the industrial revolution in Britain, five key factors have been identified as having contributed significantly during the eighteenth century (Mathias 1983). The first of these was the growing importance of trade and commerce. Second, the growth of demand for the products of the textile industry, first in woolens and later in cottons, sparked a drive to increase production. Third, a large pool of workers was available for work in the nascent factories, due first to a dramatic increase in population and second from the decrease in need for farm workers. Fourth, Britain enjoyed a large supply of key natural resources that could be exploited relatively easily and cheaply. Particularly important were to be coal and iron ore. Finally, sufficient capital generated by success in international trade and founded on land ownership was available for commercializing the inventions that a rapidly growing interest in the natural sciences, including mathematics, engineering, metallurgy, and chemistry, was producing. To Mathias's list of factors must be added the pool of entrepreneurs willing to risk everything on a commercial venture. Additionally, advances in transportation and communication, such as canals, railways, and

ships, would add the final ingredient to make it all happen. We will continue to examine these factors in greater detail in the next chapter.

Discussion Questions

1. How did Britain's status as an island near to continental Europe impact her economic development during her early history?
2. What were Rome's greatest contributions to Britain's economic development? What British-produced products were the most important exports under Roman rule?
3. What role did the Anglo-Saxons play in the early economy of Britain?
4. Describe the role that wool played in the British Isles in the Middle Ages.
5. Why was change occurring at an increasing rate in Britain as the period was coming to a close?

Chapter 4

Early Industrialization in England and Wales, 1760–1814

The processes through which the business system of Great Britain approached industrialization was shaped by a series of economic, social, and technological developments that took place beginning in the last half of the eighteenth century and ending in the late 1800s, roughly a hundred and fifty or so years later. During this time the British economy changed from a base firmly founded first and foremost on agriculture, supplemented by important contributions of the international trade of products produced by others and small-scale craftsmanship for only the local or domestic market. Over these 150 years British entrepreneurs expanded their interests and activities to become the "workshop of the world," in control of more than 40 percent of the entire world's manufactures (Marshall 1962).

It was not an easy process; other than naval protection, these budding businessmen and women received little or no help from the British government, which rather tended to discourage individual endeavor in favor of royally chartered monopolies. The early British entrepreneurs not only had to find their own markets, initially they also had to find their own financing for their enterprises. The government went so far in 1721 to forbid all but royally chartered stock companies. Despite these barriers, British craftsmen, traders, shippers, and investors found success, and in the process, pushed Great Britain into the position of the world's first industrial power.

Industrial Revolution

Modern business institutions stem directly from the heightened use of natural resources, labor, and capital carried out during eighteenth

and nineteenth centuries by a new class of Britons: *industrial entrepreneurs* (Crouzet 1982). The emergence of these entrepreneurs was triggered by a tremendous expansion in trade and commerce that had begun a century earlier. Before the importance of these industrial entrepreneurs waned in Britain and their functions were taken over by a class of professional managers, the world saw a series of revolutionary changes occur in the technology of many industries. An unprecedented acceleration of general economic growth took place directly as a result of their efforts. In addition, they helped to make possible a society-wide drive to control nature and to break away from the limits a stingy nature had always seem to placed on human happiness and well-being. The work of these entrepreneurs led to a revolutionary rise in human productivity, both in agriculture and in the production of goods and services. In the process, they moved production from the cottage, where it had remained since the dawn of civilization, to the *factory*, which was short for "manufactory."

Industrialization of the British economy was not a revolution in the familiar political sense, as occurred in France in 1789, but a series of ever-greater advances in technology, transportation, and in methods of industrial organization. Major technological advances included the many developments in textile manufacturing, iron and steel production, and the substitution of steam power for wind, water, human, and animal power. Advances in transportation included development of the three-masted oceangoing sailing ship, substitution of controlled canals for free-running rivers, and, later, the use of steam to power rail-riding engines and coaches. Inventions such as the steam engine, the coke-fired furnace for the smelting of iron ore, the spinning jenny and power loom, paper-making machinery, and many more stem from this prolific period.

In addition to the technological changes, improvements in managerial process and techniques helped to make the advances possible. These included the turnpike trusts, joint-stock financing schemes for canals and later railways, and opening the ownership of royal monopoly trading companies to widespread public ownership.

Change occurred on such a scale that it resulted in a dramatic increase in the number of human beings that any given area of land could support. In large part because of improvements in their diets, human productivity also increased. This, together with the many advances occurring in technology at the time, resulted in significant improvements in the standard of living for both those who worked the land and those who benefited from the productive increase: Britain's rapidly increasing urban population. Not only were there far

more people in Britain, there was also a per capita increase in the level of their consumption of all goods and services.

In addition to advances in technology and productivity, a number of other factors helped to make the industrial revolution possible. Among those often named include Britain's temperate climate, abundant supplies of water power, good harbors and a seagoing tradition. Political events are also mentioned as making it possible for this dramatic change in production and consumption. The fact that the power of Spain and Portugal was on the wane at the time of Britain's commercial expansion opened many parts of the world to British traders.

A combination of economic and social factors also contributed to the change. Among these was a population growing fast enough to provide both an expanding workforce and a strong domestic demand for cheap consumer goods. The available workforce population was growing slowly enough to provide incentives for developing labor-saving inventions, and to keep from running out of resources at the critical stage of economic development. Also contributing was a cheap and plentiful supply of capital, together with what was, for the time, extraordinarily low rates of interest. The rate was set by code at just 5 percent per year from 1714 onward. Also, land, in conveniently large blocks, was owned by persons willing and able to develop it. Finally, there existed, as in no other nation of the time, a large group of active and eager entrepreneurs who were willing to act and ready to accept risk to seize opportunities for profits wherever they appeared.

Yet, the inventions, natural resources, or socioeconomic factors alone or together could not provide the catalyst for the industrial revolution in Britain. Certainly, these made up most but not all of the "right" conditions or ingredients. The right underlying social framework and attitude had to be present, one that was sympathetic to social mobility, self-enrichment, and willingness to accept change, while also permitting that change to fit into a stable tradition.

Such a framework and attitude emerged after Britain's civil war in the seventeenth century. The nation came out of that experience with a political and economic stability that became the envy of Europe. The restoration of the crown, coexisting with a strong parliament, established controls over regal excesses and gave the people a greater say in the way they were governed. Kreiger (1987) calls the underlying social fabric that emerged in Britain at this time "organic corporatism." This ideology produced a society that permitted the recognition of individual rights along with community needs, while also maintaining a central authority for stability. In this way, according to Kreiger, Britain became a nation in which the diverse elements of society

became merged or unified into one cohesive body of people, while also retaining aspects of their individualism. Common goals prevailed, but always under individual initiative.

By the 1800s, Britain's brand of individualism had become entwined with the process of industrialization. This, in turn, further influenced the national character. What resulted was an environment that permitted huge rewards for entrepreneurial activity. Such rewards included access to high social status, often in just one or two generations.

The country's economic policy, focused as it was on individualist principles, was further pounded into shape in the heat of entrepreneurial market competition. Other than interest rates, neither prices nor profits were set by government. This was in sharp contrast to the economies of Britain's continental neighbors and competitors, which remained chained to meeting needs of the community first under a design mandated by the state. Thus, the pattern of economic growth in Britain differed widely from that of other European nations whose development occurred afterward (Crafts 1996). While there was some government involvement in Britain's development, it was usually negative, such as limiting trade to royal monopolies, for example, and restrictive, such as the navigation acts that limited shipment of British and colonial goods to ships owned and operated by individual Britons or their licensed entrepreneurs.

The British government's participation in economic development during the first hundred or so years of the industrial transformation was largely limited to maintenance of its policy of mercantilism. This was a policy of power, designed to develop and maintain the nation's economic strength by a system of protective tariffs and navigation laws. These in turn fostered the growth of new industries at home and the application of new manufacturing and merchandising processes. In other ways, the British government's policies actually inhibited early industrial growth. Its policy of preserving town and guild monopolies, controlling the growth of industry in rural areas, setting of manufacturing regulations and restricting introduction of certain labor-saving machines, along with the ban on forming joint-stock companies, effectively restricted business growth until well after 1850. It was not until the government finally came to realize that free trade meant even faster accumulation of national wealth that it changed its policies.

Barriers and Reforms

Lack of improvements in industrial organization and management practices were still barriers to full industrialization as late as 1850.

They were among the last major changes to take place in Britain. When they did occur, they made it possible for large multidivision, multibranch, and multifocus enterprises to develop (Blackford 1988). Despite the very real advances in technology and transportation, British industry could not grow much beyond the level it had reached in the last decades of the eighteenth century without the invention of new ways of organizing enterprises.

At the beginning of the eighteenth century, foreign trade was still dominated by the great chartered companies. Industry, which was still almost entirely made up of small job shops with the owner working alongside his few assistants, or conducted by individual artisans in their homes, suffered from the nature of its organization as did commerce and transportation. The rules governing industry were still those laid down by Tudor legislation, with its reliance on guilds, which were composed of masters, journeymen, and apprentices, and on rigorously enforced regulations and detailed specifications regarding the products or the guildhall.

The 1721 Bubble Act

Another hindrance to commercial and industrial expansion during the early stages of the industrial revolution was a relative shortage of long-term capital. The financial panic of the South Sea Bubble (a demand-driven run-up of the trading company's stock and subsequent precipitous collapse) led the Walpole government to pass the Bubble Act of 1721. This law forbade the formation of joint-stock companies without a royal charter—an instrument that was costly and difficult to acquire. This bill effectively eliminated what had been the easiest and probably most effective method of raising the capital necessary for large-scale industrial organization. Investors, stung by the collapse of the South Sea stock, turned to safer investments, putting their money in 3 or 5 percent government funds, which were seen as extremely sound investments with "adequate" returns. As a result, many of the new industrial start-ups of eighteenth-century Britain had to be slowly and painstakingly built up by their craftsmen founders using internally generated capital. These craftsmen became Britain's first industrial entrepreneurs.

The individual entrepreneur using private capital was not a new development, however. Private traders existed and undoubtedly flourished alongside the earliest priestly or royal monopoly businesses from the earliest emergence of trade in the Fertile Crescent (Snooks 1996). Perkin (1969) goes so far as to claim that it was these

craftsmen entrepreneurs who contributed the most to the great economic changes that followed. Industrial entrepreneurs were working capitalists who both owned and managed their own businesses. They and only they could identify the market opportunities presented by the new technology employed in their shops, and who could gauge the extent of demand for the additional products the new technology could produce.

Entrepreneurs had to save or otherwise procure the capital needed for new machinery, to purchase raw materials and construct new and expanded facilities. When they could not raise it in their own family, they had to go outside to persuade partners to invest, and to convince owners of land where a suitable fall of water and adequate communications existed to allow the location of a works on their property. They then had to build their factories, install the machinery, recruit, train, and discipline workers, buy and store raw materials, and sell their finished products at sufficient profits to pay dividends and allow for future expansion.

Joint-Stock Financing Reform

Joint-stock financing of industrial enterprises did not become common in Britain until after the 1850s. Even when joint-stock organizations did become possible, British businessmen were slow to take advantage of the opportunities they presented. Before 1850, joint-stock financed companies were a rare occurrence in Britain, despite the series of enabling laws passed over the first half of the century (Court 1954). The process under which the change occurred reflects a greater shift in government's attitudes and the peoples' attitudes toward their government, as well as a major shift in social values. At the beginning of the century, people believed that debt was to be avoided at all costs; individuals were personally liable for the debts of their businesses. Debtors were subject to prison and public vilification. The attitude of the governing elite was that corporations and limited liability were privileges restricted to a very few of the nation's governing elite.

Reform Act of 1832

With the Reform Act of 1832, the trend began its shift toward an opposite viewpoint. After 1860, limited liability companies became the norm rather than the exception. Private companies in all industries began to convert into public companies, even though they were

still operated by members of their founding families. A carryover of this unwillingness to go public, or when it did happen, to remain under the founder's control, was that British firms were much slower in evolving into big businesses than were their later cousins in the United States.

Although Britain's early entrepreneurs had experienced some difficulty getting their hands on investment capital during the early years of rapid industrial growth, by the last half of the nineteenth century both the capital and the institutions required for its distribution were in place. In contrast to Germany and other Continental competitors, a strong financial system to meet commercial banking needs and long-term investment opportunities was firmly established in Britain for most of the nineteenth century. The Bank of England and a number of city and country banks provided discount facilities and some long-term credit. Insurance institutions, such as Lloyd's, and security exchanges were also functioning. Markets in public and private bonds and equities completed the advanced financial system (Sylla and Toniolo 1991). By 1900, London had become the unchallenged center of the world's commerce and finance.

Early Modernization of Industry

Despite the fact that the Industrial Revolution began in Britain somewhere around 1750, throughout its first hundred years or so British industry continued to be dominated by the same traditional, small-scale operations it always had been. These small businesses catered to local markets and did not engage in international trade. According to Crafts (1996) and Crouzet (1982), in 1850 this large body of enterprise accounted for some 60 percent of industrial employment and probably experienced no growth in productivity over the period from 1780 to 1860. While exporting firms were certainly smaller in number, their productivity growth was rapid over the same period. The greatest growth occurred among the producers of cotton textiles. Having finally overtaken wool as Britain's most valuable export, cottons accounted for more than 40 percent of British exports in the first half of the nineteenth century. Possibly even more important were Britain's re-exports of such high-value colonial products as sugar and tobacco.

By 1800, Great Britain's large-scale industries had become the most advanced of all European countries. However, the country was still not yet completely industrialized. As late as 1806, less than 25 percent of the population earned their living from large-scale industry,

while only a third of Britain's revenue was derived from it (Collins 1964). Just four short decades later, Britain was firmly established as the most powerful economy in the world.

British industry achieved its peak in terms of global dominance during the last half of the nineteenth century. After that, it entered into a continuous period of slow decline (Gamble 1981). Its dominance was accomplished under a structure that had not changed markedly from the organization that had developed during its early development in the last half of the 1700s. While the first half of the eighteenth century had seen the nation's economy still focused on trade and agriculture, in the second half of the century Great Britain's economic power resided in her manufacturing industries. In the middle of the 1800s, a full third of the world's manufacturing output came from Great Britain. The island nation also produced half of the world's coal and iron, half of the world's cotton goods, and almost half of its steel. Although by the end of the century competitors such as the United States and Germany had made deep inroads into her global commercial dominance, in 1900 Great Britain still produced a third of all the world's exports of manufactured goods. And those goods were carried in British ships as well. The registered tonnage of Britain's merchant fleet was greater than that of all other nations combined.

Growth of the Textile Industry

The first British industry to industrialize was textiles. Britain had long dominated the export of raw wool; later, this dominance shifted to wool textiles and worsted cloth shipped to finishing markets in northern Europe. By the eighteenth century, exports of cloth had come to represent some 70 percent of all exports from England. It remained important throughout the century as well. In the 1770s, cloth exports still constituted more than half of all British exports. In 1770, most spinners were still supplied with wool grown in Britain or Ireland, although some fine cloth was produce in the west of England and Wales, with some merino wool imported from Spain. Homegrown wool provided the main raw material for the industry until after 1835, when greater and greater amounts were imported from New Zealand and Australia, with some coming from Germany; wool from the Falkland Islands was not important until later in the century.

Before entrepreneur-owned factories became common in the wool industry, a number of employee-owned mills were established. These were not integrated mills, but instead tended to concentrate on one or two of the various steps in the process. The first appeared in 1785, and remained in operation until the 1890s.

Despite the significance of wool exports, industrialization of the textile industry was not universal. Neither the silk nor linen industries were large enough to warrant much investment. And wool was much later to industrialize than was the "upstart" product, cotton (Musson 1978). Cottons were still an insignificant part of the textile industry as late as 1770. However, before the end of the eighteenth century, cotton became Britain's major manufacturing industry. The change occurred because of a remarkable series of technological advances together with the emergence of the modern factory system.

Industrialization in the Cotton Industry

Before industrialization of the cotton industry occurred, organization of cotton textile production followed a pattern very similar to that of wool. Thread and cloth were produced in workers' homes under the cottage or domestic system. Finishing was done under a more concentrated process, but typically in separate, small bleach crofts and dying and printing works. As with wool, merchants usually owned the product at its various stages and farmed it out for the added-value operations.

Most of the production was still done in rural areas, but a few full-time manufactories were appearing where a power source was available. Water and water power were important ingredients in the production of both wool and cotton, although it was less important for wool production where its use typically was limited to powering fulling mills.

The development of a series of production innovations in the last half of the eighteenth century made water power even more important. The first improvement came in the production of thread: the spinning jenny vastly improved the product while speeding up the spinning process dramatically. At first a hand-operated machine, it allowed one person to run as many as eight spindles at one time. As more spindles were added, first animal power and finally water power was used to operate the machinery.

Even more important was the introduction of the water-powered water frame in 1771, a machine that produced cotton thread strong enough to be used for the warp (stationary vertical threads) as well as the weave (horizontal threads) in cotton cloth. Only a few years later, in the late 1770s, invention of the "mule" made it possible to produce the strong cotton cloth needed for fine muslin cloth (the plain weave cloth typically used for bedsheets).

Now only two things were needed to make the economy fully industrialized: (1) a power-driven loom and (2) a constant source of power that made it possible to locate new factories anywhere that

would be able to operate all year long, regardless of the weather. The first workable power loom was patented in 1785, but its use did not become the norm until after 1820. Steam power had been introduced to spinning as early as 1785. However, it was not until after 1850 that the factory system—the wedding of power spinning and power weaving driven by steam engines, brought together in large, permanent mills—became the norm in the textile industry.

The use of steam-powered machinery in the textile industry required development of new and more durable machines for spinning and weaving. Soon, the north of England, particularly the area around Manchester, became the center of an entire industry: machine design and manufacture. The machine industry clustered in this part of Britain because it was also the center of Britain's textile industry (Musson 1978).

Low Entry Costs

Hudson (1986) has pointed out that before 1850 and even earlier, in many branches of the textile industry the capital outlays of entrepreneurs were relatively small. Thus, businesses tended to be small or at best medium sized. Spinning and weaving machinery was relatively cheap, and could often be purchased secondhand at bankruptcy auctions. Furthermore, when textile manufacturing moved out of the cottage and into the factory, supplies of machinery, including steam engines, often were financed by the manufacturers, not the textile entrepreneurs. It was also possible to sublet sections of existing buildings, and often even to "rent" surplus power from a landlord's mill.

In the early days of the industry's development, many processes were done by outside contractors who were paid on commission—distributed only after all contributions to production and distribution were completed and payment received for the sold product. It was not until after the middle of the nineteenth century that it became necessary to find financing for the few very large firms emerging in the textile industry. Merchants provided much of that capital, with a significant portion also secured as loans, using land as collateral. Most bankers of the time continued to deal almost exclusively in short-term credit. In time, early textile producers came to depend more and more on their land as source of investment capital, with short- and long-term mortgages eventually becoming the primary source of financing.

Differences in Financing Methods

Musson (1978) has noted that the financing of cotton production differed from that of woolens and worsteds almost from the beginning. Many of the early cotton mills, and particularly the largest ones, were

financed by merchants (wholesalers, retailers, and international traders). For short-term loans for such purposes as operating expenses, bank credit was commonly used. This system continued through the first half of the nineteenth century, with the major source of investment capital for growth continuing to be the firms' retained earnings.

As the eighteenth century neared its close, domestic spinning and weaving of wool was taking place in every county of Great Britain (Jenkins and Ponting 1982). However, the center of the wool textile industry came to be centered in Yorkshire, where it remained for most of the nineteenth century as well. Yorkshire mills produced about a third of the entire annual production, and close to one-half of the value of wool textile exports.

Industrial Synergy

While the textile industry provided much of the early impetus for the industrial revolution in Britain, it was the combined effects of growth in the coal, iron, and steam industries that provided the final push. These three industries, driven by developments and improvements in the manufacturing first of textiles and then by metal products and machinery, became the dominant forces propelling Britain to world dominance in manufacturing and commerce.

The stories of the growth of these three industries over the last half of the eighteenth century and all of the nineteenth century can hardly be separated. Not only were coal, iron, and steam closely interrelated, they also stimulated each other; developments in one sector made possible advances in the others. Then, those developments were expanded to other, related industries, such as transportation and distribution, which in turn made possible additional advances in other industries.

For example, steam engines were first put to use early in the 1700s to pump out coal mines in Wales. In 1710, there were at least four and probably more steam engines in operation in Britain (Table 4.1). The mines were then able to provide coal in large enough quantities to enable iron smelters to substitute coke (processed coal) for charcoal. Soon steam engines replaced water power in iron stamping and rolling mills. The iron produced was used to make more steam engines, other machines, and to replace wood and other materials in factory and bridge construction. The new machines were also powered by coal-fired steam engines. Before long, steam was also being used to power new developments in transportation, particularly railroads. Railways were first developed to efficiently transport coal and iron ore from mines to where it was needed for production. Types of engines are listed in Table 4.2.

Table 4.1 Steam engines manufactured and in use in Britain in the 1700s

Decade	Known built in this decade	Possible others	Cumulative known total	Possible total
To 1710	4	2	4	4
1711–20	32	3	36	40
1721–30	47	2	83	100
1731–40	53	3	136	150
1741–50	96	3	232	250
1751–60	87	2	319	370
1761–70	191	4	510	580
1771–80	201	10	711	800
1781–90	388	12	1,099	1,300
1791–1800	1,014	56	2,113	2,500
Possibly from this century	78	–	2,191	–
Total	2,191		2,191	

Source: Kanefsky and Robey 1980, 169.

Table 4.2 Steam engines in use in Britain in the 1700s, organized by make and/or type

Maker/Type	Number made	Percent of total	Year of record
Savery[1]	33	1.5	1698
Newcomen (pumping)	936	42.7	1710
Newcomen (rotary)	86	3.9	1779
Watt (pumping)	162	7.4	1744
Watt (rotary)	316	14.4	1782
Pirate Watt	63	2.9	1780
Compound	18	0.9	1782
Bull	16	0.7	1790
Twin cylinder	31	1.4	1789
High pressure	6	0.3	1799
Symington	21	1.0	1787
Other	5	0.2	1787
No data	498	22.7	1776
Total	2,191	100.0	

[1] Savery is not a steam engine but a form of suction pump that uses steam to create a partial vacuum.
Source: Kanefsky and Robey 1980, 169.

The earliest recorded use of steam as an element in devices to draw water from underground mines was a 1698 device made by Thomas Savery. It was not an actual steam engine but rater a form of suction pump. Steam was condensed in a closed vessel and water sucked into it by the partial vacuum caused by the condensing. It could also be used to force water upward in a reverse operation. Newcomen pumping engines were in widespread installation by 1710, when 936 were in use in mines in England and Wales (Table 4.2). Rotary steam engines were not commonly employed as power sources until much later in the century.

The Coal Industry

Despite its overall importance to nearly every subsequent industrial activity during the industrial revolution, the coal industry remained largely just as it had been at the end of the seventeenth century (Crouzet 1982). Few if any innovations took place in the production of coal, other than the early application of steam engines, first to pump water from underground mines and later to help lift coal and miners up out of deep mine shafts. Coal was still cut from the face of a coal seam by an individual miner using a pick or shovel. Gun powder was sometimes used to break loose a coal face, but because of the dangers of explosion and fire its use was not common.

After the limited availability of water power, coal was almost the only source of energy for all of Britain's manufacturing industries, and Britain owned vast reserves of this critical resource. In 1915, these reserves would have permitted five centuries of extraction at the then-current rate of use.

The greatest years of industrial coal use began around the middle of the nineteenth century with the parallel explosion in the use of coal-fired steam engines for industrial and railway use. In addition, coal-fired, steam-powered maritime engines were quickly developed for use by Britain's large fleet of trading ships. The rate of growth in the use of coal peaked around 1875, after which it remained either static or grew slowly. Coal production reached its all-time peak of 287 million tons per year in 1913.

In addition to providing a cheap and reliable source of energy for all Britain's industries and serving as a fuel for domestic heating, coal was also important as the raw material for the manufacture of lighting gas. It was also an increasingly important feedstock for Britain's budding dye and chemical industry. After the late 1850s, coal also

contributed greatly to export earnings; in 1913, 98 million tons of British coal was sold abroad.

The Iron Industry

Iron, which was first produced before 1500 BCE, was brought to Britain by Celtic immigrants around 450 BCE. Well into the industrial revolution, iron was produced Britain in three grades: wrought iron, cast iron, and steel. Most iron was wrought iron. When heated, wrought iron can be forged by smiths into many different shapes and uses, from pots to body armor, nails, horseshoes, and plows, to name just a tiny fraction. Cast iron, which is the pouring of molten iron into a mold in the shape of the desired finished product, was not used to any great extent until the eighteenth century. One reason was the difficulty of bringing iron up to the necessary high melting temperature. Steel was the most difficult and costly to produce in consistent quality and quantity, and remained in little use until the late 1800s. As a result, for most the nineteenth century Britain imported most of the high-grade steel it needed from Germany (Westphalia), but later from Sweden as well.

Early iron was produced in what was called a bloomery. In this method, iron ore was packed into a clay-lined or unlined hollow, surrounded by charcoal, and heated. Foot-operated bellows were used to raise the heat of the fire. The iron never liquefied; instead, it became a doughy lump, called a bloom. When the master ironmonger believed it was ready, the lump was taken out of the hearth and hammered, mostly by hand, but soon by hammers driven by water wheels. Hammering drove out slag (impurities) and converted the raw iron into a consistency needed by the smith. The smith then reheated the iron and hammered it into the shapes needed by society, including swords and plowshares. The first important technical developments in this industry were the use of water power to operate the bellows and, later, to power the trip hammer.

Introduction of New Technology

In iron smelting in the late seventeenth century, blooms (a liquid mass of iron ore and slag called sponge iron) weighing 100 to 200 pounds were commonly smelted. These never exceeded 300 pounds. The bloomer system continued to dominate iron-producing processes until long after the development of the blast furnace in the eighteenth century. However, from 1680 to about 1750, the bloom process began to be replaced by an indirect process. Although it still produced

wrought iron, an intermediate step was needed before the iron was ready for use by the smiths.

This method, also called the charcoal iron process, was the dominant method for producing iron when the industrial revolution began to change the British business system. A key feature of the process was the blast furnace, which was probably introduced to Britain from Belgium and France. A blast furnace raised the temperature of the ore high enough to liquefy it. The liquid ore was then poured into a mold, called a pig, in a process similar to what would later be used to produce cast iron; at this stage, the metal was referred to as pig iron. The iron pigs were then reheated in a charcoal fire under a forced air draft. It was then hammered, reheated, and hammered again into wrought iron bars. Naturally enough, the metal at this stage was known as *bar iron*. Bar iron became the raw material for smiths to pound into its various final forms.

The blast furnace consisted of a conical tower about fifteen feet high (later it grew to twenty-five feet high and higher). Iron ore, charcoal, and sometimes limestone as a flux (flux agents were used to clean the iron), were poured in at the top of the furnace. The mix was then heated under a forced air draft, with the bellows often powered by flowing water. The liquefied iron was drawn off at the bottom. It was then poured into a trough in the sand floor called a sow, with smaller troughs or molds (the piglets) branching off at each side of the main channel. In this way, the production of iron became a continuous process, with some furnaces operating as long as a year before they were shut down for maintenance.

The last major advance in the charcoal iron industry was the rolling and slitting mill. Water wheels powered large, heavy iron cylinders with slots or channels of varying sizes. These cylinders compressed the hot iron bars into smaller and smaller sizes, driving out impurities at the same time. Steel cutting discs were used when the object was to cut or slice the hot metal into smaller pieces as it passed between the two rolls. This system of rolling and slitting mills continued to function long after steam power was substituted for water power.

Changing from Charcoal to Coke

Throughout the charcoal iron industry period, iron firms remained relatively small. According to Crouzet (1982), the average iron-producing firm had around 175 employees. The limiting factor in their growth was the availability of charcoal. As Britain's forests were cut, it took more than 20 years for trees to be ready to be turned into charcoal. At the same time, Britain's rapidly growing navy and merchant service was a strong competitor for wood. Charcoal prices,

which had remained steady over the preceding 60 years, began to increase dramatically after 1750. Also, there was simply not enough to supply all the nation's needs. As a result, before the industrial revolution could take hold, large quantities of iron were still being imported from Sweden, and later from Russia.

The substitution of coke for charcoal for producing iron was the first major innovation of the eighteenth century. Coke, which is produced by heating coal in an air-tight chamber, had been used by Britain's copper and brass producers for decades. Coke was also used as a fuel for the production of malt for brewing. Abraham Darby, who as a young man had worked in both of these industries, first used coke for iron smelting in 1709. The impact of that innovation is inestimable; Harris (1988) called it "one of the greatest advances in the history of technology, on which subsequent ferrous metal production in the modern world has been, and still is, based" (p. 30). Coke greatly reduced the cost of producing iron; after 1760, the cost to produce a ton of iron using coke was about five dollars less per ton than to produce the same amount with charcoal.

Despite coke's great advantages over charcoal, the number of coke-fired iron smelters grew slowly, and it was not until the last half of the century that they became widespread. Between 1750 and 1788 the number of charcoal iron smelters dropped from around 70 to just 25. However, by 1790, the few remaining charcoal smelters only produced about 10 percent of all iron made in Britain.

Later Innovations in the Iron Industry

The late 1700s saw a number of innovations adopted by iron producers, so that as the 1800s began, Britain's iron producers were close to being able to supply all the country's needs for iron. Most iron was still produced as wrought iron, which was semiprocessed into bar iron. At the middle of the century, some 70 percent of all British pig iron was produced as bar iron.

Growth in this industry continued more or less consistently over the first half of the nineteenth century (Hyde 1977). Annual wrought iron production peaked at some 3.5 million tons in the early 1870s. By 1881, production had dropped to little more than 2.5 million tons a year. Some of Britain's iron makers had turned their attention to the making of steel, which was still costly and extremely difficult to manufacture. Although their first efforts were characterized by very irregular quality, these early steel producers were starting to supply the cutlery trade centered at Sheffield. The invention of the crucible process for making steel took place around 1850 at Sheffield. The

process eliminated the older deficiencies and, since it had not been patented, was quickly copied. British steel production grew from just 329,000 tons in 1871 to more than 1.7 million tons in 1881. The Steel Age had replaced the Iron Age.

The Introduction of Steam Power

The next major innovation in the iron industry was the adoption of steam engines to replace water power (Hills 1989). Although the first use in the metals trade occurred in 1742, steam engines did not become common until after 1775. At first they were used in conjunction with water power; steam-powered pumps were used to pump water back upstream for re-use by the water-wheel–powered bellows. However, by 1790, steam engines were in regular use to power bellows and hammers directly in iron smelting and forging. Not long afterward, steam engines began to be used as the primary power source at rolling and slitting mills as well. The major impact of the steam engine was to eliminate the requirement for locating mills only where water power was available. Instead, new mills came to be constructed close to coal fields, thereby reducing the cost of shipping coal from the mine to the mill.

Both the steam and railway industries in Britain owe their development to demands of the country's coal industry. Flooding in coal mines was the driving force behind development of a practical way of pumping water. At first, teams of horses or men were the only consistent power for pumps. These could only pump out relatively shallow pits. The first piston-operated steam engine was invented by Thomas Newcomen around 1698 as a way of drawing water out of deep mines. By 1712, Newcomen engines were in daily use at mines across Britain. Newcomen engines continued to be used until into the 1800s. Although relatively simple in design and operation, they were also inefficient.

Greater efficiency had to wait until James Watt invented a greatly improved engine in 1765. Not only did Watt's engines use far less coal to produce the same amount of power, they could be constructed small enough to be used in other applications as well. It wasn't long before Watt engines were applied in the textile industry, and, not long afterward, in the iron industry.

Revolution in Transportation

The revolution in transportation that steam-powered railways brought to Britain actually began in the late eighteenth century with what Briggs (1983) called a "natural rather than a revolutionary

development": the building of canals to augment existing river systems. The great age of canal building peaked in the late 1790s, but continued long into the railway-building boom of the 1840s and 1850s. Before canal building stopped, some 4,000 miles of improved inland waterways served British industry.

Like their later counterparts, railways, canals were primarily built to serve industry, particularly coal and bulk agricultural products. The first canals were built to link the country's more important river systems, such as the Mersey, Severn, Thames, and Trent. Railway building finally put a stop to canal construction, and many improved waterways fell into disrepair, unlike the practice in continental Europe where inland waterway construction still continues—the great Rhine-Danube canal link opened in the 1990s to immediate success. Barges on rivers and man-made canals remain an important and growing component in the European Union's inland transportation system, while Britain's canals are almost exclusively maintained for recreational use.

Britain's first railways emerged out of the need to move large quantities of heavy materials at mines. By 1775, some innovative mine operators had started to install flat iron plates over timber rails used for animal- or human-pulled ore carts. The iron plates were used to extend the life of the wooden rails. In a very short time, angle iron came be used instead of flat plates, with the vertical piece installed outside of the cart wheel. This made it easier to keep the cart wheels on the track. Cart wheels were typically constructed of a flat, wrought-iron rim installed over a wheel with wooden spokes, often with a cast-iron axle hub. By 1789, flanged iron wheel rims rolling on iron rails had replaced flat rims and angle-iron plates. It is thought that the width of early carts was typically around five feet. However, when a flange was added to the inside of the wheel instead of an angle on the outside, the width was smaller by two wheel widths. This dropped the distance between wheels to 4 feet, 8 inches, which became the standard gauge of nearly all the world's railroads (Cornwell 1976), although narrow-gauge railways of three feet and wide-gauge of five feet are still functioning today. The widest gauge ever used in any great amount was the seven-foot gauge used in Russia.

Initially, early railroad wheels and rails were both made of either cast or wrought iron. However, cast iron rails proved to be too brittle, and were soon replaced with wrought iron. Wrought iron rails served until after 1857, when they came to be replaced by steel rails. Steel rails lasted as long as 16 years in daily use, whereas wrought iron rails often had to be replaced every three months.

The first railway in the world, consisting of a steam locomotive hauling loaded rail cars and passenger cars containing paying passengers in

the form of a train traveling along a track of iron rails, was the Stockton and Darlington Railway, officially opened on Tuesday, September 27, 1825 (Ferneyhough 1975), although fare-paying passengers were not carried until 1833 (Briggs 1983).

By 1800, stationary steam engines were widely used in industry to power machines and pump out flooded mines. These early steam engines were too inefficient and bulky to be used for locomotion. Several technological advances, beginning with James Watt's separate condenser and Richard Trevithick's high pressure engine, soon made it possible to consider steam-powered moving engines. Trevithick tested one of his high pressure engines as a locomotive in 1804, and again in 1808 at an exhibition. However, the first successful use of his designs did not occur until 1812. Additional improvements followed, typically in attempts to improve the transportation of coal. A line to connect a Midlands coalfield with the sea was finally placed in operation in 1825. The coal company had appointed George Stephenson its chief engineer for the line. Stephenson copied other designs, such as the multitube boiler, and added improvements of his own to the locomotive engine, so that by 1830, he was able to produce the first practical engine, the Planet. Stephenson's design became the basic pattern for all steam locomotives for the next hundred years (Cornwell 1976).

Meanwhile, a group of local merchants and miners had developed a second railway, the thirty-six-mile-long Liverpool and Manchester Line, which began operating in 1826. This line, although roughly the same length as the Darlington, was much more substantial, as it was double-tracked for its entire length. However, existing engines were not powerful enough to function without animal help. In 1829, the new railway's owners announced a contest with a prize of 500 pounds sterling for the builder of the locomotive that best fit their needs. Besides a list of other tough stipulations, it had to be able to haul a load three times its own weight for a total of 30 minutes at a speed of 10 miles per hour. Of the three serious contestants, Stephenson's design was a clear winner, and was purchased for use on the line. His successful engine, the *Rocket*, can be seen today resting in London's Museum of Science.

After 1830, steam engine development proceeded at an astronomical pace, with the Stephenson engine company leading the way. Soon, Stephenson engines were being sold all over the world, as other nations jumped into the railway age. The next several decades were to constitute the first great railway building mania. Track laying and railway company forming continued almost unchecked. By 1841, there were some 1,500 miles of track built in Britain. Although many of the early rail companies failed, enough succeeded so that over the next 10-year period, to 1851, there were some 6,500 miles of track open in

Great Britain and more than 8,000 miles by 1855 (Briggs 1983). Few gaps remained in the country, and those would be filled very quickly.

Merger Mania

Following a trend that was taking place both in the United States and Germany at this time, a number of British firms elected to grow by merger. Mergers were most prominent in the textile, brewing, iron and steel, cement, and tobacco industries. Blackford (1988) attributed the British merger trend less to a desire to reduce costs of production than to simply limit competition and preserve the status quo. British firms had been hurt by the Great Depression of the last two decades of the nineteenth century. A salient goal in merging was survival; only secondarily was merging a strategy to improve their international competitiveness.

The pattern of mergers that began during the late 1800s picked up again after the end of the World War I. Among the first to adopt the growth-by-merger strategy were firms in the metals, food processing, chemicals, and electrical equipment industries. During the decades of the 1920s and 1930s, some 4,000 British companies merged. As a result, big business finally became more common in the United Kingdom, even though it did not significantly improve the firms' competitiveness.

Behind the "merger mania" first of the late 1800s and again in the 1920s and 1930s, was a heightened state of global competitiveness in all of the industries that Great Britain had once dominated. Particularly effective competitors were the newer, larger, and more efficient companies in Germany and the United States. This foreign competition, combined with domestic difficulties brought on by economic depression, labor unrest, and two costly wars, effectively crippled the British economy, driving British business further and further into decline. The next chapter brings this discussion of the growth and development of the business system in Great Britain to the great changes that took place in business as a result of the global depression of 1929 and the interwar years.

Conclusion

After 1870, British business was forced to accept the fact that growth required a major change in organizational structure. The joint-stock company was making slow inroads in most types of industry. By 1885, joint-stock companies accounted for somewhere between 5 and 10 percent of the country's major business organizations. Only in several industries, including shipping, iron and steel, and textiles, were

they becoming the dominant form (Payne 1988). The vast majority of firms continued to be unincorporated family businesses through the 1880s.

According to Harley (1991), delays in adopting the corporate structural form severely inhibited the ability of British business to compete after 1900. The delayed adoption of improved organization and management techniques resulted in the continued support of inappropriate old industries. While the United States was turning to large, horizontally and vertically integrated corporations, British businesses by and large failed to benefit from economies of mass production.

The British industries that remained dominated by family ownership and management included almost all the firms in the production of wool and woolens, as well as the firms producing textiles and apparel, including cotton, linen, silk, jute, lace, and hosiery. Almost all of Britain's pottery, cutlery, and engineering firms were still privately owned. Brewing was almost exclusively a family operation, as was residential construction and the production of food products. Nearly 100 percent of the nation's retail shops were privately owned and operated (Clapham 1926).

The era of British entrepreneurial industrial dominance that shaped what came to be known as the "long nineteenth" century ended with the outbreak of World War I. In 1914, only a few large limited liability firms could be found in Britain. Instead, business in the United Kingdom was characterized by a predominance of small, private, family controlled enterprises. This mix continued to characterize the British business system despite a rash of mergers that took place during the 1880s and 1890s.

Discussion Questions

1. Why was Great Britain known as the "workshop of the world" in the seventeenth and eighteenth centuries?
2. Describe the changes that took place in science and industry in Britain during the eighteenth century and explain the role those changes had in shaping the business system in Britain.
3. What role did industrial market competition play in the industrial revolution in Britain?
4. What were the navigation acts? How did they influence the growth of commerce and trade in Britain?
5. What caused British commerce and industry to fade during the last half of the nineteenth century?

Chapter 5

Global Leadership in Commerce and Industry, 1815–1914

From the end of the Napoleonic Wars in 1815 up to a decade or two before World War I in 1914, British manufacturing and international trade dominated the rest of the world. After 1919, however, its leadership entered into a long, slow decline, to be overtaken in the West eventually by both Germany and the United States. Only since the last of the 1980s and early 1990s has it been able to stop the decline and turn itself around. Today, the business system of Great Britain appears to have returned to a leadership position of influence in banking, finance, and the petrochemical industry. Britain's businesses also play an important role in the nations of the European Union and in global markets as well.

The nineteenth century was Britain's great economic growth period. When the twentieth century began Britain had the strongest economy in the world. Within just a few years, however, British business stumbled into the pattern of slow decline that characterized the nation's business system through most of the twentieth century.

Stages of British Industrial Leadership

The early years of the period from 1815 to 1914 constituted the glory years of British business. British businesses dominated foreign trade, textiles, iron and machinery production, banking, insurance, and shipping. It was not a homogeneous century of growth. Rather, development took place in four distinct periods (Figure 5.1). The years from 1815 to about 1842 constituted the first period. It was a time characterized by mixed growth and capital formation. It was the

Stage	Period	Defining Characteristic
I	1815–1842	The age of iron and steam; development of Britain's transportation system; military ventures
II	1842–1873	The boom years of the Victorian era; Britain becomes the "workshop of the world"; growth of the empire
III	1873–1897	The age of the great depression; dramatic drops in prices and wages; aggressive competition from U.S. and German industry
IV	1896–1914	The age of steel: economic Indian Summer; the calm before the storm of World War II; industry recovers; continental arms race

Figure 5.1 Stages of British commercial and industrial leadership.

time when steam power was introduced to textiles manufacturing and advances in smelting technology made iron cheap and plentiful. Britain's transportation system began to take shape. They were the time of Britain's age of iron and steam.

The second period, from about 1842 to 1873, was a period of regular and rapid growth. These were the years of the great boom of the Victorian era. Advances in one area of technology after another played off one other to enable Britain to become the workshop of the world (Ensor 1992). Growth in the Victorian economy was led by construction of Britain's railways, a pattern that was also driving development in the United States and Germany. At the end of this period, a new steel industry began to take the place of the older wrought iron industry, leading Britain into the age of steel.

Even while this industry was taking shape, Great Britain was struggling through a long depression in the third stage. Often called the Great Depression, although it might be more appropriately called the Great European Stagnation, it began in 1873 and continued until 1896 (Tames 1972). It was characterized by an almost universal decline in prices and profits, although current research suggests that economic development continued in Britain and most other industrial nations, albeit at a much slower rate than during the preceding boom period.

The fourth period, 1896 to 1914, called the period of Indian Summer by Tames (1972, 25), was in many ways the calm before the storm. Competition with Germany in the building of steel battleships served to prime the economic pump. Elsewhere in the world, the

automobile industry was replacing the now diminished railroad building sector, as were the great industries of the second industrial revolution. These included chemicals, electricity, optics, communications, and distribution. This global growth created great demand for British coal and machinery, although her textile exports were being eclipsed by both the United States and Germany.

As this century came to a close, structural deficiencies in the British business system began to pick away at the last vestiges of world economic dominance. As a result, by every industrial measure, Britain would soon no longer be the world's dominant industrial power. Her economy continued to grow, but at rates lower than her two greatest competitors, the United States and Germany, although she continued to far outpace France and other continental nations.

The Age Iron and Steam, 1815–1842

The early factory system evolved in Great Britain during the last half of the eighteenth century. Shortly afterward, the products of the workshops and early factories of that period were well on the way to dominance in the many markets of continental Europe. Britain's businesses grew rapidly until Napoleon put into force his "Continental System," closing the continent to British goods. British merchants and manufacturers had to quickly find replacement markets in Asia and South America, in addition to supplying many of the manufactured goods needed in the rapidly growing North America. These markets would become vital for Britain as the 1700s approached its end and Europe and the United States became self-sufficient in Britain's primary export products.

The Napoleonic Wars ended in 1815 with France's defeat at Waterloo. For the next decades, Europe eagerly sought British textiles, iron, and manufactured goods—and particularly British machinery—as they played catch-up with the economic lead of Great Britain. As they slowly developed their own economies using British-made machines for a head-start, Britain's continental customers began to erect protective tariffs, behind which their infant industries could grow and prosper. This trend continued as the century proceeded, so that as the century neared its end, Britain's most valuable export had become coal to drive the manufacturing engines of Europe, while exports of the earlier products of the industrial revolution were exported to markets farther and farther away.

Britain's industrial revolution began again in earnest after 1820, when the earlier defeat of Napoleon brought peace to Europe and re-opened

continental markets. The most important changes were taking place in the textile industry. However, equally important, if not more so, were the revolutionary changes in transportation, which made it possible for British manufacturers to get their products to market.

Growth of the Textile Industry

From 1820 to 1850, a complete transformation took place in Britain's textile industry. Cotton production had much earlier supplanted woolen goods as the most important part of Britain's textile industry. From a social point of view, this transformation had a disastrous effect on the more than 250,000 cottage-based hand-spinning and handloom weaving workers. From an economic point of view, however, Britain's lead in industrialization could not have been sustained if this transformation had not taken place. The many textile industry inventions and innovations applied to both spinning and weaving had enabled handloom producers to greatly increase production. In the process, however, these same inventions were also greatly depressing the earnings of the cottage workers. In addition, production by hand remained a bottleneck; it could not meet the growing needs of the global market for British cottons.

Impact of the Power Loom

The power loom, although invented in the last decades of the 1700s, was not adopted in large numbers until after 1815, when Britain producers regained access to the continent. Europe at that time was a market starved for all types of consumer goods. In 1810, the value of Britain's cotton exports was ten times what it had been in 1780. In 1820, after the war, cotton exports trebled again. While the demand for wool cloth had proved to be inelastic, the demand for cotton goods appeared to be highly elastic, and seemingly insatiable. Cotton producers hurried to adopt the labor saving devices that not only made it possible to produce far greater quantities of goods, but also goods of much higher quality.

As Table 5.1 illustrates, Britain's handloom weavers were still an important employment category until the 1830s, when their numbers took a dramatic drop. By 1840, handloom weavers were permanently outnumbered by power-loom weavers. In the late 1850s, the handloom industry all but disappeared, taking with it the livelihoods of some 250,000 or more men, women, and children, who either starved or migrated to the cities and factory towns looking for any kind of work available. Particularly for women and children, the new factories provided the needed employment opportunities.

Table 5.1 Comparison of power vs. handlooms in Britain, 1795–1861

Year	Power Looms	Handloom Weavers
1795	—	75,000
1813	2,400	212,000
1820	14,150	240,000
1829	55,000	225,000
1833	100,000	213,000
1835	109,000	188,000
1845	225,000	60,000
1850	250,000	43,000
1861	400,000	7,000

Source: Crouzet 1982, 199.

The mechanization of the cotton industry was completed by the middle of the nineteenth century. At first, power was provided by animals, but in hardly any time at all water wheels provided the power for most textile factories. After the American Civil War ended and supplies of raw cotton from America became available again, water power was itself supplanted by steam power. The British business system, led by the growth in coal mining, iron making, and the cotton industries, would come to full maturity over the next 50 years.

Changes in Transportation

In 1800, Britain had a reputation for having the worst roads in Europe (Deane 1979). Turnpike tolls and road disrepair continued to act as a brake to development of Britain's productive capacity outside of London or a few port cities. A number of turnpike acts allowing limited liability corporations to be formed in order to build and operate a section of toll road were passed in the last half of the eighteenth century. However, road construction and repair remained spotty at best and in too many cases nonexistent. However, by the end of the century enough roads had been constructed for a network of mail coaches to be in operation, with London at their hub. By the time commercial turnpike construction reached its peak in 1830, there were some 20,000 miles of improved roads and highways in the country.

Before the industrial revolution could take the next great leap forward something else was needed: a way to transport heavy raw

materials such as coal, agricultural products, and finished manufactured goods from their sources to domestic markets or ocean shipping ports. The answer of the time was transport by water. Britain had long taken advantage of her river system, making a number of inland waterway improvements prior to 1750. At the same time, with no point in the country more than seventy miles from a coastline, the country's coastal shipping network was already well established. It became even more so after 1815 when sailors no longer faced impressments into naval vessels, nor the vessels themselves subject to capture or destruction by the French or her allies' privateers.

Beginning first with a spurt of construction during the 1760s and 1770s, a privately financed inland waterways system quickly began to solve British industry's immediate transportation needs. A second spurt followed after the end of the American Revolutionary War in the 1780s and 1790s, peaking near the end the century. At first canals were built to transport coal from mines to ports for export and towns for use as fuel for the many types of industries that depended on it. These included blacksmithing, brewing, tanneries, nonferrous metal smelting and fabrication, and many others. Coal was king for canals, just as it would soon be for almost all of British industry. When canal construction ceased in 1858, there were more than 4,000 miles of improved inland waterways in Britain.

Figure 5.2 Narrow boats.
Source: Courtesy of PublicDomainPictures.net).

Together, the new turnpikes and inland waterways system resulted in a dramatic lowering of the costs of heavy raw materials. They also served to centralize new industries along the paths of the new roads and canals. Ultimately, they made it possible for producers of consumer goods, such as the potter Josiah Wedgewood, to get new mass-produced goods to market cheaply, safely, and on a regular basis. The speed and reliability of the new transportation system sparked greater development of the industrial machinery and consumer goods industries, while also making possible the development of an extensive retail system. Soon, everyone in Britain with a paying job could dream of owning products that for centuries had been restricted to what was a small body of aristocratic elites.

Changes in Finance and Management

Finally, one of the canal system's greatest indirect benefits came from its financial and management structures. Most canals were built with long-term capital investments by private individuals, with some funds coming from the people who would benefit most from their construction—industrial regions, towns, and manufacturers' associations. In this way, British business became accustomed to joint-stock financing. In the return, canal construction helped to develop a cadre of investors who were ready and eager to step in when the global railway construction boom began in the 1840s. The tremendous need for capital to build the world's railway networks was largely met by these and similar British investors. These same investors soon helped London become the financial center of the world. Deane (1979) considers creation of the new kind of investor that canal construction brought forth to be one of the most important developments of the early industrial revolution.

Furthermore, canals were not operated by their investors, but rather by some of the world's first professional industrial managers. Few if any of the new managers had any financial interest in the canals themselves. Many of the skills necessary for managing large, geographically dispersed enterprises such as railways and global shipping networks were first developed in Britain's extensive turnpike and canal transportation system.

Coal, Iron, and Cotton, 1842–1873

Britain's economic boom during the first half of Queen Victoria's reign was driven by the growth of just three industries: mining, iron

making, and continued advances in textiles (Crouzet 1982). Three main factors characterized their growth. First, industrial production in Britain grew at a rate much higher than in any other nation at the time. This rapid growth did not slow down until after the middle of the century. By the end of Victoria's reign in 1901, however, the volume of Britain's industrial production would be five times greater than it had been in 1820.

The second factor behind the great boom in Britain's business system in this period was the rapid spread of technological and scientific advances. These advances were applied to production and motive power. New machines were invented, improved and made more precise and complicated. And coal-fired steam engines provided more and more of the power for those machines.

The third major factor had to do with the structure of the enterprise itself. At the beginning of the industrial revolution, all businesses had been small, highly entrepreneurial activities. They had been financed largely by the business person's own family or with profits earned from the owner's earlier trading activities. Manufacturing had largely been carried out by individual "subcontractors" or piece-workers that did the work in their own homes or small workshops. This, of course, was the cottage industry. By the 1850s, the majority of businesses still remained small, but many were becoming much larger, as more and more of the work was being done in factories and mills instead of by subcontractors. With this change, the pace of work itself soon came to be directed by the speed of the factory engine, not the individual worker.

Also related to the changing structure of Britain's industry during this time was the decline in the number of male workers involved in production, and the great increase in the numbers of women and children who worked for lower wages. Most handloom operators had been men, but women and children predominated on the power loom factory floor.

Predominance of Small Businesses

Britain's business structure during the middle years of the nineteenth century consisted almost exclusively of individual ownership or small partnership firms. These were passed from one generation to the next in the way landed estates had always been transferred (Briggs 1983). In addition, business and merchant families tended to intermarry; this, rather than mergers or buy-outs, were the most common means of early integration growth.

There were two reasons for the predominance of individual ownerships. First, the public's outcry after the South Sea Bubble burst had resulted in passage of legislation to control speculation and stock manipulation by forbidding all but officially approved formation of joint-stock companies. The second reason had to do with the nature of the enterprise itself. British businesses at this time, including manufacturing enterprises, tended to be relatively small. They had modest needs for long-term investment capital. Britain's entrepreneurs were often able to raise their start-up capital from friends, families, or, later, by mortgage loans on real estate. They also believed that only they knew what was best for their companies; a board of directors sticking its nose into areas where it didn't belong was an anathema to them. Absolute ownership meant absolute control.

As the century passed its halfway point, however, the capital needs of the largest new factories were reaching the point where traditional sources were becoming insufficient. To establish and construct the new iron and steel mills, for example, required very large sums of money. Furthermore, the inability to incorporate meant that owners retained full financial responsibility for their enterprises; creditors could go after the owners' private property as well as attaching the firm's assets. To relieve this fear of personal loss of everything, pressure was placed on Parliament to make incorporation and limited liability possible.

Laws Allowing Incorporation

Parliament passed a series of new acts to make incorporating easier, while also repealing older restrictive laws. These began with repeal of the Bubble Act in 1825, followed by a tentative liberalization of remaining laws in 1837 when incorporation by an administrative process, instead of a private act of parliament, became possible. Joint-stock status was made available to anyone who desired it, provided they complied with disclosure requirements. While these early legal actions were well intentioned, they did not result in any widespread use of the procedure. The liberalized laws did not go far enough; they neglected to provide potential stock holders the benefits of limited liability.

Only in the last half of the 1850s was this oversight rectified. Additional laws, the first in 1856 and the last in 1862, consolidated the many acts on the books and finally made full limited liability possible. However, even after limited liability legislation was passed, few of Britain's owner-managers took advantage of the opportunity. Conversion to corporate status did not begin in earnest until well into the 1880s.

The Great Depression of 1873–1896

The great depression of 1873–1896 began on the European continent when a speculative railway-forming boom in Austria and Germany collapsed in April of 1873. Business failures and economic hardship soon spread to Great Britain and the United States. By 1876, the decline was general throughout Europe and the Americas.

The 1878 failure of Scotland's greatest industrial bank, the Bank of Glasgow, precipitated similar bank failures in other parts of Britain. Except for agriculture, where prices remained very low for almost two decades following the collapse, actions taken by the Bank of England were enough to slow the decline and begin a mild recovery. However, another slump began several years later with collapse of a powerful French bank. Wages and prices fell dramatically, dragging employment down with them and reaching their nadir in 1886 with street riots across Britain. However, the economy began to recover enough the next year so that by 1893 the businesses that had survived the depression years were once again prospering.

The industries contributing most to Britain's prosperity in this, the Indian Summer of her economic dominance, were still led by textiles, but others were quickly catching up. The production of steel and products manufactured from steel were key industries. Both the new ages of iron and railway building had occurred during Britain's great Victorian boom period from 1843 to the middle of the 1870s. Great Britain's steel age, with its closely related machinery, shipbuilding, and construction industries, began as the first engines of the economy—textiles, coal, and iron—were well into their decline stages.

Britain in the Age of Steel, 1870–1914

The first invention that made it possible to produce steel of consistent quality, cheaply, and in great enough quantities to bring its price low enough to stimulate its greater use, was patented by the Englishman Henry Bessemer in 1856. Bessemer's process produced steel by blasting hot air through liquid iron; this burned out excess carbon and other impurities. However, it could only be used with iron ore that was not contaminated with large amounts of phosphorous. Most French and German iron ore was phosphoric, and thus could not be used for Bessemer steel production. Much of Britain's ore was also tainted with phosphorous, but Britain's steel producers had long enjoyed easy access to nonphosphoric iron ore from Sweden and Spain. In this way, Britain's steel producers were able to quickly

outpace their continental competitors. In the 1880s and 1890s, Great Britain became the world's largest producer of steel. Despite that leadership, British steelmakers could not produce enough to satisfy total domestic and foreign demand; steel continued to be imported in ever larger quantities from Sweden, Germany, and Belgium, thus abetting development of the steel industry in those nations as well.

Steel and Britain's Railroads

After the 1870s, the largest users of steel were the railways. Britain's rails were all made of steel after the 1870s, when the country's rail network had reached more than 15,650 miles. Another 2,285 miles were added over the next decade, and by 1890 the United Kingdom had more than 20,000 miles of railways in operation.

The rail system became fully integrated two years later when all tracks were made the same gauge. When the last broad gauge (five feet rather than standard gauge, which is four feet, eight-and-one-half inches) pulled out of London's Paddington Station, the last purely broad gauge stretch of line in the country, the Great Western Railway, was converted to standard gauge (Day 1985).

New Steel Production Processes

A way to produce high-grade steel from phosphoric ores in Britain, France, and Germany was invented by another Englishman, Sidney Gilchrist Thomas, in 1879. When used in the Bessemer process, the Gilchrist-Thomas method (the method is also called the Thomas-Gilchrist process, the Thomas process, or the basic process) made it possible for European steel producers to use low-grade phosphoric iron ores. The method used to make steel made without the Gilchrist-Thomas process was referred to as the "acid" process. Since each method produced steel with different characteristics, both the acid and basic methods were used in the Bessemer and the open-hearth steel processes. These and related technological advances helped Britain to lead the word in 1880 in production of steel, with more than 1.3 million metric tons of steel produced. That lead was only marginally ahead of Britain's competitors and did not last for long, as production statistics in Table 5.2 illustrate. By the outbreak of World War I in 1914 the United States nearly tripled and Germany nearly doubled the total amount of steel produced by both processes in Britain combined.

Although few British producers felt the need to change their production methods, the Gilchrist-Thomas process was quickly adopted

Table 5.2 Steel production in Britain, the United States, and Germany, 1875–1914 (in thousand metric tons)

	Bessemer			Open-Hearth			Other	Total
	Acid Method	Basic Method	Bess. Total	Acid Method	Basic Method	O-H Total		1914
Great Britain								
1880	–	–	1,061[1]	–	–	255[1]	–	1,316
1885	–	–	1,324[1]	–	–	594[1]	–	1,918
1895	–	–	1,560[1]	–	–	1,753[1]	–	3,313
1900	1,275	499	1,774	2,910	298	3,208	–	4,681
1905	1,419	587	2,006	3,093	808	3,901	–	5,907
1910	1,157	651	1,808	3,066	1,604	4,670	–	6,478
1914	810	490	1,300	3,741	2,922	6,663	–	7,963
United States								
1880	975	–	975	–	–	92	65	1,132
1885	1,378	–	1,378	–	–	121	54	1,553
1890	3,348	–	3,348	–	–	466	67	3,881
1900	6,066	–	6,066	774	2,309	3,038	96	9,245
1905	6,928	–	6,928	1,049	7,093	8,142	101	18,171
1910	8,541	–	8,541	1,100	13,876	14,976	162	23,679
1914	5,645	–	5,645	820	14,765	15,585	107	21,337
Germany								
1880	679	18	697	–	–	36	–	1,203
1885	379	548	927	–	–	276	–	2,232
1890	351	1,493	1,844	–	–	388	–	4,025
1900	223	4,142	4,365	148	1,997	2,145	136	6,646
1905	424	6,204	6,628	166	3,087	3,253	186	10,067
1910	171	8,202	8,282	140	4,974	5,114	383	13,699
1914	100	8,144	8,244	275	5,946	6,221	481	14,946

[1]individual amounts not available
Source: Chandler 1990, 282.

abroad. In Germany, which had taken over the phosphoric iron-rich territories of Alsace and Lorraine from France, it was found to be ideal for their conditions. In just 15 years after introduction of the Gilchrist-Thomas method, total German steel production permanently

passed the annual production of steel in Britain. After 1900, to feed her extensive machinery manufacturing and other industries for which steel was needed, Britain became Europe's largest importer of raw steel.

Steel in Shipbuilding

Between the last half of the nineteenth century and the outbreak of hostilities in 1914, Britain experienced its greatest period of iron and steel commercial and military ship construction. The ships were first built of British iron plates, but shipyards changed over to British steel as more became available. Although iron clads and composite iron and wooden ships had been built since the early 1800s, the use of iron for ship construction did not come close to completely supplanting wood until after the 1860s. By the mid-1880s, steel had completely superseded wrought iron for ship construction.

Nearly all British exports and imports were carried in British-flag vessels. Of these, the first really successful paddle-propelled steamship to cross the Atlantic Ocean was the British vessel *Great Western* in 1838. Not long afterward, paddles gave way to screws (propellers) for large cargo and passenger steamships. At first, steam engines were so inefficient and dangerous that most ships used a combination of sail and steam. However, as steam engines became more and more fuel efficient, sails gave way completely to steam. The greatest advance in propulsion engines for steamships at this time was the invention of a compound steam engine, which used the same steam in two or three cylinders of successively larger diameter, one after the other. By the time steel was replacing iron in ship construction, compound engines, using high-pressure steam, had been fully developed and were in general use at sea (Hills 1989).

Contribution of Overseas Trade

As late as 1890, overseas trade remained the most important contributor to Britain's economic success. British exports in 1890 were greater than that of the next two countries put together: for Britain, export values equaled around $1.2 billion, while for France it was just a little more than $490 million and around $580 million for Germany (Ensor 1992). The importance of trade was offset by a decline in the textile industry, which had been Britain's leading export for decades. Textiles constituted the industry with which Britain had begun the industrial revolution. As the nineteenth century was drawing to a close, however, the traditional markets for British cottons,

Table 5.3 Top British firms[1] capitalized £1.9 million or more in the first decade of the 1900s

Industry	Number	Percent of total (n = 52)
Brewery	17	33%
Textiles	10	19%
Metals/shipbuilding/armaments	9	17%
Chemicals, including soap	4	8%
Farm products processing, including tobacco	8	4%
Miscellaneous	4	8%

[1]Large transport firms and postal service not included.
Source: Floud 1997, 112; from data in Jeremy 1991, 94.

the United States and Europe, had retreated behind high tariff walls and had become more or less self-sufficient, as well as being global competitors. Britain turned to other markets, especially those in Asia and South America, which successfully replaced the markets she had lost. These exports were almost exclusively carried in British merchant vessels, to the further benefit of the British economy (Beasley 1989).

The business system that survived the 1880s slump was far different from that which had existed before 1870. What, how, and why the business system changed after its great victories during the Victorian era are open to many different interpretations, however. British industry at the close of the 1890s, while remaining a world leader, was still primarily made up of small businesses. Only a few more than fifty firms were capitalized at more than £1.9 million (Table 5.3). With fewer than fifty workers, most were still more appropriately considered "workshops" than factories. The one prominent exception was the Armstrong and Whitworth engineering armaments factory with 17,310 workers prior to World War I. Only after 1890 was it common to see mergers occurring, particularly in the brewing industry.

Conclusion

Great Britain entered the nineteenth century with a victory in the Napoleonic Wars, master of a global system of colonies that functioned as more or less captive markets for her industry and commerce,

a navy that ruled the oceans of the globe, and a leader in industrial capacity and innovation. She left the century struggling to maintain market leadership in the face of stiff competition in all sectors. The tremendous costs in economic and loss of human resources of the World War I left the nation bankrupt.

In most of the nineteenth century Great Britain led the world in commerce and industry, so much so that its envious competitors called it the workshop of the world. However, by the end of the century it had fallen from that perch and, instead, the British economy stagnated to the point that it spawned what became known as the British Disease. The traditional reasons given for the failure of British industry to transform itself to meet growing competition and technological advances has been that the decline was caused by (1) the powerful trade unions that obstructed the self-regulating market economy noted by the philosopher Adam Smith; (2) government intervention; and (3) unwillingness of business owners and managers to oppose forced restrictions in the management liberties (Aldcroft 1982). Trade union power and intervention by the state in pricing, labor rates, and other management tasks were major causes of the decline of British industry in the years leading up to World War I.

Elbaum and Lazonick (1984), however, suggest that this traditional rationale is largely erroneous. Instead, they attribute the decline to the closely held structure of most of British industry and commerce and the unwillingness of owner-managers to change to meet competitive challenges from industrial newcomers. They described the problem as follows:

> In such countries as the United States, Germany and Japan, successful twentieth-century economic development has been based on mass production methods and corporate forms of managerial coordination. But in Britain adoption of these modern technological and organizational innovations was impeded by inherited socioeconomic constraints at the levels of the enterprise, industry, and society. Entrenched institutional structures—including the structures of industrial relations, industrial organization educational systems, financial intermediation, international trade, and state-enterprise relations—constrained the ability of individuals, groups or corporate entities to transform the productive system . . . Britain's problem was that economic decision makers, lacking the individual or collective means to alter prevailing institutional constraints, in effect took them as a "given." In failing to confront institutional constraints, British businessmen can justifiably be accursed of "entrepreneurial failure." (p. 568).

Discussion Questions

1. Why was the nineteenth century Britain's great economic growth period?
2. Describe the four transition stages in Britain's global industrial and commercial leadership.
3. What were the factors that led to the growth in Britain's textile industry?
4. Describe the innovations that occurred in Britain's coal, iron, and steel industries.
5. Why did Great Britain lose its industrial and commercial leadership in the closing years of the nineteenth century?

Part III

Managed Commerce and Industry in Germany

Chapter 6

Foundations of German Commerce and Industry

Located at the center of the European land mass, Germany has long been a powerful force in the culture, thought, science, and commerce of Western civilization—a powerful force, yes, but not always a welcome one. Since the founding of the Holy Roman Empire—the First *Reich*—in 800 and continuing well into the middle of the twentieth century, Germany's neighbors have often struggled to come to terms with this often enigmatic nation. The so-called German problem is one that many have attempted to define; but few have succeeded (Sheehan 1981).

The German problem has revolved around at least three dimensions since the founding of the first German empire: *What is Germany? Who are the Germans?* And, *What is the German culture?* These have remained questions to which not even the German people could always agree on answers.

The first refers to the old "problem" of pinning down the identity of the German state. At times extending from the Baltic to the Mediterranean, from west of the Rhine eastward into what is now Poland, Germany has waxed large and small with time and circumstance. After 1945, the *What is Germany* question took on a new meaning, one shrouded in the global political and ideological competition that characterized the Cold War. The latest major change occurred only recently with the reuniting of East and West Germany that took place on October 3, 1990. The unification of West and East Germany may have led to the end of the Cold War, but has not yet fully answered all the questions about Germany. The question now addresses what

role a larger and more powerful Germany will play as the strongest economy in the European Union and in the world.

As for the Germans themselves—the *Who* question—by the time Roman legions first entered the region, the middle of Europe had long been the shifting homeland of many different Teutonic, Celtic, and Slavic tribes. Out these tribes grew six major groupings, or stems, that evolved into the German people today. The German culture question often has been in the forefront of people's minds, particularly in light of the many inhuman atrocities committed between 1933 and 1945. The question became: What sort of culture would sponsor two world wars in less than 30 years and foster genocide on such a huge scale? According to Sheehan (1981), the first stab at establishing a distinctive German culture began with Martin Luther's sixteenth-century revolt against the corruption of the Roman Catholic Church. His translation of the bible into German set the stage for establishment of a German scholarly language tradition and a public cohesive enough to want to read it in their mother tongue.

Defining Germany

In the nineteenth century, the German question first became a European-wide issue at the Congress of Vienna (1815), where victors over Napoleon met to hammer out the shape of post-Napoleon Europe. What to do with the hundreds of minor states and demesnes that were still scattered across the German landscape and those that had fought on the wrong side of the victorious Prussian-Austrian-Russian armies, dominated conference negotiations. Both Prussia and Austria sought rewards in the form of additional territories, with which they then hoped to dominate German Europe. The Rhenish Confederation that Napoleon had formed to serve as a buffer between France and Eastern Europe was dissolved, and the lands of the losing side, primarily those of the Rhine states that bordered France and of Saxony, became fair game for the victors.

Prussia and Austria's non-German allies also had an interest in the distribution of spoils. Great Britain's major objective was a Europe characterized by a balance of power, with no one state strong enough to interfere with her access to continental markets, her colonial empire, or with her global trade and commerce (Williams 1896). Russia's goals were more complex. She demanded and got control of most of Poland, but was unsuccessful in her drive for influence in the Balkans, which had long been Austria's traditional sphere of influence. When the negotiations were finally completed, the hundreds of independent

and semi-independent states of Germany had been reduced to just thirty-six. Austria remained the largest and ostensibly most powerful German state. Prussia was next, with Bavaria a distant third.

The German problem emerged again after Prussian-led German troops defeated the armies of Napoleon III's France, when it appeared in two forms. At the end of this short war Prussian Prime Minister Otto von Bismarck embarked on a program to unite all the remaining independent German states. The goal was to establish one sovereign nation under Prussia's leadership. For the new nation that emerged, the "problem" became finding ways to accelerate and strengthen growth of the new Germany, economically, politically and militarily, while at the same time maintaining the semblance of a balance of power in Europe. This power balance was a major concern of both the United Kingdom and Russia. Externally, the rapid economic development occurring in the United States was also seen as a threat, with the potential of forever dooming Germany to second place economically and politically (Calleo 1978).

Although late to the field of major political powers, the newly unified Germany that emerged in 1871 quickly became a force to be reckoned with, both within Europe and internationally. Over the next 20 years, Germany underwent her most intensive period of industrialization. Her economic power soon surpassed Great Britain's, and was second only to that of the United States. For Germany's continental neighbors, the German problem rapidly became one of learning how to compete with Germany's increasingly competitive industry. High quality, less expensive, German-made products, particularly coal, iron, and steel and industrial machinery, were stealing market share from British, French, and Belgian industry. Only a high tariff wall kept them from dominating the U.S. market as well. Another manifestation of the German problem had to do with Germany's belligerence, and the war strategy she followed in 1914. A similar issue emerged with the rise of national socialism in the 1930s and Hitler's dragging Europe into another global armed conflict.

Until the early 1990s, the postwar German problem meant dealing with a divided Germany. West Germany was an important ally of the United States and Western Europe, while East Germany was a key member of the Soviet-dominated Eastern Bloc. When unification finally occurred in 1990, the problem became a domestic issue, as West Germany found itself increasing taxes to fund efforts at bringing the East German economy up to the West's level. Modernization of outdated industrial infrastructure and the clean-up of widespread pollution became a far more costly task than had been anticipated. With

Germany's attention redirected inward, her economy suffered. This had adverse economic effects across Europe.

Germany, again one nation and the largest and most powerful in Europe, is again the engine that drives the economies of her European Union partners. She has been a leading force for a full economic, social, and political European Union. For some Europeans, however, Germany's re-acquired power to potentially dominate all of Europe is the German problem in the spotlight once again.

The Land and People

Unified Germany consists of sixteen strongly independent states (*Lander, laender,* or *länder)* that extend across the heart of Europe. These states play a particularly important role in the governing of the nation, and are in some ways as independent as they were before they were merged into one larger federation under Prussian leadership in the late nineteenth century. Germany stretches southward from the North and Baltic seas to Switzerland and the Alps. Germany borders on the west with France, Belgium, Luxembourg and Holland, and on the north, northeast, and east with Denmark, Poland, the Czech and Slovakian Republics, and Austria.

Mitten in Europa

The phrase *Mitten in Europa* means that Germany is seen as being located in the middle, or in the midst of, Europe. However, over more than a thousand years, the actual boundaries of what is known as "Germany" have been continuously redrawn, and the land occupied by "Germans" has also varied with time and military, political, and social ebbs and flows. Suffice it to say, then, that a portion of the European continent that has come to be recognized as Germany lies somewhere near the middle of Europe. The continuity that has been lacking in the geopolitical character of Germany is, however, found in much of its topography. Broadly speaking, Germany consists of just three separate topographical areas. The northern third is made up of the sandy, relatively low, flat, and generally wet lands that begin at the North and Baltic seas and extend south and east. Below this region is a broad band of rolling hills, secondary mountains and valleys that run east and west across the center of the country. Further south are a narrow band of higher hills and mountains that ultimately merge into the Alps. These mountains separate Europe's northern lands from the sunnier and drier southern European regions.

For countless centuries, all of Germany was covered with dense forests, broken only intermittently by small clearings for subsistence farms. Draining these forests was a river system that flowed mostly from the south to the north, with only the Danube serving as a major east-west waterway. The rivers Rhine, Oder, Vistula, Elbe, Weser, and their tributaries all drain toward the northwest, north, and northeast. Throughout all of German history, each has served as a major avenue of communication and trade. They still do today. With the opening of the last major canal and locks in 1991, the Rhine-Main-Danube inland waterways of Germany extend from the Atlantic Ocean to the Black Sea.

The German People

The people who came to occupy the lands at the center of Europe were a mixture of the many waves of migrants that, after the fifth century, rolled across central Europe to more or less result in the ethnic patterns seen today. The Romans grouped the majority of these inhabitants of Germany's dense forests together as one, and referred to them as the *Germani*. Although originally the name of just one specific, non-Celtic tribe of the many spread across the forest land, Germani soon came to mean any of the Teutonic tribes in that part of Europe. These included Angles, Saxons, Suevi, Cimbri, and many others. At no time were the Germani a homogeneous people. Rather, they ranged from the darker skinned, black haired people of the mountains in the south; to blond, blue-eyed people across the center's rolling hills; to the often red-haired taller people in the north.

Later migrations and intermingling of the people in the center resulted in even greater diversity. In the west and southwest, a mixture dominated by Celtic and Roman blood emerged. While the people in the north remained predominantly Germani, the east became a mixture of Germanic and Slav, with the southeast adding Celt to this blend of ancient clans.

It is clear then, that no single "German" type can be identified. Instead, something else was needed to tie all these diverse ethnic threads together: the adoption of a common culture. When that common culture finally did emerge, it knit the many tribes together solidly into one people: the Germans.

Seeds of a German Political State

The seeds of what we now recognize as making up modern Germany began to take root around 800, and by the tenth century the first

German political state had appeared. By 800, the tribes and neighboring groups had come together to form the five major sociopolitical stems recognized as German today. These include Saxony, Franconia, Bavaria, Swabia, and Lorraine. Bordering on the North Sea was the duchy of Saxony. West of the Rhine, covering much of what is now generally the Netherlands, Belgium, and Luxembourg, was the duchy of Lorraine. Franconia was in the center of Germany, with its southern border touching upon Swabia. Below Swabia, to the southeast, lay Bavaria. It was from this core that migration eastward occurred from the eleventh to the thirteenth centuries, expanding the "German" core, with the local Slav population either pushed farther to the east or absorbed. Eventually, the lands from Pomerania and Prussia along the Baltic Sea, south to Silesia, Bohemia, Moravia, and Austria became German in character, if not completely in population.

The great eastward migration was stopped in the southeast when Hungarians refused to retreat further, and the east and northeast when waves of Bubonic plague in the mid-fourteenth century decimated the populations of all of Europe. The second half of the fourteenth century saw the deaths of from 20 to 30 percent of the total population of the German lands. The Black Death wiped out entire towns and villages, with thousands of acres of once-cultivated farmland returned to rough waste. Migration stopped altogether. It was not for another hundred years, when the plagues had run their course, that the land was slowly reclaimed and again subjected to the plow.

Stages of Growth

Germany's evolution from a widely dispersed group of related-but-unaffiliated Teutonic, Celtic, and Slav tribes to the beginnings of a modern nation state took place in three distinct stages. The first occurred when the western and southern tribes came up against the Roman Empire in the first century BCE To keep the barbarian tribes out of Roman lands, a long line of Roman fortifications, known as the Limes, was constructed. The fortifications began around the central Rhine, ran across central Germany to the Neckar River, and continued over to the northern Danube. Those Germanic peoples within the security of the Limes soon became an important part of the empire, while those outside waged almost constant warfare against their former kinfolk (Holborn 1973).

The second stage in this evolution began some 800 years later with Charlemagne's victories over the Saxons in the north and northwest. Charlemagne reigned as king of the Franks (the Franconian *Stem*)

from 768 to 814. Christianization of the region took place under his rule. From these victories came the first common government for all the Teutonic tribes, united under the hubris of the Holy Roman Empire. Taking the title of Charles I, the founding emperor, Charlemagne, reigned from 800 to 814. The consolidation he began ended with his death in 814 and the dividing of his empire among his three sons. The next hundred years were a period of further disintegration. A German king to rule over all parts of the empire was not elected until the 911—the year when German history may be said to have truly begun.

The third stage of Germany's early taking of her place in Europe coincided with a great wave of town formations in the west, and the colonization of lands to the east of the Elbe River—lands that had long been occupied by Slavic peoples. This period began around 1150 and ended with the ravages of the plagues in the mid-fourteenth century. At the beginning of this period, Germany was a land dominated by feudal society with manorial traditions, and an economy that was almost exclusively agrarian.

At the center of society was a military aristocracy, similar to the Samurai of feudal Japan, and ecclesiastical prelates. Lands not controlled by secular feudal lords were often church lands. Altogether, some five to six million people lived on the isolated manorial farms, or in very small hamlets or villages clustered around a castle, church, or both. The fields surrounding the hamlets were small clearings for farms. Beyond these were the huge, dense and dark forests where no person ruled (Havercamp 1988).

By the end of the third period in the mid-fourteenth century, Germany had become a region dominated economically by numerous towns, which were often joined together in groups called *leagues* for security and political power. Trade, commerce, and small-scale home-based industry had become evident in almost all parts of the region. German traders were regularly traveling to and taking up residence in the growing number of trade centers, such as Bruges and Antwerp, in order to market the products of German farms, mines, and factories.

Towns and Early Business Activities

After the tenth-century end of the depredations of the Vikings in the north, and Saracens and Hungarians in the south and southeast, the population in what was to become Germany began a slow but steady increase. Traditional farming methods and farmlands could not always provide enough food for the growing population. Therefore,

this period just before the time of the plagues saw the beginning of two separate trickles of migration from the agricultural, manorial core. Some heeded the offer of free lands east of the Elbe taken from the Slavs, while others left for areas closer to home, but far more foreign in culture: the somewhat larger regional market villages and slowly growing towns.

By the twelfth century, agricultural production had undergone significant improvement, both because of the extension of new grain-growing lands to the east, and replacement of the old oxen-pulled plow with a four-wheeled plow pulled by much faster horses. In this way, sufficient farm surpluses existed to support the growing exodus to the towns and cities.

As the new immigrants established themselves in the towns, they filled two key purposes. First, they served as a needed pool of cheap and plentiful labor for new manufacturing industries that were emerging. At first, these centered on weaving and other textile processes. As the second purpose, some of these new town dwellers became the artisans and craftsmen who helped increase the production of such craft items as iron work, leather goods, furniture, and the like.

As this crafts production increased, so did the need for traders to sell the surplus and import products and commodities not available locally. Craftsmen soon formed themselves into guilds, which filled many needs. For example, guilds provided continuity for the profession through vocational training and apprenticeship, they provided insurance protection for widows and families of members, and they kept prices high by keeping nonguild goods out of the local market.

Town growth from the eleventh to the fourteenth century thus fueled an unprecedented growth in industrial productivity, commerce, and trade. Trade items shifted as well, no longer dominated by the supplying of luxury goods to aristocrats and monasteries. Rather, it was increasingly focused on finding and providing the raw materials for the new industries, such as wool and hides, and then distributing the towns' finished products. In northern Germany, the textile industry was quickly becoming the dominant economic activity. In the center and south, the products of an emerging metal industry were being produced and distributed. The dense German forests were slowly being stripped for production of charcoal to fuel the budding metal-working industry. Salt, which had for centuries been mined in Poland and the Tyrol region in southern Germany, was now needed in greater quantities to preserve foodstuffs needed by the growing urban population. For example, salted fish from the North and Baltic seas was being traded southward into the hinterland. This industry,

together with amber and grains from the new farms east of the Elbe, helped establish the wealth of the Hanseatic League trading cities along the northern shores.

Another force that contributed to the growth of towns was the holding of trade fairs. Originally, fairs lasting as long as a week had been held for celebrating and observing local or regional religious holidays. But by the middle of the thirteenth century, some fairs had become major commercial activities, lasting as long as several weeks or longer. As these trade fairs grew in economic importance, some merchants—almost all of whom at the time had begun their business lives as itinerant peddlers—took up permanent residence within the safety and stability of the towns' walls. In this way, traders became more oriented to towns than to the widespread aristocracy, with the goods they traded and supplied increasingly including products used in everyday life. With this shift in focus came a new reliance on money to pay for goods.

Germany was one of the last major nations to fully industrialize, beginning as much as 100 years later than Great Britain, Belgium, the United States, and France. In the process, Germany chose not to follow the laissez faire, or market-driven, capitalism models of the United Kingdom and the United States. Rather, Germany industrialized in its own way, and in the process forged a new model, one which we now call *organized capitalism*, in which very large firms, operating together in cartels, *managed* the market rather than reacting to its forces (Parnell 1994).

Whether they were a cause of the new economic focus taking place in Germany during the late Middle Ages or a result, towns and cities were becoming increasingly important. Their contribution to the great changes in economic conditions occurring was summarized by Poole (1980):

> Nothing is more remarkable than the rapid constitutional and economic development of the towns of Germany during the first half of the thirteenth century; they advanced steadily in the face of opposition from the central government, nearly always in spite of fierce resistance from the territorial lords. Gradually they succeeded in freeing themselves from seigniorial domination, acquired the control of their own affairs, and developed their trade and commerce. Peace, security of the highways, and the suppression of tolls arbitrarily raised by the local lords were of primary importance to these flourishing communities of traders. (p. 112)

Two separate waves of growth marked the increasing importance of towns and cities across medieval Europe. The first began in the last

half of the twelfth century when a League of Lombard Towns was founded in 1167. Merchant and trading companies from this league regularly crossed the Alps to include representation in the towns of southern Germany. Led by Milan, Lodi, Verona, Bergamo, Padua, and others, these towns thrived on the revival of trade around the Mediterranean. The Lombard League traded the manufactured goods of Italy and the Middle East, and spices from the Orient, for raw materials and other products from the German and Baltic forests, rivers, and farms.

The second wave began almost a hundred years later in the north, first with the Hanseatic League along the North and Baltic seas (Box 6.1) and later with a group of central German cities, the Rhine League. Across northern Europe, the Hanseatic League of cities, founded in 1241, played an important role in establishing international trade from the Baltic and North seas with cities of the south through the north–south-running German, Polish and Russian river systems to the Black Sea, and land routes across the Alps. These cities traded fish, grains, amber, and other raw materials and commodities, importing southern manufactures and spices. The great federation of Rhine towns, founded in 1254, traded goods to the north and south, including the increasingly important metals and mining products of central and southern Germany, and both German and French wines. The Rhine League included such towns as Cologne, Worms, Strasbourg, and Basle among its original members.

Box 6.1 The Hanse: Creating order out of chaos

In the middle ages, chaos ruled in what we now call the nations of Europe. Germany, Estonia, Latvia, Poland, Russia, the Netherlands, Belgium, and Denmark did not exist. Rather, they were a hodgepodge of principalities, dukedoms, satrapies, enclaves, independent towns, religious enclaves, and a host of other types of territories, all more or less ruled by a variety of kings, margraves, dukes, barons, lords, earls, bishops, and anyone powerful enough to proclaim and defend ownership. Constantly bickering with their subjects over taxes, tolls, and tariffs, or fighting each other over land, they had little time or inclination to promote trade.

Despite the difficulty of making a living in such an insecure environment, a group of men and women in the town of

Lūbeck—a Holy Roman Empire imperial city at the base of the Baltic Sea, believed they could make a lot of money buying and selling things to and from other places—if they were left alone to do it. In the mid-thirteenth century in the northern regions of Europe, there were a number of like-minded merchants living in towns on or near the Baltic Sea. They decided to cooperate in an organization to promote trade and protect traders. The result was formation of the Hanseatic League—a loose confederation of merchants of some 70 towns in Northern Europe. At its peak, the league would include 170 cities and trade with markets as far away as Africa and the Far East.

For the next 300 years, Hanse merchants traded everything from Baltic Sea fish, amber, salt, timber, grains, and textiles to naval stores and complete ships, iron, copper, and anything else needed, desired, or available. Although they never established a formal political organization, they did maintain a loose governing parliament and court to adjudicate trading differences and cooperate to suppress pirates and political pressures from jealous princes. There was never a Hanseatic army or navy, but member cities cooperated when either was needed. They also established and jointly owned and operated trading facilities in ports outside of the member city-states. Their importance began to fade in the sixteenth and seventeenth centuries when the focus of European trade shifted from the north to the Mediterranean Sea and New World colonies. By the eighteenth century they were only a memory.

Source: S. Halliday 2009.

By the beginning of the fourteenth century, Germany's population had grown to somewhere between 10 and 14 million, depending on what Germanic-speaking territories one chooses to include. An emerging capitalistic economy was taking form, forever changing the old feudal society. Many of the peasant farmers who had colonized the Slav lands east of the Elbe owned their own farms; manufacturing production, trade, and commerce were now functioning on a developing money economy. Towns and cities became an even greater magnet for serfs; after one year of successfully avoiding capture, serfs gained their freedom forever.

The crowded, sprawling medieval towns were an ideal haven for absconding serfs and badly treated apprentices. Equally, towns were

becoming centers of cultural as well and economic freedom and opportunity. Sparked by the increasingly important trade fairs, they became more and more cosmopolitan and vibrant. Had things continued, Germany might have been one of the first European economies to industrialize, rather than the last one. However, in the mid-fourteenth century, circumstances abruptly threw almost all German industrial and commercial activity into reverse. The plague surged through the tightly packed towns, killing as many as a third or more of the population. Entire regions were abandoned. New farms in the east were allowed to return to wasteland. The areas of Europe we now call Germany retreated into a hodgepodge of semiautonomous city-states, tiny principalities and castle-centered estates of independent imperial knights, and diverse ecclesiastical territories. This disintegration remained the fate of Germany for another 500 years; it played a significant part in the formation at least one major component of what some have called the German character—a concept that refers to the German peoples' commitment to place and distrust of persons from outside.

Shaping a National Character

By the end of the fourteenth century, three major factors had evolved to begin to shape what might be called a distinct national character of the German people. The phrase *national character* is not easily defined. It generally refers to a commonly held but not necessarily overtly expressed sense of national identity, of *folk-soul*, or national community (*Versgemeinschaft*). In some cultures, it has adopted a parental overtone as seen in the terms *motherland* or *fatherland*. Whatever more or less awkward words are chosen, the concept has come to be part of the vocabularies of various cultures, and to denote what is sometimes referred to as *arrangements of a cultural consensus*. In this sense, the existence of a distinct national character of various nations, including Germany, has been agreed upon by many authors, and expressed in cultural and historical reports. It also includes the beliefs and attitudes of a people that influence the way business is formed and conducted.

The Contribution of Isolation

By accident of geography, for a long period in her history, much of Germany remained relatively isolated from other parts of Europe. Dense forests, bogs and swamps, hills and mountains physically separated groups of people. Major river systems, except for the Rhine and

Danube, tended to be barriers to communication between people, rather than avenues of social exchange. What emerged from this isolation was what is often described as the Germans' great love of the place of their birth. This physical isolation reinforced local loyalties, some of which can be traced back to tribal times. This resulted in many small local centers, first of markets, then as actual governments. For centuries, each local region, whether controlled by the church or aristocrats or free, fought against its neighbors for dominance. As we have seen, the events of the plagues and other disasters of the fourteenth century put a stop to any change in the local orientation that had been developed by trade. This resulted by 1800 in the existence of 1,789 independent sovereign powers in the region we now consider to be Germany. Of these, 314 were separate individual states and 1,475 ecclesiastical or ducal estates. Germany had become nothing more than a geographical label for a region located in central Europe.

Also contributing to the German character was the economic institution of feudalism. Central to the feudal period were the concepts of "belonging" to the land and subservience to a higher authority. The key economic institutions of this period were the semiautonomous manor and the Church.

Whether the manor constituted a village surrounding a castle or an abbey, it was as self-sufficient as it could be; and all residents were included. Every man, woman, and child "belonged" to a specific piece of land. This concept applied whether the person was a serf or lord. Local laws were written to specifically spell out each person's responsibilities. Serfs were responsible for farm labor and for payments in kind or in labor for use of the land allotted to them. The lord was responsible for defense of the manor and for providing the capital needed to construct flow mills, ovens, and breweries, which then remained under his ownership. Tenants were required to use the landlord's mills. Such laws were locally specific, and included legal limits to trade and commerce, including prices and interest rates. In this society, the many labored to support the few; and, like the Japanese Samurai, the warrior class was supported by the vast bulk of peasantry. Penalties for shirking responsibility were harsh, and often resulted in loss of life.

The Role of Faith

The third factor that helped to shape the character of the German people was the nearly universal faith in the power of God; this often meant total dedication to the carrying out of "God's work." All human labor, from farming to art and everything in between, was seen as serving God's purpose, and was carried out in order to glorify

Him. The Church, God's temple on Earth, and the clergy, who were the Church's servants, served as the guiding force of both peasant and lord. The Church dictated what wages were to be paid, what prices and rents were "customary" and therefore allowed, who could marry and when, what occupations men followed, and even what kind and how much education was allowed.

When the bishops of Wurzburg and Cologne were made princes of the empire in the last half of the twelfth century, the trend toward greater power and wealth for many churchmen was accelerated. Many prelates gained huge estates. For example, the bishop at Fulda, the burial place of St. Boniface—the English monk who became a missionary in Germany in the fifth century—controlled some 15,000 separate manors. Spiritual princes such as these owed loyalty to the king, and served him in peace and in war. Ultimately, many church leaders acquired full powers over their lands: they administered justice, provided police service, managed all military affairs, controlled taxation and customs, and constructed fortresses within their lands. Typical examples of the later process were found across much of Bavaria. Emperor Henry II, last in the Saxon dynasty, granted lands east and north of Nuremburg to the Bamberg diocese in 1007. In this region, towns with the syllables *eck*, as in Vilseck, or *burg,* as in Nuremburg, were originally manors built around a castle (*eck* and *burg* (or *bourg*) were early German words that meant a castle or fortification. A castle has existed at the small Bavarian town site of Vilseck since 1052.

In 1332, the bishop at Bamberg ordered the town's residents to surround the town with a wall. Another bishop ordered a second wall constructed in 1430, with a moat outside that wall. The Bamberg bishops continued to own the many farms, villages, and castles of that part of Bavaria for some 800 years, only losing them in 1802 when their holdings were secularized and given to the King of Bavaria in payment for land lost to France west of the Rhine. By the time of the Reformation, the Church owned fully one-half of all arable lands in Bavaria.

Medieval Commerce and Trade: 1350–1500

The 150 years from 1350 to 1500 in the German states constituted a long, slow period of consolidation and rebuilding after the plagues had decimated Europe's populations. The general stability that prevailed during the period and made rebuilding possible came to an abrupt end when the conflict between the Catholic and Protestant churches initiated the breakup of Christian unity in Europe.

Table 6.1 Size and number of sixteenth-century German towns

Category	Population	Number	Percent of total
Very large	More than 20,000	10	0.54
Large	10,000–20,000	18	0.97
Medium-large	5,000–9,999	57	3.05
Medium	2,000–4,999	186	9.97
Small	1,000–1,999	298	15.97
Very small	500–999	386	9720.69
Village	Fewer than 500	282	15.12
No population data	—	628	33.67

Source: Scott and Scribner 1996, 116.

This 150-year period was a time of concentration in Germany. As new towns were formed and older ones grew larger, a new class of merchant tradesmen emerged across northern Europe. Town dwellers could not grow their own food or produce their own ironware, shoes, or clothing, let alone import salt and spices needed for food preservation and for use in preparing meals. Artisans, craftsmen, and merchants became increasingly important. As they specialized, they became more efficient; more goods than needed locally were produced. These surpluses became available as trade goods. In this way trading with other towns and regions became possible. Towns that had once maintained small local markets became regional and, ultimately, international trading centers. The number of German towns by size in the 1500s is shown in Table 6.1.

While towns in the south of Germany tended to be areas where artisans and craftsmen concentrated, those in the north were most often centers of merchants and traders (Fulbrook 1990, 1991). Several important business institutions that facilitated the growth of businesses emerged just prior to this period, possibly the most important of which were commercial banking, joint-stock trading companies, and commercial insurance (Weiner 1968). All of these first appeared in northern Italy, but very soon crossed the Alps with Italian traders and became established in other parts of Europe.

Banking and Trade

Banking was initially developed as a facilitating function for international trade. In the absence of cash, private commercial instruments

similar to today's letters of credit were negotiated between trading partners. These credit letters functioned as promissory notes, spelling out payment terms in an acceptable currency at some agreed-upon time and place. By the thirteenth century this very often meant at a trade fair somewhere in northern Europe. The most important of these commercial fairs were the Champagne trade fairs in the western part of the Holy Roman Empire. Merchants from all over Europe gathered at the fairs, not only to buy and sell, but to settle earlier debts. Soon, some merchants took up permanent residence and made money changing and lending their primary business. At first these were almost exclusively Italian. Soon, however, Germans also took up this profitable business. Within a very short time, money lending to secular and ecclesiastical lords became as important as commercial settlements.

Beginning around the twelfth century, the formation of companies for trading ventures was becoming an accepted way to spread risk and acquire venture capital among Italian merchants. Those early Italian companies were private partnerships among family members, not true joint-stock companies. Similar activities were practiced in the Hanseatic League cities of Germany by the start of the thirteenth century. It was not until the middle of the fourteenth century that the first true joint-venture companies appeared, again first in Italy. It took another hundred or so years for the practice to appear to any extent north of the Alps. For a number of reasons, joint-stock companies were rare in Germany for all of the premodern period. Lack of investment capital was probably one reason; another was the preference for land ownership as the source of wealth generation.

Commercial insurance was another Italian invention. It appeared early in the fourteenth century and was becoming common by the end of the century. Its availability helped to speed the growth of long-distance trading ventures. Insurance was less common north of the Alps, although some sort of social insurance had existed there for some time, where life and some casualty insurance had long been a benefit of guild membership.

The First Guilds Appear

Sometime around the year 1200, a new form of social and economic organization appeared in the cities and towns of Germany: the guild. Building on a tradition of merchant traders' associations that had appeared as early as the eleventh century in north Germany, formal groups of shopkeepers and artisans began to appear in south Germany. This newer, more cohesive and comprehensive movement spread slowly northward so that by the early fourteenth century they

were common in most German towns and cities. They played an increasingly important role in shaping and controlling most trade and commerce, and nearly all manufacturing in the cities of late medieval Germany (Brady 1966).

Guilds served three primary purposes. First, they maintained exclusive rights to do business in their area or territory. All aspects of their trade were controlled by an elected guild master and guild court. Second, they served a lay religious role, taking on religious obligations, such as celebration of holy days, maintaining church attendance, supervision of members' burials, and control over rules and regulations on marriage. Third, they continued a tradition of social service for their members and families, including life and disaster insurance, which was often separate from their trade association function.

Guild membership was restricted to master artisans, merchants, traders, and shopkeepers. Journeymen and apprentices could hold adjunct membership and benefited somewhat from guild protection. To join, one had to be able to prove legitimate birth as a free man (no serfs were allowed), successful completion of a two- to eight-year apprentice and "journeymanship," a one- to three-year probation period, and, sometime after 1300, production of a "masterwork" in the guild's line of trade. Membership not only gave one town citizenship rights, it also entailed civic and often military responsibilities. Strict adherence to guild-established moral standards was also required.

The guild's power rested in its monopoly position. The guild maintained absolute control over all rights to operate in a given trade, limited the size of shops (one, two, or three journeymen was typical), controlled access to raw materials, set and administered quality standards, determined levels of production, and maintained price controls. By the fifteenth century, they were also controlling competition by setting strict limits on the number of masters permitted in their operating area. In this way, they functioned as the forerunners of Germany's great manufacturing cartels, which came to dominate business in the late nineteenth and early twentieth century. Although their powers weakened after the seventeenth century, they were not completely broken until after the Napoleonic Wars of the early nineteenth century.

Population Growth and New Settlements

The twelfth and thirteenth centuries had seen a slow but constant growth in Germany's population. This pressure on the land resulted in migration toward the south and east. Many of the new lands were

colonized by free peasants who toiled to improve their own lot, rather than that of the feudal lords. These colonizers also established many new towns and villages, some as centers of military power and others as market locations. In addition, they also drained vast expanses of marshlands and cleared forests for the plow. One of the most important of their contributions was introduction of a three-field system to replace the traditional two-field farming. With this system, only one-third of the available farmland remained fallow in place of the one-half necessary in the two-field system (Clapham 1926).

The plague and war-ridden early fourteenth century put an end to population growth over much if not most of Europe. Germany alone is said to have lost somewhere from 20 to 30 percent of her population. This put an end to eastward migration and an abandonment of many new lands that had been opened to German farming. What these disasters did not do was cause the destruction of the budding commerce and trade that had been building over the previous two centuries. While many hamlets and small towns were abandoned, the great commercial cities remained pretty much intact. Enough traders survived to step in and take up the business activities of their now dead owners.

Several factors contributed to the continued importance of German commercial centers and their growing numbers of urban dwellers (Baron 1957). The most important of these was Germany's geographic position in the middle of Europe and, thus, a critical link in both east-west and north-south trade. Salted fish from the Baltic, along with amber, were highly prized goods in southern Europe, whereas eastern silk and spices were equally desired in the north. A second key factor was continued demand for German raw materials and finished manufactured goods for rebuilding and replacing the manufacturing capacity lost from the plagues of the fourteenth century. German woodworkers and stonemasons were truly international in their activities; their skills were particularly important in the building of many of Europe's cathedrals. Its importance has been summarized thus:

> In industry and commerce the baneful effects of the fourteenth-century epidemics were more than counterbalanced by the advantages of the country's geographic position. From the late fourteenth century onwards, the progress of long-distance inland transportation linked more and more of the east-European countries in inter-European commerce. Large Eastern resources of food and raw materials supplied a substitute for German agricultural losses caused by the depopulation of the Black Death. The need for industrial goods to be used in

> exchange resulted in a rapid growth of new handicrafts and industries in the German cities; at the same time new mines were opened, with the consequent establishment of highly-skilled metal arts and crafts. In addition, the German cities had not yet ceased to be the center of trade spreading between England and the Scandinavian countries to the north and Italy to the south. (Baron 1957, 66)

The Hanseatic League

The century-and-a-half preceding 1500 saw the first appearance of concentrated commercial power in northern Europe. This power was wielded by the Hanseatic League, a loosely knit association of as many as seventy trade-oriented towns and cities, with possibly another 100 to 150 smaller towns as associates. Formed slowly over a period of 100 years, by the middle of the fourteenth century this association of cities stretched from Russia, along both sides of the Baltic Sea, across northern Poland, German, Denmark, and the Lowlands. The league maintained major foreign trade centers at Bergen in Norway, Stockholm, London, Bruges, Riga, Lübeck, Hamburg, Antwerp, Ghent, and Novgorod in Russia.

The Hanse developed from associations of private traders engaged in international commerce; it remained a cartel of independent German traders. The traders early purpose was mutual protection and preservation of markets. Soon, the associations expanded to include towns themselves. The purpose then widened to include attaining and maintaining special, often monopolistic, trade privileges for its members at the expense of all competition. Membership privileges included low internal customs duties between members and, wherever possible, preferential treatment among member cities.

Member cities remained independent; at no time did the league employ a permanent diplomatic service or army. Nor did it maintain common funds, preferring to levy special assessments for specific purposes, such as hiring a mercenary army or employing armed vessels to protect against piracy. The league's greatest early strength lay in its control of the Baltic and North Sea fishing production and the production of salt in drying pens in Brittany. There was great demand for salt-preserved herring and cod throughout Catholic Europe for holy and feast days. The league also came to control the supply of Scandinavian and Russian naval stores (pitch, tar, wax, turpentine, etc.), furs, amber, tin, copper, flax, and woad and madder (plants grown as sources of pigments in textile dyes). By the fifteenth century, its chief fortune was wrapped up in the trading of English wool and

Flemish woolens (Munro 1991). Never a political power, however, the league's economic strength quickly waned as north-south trade shifted in an east-west direction in the sixteenth century.

Importance of Agriculture

Throughout this period, agriculture remained the foundation of almost all trade and commerce, followed by mining. As a result, the German economy was exceptionally hard hit when agriculture suffered immense disruption during the fourteenth and fifteenth centuries (Miskimin 1969). Abandonment of farms occurred on a massive scale. With the deaths of a third of the population, demand for grain dried up.

The decline in grain prices led to a number of far-reaching changes in the agrarian economy. Arable land was converted to grazing land or allowed to return to woodland. In other areas, productive soil was more intensively farmed with specialized crops, such as woad, madder, flax, viticulture, and fruits (Rösener 1996).

Without these changes and improvements in farming and animal husbandry there would not have been the surpluses that made possible the great population increase that occurred in the next century. Nor would there have been the industrial crops that increased industrial activity demanded, and which would help the agrarian economy pull the Germany economy out of its doldrums. Among the earliest products to be traded in any quantity during this period were products of the field: wines, meats and dairy products, fruits and nuts.

When the fourteenth century began, agriculture had pretty much completed the evolution from the self-sustaining manorial system it had been in the feudal period, to one of larger-scale production of raw materials and food for the increasingly important towns. Large estates, some owned and operated by such ecclesiastical orders as the white-robed Cistercians, others by the nobility, were replacing smaller manorial farm complexes. By the middle of the century in many locations intensive agriculture replaced the old system of leaving some of the fields fallow. Town demand for meat, dairy products, and hides made it possible to keep larger herds, which in turn provided manure needed for intensive farming. As agriculture was shifting from subsistence to business, crop specialization appeared, with some areas concentrating on livestock and others on grains or cash crops such as madder and woad.

An important characteristic of this period was the widespread willingness of the land owner to engage in commerce, either directly as

a trader or by financing others' activities. The increased wealth being generated became available for investments. Wealthy landowners financed or themselves engaged in commercial endeavors. Many left their estates, rented their fields out, and moved into the towns to manage their new businesses. In this way, income from ground rents became a major source of wealth accumulation for the more extensive commercial ventures that appeared during the next century.

Town incomes derived mostly from trading and small-scale manufacturing, although the income from land rents also contributed to the towns' economic well-being. Other income sources were purchases of goods and services by the Church, local governments, and local nobility. The manufacturing of this time may have been small in scale, but it was crucial to the growth and development of towns and cities.

This early industry was entrepreneurial as well as tiny. Each enterprise may have only generated enough income to support a family or two. It was typically a "putting out" activity, with the entrepreneur providing cottage workers, who invariably provided their own tools, raw materials, or semi-processed piece goods for additional processing. Each step of the production process involved a separate set of workers who would ultimately join together in guilds for mutual assistance. The cloth industry is a good example. Spinners were separate from weavers, weavers from fullers, fullers from finishers, and finishers from wholesalers and retailers. Although industries such as fulling (shrinking and felting of wool cloth) and salt production required some investment, most capital investment was slight and usually consisted of workers purchasing tools for their own use (Miskimin 1969; Ramm 1982).

Conclusion

What is Germany? Who are the Germans? And *What is the German culture*? These are questions that have captivated the minds of scholars and politicians for decades. Reasons for this include the relatively late establishment of the modern German state (in 1871) and disagreements regarding the ethnic foundations of the peoples residing in the part of Europe we know as Germany, particularly in the light of their own self-definitions and exclusions.

Germany is the part of Europe that lies more or less in the center of the continent, extending from the North and Baltic seas and south to the Alps (at several times in history it extended as far south as the Mediterranean Sea). The land itself rises from sandy, wet flatlands along the northern coasts, south through a series of low hills

and secondary mountains in a wide belt across the center to higher hills and mountains that merge into the Alps. The German people are a blend of Teutonic, Celtic, Slavic, and Roman stock. More to the point, they are the people who identify themselves as Germans. The combined effects of topography and tribal territories have influenced the national character of the region and contributed to the shaping of the German culture. A strong commitment to one's place of birth and loyalty to that culture, together with a tendency for submission to authority that emerged during Germany's long history of feudalism, are often used to describe the German character. One of the results of these forces was the extreme political fragmentation of Germany, which lasted until the nineteenth century. At its peak, some 1,789 separate sovereign powers existed in the area of Germany. Shades of that fragmentation remain in the form of the fierce independence exhibited by the sixteen *Landers* that make up the present German Federation.

The beginnings of Germany's evolution into a modern unified state took place over three periods of varying length. The first was the loose uniting of southern German tribes behind the Roman Limes. The second coincided with Charlemagne's unification efforts around 800. This resulted in the foundation of the Holy Roman Empire and the first German state. A third phase occurred during the twelfth and thirteenth centuries, when excess population migrated into lands east of the Elbe, and the great town-forming throughout Germany took place. At the beginning of the period, Germany was still dominated by feudal traditions and an agrarian economy. By the end it had moved well on the way to becoming a vibrant, capitalistic society, with the center of cultural and economic activity and power shifted from castle and monastery to towns and cities. Trade, commerce, industry, banking, and communications institutions began to flourish, particularly in the north, along the seacoast and inland waters that extended from the Rhine and the Seine. Only the terrible depredations of a series of plagues, wars, and subsequent social disintegration put a halt to the dramatic changes. It would take another 500 years for the trend to reverse itself.

Discussion Questions

1. Describe the themes included in determining nineteenth-century Europe's labeling of the "German problem."
2. What role did cities and towns play in the early development of Germany?

3. What is laissez faire capitalism and why did Germany chose not to follow this model during its early development?
4. What is organized capitalism? How did it shape German businesses?
5. What role did Germany's relative isolation from the rest of Europe play in the development of its commerce and industry?

Chapter 7

German Business in the Premodern Age, 1350–1800

Germany's business history from the High Middle Ages to the modern age may be conveniently grouped into three distinct periods of roughly 150 years each. Selected characteristics of each era are shown in Table 7.1. The first period runs from 1350 to 1500. It coincides with the end of feudalism and the first great town-building period. The second, from 1500 to 1650, may be seen as a transition period separating the Middle Ages from early modern times. Its key characteristics were the Reformation, which brought an end to Christian unity in Europe, and the Thirty Years' War. This period was one of severe economic retrenchment, war, pestilence, and final collapse of the unifying force once represented by the Holy Roman Empire: from 20 to 30 percent of Germany's population died from the war or disease, towns and cities lost their freedom, political fragmentation reached its zenith, and the Hanseatic League withered away to irrelevance. Estimates of the dead from this European war, most of whom were Germans, range from 3 to 7.5 million (Parker 1997, 188).

The third period, running from 1650 to 1800, was the early modern period of German business history. More than anything, it was a period of economic stagnation, with slow rebuilding and restoring of society and infrastructure that were destroyed during the Thirty Years' War. As a result of the disasters of the first 50 years of this period, Germany's economy had once again become almost exclusively agricultural. It remained so for over 200 years, not changing until nearly a century after Great Britain, Belgium, and the United States had

embarked on their paths toward industrialization. Of the major powers today, only Japan had a later start. This chapter looks at the social and cultural factors that shaped the German business system in the premodern period.

Table 7.1 Characteristics of premodern German commerce and trade, 1350–1800

STAGES		
Late Middle Ages: 1350–1500	Transition from Middle Ages to Early Modern Age: 1500–1650	Premodern, Preindustrial Age: 1650–1800
End of manorial system and decline of trade and early industry; more than 80% of economy is agrarian	Reformation and decline of feudal system. Economic stagnation	Transition of subsistence farming to economic agriculture and home-based manufacturing
Some town building, as trading centers develop and famine and plague survivors migrate to towns	Hanseatic League fades as trade shifts from north to south	Slow rebuilding of war-devastated infrastructure
Subsistence farming dominant activity	Peasant's War; towns and farms abandoned	Centers of home-based textile processing centers grow as important trade fairs increase
Slow recovery and population growth after 1360	Pestilence, conflict, and economic retrenchment	Slow economic growth with emphasis on agrarian economy; grains dominant crop
Artisans and craftsmen take up residence in early towns	Town and population decline	Political changes as towns become independent
Decline of feudalism	30 Years' War, 1618–48	Large grain-growing areas bring renewed serfdom in east
Wool trade grows in importance	Decline in purchasing power ends dominance of wool trade	Linen and cotton processing replacing wool trade in economy
German territories ruled by various princes and religious orders under Holy Roman Empire	The Brandenburg-Hohenzollern dynasty consolidates power in Prussia	Prussian power and leadership of Germany achieved under Frederick the Great

Trade and Commerce in the Middle Years

The agrarian economy of German in the late Middle Ages suffered through a series of savage blows in the fourteenth century, beginning with a period of famines from 1315 to 1317 and followed by a series of plagues in the middle years of the century (Le Goff 1964; Rösener 1996). The later years of the thirteenth century had been warm, reasonably dry years, ideal for grain crops, resulting in bumper crops and converting more and more marginal fields to grain crops. Population growth in much of Europe increased the demand for grains. The weather turned after 1300, however, becoming cooler and wetter, resulting in poorer and poorer yields. By 1315 fields were too wet to plow and when sowing was finally possible, seed grain rotted in muddy soil before it could sprout. Farmers ate their seed grain and then wild grasses and tree bark. Older family members stopped eating so what was available could be fed to the children. When that was gone, the great famine of 1315–17 killed thousands.

Reliable farm production was critical for every sector of the economy, as explained by Le Goff (1964):

> Land and the agrarian economy were effectively the basis and the essence of material culture in the middle ages and of everything conditioned by it; wealth, social and political power. However, land in the middle ages was [by and large] barren because men were incapable of getting much out of it . . . First, this was because the implements were rudimentary. Second, the earth was not well worked. Third, ploughing did not go deep; the ancient swingplough, which in any case was and remained suited to the shallow soils and hilly landscapes of the Mediterranean area, persisted for a long time in many places. . . . The practice of ploughing three times became widespread; at the turn of the thirteenth and fourteenth centuries four ploughings were common. . . . The consequence of this was that the land was both badly worked and poorly enriched. (208–210)

The first, most devastating series of a wave of plagues died out in 1351, but was followed by another in 1365 and several other, somewhat less virulent waves afterward. When the plague had finally run its course, it was replaced by deadly waves of typhoid fever, typhus, or cholera. By 1370, population in the German regions had declined by a third from an estimated 11 to 14 million to somewhere between 7 and 10 million.

Because of the large loss in farm labor, much of tilled farmland was either simply abandoned or converted to grazing or forests. Except

for areas in the northwest, few farmers owned their lands or cottages. Importantly, the hollowing out of the region was not evenly distributed; many areas were only lightly touched. In areas more heavily hit by the disease, the entire population of whole villages and towns were simply gone, either by the plague or migration to ostensibly safer areas. Using an area estimate of the lands within the 1937 borders of Germany, Rösener found that of the some 17,000 settlements that existed in 1300, by the end of the century only something like 13,000 remained.

A Shift in Agriculture

With population decline came a drop in prices for grain. The drop in grain prices and the loss in farm labor resulted in a decline in rents for landowners. Many landowners converted their grain fields to specialty crops such as vegetable dyes and flax for linen, or they converted them to grazing or woodlands, further reducing food supplies but creating a cash economy. The growing wool and linen trade required reliable supplies of dye stuffs. Some benefit also occurred from growth in animal husbandry. With more land for grazing available, herders were able to raise more sheep and cattle, both of which provided more meat for farm and town dwellers. More cattle meant more fertilizer available for more intensive agriculture. Root crops such as beets and turnips provided winter food for animals and humans alike. Other changes in land use included planting vineyards on the slopes of major river valleys and hops and fruit orchards in fields not suitable for grain.

German farmers, battered by years of crop loss and resulting famine, dealing with the vagaries of weather, committed to unending hard physical labor, forced to endure plague and other diseases, had only serfdom and the mercy of landlords interested only in increasing their rents to look forward to. As a result, farm laborers in the late Middle Ages began to slowly drift to towns and seek jobs in the early beginnings of a textile and a mining industry. Landowners shifted from food production to cash crops, took over deserted fields, and increased their holdings. By the 1500s, agriculture was fast becoming agribusiness; the population had begun to grow again, reaching near 14 million in 1560 and 17 million by the early 1600s.

Commerce in the Transition Years, 1500–1650

German commerce, trade, manufacturing and mining became increasingly important from 1500 onward. At the same time, however,

continued decline in the old central political power of the empire, periodic depression and depredation, and weakening of papal authority were leading the German states toward some type of revolutionary change. It began with a series of peasant revolts and culminated in the Reformation, the religious upheaval that forever changed Europe. The forces of change unleashed by Martin Luther's attacks against the established church resulted in the final end of old feudal loyalties and traditions. For the next several centuries, Germany was to be wracked by one conflict or disaster after another, further driving local loyalties inward and making Germany one of the few exceptions in Europe's drive toward nation-states.

Although still predominantly agrarian, the Germany's economy in the late Middle Ages differed significantly from region to region. In the settled north, large farms and estates owned by nobles led by Knights of the Teutonic Order and the church demesnes, produced grain and exported their large surpluses through Baltic ports. These landlords dealt with farm labor shortages by reasserting their rights and reinstituting strict serfdom policies. Landowners in the south tended to be minor nobility and free peasant proprietors who grew specialty crops such hops and plants for making textile dyes. These tended to sell their surpluses at local fairs and market towns. Elsewhere, small-holding farms were farmed by free peasants who rented their farms from local landlords who all did what they could to increase their income by raising rents and restricting peasants from supplementing their diets through free access to rivers and forests. Together, serfdom, rising rents with falling prices, and restrictions from traditional access rights help fuel peasant unrest that culminated in the Peasants' War of 1524–25.

The series of peasants' revolts that began in the middle of the fifteenth century and extended into the sixteenth was marked by bloody class warfare and included revolt against excesses of the Church. All across Germany, peasants rose up against their secular and ecclesiastical lords and sovereigns. Only Bavaria was spared. This great uprising had roots in the political, economic, social, and religious conditions of the time. At its peak, it involved some 300,000 men, women and children, and cost the lives of a full third of them. It was the greatest revolt against lords and masters ever in German history. The early months were largely nonviolent; a mass movement of protest aimed at gaining binding negotiations or legal redress. Issues focused first on serfdom with its great burden of payments and services owed, but also included rights to hunting, fishing, timber, and use of the commons. It was bloodily and forcibly put down by the nobles and church with little or no lasting gains for the peasantry.

The brutal smashing of the Peasants' War was in a large sense the last hurrah for much of Germany's traditional knighthood. Changes in the technology of warfare were making the old imperial knights redundant. Artillery, which could be aimed and fired by common soldiers, was putting a quick end to any need for the knights' heavy cavalry. With their livelihood thus threatened, many turned to robbery and pillaging, bringing further havoc to the rural community, while others became the new entrepreneurs of Germany.

Luther and Church Reform

Martin Luther, born in 1483 at the height of the extensive social distress that was wracking Germany, became a focal point for all these factors (Maehl 1979). He was for a short time able to focus all the forces of national unrest and revolt, and in so doing became what Maehl has termed the "most successful heretic in a millennium." A charismatic leader with a sense of divine mission, Luther taught that mankind could not gain salvation through good works or purchased absolution of sins, but only through absolute faith in the redemptive sacrifice of Christ.

At the beginning of the sixteenth century the Church in Germany was increasingly both resented and envied. Before the Reformation it was certainly the richest of all European churches; in 1500, for example, in one form or another it owned more than one-third of all land across the old empire, and controlled at least an equal proportion of the nation's wealth (Flenley 1963). The wealth and privilege exercised by a host of archbishops, bishops, abbots, and prelates was as great as that of the territorial princes, and made them as powerful as secular rulers. Many church leaders were themselves members of the nobility, and shared that group's interests and concerns. More organized than the nobility, the Church was also better integrated; its influence reached into every aspect of German life. Such power could only result in criticism and resentment; such wealth could only become the envy of all cash-strapped members of the nobility.

Criticism of the Church focused on such issues as the abuses of clerical privilege, laxity of clerical life, ignorance of many of the clergy, as well as papal rights and claims. Luther's attacks on the authority, rights, and privileges of the Church earned him excommunication in 1521. His teachings, however, were not halted by the Church's action. Through the power of the newly invented printing press, Luther's criticisms of the Church quickly spread across Germany, Switzerland, Bohemia, and Hungary, and soon to all parts of Europe. They were

particularly well received in the towns and cities of the German north. The Reformation ended in the middle of the century, although its aftermath continued long beyond. At its peak in the 1570s, as much as 70 percent of the total population of Germany had become Protestant, with the majority of those being Lutherans.

Commerce in the Sixteenth Century

The sixteenth century was a complex mix of small successes and great calamities for German commercial interests (Cipolla 1993). At the start of the century, the German states were among the richest country in Europe (Flenley 1963). The source of this wealth was the commercial activity taking place in the 4,000 German towns and cities of the period. Never really large, most towns had populations of fewer than 2,000; only 18 were larger than 10,000, and of those, only 10 were larger than 20,000 (Scott and Scribner 1996). Cologne was Germany's largest city with a population of around 50,000.

Germany's towns and cities were cramped, crowded, and generally unhealthy centers of trade, manufacturing, and culture. Typically surrounded by high walls and a moat, the security they promised served as a magnet to disaffected and adventurous peasants everywhere. Population growth resulted in extensive overcrowding in the towns. Germany's population of between 11 and 14 million in 1340 had declined to between 7 and 10 million around 1470; it had grown again to around 14 million in the middle of the sixteenth century, and would reach some 17 million by 1618 (Rösener 1996). Wages had never kept up with the increase in prices caused by inflation that began after New World silver began to flood into Europe.

The disaffection of German peasants had resulted in a series of uprisings, while also destroying a massive quantity of fixed capital and infrastructure that had not been so affected by the plague deaths some hundred years earlier. A general economic decline followed.

While the agrarian economy in the sixteenth century was revitalized somewhat by strong population expansion, the economic decline of business and industry that began with the Peasants' War continued over most the rest of the sixteenth century. Businesses had been particularly hard hit by the depression. In Augsburg, for example, where fortunes built on Germany's early mining and metal industries were centered, the first 20 years from 1550 to 1570 saw some 70-odd large firms declare bankruptcy. Many of the Augsburg banking fortunes were lost as kings across Europe defaulted on their loans. Southern Germany, especially during the first half of the century, had enjoyed

considerable prosperity during the first half of the century thanks to the activity of its merchant bankers. But after 1550, it too suffered widespread depression and decline. War closings of Rhine River traffic blocked much of the north-south trade upon which these fortunes depended.

Across northern Germany the great trading league of cities, the Hanseatic League, entered upon a period of decline that continued through the whole of the sixteenth century and would ultimately result in the demise of the league's ability to influence economic circumstances. A major exception to this decline in the north was the free city of Hamburg, where immigrants from many parts of Europe came together to help make the city great (Lindberg 2008). Hamburg became the home of northern Europe's beer, banking, and shipbuilding industries, as well as the center of international trade that had been driven from Flanders and the Low Lands. The Bank of Hamburg, patterned after the Bank of Amsterdam, was founded in 1619, and became a major force in maintaining Hamburg's important role in global trade during the next several centuries.

The growth in economic wealth that occurred in the Hanse during the sixteenth century was based in large measure upon the trading activity that continued to exist. In addition to the commercial activity developing in Hamburg, German traders had taken up permanent residence in such important international trade centers as London, Bruges, Antwerp, Cologne, Frankfurt, Nuremburg, and Riga. Many of these early German commercial houses became important shippers and traders of such key trade goods as grains, fish, salt, wine, dairy goods, fruits and nuts, beeswax, honey, lumber, and leather; they had long been important dealers in wool and woolens, linen, and such traditional German-produced products as copper, silver, and other manufactured metal products (Wright 1996).

Changes in the Seventeenth Century

Germany during the first half of the seventeenth century suffered through a series of crises, beginning with the Thirty Years' War (1618–48). This exceptionally bloody and destructive conflict was fought almost entirely on lands that had once been part of the Holy Roman Empire, although most of the destruction occurred in the north and west. Areas along the Rhine and the main trade and transit routes from north to south were particularly hard hit. An entire generation of German-speaking citizens grew to adulthood experiencing nothing but fighting, pillaging, and wanton destruction. An untold

number of villages were completely destroyed, and many larger towns were sacked as many as three and four times (Sagarra 1977); in some areas the loss of life exceeded 70 percent, with 50 percent losses often the norm. At the start of the war, the population of Germany had been about 18 million. By 1650, it had dropped to between 10 and 11 million.

The key results of the war were its economic, religious, and political impact. Economically, the lands that made up the German states became one of the poorest regions of Europe, and would remain so until well into the nineteenth century. The commercial activity and early manufacturing industry that had begun to flower in the previous century faded almost to nothing. The region's economy again depended almost exclusively upon agriculture. Land ownership was again the dominant source of wealth and prestige. Landowners added abandoned lands to their holdings, and began to take back other lands from peasants, the great majority of whom were again reduced to serfdom.

The economic impact was further heightened by political changes. Although never completely extinguished during the war—food, armaments and other military supplies, after all, had to be secured somewhere—trade and commerce had declined dramatically by 1650. Many of Germany's larger towns and cities, which had not suffered quite as much as most rural districts, had lost as much as a third of their population to war and epidemics. The surviving citizens found the rights and independence they had won over the preceding several centuries taken from them. They again became subject to the authority of their local sovereign lords. Possibly hardest hit were the old Hanseatic League towns. Their commercial fortunes, which had been built on the north-south trade, disappeared. Most of this was because of the overall decline in purchasing power caused by the war and its aftermath. However, much of the volume and value of intra-European trade in general was also being replaced by east-west trade between Europe and the New World.

The Catholic Church's decline during the Reformation was reversed during the last quarter of the sixteenth and first half of the seventeenth centuries; the Thirty Years' War renewed its position in many parts of Germany. From the peak of some 70 percent of the population of Germany being Protestant, the Peace of Westphalia in 1648 saw Germany essentially split in half. Roughly the northern half of the region remained Protestant, while the south, after having become partly Protestant, returned to the Catholic fold. However, the distribution of religions was not complete; large parts of the northern

Rhineland remained Catholic, whereas for a time some pockets of Protestantism remained in the south.

Commerce in the Premodern Period: 1650–1800

If the sixteenth century had been a time of mixed successes and failures, the seventeenth was one of almost continuous stagnation for Germany. The Thirty Years' War, which consumed most of the first half of the century, laid waste to most of the European economy. Times were particularly hard in Germany, across which most of the warring armies had crossed and recrossed leaving death and rubble in their path. Except for a few cities such as Danzig, Hamburg, and Nuremberg, the end of the Thirty Years' War in 1648 sent Germany's old commercial and trade centers down a century-and-a-half-long path of economic and political decline. Danzig's importance was based on trade of Baltic and Prussian agricultural products for western manufactured products, as well as linens woven in villages and hamlets across Silesia. Hamburg retained its importance because of its new manufacturing industries and its role as a middleman in the trade between Spain and the Baltic region, and later for trade between France and England. Nuremburg had long been a center of distribution for the linen and southern German mining and metals industries.

Throughout most of Europe, the fifteen and sixteenth centuries had been characterized by a nearly universal drive toward political consolidation and statehood, if not nationhood. The two exceptions were Germany and Italy, where fragmentation continued unabated. Right up to the age of Napoleon, Germany remained a diverse group of independent duchies, estates, and ecclesiastical holdings, held together only by a more or less common language and a common history. Both Germany and Italy had become little more than place names for geographical areas.

For the most part, Germany turned its attention inward during these 150 years, Leaders of the hundreds of small and smaller independent states that now lay scattered across the German landscape concentrated on increasing their autonomy and power over their citizens. It was the beginning of an age of *absolutism*, which would characterize Germany's economic and political development until 1945. Absolutism was a governing principle based in Roman law, which held that all rights to make and execute laws remained solely and absolutely in the hands of the ruling prince. No other body or institution had any legal claim to interference in the exercise of that right, nor could they hold the prince responsible for his actions. Under the old medieval German law founded on custom, the estates of the realm, the Church and nobility, had shared in the prince's power according

to their respective ranks in society. A major result of the adoption of absolutism after the Peace of Westphalia in 1648 was the rise in power of the territorial princes, particularly the Habsburgs in Austria and the Hohenzollerns of Brandenburg/Prussia.

Commerce and Industry after 1650

Development of commerce and industry in Germany after 1650 can be conveniently grouped into three unequal time periods (Gagliardo 1991). The first of these runs from 1650 to just after 1715. This was a period of rebuilding infrastructure after the devastation of the Thirty Years' War, repopulation, and slow recovery of the economy. Territorial princes also used this time to legitimize their increasing power over their subjects, and to jump-start their economies.

The second phase of development, from 1715 into the 1740s, was one of consolidation. The economies of most of the German states began to grow; population growth slowed; wages remained relatively stable, while food prices continued to be low, thus enabling some improvement in living standards. The third phase began around 1750 and ended with the French Revolution and Napoleon's continental conquests. This was a period of more rapid growth of the economy as new technologies and production methods, decline of guild power, and inventions from abroad improved both agriculture and manufacturing productivity. Population growth accelerated, particularly in Brandenburg/Prussia, which accepted thousands of Protestants from France, Austria, the Netherlands, and southern Germany (Bruford 1957). These three phases of preindustrial growth also coincided with the early, middle, and late stages of German mercantilism, known as *Cameralism*.

German Cameralist Policies

Mercantilist economic policies were common across Europe from the sixteenth to eighteenth centuries; this economic theory held that the main objective of a nation's economic activity was to increase state power at the expense of rival powers. Thus, it included such principles as:

- Only possession of gold and silver determined a nation's wealth.
- Favorable trade balances were necessary to protect the precious metal wealth.
- Imports must be strictly controlled so that local industries could grow and prosper.
- High tariffs were needed to further protect local industry and to limit demand for imported luxury goods.

- Colonial possessions were highly desired as they were captive markets for the nation's manufactured exports and supplied necessary raw materials.

Cameralism, a type of government developed in Germany in the 1500s, gets its name from the German word from the chamber in which a group of nobles or wealthy businessmen would periodically meet to advise the ruling prince on various matters, including economic growth and financing for the state.. The state needed funds first for rebuilding and then to support standing armies for protection. The fundamental principle of Cameralism was that the economy of the state must be managed for the primary purpose of benefiting the treasury. State involvement in industrial activity, including loans and other incentives to entrepreneurs, development of the sciences and vocational training, and state-owned mines, farms, and factories, were seen as logical extensions of the system. Cameralism became so much a part of German policy that it ultimately became the German university discipline of *political economy.*

The fruits of cameralist absolutism benefited Germany in at least three ways. First, much of the income generated was used to fund programs to expand and improve the economy of the state. This was particularly so in the stronger German states, such as Brandenburg/Prussia, Saxony, Hanover, and Austria. Second, a large portion of the collected funds was returned to the economy through such programs as construction of public buildings, parks, palaces, roads, canals, and other infrastructure. And third, the widespread growth of permanent standing armies not only alleviated peasant and noble class unemployment, purchases of equipment, food, and supplies benefited local merchants and contractors (Gagliardo 1991).

On the other side of the coin, the princes' need for greater income to fund these expenditures resulted in significant improvement in tax collecting, budgeting, and management. In some of the states, let by Brandenburg/Prussia, a highly efficient, honest bureaucracy emerged. The successes were not universal, however. They were greatest in Brandenburg and weakest in Austria, with results somewhere between these extremes in the other German states.

Frederick William: The Great Elector

Brandenburg/Prussia's economic and political development after the Thirty Years' War began with Frederick William's accession to the crown in 1650. Later known as *The Great Elector*, he was the first

German territorial ruler to thrust his principality above the "comic opera" state within the empire (Maehl 1981). A true absolutist ruler, he made all final decisions on military, civil, and economic questions. By judiciously granting special privileges to entrepreneurs, vigorously limiting imports and establishing state-owned monopolies in selected industries, he engineered the early economic recovery of his state. Through a policy of religious tolerance and economic incentives, he encouraged immigration to his war-decimated lands. Prussian industrialization also resulted in greater urbanization as farm workers migrated to wherever good-paying industrial work was available.

New manufacturing skills brought by immigrant groups such as the Huguenots, improvements in agrarian practices, introduction of a comprehensive system of direct and indirect taxation, and state monopolies enabled him to build and maintain a permanent standing army. At his death in 1688, the Prussian army had grown from 11,000 officers and men to more than 30,000. Frederick William's son, Frederick III (1688–1713), continued these policies and began to exercise even greater absolutist control. Despite his prolific spending and participation in several wars, Frederick III pushed through a number of reforms and economies that made it possible to generate sufficient income to raise the size of the standing army from 30,000 to 40,000 and leave a considerable surplus in the state treasury (Poole 1980).

Frederick III was followed by Frederick William I, who ruled from 1713 to 1740. Even more devoted to his army, he increased its size to 76,000. He eliminated regal pomp and waste during his reign; his civil service became the hardest worked and poorest paid in all of Europe. At his death, his government was completely free of debt and his treasury had a surplus of eight million *thalers* (a silver coin common in Europe, from which comes the word English word *dollar*). His territories were to become the most prosperous of all German states. He was the first modern ruler to institute mandatory primary education, decreeing that all boys and girls must attend school until 12 years of age. His son, Frederick II, ruled from to 1786.

The Last of the Premodern Period

The last half-century of the premodern age coincided with the rule of Frederick II—also known as Frederick the Great for his policies designed to improve the lot of the common man. As the last of what have been called "enlightened despots," he succeeded in challenging Austria's position as the most powerful territory of the empire. Although he continued the policy of favoring his army and participated

in several costly wars, under his rule the Prussian economy became the strongest on the continent. Population continued to increase in his territories and the treasury continued to grow. He reformed the penal system and abolished torture. He made education a top priority and founded a number of universities. At the time of his death in 1786, Prussia was one of the world's five major powers.

Prussian Economic Conditions

Economic conditions across Europe were improving during the rule of Frederick II. Profits from the early successes of the industrial revolution in England resulted in many investments in Belgium, France, the Netherlands, and the Rhine states. Frederick's government had become an active participant in the economy, operating domestic monopoly businesses in metallurgy, textiles, silk, sugar, salt, coffee, tobacco, porcelain, insurance, and some foreign trade. It built roads and canals and ships, established a bank of credit and clearance, and increased programs in soil and forest conservation. It maintained food price stability through import-export controls and purchased and stored farm surpluses to protect against future famine.

Cameralist policies, while able to greatly increase state revenues, were less successful in Austria than they were in Brandenburg/Prussia. Without needed changes taking place in either income collection or court spending, the Austrian crown was forced to rely on its traditional sources of income, which included revenues from crown lands, tolls, and tariffs, state monopolies and excise taxes, as well as contributions from the estates (towns, church, and nobility), which remained smaller than desired and costly to secure.

Still overwhelmingly agrarian, the Bavarian economy was healthy enough to support a modest government, provided that it did not engage in military or political adventure. Almost ruined by 1745 as a result of several spendthrift leaders, the government finally retrenched and restructured, returning to solvency. Generating income for the Bavarian government was complicated by the fact that over half of the arable land was held by tax-exempt churches, convents, and abbeys. Saxony enjoyed vigorous growth of its economy after 1650, sparked by the highest quality manufactured goods of all German states. These were in great demand in Russia, England, and the rest of Europe.

Conclusion

The 450 years from 1350 to 1800 coincided with a number of revolutionary changes across Germany and Europe. It began with the

tortured death of manorial feudalism that was brought on by a series of devastating epidemics of plague. The first 150 years after that devastation were needed to repopulate the decimated territories.

A number of very important commercial inventions appeared during this period, making possible great volumes of profitable long-distance trade. First appearing among Italian merchants, they included banking, joint operations, insurance, and accounting. As these inventions worked their way north of the Alps, a string of more than 100 towns and cities along the Baltic and North seas came together for mutual protection and trade increase. The Hanseatic League of cities came to dominate trade in salt, herring, and cod; English wool and Flemish woolens; Russian furs and naval stores; amber; and many other goods. Never a political union, their importance waned in the sixteenth century when the focus of trade shifted from the traditional north-south axis to an east-west direction involving trade with overseas colonies. In a period of intense town building, guilds began to establish their control over manufacturing and commerce.

The second phase of this period was characterized by tremendous social upheaval brought on by religious controversy, focused in the Reformation and Counter-Reformation. The period ended with the death and destruction of the Thirty Years' War. This devastating turmoil permanently changed the face of the Germany, forever destroying the religious unity that had characterized the German empire since its founding, and resulting in the beginning of territorial absolutism across Germany.

The third phase of the period began at the end of the Thirty Years' War and continued until the start of the modern period. Cameralist absolutism spread across the German states, under which the sole purpose of the economy was to provide the greatest amount of revenue to the state. Mercantilism, which was common all across Europe at this time, became the dominant economic policy. Territorial princes raised tariffs, instituted excise taxes and import controls, established bureaucracies to collect and manage tax revenues, set up permanent standing armies, and supported industrial growth to push exports.

By the end of this period, cameralist absolutism had achieved a number of praiseworthy goals: fiscal stability, at least in the larger states; the creation of an honest, efficient bureaucracy; improved territorial security; legal reform and standardization; fiscal efficiency; reduction of internal tolls; uniform weights, measures, and currency; the beginning of postal and other public services; and establishment of compulsory primary education.

The economies of the German states had become mixed economies, with private and public businesses operating side by side. As

increased amounts of capital were necessary to fund new manufacturing processes, governments helped to establish banks and became part-owners of many new ventures. The overall economy of Germany remained predominantly agrarian, however. It would be nearly a full century later that the German states would follow Great Britain's pattern and become fully industrialized. But first, it had to become a nation.

Discussion Questions

1. What are the defining characteristics of each of the three 150-year periods of business history outlined in this chapter?
2. What was the importance of the development of commercial banking during this period?
3. What changes occurred in Germany's commerce and industry during the Middle Ages?
4. The chapter discusses three periods in the evolution of German commerce and industry after 1650. Describe the defining events of each period.
5. What was *cameralism* and how did it affect German trade?

Chapter 8

Commerce and Industry in a United Germany, 1871–1914

The nineteenth century is sometimes referred to as *the long nineteenth* because of events that clearly marked the beginning and end of this era. It began abruptly in May of 1789 with the storming of the Bastille and the start of the French Revolution and ended in 1914 with the advent of the World War I. When this period began, there was no German state as we know it today. Rather, Germany was still a diverse agglomeration of large and small independent states, free cities, and tiny principalities. At the close of the period, however, a fully unified Germany felt strong enough to take on most of Europe in the first truly modern, industrialized war.

The history of German business during the long nineteenth century was shaped by three central themes: (1) revolution and restoration, (2) nationalism, and (3) industrialization. Each of these themes will be examined in turn. The most important event during this period was the unification of the German state under the leadership of Prussia.

A nationalist movement had existed in the independent German states since long before the 1870s, but conflict between Austria and Prussia for leadership got in the way of a final resolution of the question. Unification had to wait until Prussian armies defeated Austrian troops on the Silesian plains and until after Prussia's decisive victory over France in 1870. Industrialization had, of course, been occurring for some time prior to unification, but in odd bits and pieces, without any overall direction or plan. After the German unification, however, industrialization proceeded at a rapid pace under Prussian leadership.

A series of revolutionary events occurred throughout Europe at this time, driving change in the economies and business systems of most of Europe.

Events Driving Change

Two key revolutionary events occurred in Europe during the late eighteenth and early nineteenth centuries that changed society forever. The first, a social upheaval, was the French Revolution. Not only did this revolution change the way people and their governments interacted, it also restructured the political face of Europe. The second revolution was economic in nature, and changed how things were produced and the way people earned their livelihoods; it was the Industrial Revolution, which began around 1780 in Great Britain. The English economic historian E. J. Hobsbawm (1965) referred to the combined effect of the two revolutions as a victory for capitalistic industry and the emergence of a middle class, largely entrepreneurial, society.

In the late eighteenth and early nineteenth centuries France was the most powerful and most industrialized nation on the European continent, second only to Great Britain. Under Napoleon, France took up arms against nearly all of Europe. Germany, whose economy was still largely agricultural, both benefited and suffered from France's military aims. The revolution in France affected all the German states both directly and indirectly.

The lands along the Rhine were first to enjoy the fruits of French military successes. Throughout most of the nineteenth century Prussia and Austria competed bitterly for leadership rights in the German states. However, for a period at the beginning of the century, a confederation of Rhenish states was created by Napoleon as a buffer between France and Germany. Its strategic location enabled business and agriculture to thrive on sales to France. Until Waterloo, it threatened to usurp Prussia's and Austria's leadership positions, at least economically.

The French Revolution and its aftermath produced other benefits for Germany. First, it triggered a final end to serfdom across all but the most eastern of the landed estates. Second, it consolidated numerous smaller, economically nonviable states and duchies into larger, more rational units. Third, it established a common body of commercial law across many of the German states with the introduction of the Napoleonic Code. Fourth, it provided ready markets for many of Germany's farms and new factories, both directly as customers and indirectly through establishment of the Continental System, a systematic boycott of English goods on the continent. With these goods harder and

harder to get, German producers were encouraged to invest in new and modern production facilities to meet continental demand. Thus, the German iron and textile industries benefited significantly from the boycott, and were poised to grow dramatically after Waterloo.

Fifth, in the states occupied by France, an honest, effective bureaucracy was established, greatly improving the efficiency of local government. In addition, tolls and tariffs were rationalized on the Rhine River system, along which the bulk of German trade goods traveled to market. This move made German goods more affordable, fostered greater internal trade, and enabled greater economic efficiencies in the 1830s with the introduction of the north German customs union (*Zollverein*). The Zollverein states adopted a common external tariff and eliminated or greatly reduced tariffs among themselves.

The Industrial Revolution had little direct impact upon the German states until long after Napoleon's final defeat. There was little international trade in German manufactured goods at the time. Rather, trade tended to remain similar to what it had been at the height of the Hanseatic League. Grains, livestock, and other agricultural products and products of German forests and mines dominated German foreign trade, with a few high-value manufactured goods, such as beer, wine, textiles, and cutlery adding small portions to the trade total.

The Napoleonic Wars of 1795–1815 provided both a spur and an anchor to further development of German manufactures. France remained a steady customer for agricultural and some manufactured goods. However, at different times, parts of Germany waged war off and on against Napoleon, who could be brutal in his peace settlements. Externally, the British blockades effectively cut Germany off from any access to foreign markets or new industrial technology. Furthermore, Germany lost productive territory to France.

From 1792 until Napoleon's final defeat in 1815, war raged almost uninterruptedly in Europe. France absorbed a large portion of what had been recognized as "German" lands. Belgium was the first to go in 1795; the Netherlands became a Bonaparte family kingdom; the entire left bank of the Rhine became French, as did the Ruhr coal and iron centers; northwest Germany was also annexed. The southwestern states—Baden, Württemberg, and Bavaria—joined in 1806 to form the core of the pro-French Confederation of the Rhine. To the north, the state of Saxony became one of Napoleon's most steadfast allies, her industries thus benefiting greatly from the connection.

Possibly the most important effect of the French Revolution and Napoleonic aftermath was the emergence of a more cohesive German region, although more than 50 years would have to pass before final

unification would occur. Before 1815, French pressure had reduced the 234 territories of the empire to just 40. Most church properties across the German territories were secularized. The revolution and recurring wars also dissolved many of the tiny principalities in their wake. With the dissolution of the Holy Roman Empire in 1806, the rationale for continued independence of the German imperial city-states also ended; the cities then reverted to the jurisdiction of their larger local regional political entity.

This rationalization of the German territories continued after Waterloo, as smaller states joined with their more powerful neighbors for protection and economic benefits. The map of Europe was further redrawn by the Council of Europe, meeting at Vienna after Waterloo to settle all war claims. As members of the victorious allies, Prussia and Austria benefited greatly. Austria regained the Italian and Balkan provinces she had lost in 1806. Prussia was given the Rhineland and half of industrialized Saxony, for which she gave up part of lands she claimed in Poland. As a result, Prussia emerged from the congress a true European power, a position she had not held before.

Under Austria's leadership, the Congress of Vienna voted to reform the remaining old German political units into just 35 (later 39) independent states, which were then loosely joined in a confederation (*Bund*). Each sovereign state remained independent, however, maintaining its own army and diplomatic corps. Presiding over this weak association was to the Austrian chancellor. The Bund was as weak as Austria and the other victorious powers—particularly England and Russia—intended it to be, and remained in effect until it was dissolved by Prussian victories over Austria in the Seven Weeks' War of 1866. After that, Austria never again played a significant role in German politics.

The years from 1815 to 1830 were a time of restoration for the monarchy in France and one of relative peace and consolidation of newly acquired or lost territories in Germany. After a brief disruption caused by another revolution in France in 1830, this half-century of unprecedented political and social upheaval finally came to a close in the years 1848 and 1849. Although they began in Paris, the revolutions of 1848 were not limited to France alone. Spontaneous uprisings occurred across Europe, as disillusioned and romantic reformers attempted to substitute rule by constitution and respect for human rights for the fading divine right of kings and autocratic despotism. In the German lands, a number of revolts occurred in both Austria and Prussia that brought an end to the Austrian dominated Bund and briefly established a national German state. Revolutionaries came

together at Frankfurt in May of 1848 to write a constitution and establish a unified national government. Their work was in vain, however, because none of the larger German states accepted the idea.

Building a German Nation

Nationalism is the name given to a social movement in which a person owes loyalty and devotion to a political or ethnic unit, and that loyalty should be greater than any held toward other individuals or groups—a "My country, first, last, and always" point of view. A host of nationalist movements spread across Europe beginning in the eighteenth century, peaking in the nineteenth century with calls for a united Germany, united Italy, and freedom from Turkish dominance in the Balkans.

The post-Napoleon period also saw the emergence of *romanticism*, a creative mood or intellectual belief that stressed human feelings and emotions over strict adherence to rules, along with an expressed love of nature and a longing for a return to a more romantic past (Snyder 1978). By its focus on ethnic folk history and folktales in the literature and art of the time, romanticism promoted a further spread of the nationalism that had come to the fore under Napoleon's dominance. By 1830, strong nationalist movements had resulted in the creation of three new European states: Greece and Serbia from Turkish dominance, and Belgium from the Netherlands.

German Nationalism

In Germany, a wave of nationalist thinking followed Napoleon's victories and occupations of German territories. Eventually, the educated middle class and university elite became the loudest proponents of German nationalism. They had to wait until the 1848 revolutions before the movement for a unified Germany coalesced to a point sufficient enough for action. Germans now regarded their culture as "special" and their way of life as equal to or better than that of non-Germans. Only a hundred years or so earlier, Germans had given their loyalty to the Church, a guild, city, lord, or other local or regional political unit. Now, the primary loyalty of the people was directed toward the idea of a national German state.

Population growth in the German states after the Treaty of Paris disproportionately added to the size and economic power of Prussia. From 1816 to 1865, the population of Prussia, already the largest German state with a population of more than 10.3 million in 1816,

Table 8.1 Population growth in eight German states, 1816–65 (millions)

State	1816	1865	Percent growth rate
Baden	1,005.8	1,492.2	42
Bavaria	3,560.0[1]	4,814.7	35
Württemberg	1,410.3	1,752.0	24
Electoral Hesse	567.8	754.1	33
Hesse-Darmstadt	587.9	854.3	45
Hanover	1,328.3	1,927.8	45
Saxony	1,162.7	2,354.0	97
Prussia	10,349	19,445.0	88
Totals	19,971.8	33,394.1	

[1]Includes Bavarian Palatinate.
Source: Sheehan 1989, 458.

grew by an additional 88 percent to 19.5 million in 1865. Population growth during the first half of the nineteenth century for eight German states and totals are displayed in Table 8.1.

Modern German nationalism appeared in full form following the revolutions of 1848–9, where an ill-fated assembly at Frankfurt produced the first solid unification proposal. The plan was acceptable to most of the small German states, but was vetoed by both Prussia and Austria. Although the revolutionaries of 1848 were not able to establish a strong, unified German state, they did succeed in forcing all but Austria to adopt constitutions. The great benefits of the 1848 revolutions were: (1) equality for all people under the law, (2) freedom of all persons and their right of movement, (3) freedom of speech, and (4) freedom of assembly (Maehl 1979).

Otto von Bismarck, owner of a large estate in Prussia and a 10-year veteran of the Prussian diplomatic corps, was elected to the Frankfurt assembly. He nursed a deep distrust and disdain for the weak Austrian-dominated Bund, and wanted to see it broken up and replaced by a strong confederation of states north of the Main River. This new confederation would be led by Prussia rather than Austria. Bismarck was given an opportunity to bring his dream to fruition when he was appointed chancellor of Prussia in September of 1862. Four years later in 1866, Prussia and Austria were at war.

Prussian troops soundly defeated Austria, who had been joined by most of the other German States; Prussia, on the other hand, stood

alone. The peace treaty signed in August of that year put a permanent end to the German Bund, replacing it with the North German Confederation, which included all states north of the Main River. Prussia annexed several of the smaller states that had fought against her, greatly improving her territorial integrity and further strengthening her militarily. The new confederation included about two-thirds of the German population, but only two-fifths of the territory. States south of the Main River formed a second confederation. They were told they could join the confederation if they wished, but would have to reorganize their armies on the Prussian pattern and allow them to be commanded by Prussian generals in the event of war. Austria was excluded; from that time on, she never again played an important role in German economic development.

Four years later, the North German Confederation, joined by the south German states, defeated France in the Franco-Prussian war of 1871. Until recently, most authors had contended that Bismarck purposefully maneuvered France into declaring war on Prussia over the Spanish succession. Modern scholars, however, disagree, concluding instead that France was predominantly responsible for the outbreak of hostilities (Maehl 1981). Victorious after just six months, Prussia was able to dictate harsh peace terms, including the annexation of the French provinces of Alsace and Lorraine, and payment of a war indemnity of five billion francs.

In this war, for the first time since the Middle Ages, the German nation and all its states fought as one. After the Prussian victory over French troops at Sedan, the south German states one by one voted to join their futures to the Prussian star. The first states south of the Main to ask to join the North German Confederation were Baden and Hesse-Darmstadt. Eight days later, Bavaria reluctantly followed suit, although her parliament took several months to finally agree. Wurttemberg was the last large state to sign a treaty of union. Bismarck was able to cap Prussia's victory over France by proclaiming at the French palace of Versailles the establishment of a new German empire, with Prussia's King William I the first emperor. The empire brought together 25 of the German states and most of the free cities under one administrative umbrella; Germany was once again a united nation—and suddenly the most powerful nation on the European continent.

Phases of German Industrialization

Germany's transition to an industrialized economy occurred in three distinct phases extending across parts of three centuries: First came

a period of *proto-industrialization*, with individual artisans brought together in a single location, but still working independently. In this way, production was shifted from cottage industries to factory-like units. Second was a *bureaucratic entrepreneurship* period, which was characterized by governments of some of the larger German states providing the financing for selected industries. Management for these growing enterprises was drawn from the established government bureaucracy. The salient feature of the third period, *collective capitalism*, saw the cartelization of Germany's primary industries. At its conclusion, Germany had completed her evolution from a European power to a world power (Trebilcock 1981).

Phase I: The Proto-Industrialization Period

In the first of these phases, the proto-industrialization period, factory-like institutions began to change the face of German manufacturing. They were not factories in the modern sense, but rather larger manifestations of the old farmed-out, piecework system. The period began around 1720 and ended in the 1790s with the rise of Napoleon's dominance of continental Europe. One of the major reasons why this proto-industrialization did not result in an industrial revolution at the same time that Great Britain was experiencing hers was a lack of experienced entrepreneurs in Germany.

Other than in the few successful trading cities such as Hamburg that remained prosperous, by the middle of the eighteenth century most of Germany at this time suffered from a severe lack of an experienced, successful entrepreneur class with capital and experience to apply to new industrial endeavors. In contrast to Great Britain, which developed its industrial economy almost a hundred years before Germany, there were few entrepreneurs willing, able, or knowledgeable enough to start and run new factories in the German territories. As a result, if the German states were to take their place in the new industrial world, state participation, ownership, or inducements for these early entrepreneurs was necessary. Thus, economic growth during this period was largely a result of state intervention in a selected number of budding proto-industrial sectors.

During this phase several of the larger states, led by Brandenburg-Prussia, jump-started development by sponsoring entrepreneurs in a few selected industries. These early seed factories were in most cases simply somewhat larger aggregations of earlier systems and processes in which a merchant entrepreneur contracted with a number of

Table 8.2 Prussian cities in the early nineteenth century

Town size (full-time residents)	Number	Population (000s)
More than 10,000	26	836
3,500–10,000	136	765.9
2,000–3,500	194	508.9
1,000–2,000	407	597.9
Less than 1,000	258	186.9

Source: Sheehan 1989, 105.

independent workers at various stages of the manufacturing process for labor on materials provided to them. This process remained in operation in Germany's textile and iron industries until the last half of the nineteenth century. These early consumer-goods factories were soon joined by war-related industries, particularly in the Silesian territories controlled by Prussia, where demand for processed products by the increasingly urbanized population was contributing to the growth of industry.

By the early nineteenth century there were some 2,000 cities and towns in Prussian territories (Table 8.2). Most were relatively small, and many were still surrounded by protective walls. Their economies were focused on supplying the everyday goods required by local and regional customers.

Importance of the Merchant

Although mining and manufacturing were slowly evolving into enterprises similar to modern factories, the key entrepreneurial figure driving the rest of the economy at this time remained the merchant. Equally, the dominant production system continued to be the ancient domestic or "putting-out" system. In this system, merchants purchased the products of individual handicraftsmen for later resale or for passing on to others for additional manufacturing processes. They also provided local independent cottage workers with goods for additional processing. Often, the merchant leased tools and equipment to the hand worker. However, there were not enough merchants across Germany to finance the new factories needed to compete with the growth of British industry. That investment had to come from the various German state governments.

State-Led Economic Development

The region of Upper Silesia became the first center for state-led investment. Near to what was to be the locale of a number of battles with Austria, Silesia became a center of Prussian armaments manufacture. From the 1750s onward, Silesia's few industries—particularly iron and linen—attracted more and more government aid. The workers for Silesia's linen factories, who could also serve as foot soldiers in Prussia's armies, were encouraged to migrate to the region by the king's promise of a free loom to each immigrant weaver. Similarly, the Prussian state financed Germany's first blast furnace, constructed at a Silesian ironworks in 1753.

Along with Silesia, the other two areas of the early development of industry were Saxony and the Rhineland. Up until the time of Napoleon's defeat, these regions led all Germany in the slow shift from an agricultural to an industrial economy. However, outside of these regions economic activity was very different; more than 80 percent of the population across the German states continued to be linked to the land. Agriculture was the dominant industry, and would continue to be for another hundred years.

Slower Growth in Austria

In Austria, Prussia's only serious contender for leadership in the German states, development of an industrial economy took a backseat to efforts at maintaining dynastic control over a widespread empire to the east and south. The Austrian empire at the end of the eighteenth century was hardly a cohesive nation; rather, it can be better described as a loosely associated composite of individual states led in different levels of authority from Vienna. Spread across central and south-central Europe, the Austrian empire included modern-day Austria, Hungary, northern Italy, Bohemia, the Netherlands, and what is now eastern Bavaria. The only common thread holding this vast spread of disparate peoples and land together was the monarchical and aristocratic order of the Habsburg dynasty. The crown of the Holy Roman Empire had rested on the head of the Habsburg monarch since the fourteenth century, and would remain there until 1806, when the empire was finally dissolved forever.

Phase II: Bureaucratic Entrepreneurship

During the second phase, from 1790 to 1840, the focus of business growth shifted from state sponsorship of private businessmen to a

selected core of businesses run by state-supplied bureaucratic experts in large, state-owned manufacturing and mining industries. These manufacturing industries were those the states believed contributed to cameralist and militaristic objectives. They included potash needed for fertilizer and gunpowder, textiles, iron, steel, armaments, coal, and transportation equipment and infrastructure.

This period saw the emergence of a professional political bureaucracy, with personnel often shifting back and forth between public and private spheres of activity. German industrialization in this period lagged far behind Great Britain's, as well as that of Germany's two continental neighbors, Belgium and France. While great strides were being made, they were limited to just a few regions—particularly those that bordered on increasingly powerful France. At the same time, a new problem was affecting Germany: overpopulation.

Outside of the agriculture lands east of the Elbe and the growing industrial regions that bordered the Rhine, most of the rest of Germany could not absorb a rapidly increasing population. Neither the new factories nor expanding farms east of the Elbe were creating jobs fast enough, so hundreds of thousands of German workers and their families left their homelands. Initially, a majority migrated to North or South America. Others crowded into the towns and cities, desperate for work, and willing to accept wages lower than normal. As a result, many areas of Germany suffered a real decline in earning power during the last half of the nineteenth century. In the eastern states, it also resulted in a critical shortage of labor when Germany's full industrialization took off in the last three decades of the nineteenth century.

The agricultural sector experienced a number of important changes beginning in the late eighteenth century. Spreading slowly, these changes would alter agriculture enough by the middle of the next century to all but eliminate the age-old threat of famine that had hung over central Europe. Full emancipation of the serfs began early in the century, and by the 1860s, was in effect in almost all of Germany. Changes in farming methods also occurred. Introduction of new crops such as potatoes and sugar beets improved the diets of most German farm workers, while also helping to raise farm income. The old three-field system, with a third of farmland fallow each year, was replaced by better crop rotation, widespread use of nitrogen-fixing legumes, and the use of more and better fertilizers. As a result, the threat of periodic famines in Germany ended after the potato blight of 1845–6 and poor grain harvests of 1846–7.

During the first half of this phase, production of arms and armaments provided a major impetus for German industrialization. The

greatest early impact was in Saxony and the Rhine states, where factory jobs soon completely eclipsed farm labor. By 1800, only about 20 percent of the population of Saxony held full-time farm occupations; the majority worked to some degree in textile manufactures. German textiles soon replace British-made goods that were banned from continental markets by Napoleon. The Rhine states benefited greatly from French demand, along with the growing importance of the Ruhr coal, iron, and steel industries.

One of the most far-reaching French changes was the imposition of the Napoleonic Code—a body of law that standardized commercial as well as civil law. Another major change fostering commercial and industrial growth at this time was the gradual elimination of the restrictive guild system, which had placed artificial restrictions on entrepreneurial activity. Again, Prussia led the German states' actions against the guilds, passing laws restricting their powers as early as 1806.

Lowering of Customs Duties and Tolls

Prussia also led the German states in reducing or eliminating much of the patchwork of customs duties and tolls that severely restricted internal trade. Beginning in 1817, Prussia lowered tariffs on most industrial products. These low tariffs were given wider impetus in 1834 when she convinced most of the other north German states to join in the Zollverein, or customs union. The union excluded Austria and her south German allies, most of whom feared the increasingly powerful Prussian army.

The union eliminated tariffs between member states and established the modest Prussian tariff as the common external tariff. Customs collections were honestly administered and fairly distributed by the Prussian bureaucracy. The volume of goods traded between the member states increased rapidly. By 1845, member states' revenues from the common tariff had increased by 90 percent, while population had only grown by 21 percent. Each member state's share of the tariff was based on its population (Sagarra 1977).

After 1834, free trade flourished and business grew larger and more profitable. This development expanded the market for many German goods by making it possible to price them more competitively. This now reliable source of income greatly benefited many of the smaller states' governments as well. In some states, the money was spent developing schools, universities, and other social infrastructure. In others, it was frittered away in castle-building and court pomp and glitter.

Slow but steady growth of the industrial sector in most of the larger German states was well established by 1830. Development in

the primary industries, including a wide variety of textile processing factories, a new surge of canal building and early railroad construction, provided an impetus for growth in other sectors, particularly coal, iron, and steel.

Phase III: The Collective Capitalism Period

The process of full industrialization across Germany did not take off until well into the third phase, which began around 1840. When it ended in 1914 with the start of World War I, Germany was a fully unified nation and a modern, fully industrialized world power. She had developed the strongest economy in Europe and in industrial production was second only to the United States.

The impetus for the rapid development of Germany's economy had again shifted, this time back to private entrepreneurs, directed by a small circle of powerful financial institutions. By the close of this period, economic activity in most major German industries was dominated by a few very large firms organized into cartels, with deeply entrenched participation and leadership by a small number of similarly large banks. Under this system, competition was closely *managed* by a few large firms, rather than being left to function on its own.

Until the 1850s, Germany was still largely a grain-exporting country. There was little capital available to invest in manufacturing; what little investment did take place was focused mostly on internal improvements and transportation, such as canals and, later, railways. A few princes invested selectively in manufacturing enterprises on their own lands, such as the porcelain and linen works of the Prussian king. Banking was almost nonexistent; the south-German banking houses active in medieval Augsburg and Nuremberg had long ago faded from the scene.

Before 1850, what new productive machinery that was installed in Germany came mostly from France or England. It included steam engines and pumps used in mining, spinning jennies and other textile manufacturing equipment, the reaper and other agricultural equipment. Mines and metalworks remained relatively small and independent. After 1850, however, changes in the German economy came rapidly and from all directions.

Development of the modern German business system began to take on its modern form almost a century after the Industrial Revolution began in Great Britain. The key preliminary steps were taken earlier, however. A good example of this is the history of railway construction. Germany's first railway, which covered a seven-mile stretch

from Nuremberg to Furth, was completed in 1835. The first long distance line, between Leipzig and the Saxony industrial city of Dresden, began service in 1837. After that, state (*lander*) governments became involved and railway construction accelerated. By 1850, some 3,500 miles of track had been laid in Germany; most of this was in Prussia, was government-owned, and used Prussian-built Borsig locomotives. This exceeded by some 1,500 miles the trackage put down in France at that time. Construction of Prussia's state-owned railways absorbed nearly 75 percent of all share capital raised between 1850 and 1870 (Schmitz 1993).

Over the next several decades, the pace of railway construction took on even greater steam, so that by 1875, when the primary European network was largely in place, some 12,500 miles of track had been installed across Germany. Railway construction continued, but at a slower pace thereafter. The length of track laid doubled from 1860 to 1870, but only added half again as much between 1870 and 1880, and about the same again between 1880 and 1890.

As in Great Britain and the United States, railway construction dragged the coal, iron, steel, and machinery industries along with it. More iron and steel plants were established in Prussia in the four years following the end of the Franco-Prussian war than in all the years preceding (Wilson 1962). Huge reserves of cheap coal from deep mines in the Ruhr were exploited, made possible by the application of stream-driven pumps and lifts. Between 1850 and 1869, production in the German coal mining industry increase fivefold, from 5,100,000 to 26,774,000 metric tons (Sheehan 1989). Both the numbers of mining firms and the number of workers employed in mining in the Ruhr coalfields helped make this great increase in production possible (Table 8.3).

Table 8.3 Numbers of mining firms and miners in the Ruhr, 1850–70

Year	Number of firms	Number of miners	Employees per mine
1850	198	12,741	64
1855	234	23,474	100
1860	277	28,657	103
1865	234	42,450	181
1870	215	50,749	236

Source: Sheehan 1989, 740.

The final transformation of the German economic, business, and social systems took place in brief 35 years between the Franco-Prussian war and the start of World War I. Maehl drew a concise picture of the changes that took place in that short period:

> For many reasons German trade and industry . . . embarked upon a course of dynamic expansion and spiraling increases in the gross national product, which generated a popular climate of euphoria. By the eve of World War I Germany had become the strangest and most ambitions power in the Old World. She was also the proudest and noisiest about her accomplishments. Most Germans glowed at the thought of the fatherland's social legislation, scientific and technical progress, educational systems, rising might, blossoming overseas empire, mounting imports and exports, mushrooming mercantile marine, and vast industrial strength . . . All other spectacular material progress had ended by conferring upon her people the highest standard of living in Europe. (Maehl 1981, 425)

Forces Driving Industrial Growth

Aided by tremendous growth in population (doubling from 34 million in 1845 to nearly 68 million in 1914), Germany's industrial growth was powered by four major forces:

1. A series of standardizing and liberalizing commercial and industrial laws, together with a series of timely scientific breakthroughs
2. Emergence of a comprehensive system of commercial banking
3. Exploitation of vast reserves of Ruhr coal and Alsace-Lorraine iron ores
4. Development of corporate cartels, which rationalized major industries, lowered production costs, improved company earnings, and reduced if not eliminated competitive pressures for price-cutting and other similar measures

The stage was set for Germany's intense industrialization after 1869 when Prussia passed the first series of laws to remove the last vestiges of guild restrictions on businesses, while also permitting full freedom of movement for labor. The next big political push came in 1879 with passage of a steep protective tariff, providing German industries almost monopoly power in their domestic market. One of the most important scientific advances to occur at this time was the Gilchrist-Thomas steel-making procedure invented in England. This process made it possible for Germany to fully exploit the phosphorus-tainted iron ores of Alsace-Lorraine, which had been annexed from

France in 1871. Using coke produced from the Ruhr coalfields, much of Europe's iron and steel until the end of World War II was produced from this region.

As state financing of industries tapered off, other sources had to be found. Initially, funding for Germany's early industrial development was provided by foreign loans and direct investments in Germany. However, for several years after 1871, one of the greatest sources of capital for financing construction of such major industries as Germany's state-owned railways was the five billion French francs paid as war indemnities.

The Push for Full Industrialization

It was not until the 1880s that Germany's major push toward full industrialization took place. By then, Germany's commercial banking system was firmly established, ready to supply the very large sums needed for construction of the modern iron and steel, chemical, electrical, and machinery manufacturing industries, as well as continuing to invest in coal and railway construction. These huge sums came from joint-stock banks. As her economy grew, the small but real increases in personal incomes made it possible for millions of German to deposit their savings in the newly formed banks. By 1875, the banking system was complete. These large multipurpose banks played a key role in providing funds for Germany's new capital-intensive industries. Representatives of the banks sat on their creditors' boards of directors, participating in and guiding top-level decisions (Chandler 1990).

The German banking system soon came to be dominated by four giants, cartelized much as German industries would be soon afterward. The four giants were controlled by a new central bank formed that year, the *Reichsbank*, which had been the Prussian Bank. The Reichsbank retained sole authority to issue Germany's new single currency. All the pieces were in place for Germany to pass Great Britain and become, in the next century, Europe's leading industrial nation, even rivaling U.S. manufacturing in many area.

Conclusion

After 1880, German business operated in an established, planned, protected economy, far different from the free trade, entrepreneurial system existing when she had embarked on the road to industrialization. No longer dominated by a Junkers-dominated agricultural economy, the German government under Bismarck acquiesced to the demands of her increasingly powerful industrialists and bankers.

German manufacturers, led by bankers who held large blocks of shares in the industrial concerns, formed huge cartels that controlled all aspects of the business. Seeing cartelization as a protection against depressions that had occurred in 1873–4 and the wasteful, potentially disastrous overproduction that climaxed the excessive competition of early development, government not only approved of cartelization, it strongly encouraged the process. Three powerful early cartels led the development: potash producers in 1879, coal from 1879 onward, and iron and steel also in the late 1870s. The great rush for cartelization occurred during the 1880s, however. By the end of that decade, they were functioning in all German enterprise arenas.

By 1913, Germany had become the world's largest exporter of chemicals, electrical equipment, transportation equipment, and other machinery, including textile and metal-working machinery. Much of this was carried to foreign markets in German-owned merchant ships made from German steel and powered by German marine engines. German merchants maintained offices around the globe to sell, and install, and service what they sold. The machines had been designed by German-educated engineers and scientists--arguably the best in the world at that time—and manufactured to the highest quality by graduates of Germany's world-leading vocational schools and industrial apprenticeship programs.

The German government actively aided German industry by establishing steep protective tariffs and supporting cartels and other collective market management activities. In addition to protective tariffs, German business came to expect—and get—more and more support from government: direct financial subsidies, preferential freight rates on government-owned rail and ocean shipping lines, and other protection from competition. In contrast to what was happening in both Great Britain and the United States where anti-trust legislation forbade cartels, German industry was free to organize in order to set prices, control access to raw materials and markets, proportion market shares, and in all ways *manage* their economic affairs. In the process, by 1914 the German business system had taken on the character of what Chandler (1990) has labeled *cooperative managerial capitalism;* in many ways this is the system under which it still functions today.

Discussion Questions

1. What were the three central defining themes that occurred during the so-called long nineteenth century in Germany?

2. What was the Zollverein and how did its formation shape trade and industry in Germany?
3. What effect did the Napoleonic wars of 1795–1815 have on German industry?
4. What was the North German Confederation? Why was it important?
5. What was the significance of bureaucratic entrepreneurship and collective capitalism to Germany's industrialization after victory in the Franco-Prussian War?

Part IV

Networked Commerce and Industry in Japan

Chapter 9

Foundations of Japanese Commerce and Industry

The Japanese business system was forged out of a social and cultural environment that stressed intense loyalty to one's family and community, a rigid set of rules for relationships between individuals and groups, and a willingness to adopt technologies, ideas, and practices from other societies while remolding them to fit specific needs and traditions of Japan and the Japanese. Except for the indigenous religion of Shinto, the earliest philosophical and religious borrowings came from China and Korea. Later ideas were taken from the West, although these did not influence Japan greatly until after the end of the Tokugawa shogunate.

Japanese society emerged from a late-starting but long-lasting feudal system that only ended after U.S. Commodore Matthew C. Perry and his fleet of black warships forced Japan to open her ports to Western traders in 1853. Perry demanded the Japanese open their country to permit provisioning and refueling of U.S. warships and trading vessels passing Japan on their way to Chinese ports, and a promise of humane treatment for castaway sailors. Only incidentally did the demands include opening Japan's ports for trade. In little more than a decade, the changes initiated by this forced opening of Japan resulted in a revolution, an end of the shogunate form of government, and a restoration of ruling power to the emperor and his advisors. At the same time, the floodgates were opened and Japan began to seek out the best and most applicable ideas in government, education, the military, and business for implementation at home.

As the modern Japanese business system evolved, it was influenced by the fundamental beliefs and ideas of Buddhism, Confucianism, and

Shintoism. A strict military code of behavior and rigid class system further shaped the way business was to be conducted in Japan. The evolution of Japanese business institutions and practices took place over a long 500-year period of isolation and feudal social structure. Merchants were considered to be at the very bottom of a four-level caste system that included the samurai at the top, followed by farmers, craftsmen, and then merchants. Despite their low social status, Japan's early businessmen became vital elements in the functioning of Japanese feudal society. The Japanese economy was based on the annual rice crop; without a growing body of merchant traders, wholesalers and distributors, the feudal system would probably not have lasted as long as it did.

The modern business system of Japan is clearly a product of developments and events that have occurred since the close of World War II. However, many of the philosophical, political, and cultural factors that helped give Japanese business its present character have roots that extend far back in history. According to Rosefielde (2002), the uniqueness of the Japanese system of commerce and industry is not caused by what is sometimes called "Asian values," but is a product of how Japan has combined its "shame-based communalist culture" with Shinto, Buddhism, Confucianism, and Korean and Chinese values. These values, in turn, have been combined with market concepts shaped by Western industrial nations. Together, they have enabled Japan to achieve exceptional post-World War II economic achievement. This chapter begins with a brief overview of how some of those cultural and social contributions influenced the way commerce and industry evolved in Japan.

While events began to influence Japanese society as early as the sixth century, the pre-conditions and subsequent development did not become salient until some centuries later.

The philosophical, economic, and cultural factors that shaped Japan's political and economic development occurred over five distinct historical periods. The first of these began around the twelfth century. The last began after Japan's defeat in World War II and continues today. The five periods, each with its salient themes were, first, a period of internal civil war and strife during which the first ethical foundations were laid out. The philosophy and cultural characteristics of all later periods were shaped by the philosophical foundations that took place in this period of Japan's history. The second phase, known as the Kamakura period, coincided with the ascendancy of the samurai, Japan's feudal warlords. In this period powerful warlords isolated the traditional emperor and began to run the country themselves.

The third phase of development was the Tokugawa period, during which Japanese society was characterized by feudalism and extreme isolation. Isolation was so severe that any Japanese that left the islands was forbidden to return lest the society be infected by any foreign ideas. During the fourth phase in the period of early modernization, the Meiji period, Japan opened itself to the West, and in the process laid the groundwork for the country's first modern business system. The last of the five phases of Japan's transition from feudal isolation to global supremacy was the Showa period, which coincided with Japan's colonial expansion during the 1930s and 1940s, World War II, and the dramatic rebuilding of her economy after 1945. Out of the ashes of nearly total defeat Japan went on to become the second largest economy in the world.

To begin to understand the history of business in Japan one must go back nearly 2,000 years, when imported Korean and Chinese cultural influences first began to shape Japanese society. It is clear that many of those earliest cultural traditions still influence the way business is structured and is conducted in modern Japan.

AGRICULTURAL ECONOMY

Four major islands hold most of the Japan's population, agricultural land, and industrial infrastructure. From north to south, they are Hokkaido, Honshu, Shikako, and Kyushu. One way to get an idea of the size of the Japanese archipelago is to place an outline of the islands over a map of the eastern United States. The northern-most island is Hokkaido; it would cover all of New England, excluding Maine, while the southernmost islands, some 1,700 miles away, would be scattered across Mississippi and northern Florida. The country's capital, Tokyo, and the other largest and most important cities all lie on the largest island, Honshu.

Japan for centuries was one of the most isolated nations of the world. This isolation was at first natural; maintaining that isolation later became an important part of official royal policy. The chain of islands that make up the Japanese nation lie off the coast of the East Asian mainland, much in the same way that Britain sits off the coast of Europe. However, only 20 miles separate Britain from France. On a relatively clear day, the white cliffs of Dover are clearly visible from France, whereas the narrowest point between the Asian landmass and the Japanese islands is Korea, a little more than 100 sea-miles away. The closest distance between China and Japan is about 450 miles. Certainly contact between fishermen, ambassadors, or traders did

occur before the sixth century, but traveling between the regions was not an easy task, particularly considering the small size of both Chinese and Japanese vessels at that time.

The differences in distances resulted in equally dissimilar effects of Japan's and Britain's proximity to their continental neighbors (Hirschmeier and Yui 1975). During the Middle Ages Britain became integrated into the cultural, economic, and political European world, although it must be recognized that this was often at arm's length. A shared language—first Latin and then French—enabled members of the political and scientific worlds to communicate and share ideas, thus permitting a common heritage to develop.

By the late Middle Ages, contact between Asia and Japan ceased altogether. Unlike Britain, which had been subjected to a series of invasions by such diverse groups as the Romans, Anglo-Saxons, Danes, Norwegians, and Normans, the Japanese suffered no foreign invasions. They developed a homogeneous culture over several centuries of isolation that became institutionalized during the Tokugawa period. The Japanese absorbed many foreign ideas and cultural influences, but nearly always shaped them to fit their own conditions.

Japan's rugged landscape, with more than 80 percent of the land mountainous and unfit for agriculture, meant that its growing population had to crowd onto a few low-lying regions, most of which are located on the Pacific Ocean side of the islands. A mountainous spine contains a number of active or former volcanoes and short powerful rivers that have sliced deep gorges on their short journeys to the sea. The islands are well watered and, although the soil is poor, many different cereal crops, vegetables, and fruits have thrived. Rice, long the staple of the Japanese diet, is still important, but less so than it once was. Today, despite the high costs of its domestic production, Japan is a net exporter of rice.

For most of the 100,000 years or so that people have lived on what are now the Japanese islands, there was little in the way of what can be considered an economic aspect to its culture (Brown 1993). Just as in the rest of the world, Japan's earliest residents were simple hunter-gatherers. Sometime within the last 20,000 or so years, it was possible to walk to Japan from Korea. A second land bridge is believed to have existed in the north, connecting Hokkaido with the Asian mainland. These land bridges allowed Japan's first Stone Age hunter and gatherer migrants to make the journey easily, probably following game animals. When the sea rose, they were isolated from their former homelands. Later invaders of the islands were probably fishermen as

well as hunters, and may have regularly moved back and forth between the islands and the mainland. Some eventually stayed, bringing with them superior pottery-making skills and possibly a matriarchal society. Out of that tradition may have arisen a belief in a mythical founder of Japan, the sun goddess from whom all later emperors are believed to have descended.

A group of mounted invaders from Korea may have been the last great wave of migrants to the Japanese islands around 3000 BCE. That migration featured cultural traits that were common in Korea and China at the time, one of the most important of which was the wet cultivation of rice. These people became very adept at building dams and irrigation systems, terraced rice paddies, and other agricultural infrastructure.

Centers of Development

From the time of the birth of Christ, there were two competing centers of development in Japan; both were on the main island of Honshu. One was centered on Izumo on the southeast coast and looked toward Korea. The dissemination of Chinese and Korean cultural elements into Japan probably entered through that region. The second location was at Yamato on the large coastal plain on the east coast, facing the Pacific Ocean and not far from future capital cities of Nara and Kyoto. Beginning with the first imperial court at Yamato, future capitals tended to be located on this plain.

Japan has two large minority populations that have not been absorbed into mainstream society. One consists of the descendants of Koreans who migrated there after 1910, during the time when Korea was a Japanese colony. Although several generations have now been born and raised in Japan proper, they are still considered to be resident aliens and are denied full Japanese citizenship. The second group is culturally different, not ethnically. These are the descendants of a formerly outcast class of ethnic Japanese. While they have full citizenship, they are discriminated against in many ways.

Today, the overwhelming majority of the Japanese people is a homogenized mix of the many different people who came to Japan from other East Asian regions. Only the Ainu, an early group of migrants to Japan, show much ethnic difference. The Ainu are probably among Japan's first settlers. Most have been assimilated into Japanese society, but a few isolated groups, together numbering no more than 15,000, remain on the northern island of Hokkaido.

Emergence of a Japanese Nation

Japan emerged as a more or less unified nation before the year 400; it was first mentioned in Chinese court records as early as the year 414. Prior to that notation, mention had been made in Chinese royal records of a diverse body of independent tribes living on the islands to the east of the Chinese mainland. Until it was unified, Japan consisted of a large number of independent, powerful clans led by independent warlords. Each clan protected its own land. Family members of the clan traced their lineage back to a common ancestor. Attached to each clan were nonfamily members, typically of a lower caste, together with various artisans, servants, and slaves. Artisans tended to belong to guild-like organizations with membership in a guild hereditary.

The first unifying group was the Yamato clan, which came to power around the middle of the third century and remained in power until 587. An enormous increase in the production of rice at this time made it possible for this wealthy clan to overpower and unify rivals into a genuine nation-state for the first time. Korean immigrants brought to the court ideas that led to greater military and political control. Soon, the social order became stratified into four broad classes: (1) powerful vassal clans that dominated the lands and people; (2) occupational groups that served clan chiefs and the imperial court by performing services and manufacturing tools and weapons; (3) the royal estates that handed over the bulk of what they produced to the Yamato king or queen; and (4) the politically appointed administrators of provinces and districts who served as an arm of Yamato control.

The Yamato court of the fifth century maintained a large standing army and was able to defeat a large Korean army on Korean soil. A vassal state was established over the Korean lands, and Korean and Chinese weavers, metal smiths, priests, and irrigation experts migrated to the Japanese islands from the conquered territories. The power of the Yamato court peaked early in the fifth century. Before long, the Korean possessions broke away and stopped sending tribute. The court's power continued to wane until the emperor was finally murdered.

A member of the Yamato family, Prince Shotoku, ruled as regent for his aunt, the wife of the slain emperor. Profoundly influenced by Buddhism, Shotoku made it a policy of his government to respect all living things. He reformed the bureaucracy, established a system of distinct court ranks, and in 604 introduced a 17-point constitution. The rank system was designed to improve government administration, while the constitution for the first time set forth the ideals of

the state, together with rules for all human interaction. The Shotoku constitution established three levels of society: the emperor, his ministers, and the people. The rights and duties of each were spelled out. This was one of the first laws passed that applied to the entire nation.

Shotoku established formal relations with China on an equal basis, whereas Japan had previously been a tributary state. He sent Japanese students to China to study government, art, history, religion, literature, and science. Shotoku died in 622 with his reforms still unfinished. Descendants of the powerful warlord who had originally murdered his uncle retook the throne and control of the government, letting many of the Shotoku reforms fade away. Not long afterward, however, the students Shotoku had sent to China began to return. They brought with them a recognition that government reforms were necessary if Japan were to retain its independence and for social unrest to be avoided. In 645, a palace coup led by the pro-China clique resulted in the deaths of all members of the usurper's family, thus removing all resistance to return the imperial family to power. Their actions are known as the Taika reforms.

The reformers' first objective was to establish a strong central government with the emperor as absolute monarch. In 646, the reformers abolished all private ownership of property and serfs by the wealthy families. In Japan's first successful land reform program, the state then distributed land free to farmers with the right to cultivate it in exchange for a payment of a fixed annual tax. They also set up an administrative system run from the capital city, with provisions for national defense and communication. All these reforms and others were accomplished in the space of just five years. Enactment of a Chinese-style code of administrative and penal law, the Taika Code, occurred in 701.

In the year 710, a grand Chinese-style capital city was begun a short distance away at Heijo (now the city of Nara), thus signaling the beginning of the 75 years of the Nara period. The Nara period saw the first great flowering of Buddhism in Japan. The Nara emperor, Shomu, established many Buddhist temples and monasteries with monks and nuns whose sole responsibility was to recite scripture and pray for the welfare of the nation. Many of the temples grew wealthy, and soon monks were moving into the bureaucracy and serving as advisors to the emperor and regional lords.

By the end of the eighth century the increasing power of Buddhists forced the family of one of the leaders of the Taika reformers, Nakatomi Kamatari, to place a different emperor on the throne, one who was not a Buddhist. That emperor, Konin, and his son, Kammu,

severed all relationship between the throne and Buddhist temples. Kammu moved the capital from Nara to Heian-kyo (now Kyoto), thus beginning the Heian period of Japanese history. During this period, which ran from 794 to 1185, Buddhist monks and priests were forbidden to become involved in the running of the state. This enabled Buddhists to refocus their energies toward their traditional mission of helping the people to reach enlightenment.

During the Heian period, Japan enjoyed some 150 years of peace and stability. However, population pressures eventually made it difficult to find enough rice lands to distribute to farmers. Smaller plots resulted in smaller yields, which in turn provided smaller government revenues. By the eleventh century, the policy of public ownership of land began to crumble, so that soon land passed back into private hands. For some time, the government had operated a program that rewarded anyone who carved new farms from wastelands or reclaimed others from bogs, with full ownership of the reclaimed farms, so the idea of private ownership was not entirely new. Eventually, many small fields were brought together into more viable farms by these landowners, in much the same way that the manors of feudal Europe were established.

Owners of Japan's manors soon found a way to have their lands exempted from taxes, in the same way that temple lands were exempted. The aristocracy, led by the leaders of large land-owning families, began to amass power as well as wealth. As they employed retainers as bodyguards, a new class came into being: the samurai. These were originally second or third sons or minor officials who, unable to inherit or find employment at the court, accepted minor administrative posts in the hinterlands. There, they acquired wealth and property on their own, soon becoming a force that could not be ignored.

Belief Systems and Japanese Society

Although the national character and ideological system are certainly unique features of the Japanese nation and its people, the forces that helped to forge it were borrowed from China and Korea, in the much same way that business techniques moved north from Italy to eventually be adopted by all of medieval Europe. The Japanese people are a mixture of several waves of emigrating Asian groups, with most of those invasions or waves of migration occurring before the fourth century BCE. As succeeding waves of peoples settled on the islands, they either brought with them or absorbed existing ideas and traditions from China, Korea, and elsewhere in Asia.

Chinese ideas and cultural norms began to arrive somewhere in the sixth century and only stopped after Japanese troops were pushed out of Korea and China in 1945. Among the more important of the formal philosophical systems that came from China at this time are Buddhism, Taoism, and Confucianism. These interplayed with the earlier Japanese indigenous religious system, Shinto. Each of these thought systems and their teachings are presented briefly below. Christianity was introduced into Japan in the sixteenth century by Roman Catholic missionaries and was at first well received. During the Tokugawa period, however, Christianity was banned and Japanese Christians were persecuted. Many died rather than recount their faith. The ban was lifted by the Meiji government in 1873.

The Early Influence of Chinese Buddhism

From the middle of the sixth century until the onset of the Meiji revolution in 1867–68, Japanese culture was very much under the influence of China. Initially, the major sources of that influence were Buddhist priests. Along with Buddhism, Chinese cultural traditions spread into Japan both directly and through Korea. Japanese Buddhism is known as *Bukkyo*. It had probably unofficially entered Japan even earlier than the middle of the sixth century; the year 552 is the traditional date given by Japanese scholars for the first arrival of Buddhist priests in Japan. These Buddhist priests came to the Japanese Yamato court with official representatives from a small kingdom in southern Korea. A sprinkling of Buddhist missionaries from China proper may have arrived in Japan earlier. During this period, Korean, Chinese, and even occasionally Indian Buddhist priests regularly visited Japan, teaching and spreading word of the new faith. At any rate, it did not take long for Buddhism to become entrenched into Japanese society.

Buddhism originated in India in the fifth century BCE. It spread quickly north to China, and in a relatively short period of less than 100 years became an important feature of Chinese culture. The missionary zeal of its Chinese followers carried Buddhism to Korea, and from there to Japan. During this same period, many Japanese converts traveled to China to learn more about Buddhist thinking. When they returned they brought many other aspects of Chinese civilization with them.

A primary tenet of Buddhism is achieving a balance between seeking happiness (enlightenment) through participation in the pleasures of the senses strict devotion to self-mortification, or asceticism. The Middle Path, or Eightfold Noble Path, consists of eight "right"

behaviors: Right Understanding, Thought, Speech, Action, Livelihood, Effort, Mindfulness, and Concentration. Together, these are encompassed in the three fundamental ideas of Buddhist training and discipline: Ethical Conduct, Mental Discipline, and Wisdom (Rahula 1978).

At the core of Ethical Conduct is the Buddhist conception of love for all living beings. This idea was readily accepted by Japanese Shintoism, which taught that all things are in their own way godlike, and thus should be revered and respected. In addition, the concept of Ethical Conduct embraces three of the Middle Path concepts, namely Right Speech, Right Action, and Right Livelihood.

Included within the realm of Mental Discipline are the factors of Right Effort, Right Mindfulness (or Attentiveness), and Right Concentration. These concepts fit easily into the samurai warriors' ideal of mental and self-discipline. The ultimate process and goal of this factor is a mind that is both trained and disciplined; Right Mindfulness, Right Effort, and Right Concentration together make it so.

Wisdom is achieved through application of Right Thought and Right Understanding. Right Thought is ethical thought. Understanding of things as they really are is the highest wisdom a person can attain. Real understanding, which perceives the Ultimate Reality, is only achieved when the mind is free from all impurities and is fully developed. This can only be reached through meditation.

By the middle of the seventh century, students that the Yamato court had sent to China returned to form a "pro-Chinese" clique at the Japanese court. These students had been sent to the mainland so that they could study at the same sources of knowledge, art, and invention as the Chinese. This group grew in size and importance so that by 645 they were powerful enough to seize control of the country. For a time, this resulted in Japan almost becoming a miniature copy of China, something of an intellectual satellite if not a political one. The pro-Chinese faction proceeded to reform the country's traditions by installing Chinese political and social programs, along with such economic institutions as land reform. They did not simply copy Chinese traditions as they found them, however. The reformers modified Chinese cultural, philosophical, and political ideas to fit the local Japanese character. While they considered the Chinese culture to be superior to their own, they were still loyal to their own antecedents. By adjusting many aspects of Chinese culture to more closely fit Japanese traditions, the reformers' innovations made the changes uniquely Japanese. These dramatic changes, which took place over a 40-year period beginning in 574, are known as the *Taika reforms* (Varley 1984).

Buddhism was made the national religion in the eighth century, and many temples, monasteries, and convents were built during this period. Over the next few centuries Buddhism continued to expand across Japanese society, and in the process became an important conduit for the spread of Chinese culture across Japan. A similar pattern was taking place in the West at this time, as the spread of Christianity was transmitting aspects of Mediterranean civilization and culture across northern Europe.

After Buddhism was reframed to fit Japanese needs, it quickly established itself in most of Japanese society. Modified Buddhism particularly flourished during two separate periods in Japan. The first was the Nara period from 710 to 794; the second was the Kamakura period in the twelfth century.

By the Nara period in the eighth century, Buddhists were teaching the idea that mercy toward all living creatures was among the most important qualities of mankind. Furthermore, Japanese Buddhists followed through on their teachings. They introduced a wide variety of social welfare activities and programs. They established and operated hospitals, charities, and construction, irrigation, and reclamation projects.

Eventually, Buddhism lost most of its influence over Japanese society. By the time of the Tokugawa ascendancy over rival clans early in the seventeenth century, Buddhist temples had been reduced to little more than parish recorders, keeping vital statistics and performing burials. Away from the eyes of society, a few Buddhist monasteries continued to participate in the shaping of artistic traditions and in providing classical education.

Buddhism's role as a major religious or philosophical movement in Japan essentially ended during the sixteenth century dictatorship of Oda Nobunga, from 1534 to 1582. Nobunga was a rational, inventive war leader. He was also a strong nationalist, believing that China's culture and traditions were inferior to Japan's. He also believed that Buddhist priests were nothing more than parasites on the government and the Japanese people. Acting on his beliefs, he abolished all Buddhist temples in Japan. In addition to his anti-Buddhism stance, he was also a modernist in terms of business and industry. He introduced several important reforms affecting trade, one of the most important of which was removing district checkpoints (where tolls and taxes were levied one on top of the other), thus greatly facilitating trade within Japan.

Japanese Buddhism continued to be reshaped and reformed to meet changing needs of society. In the early ninth century, the *Tendai*

and *Shingon* sects were brought from China by monks who had studied at Chinese temples. Although both of these sects had less impact on society than did *Zen Buddhism*, they still exist in Japan today. Zen was introduced at the beginning of the Kamakura period. A fourth important Buddhist sect emerged in the twelfth and thirteenth centuries, *Jodo*, or "Pure Land" or "Pure Life" Buddhism. Jodo was formed as something of a reaction to the secularization of the Tendai and Shingon parties. These, centered at the court and serving as advisors to wealthy aristocrats, had become wealthy and powerful, neglecting their old mission of service to the poor. Pure Land Buddhists taught a religion that emphasized the glories of the next life over any that could be gained in this one. Salvation and admittance to the paradise of the afterlife could only be gained by renouncing the temptations of the present, and devoting oneself to living a pure life. The Pure Life Buddhists established free hospitals, schools, orphanages, and similar social services. Pure Life Buddhists can still be found in Japan today.

Zen Buddhism in Japan

By the twelfth century, Buddhism in Japan had evolved into four major sects and several minor ones. One of the more important sects was Zen, whose teachings incorporated a very strict system of mental and physical discipline. The object of this discipline was total self-control and mastery of one's own willpower. The word *Zen* literally means meditation, and meditation became one of the most fundamental practices in Zen Buddhism. Achieving the Zen state of enlightenment means gaining the final realization that all human suffering stems from mankind striving for earthly things such as wealth and power, which are illusory and thus unimportant in the long term. Realization of Zen enlightenment can only occur through meditation. Zen further encourages the individual to seek personal enlightenment by exercising continuous discipline and effort, analogous to the continuous improvement concept of modern Japanese businesses' total quality management programs.

Zen became the preferred religion of the samurai warrior class, whose approval probably contributed significantly to the concept's rapid success and lengthy staying power. In this way, it played a leading role in the development of the country over the next 600 years, which constituted the Japanese Medieval Age. By its stress on self-discipline and control, it emerged as a particularly relevant creed for the warrior and ruling classes, and helped to shape the apparent stoicism that seemed to characterize the samurai.

Zen monks were engaged by the shoguns and samurai as advisors. They played a particularly important role in negotiations with China. A great revival of interest in Chinese learning and literature took place under Zen's influence. Chinese art, landscape gardening, and tea drinking, introduced to help keep Zen meditators awake, were absorbed into the Japanese culture.

An entire aesthetic system grew out of Zen teachings, one that became a lasting element in the Japanese culture. Appreciation of the small, the simple, the natural, and even the misshapen came to be valued over the large, the grand, the man-made, or the uniform (Reischauer 1970, 1988).

Confucianism in Japan

Although Buddhism quickly became the dominant religion for the Japanese masses, a second philosophy invaded the Japanese islands about the same time, and was just as quickly adopted by many of the country's ruling and educated classes. This was Confucianism. Chinese Confucianism was not a religion in the traditional sense, as Buddhism became. Rather, it was more of an intellectual system of thought, based on traditional Chinese doctrines in the areas of ethics, morals, and politics.

Confucius, a Chinese philosopher and teacher, is believed to have been born in 551 BCE and died around 479 BCE. As his teachings spread in China, many came to be absorbed into the new religion of Buddhism. While Buddhist ideas were mainly concerned with helping people who were suffering either mental or physical distress, Confucianism emphasized such virtues as loyalty and self-sacrifice.

Loyalty to the emperor was important in the Chinese system of Confucianism. However, this was often overshadowed by loyalty to the family. This was changed when it was introduced into Japanese thought, where loyalty to the lord was made the central concept of the system. Loyalty to the family was, indeed, important, but loyalty to the lord took precedence. Loyalty to the lord translated to loyalty to the emperor, as well. In this way, the samurai's fealty to his lord was strongly reinforced.

Confucianism emphasized that in order to maintain social stability and serenity, mankind must accept and follow proper and natural relationships between those who are ruled and those who rule. This idea fit well into the pattern of feudalism that was evolving in Japan. It came to be the underlying philosophy of the bureaucratic state developing in China and was well suited to the system of a rigid hierarchy emerging in Japan (Reischauer 1970).

Confucian philosophical tenets had particular influence in establishing and maintaining the rigid class system that came to characterize the Japanese feudal period. At the top of the hierarchy was first the emperor, followed closely by the shogun, or supreme commander. The role of the emperor was to *reign*, while the shogun and his appointed officials *ruled* Japan (Hirschmeier and Yui 1975).

Beneath the shogun was a strict hierarchy, running from highest to lowest officials to village headmen, until authority finally came to rest in the hands of the father of the family. Samurai, whose profession was arms, occupied no direct position in this hierarchy, except for a few more powerful leaders who became feudal lords. Samurai owed unquestioning obedience to their respective lords.

In terms of social standing outside of the direct government system, a Japanese Confucian hierarchy of four classes existed. Occupying the lowest position in this social hierarchy were merchants; above merchants were craftsmen; above craftsmen were farmers; and above farmers were the samurai. In Japan, Confucian ideology held that the public interest ranked above the private, and virtue (*gi*), which was a samurai ideal, ranked above individual profit (*ri*). Thus, two Confucian doctrines placed samurai above merchants: merchants performed less "public service," and they sought profit before virtue. Eventually, however, with no wars to justify their existence and suffering from a declining income base, samurai were forced to become merchants to survive.

Confucian principles of ethics were the greatest influence on the samurais' unwritten code of behavior, the *Bushido*. Particularly important were the five rules of the relationship between master and servant (those who govern and those who are governed), father and son, husband and wife, older and younger brothers, and between friend and friend. These rules of behavior, together with the Confucian emphasis on learning and self-control, provided a powerful sense of direction for the samurai and for Japanese society in general (Nitobe 1969).

Taoist Simplicity and Harmony

Another philosophy, Taoism, came to Japan from China about this same time as Confucianism. Taoism is a Chinese religion and philosophy that advocated simplicity and selflessness. It is said to have sprung from the teachings of the Chinese philosophers Lao-tzu and Chuang Tzu during the sixth century BCE. Basically, Taoism urged people to live a life of complete simplicity and naturalness, and of noninterference with the course of natural events. Only in this way could one attain the happy existence of living in harmony with the *Tao* (an ideal state of consciousness). Morishima (1982) associates Taoism with

Confucianism and Shintoism, stating that the idea of the Tao means an external order in the patterns of everything in society. To those in the West, this might be called "universal order," "God's design," or the "way of the cosmos." It was a concept that was plainly in concert with the traditional concepts of Confucianism.

Taoism did not become a separate religion in Japan, but instead was absorbed into the native Shintoism that was by then taking full shape. Morishima also saw that Japanese Shintoism was the one manifestation of Taoism that was accepted in Japan. Japanese Taoism is vastly different from that which evolved in China. In China, Taoism advocated that a person retire from public life to live in a world of seclusion, tranquility, and parsimony. Only in this way could the person attain the aim of ageless youth and immortality in the pursuit of happiness. In Japan, Taoism was transformed into an opposite of seclusion, and instead came to promote nationalism. Taoism provided a religious rationale for the loyal and patriotic sentiments that enforced isolation prior to the nineteenth century and that the West believed to be so characteristic of twentieth-century Japan.

Shinto Nature and Ancestor Worship

Shinto beliefs and worship probably came to the Japanese islands with some of the earliest peoples to cross the water from the Korean Peninsula. In this light, it can be considered Japan's aboriginal or indigenous religion. Shinto is basically worship, or simply paying reverence to, all things in nature, including but not limited to one's ancestors. Shinto teaches that all things, animate and inanimate, have their own *kami*, or spirit, and are therefore to be respected (DeMente 1987).

Shinto has no recognized founder; in its ancient or tribal form, it was associated with the ritual act of purification or cleansing from disease, wounds, death, or acts deemed to be antisocial by the tribal unit. As settled agriculture took over from hunting and gathering lifestyles, it was applied to traditional farming activities, representing hope or a plea to the gods during the time of the planting of the rice crop, and in gratitude to the gods during the harvest. Other rites were designed to call upon the *kami* spirits for protection or intervention in times of stress or crisis. At first, special places where *kami* worship occurred were simply marked off with straw ropes, or with paper or rice straw streamers wrapped around special rocks, trees, or gates (*torii*). Eventually, these took on a more permanent form, with some becoming elaborate shrines with different buildings for worship, for ceremonies and rites, and for prayers. Although Shinto is no longer a state institution, tens of thousands of these shrines are still in use in Japan.

In Japanese, the word *Shinto* consists of two ideographs or Chinese characters that together mean *the kami way*. The word first appeared around the eighth century to distinguish the Japanese faith from the Buddhist, Confucian, and Taoist faiths being imported from China. The Shinto religion, therefore, is the Way of the Gods: *kami no michi* (Mason and Caiger 1972).

Kami are the sacred spirits that are worshipped in Shinto. The word is used as a title conveying honor and respect, much like the English word "Reverend" for minister, or "Father" for priest. Both living and nonliving things have such spirits. They are also embodied in certain admired personal characteristics or behaviors, including growth, fertility and production, harmony and cooperation, justice and authority. Special virtues worthy of particular Shinto veneration are seen in humans who have done heroic deeds, people who in some way have contributed significantly to the family, the class, the nation, civilization, or human welfare in general, as well as people who have given up their life for the community or nation (Ono 1962).

In practice, Shinto has come to embody more than just a religious faith; it includes a body of attitudes, ideas, and ways of behaving that are now seen as characteristically Japanese. The Shinto religion does not include a supreme deity, nor does it have sacred scripture like the Bible or Koran. However, all Shinto ceremonies include four elements: ritual purification, an offering, prayer, and a symbolic feast.

According to Morishima (1982), Shintoism contains such Taoist magical elements as fortune-telling, astrology, geomancy (telling or interpreting the future by signs from the earth), and the like. An example of geomancy was the interpretation of a windstorm that destroyed an invading Mongol fleet as a "divine wind" rather than a freak gale that just happened to come at a crucial time. In the thirteenth century Mongol hordes overran Korea, central Asia, and much of the Middle East and Eastern Europe. From those conquests they slowly took over China. They attempted to conquer Japan twice, first in 1272 and again in 1281. Both times their huge invasion fleets were disrupted by bad weather. As the second invasion was beginning a typhoon or kamikaze, or divine wind, hit, destroying the fleet and most of the invading army. The Mongols did not attempt a third invasion.

The Meiji government made Shinto the official state religion in 1871 as the spiritual basis for both society and the government. For a time, Buddhism was forbidden, but the ban was seen as unenforceable and soon lifted. Today, Shinto officially recognizes the dual religions of many if not most of its followers. All Shinto shrines were taken over

by the government and Shinto priests selected by merit replaced much of the traditional, hereditary system. Shinto remained the official state religion until 1945 when it was secularized under the American occupation. Outside of Japan, Shinto was considered synonymous with Japan's ultranationalist factions, with the country's militarism and emperor worship, which Westerners felt to be unnatural.

The Shinto religion is largely responsible for the strong feelings of group pride in Japan. Early in its practice, Shinto taught that all Japanese were descendants of divine beings. Therefore, the Japanese people were different from other mortals and, obviously, a special people. Shinto also decreed that the Japanese emperor was the high priest of the people, and governed in the name of all leading deities. Shinto existed alongside other schools for centuries, but in the 1870s was named the official religion of the nation, and its teaching activities came under control of the government. Under national Shinto, the emperor filled two roles. First, he was the emperor of Japan. Second, he was high priest of the Shinto religion. In the latter role he was deified, and people were taught to believe that he was a living god.

Today, Shinto is no longer an official state religion. Still, it remains an important and far-reaching influence on the Japanese culture and business, although it is no longer the major influence it was prior to and during World War II. Shinto shrines are now independently owned and operated places of worship, often managed by a local important family, a community, or a business. An Association of Shinto Shrines provides guidance and coordination throughout Japan.

Shinto is an important element in the Japanese business system. In addition to encouraging loyalty, cooperation, and submission to authority among workers, every activity necessary for the production of food, clothing, and shelter, for the enrichment of Japanese culture, and for the betterment of Japanese society and the nation in general, has a connection with the *kami*. Thus, all business activities are "good," provided they promote the overall happiness of Japanese society. Shinto also considers acquiring material possessions a natural consequence of a life of adoration of the *kami* and therefore is to be encouraged. On the other hand, using one's wealth for selfish purposes or in ways that hurt others is "bad."

EARLY BUSINESS PRACTICES AND INSTITUTIONS

The first business ventures in Japan were an outgrowth first of clan and family activities and later of shogun or imperial monopolies. By the twelfth century, most of the land was owned outright or controlled by

powerful families. Agricultural and craft surpluses were the property of the landowner, who traded or sold them as he saw fit.

Under the Taika, land had been seized by the state and then parceled out to individual farmers or craftsmen. Over the next several centuries, larger and larger parcels of land were removed from state control and given tax-free status, so that by the twelfth century the privatization process was nearly complete. The flow of goods became less a part of the national tax system than the end result of a complex system of tithes and fee payments. At the bottom of this system was the individual farmer. Above him was an overseer, a local lord, an absentee family or temple landowner, on up to a powerful court patron who, for a fee, ensured that the land remained untaxed.

Also at this time, metalworking and textile weaving skills imported from China and Korea were becoming increasingly important to the overall economy. It is important to remember that although Japanese culture grew from borrowed roots, the adaptations made by the Japanese made it clearly "Japanese" and are looked upon with pride even today (Reingold 1992).

The use of Chinese characters for writing the Japanese language began sometime in the fourth or early fifth century. For earlier records of events in the islands, one must look to Chinese or Korean sources. Japanese craftsmen improved on what they borrowed, including the use of Chinese characters. Many characters were simplified and were not used to mean the same thing in Japanese that they did in China; others were used to represent specific sounds in Japanese, rather than whole words.

Japanese craftsmen also improved on technology imported from China and Korea. For example, iron and steel making was imported from Korea. But within the space of a century or so, steel swords made in Japan were considered the best available in all of Asia, commanding great prices in China and beyond. Japanese smiths also mastered bronze casting techniques, taking them to the point where the great bronze Buddha statues crafted during the twelfth and thirteenth centuries became among the largest bronze castings ever attempted. They remain so today. Other skills imported and improved upon by the Japanese included weaving and embroidery, paper-making, and woodblock printing.

Under the Tokugawa period, large surpluses had to be produced in order to pay for the political system imposed by the imperial court. Feudal lords had to maintain two residences, one at the capital city of Edo and one at their rural domains. The lords with all their retainers were required to spend alternate years at Edo and their home estates. While

they were away from the capital, their wives and children had to remain at Edo, hostages to the lords' good behavior. The surpluses produced to pay for this system of conspicuous consumption were forced out of the lords' peasant labor. The products were shipped to the main towns, particularly Edo and Osaka, where they were stored and eventually sold.

Eventually, many of the families were forced to augment their incomes. They did so by taking on some of the steps of gathering, storing, and distributing their goods themselves, or by financing others to do it for them. By the end of the fifteenth century, many of the commercial enterprises needed in a modern business economy were in place in Japan. These included banking, manufacturing, retailing and distributing goods, as well and storing, grading, and even futures trading on rice prices. Ownership of the emerging businesses was typically retained by the founding families, although more and more the daily operation of the business was turned over to trusted clerks. These assistants manifested the Confucian ideal of loyalty by remaining with their firms for life. In this way, the early business system of Japan came to function much like an extended family.

Japan's first real businessmen were the *toimaru*, who were specialized wholesale merchants. These merchants stored, transported, and sold goods at Japan's larger ports. Many of these toimaru joined with artisans and craftsmen in their guilds. As they grew in wealth and power, they gained special monopoly privileges, and even negotiated special exemptions from customs duties, just as the samurai were about to negotiate freedom from payment of taxes.

The early business system of Japan thus evolved from a state monopoly to individual entrepreneurs or commissioned middlemen. All merchants occupied the lowest rung on the status ladder, and continued to do so until long after the first samurai took up the profession. Commerce was about the only occupation open to feudal warriors and lords who needed a steady income to pay for their court-ordered social system, particularly after population pressures reduced their earnings from rice taxes. These early business leaders, when joined by members of an impoverished warrior class that had outlived its reason for existence, discovered that business was not as bad an occupation as the old leisure classes had made it out to be. When the samurai went into business, they brought with them their particular Buddhist ideals and ideology: a deep commitment, strong loyalties to suppliers and customers, and willingness to work long and hard to achieve success. These ideals and beliefs were absorbed by non-samurai business leaders as well, and many still influence the way business is conducted in Japan today (Saito 2005).

The Samurai Tradition

The earliest samurai came to power in the provinces, gradually moving in toward the imperial court, where they served as dedicated bodyguards and military police. One of the most noteworthy of the early samurai was Minamoto Yoshiie, who participated to distinction in the 12-year war to put down an uprising by the Abe family clan. Yoshiie emerged from this war with the reputation of the ideal warrior, brave and loyal. Many powerful clans thereafter pledged loyalty to Yoshiie, granting him tracts of land in payment for his protection. This system was adopted by later samurai.

The samurai class eventually came to full power with establishment of the military government or shogunate at Kamakura during the medieval period. Shogunates exercised effective control over Japan until the emperor was returned to power during the Meiji Restoration of 1868. When the samurai were not serving as warriors, they spent their time mostly hunting and training in the military arts, living what the Japanese call "the way of the bow and the horse." For the samurai, pride in one's family name was a key value in their code of behavior, along with unquestioned devotion to service to one's lord. Out of this early code of living was to emerge the Code of Bushido, or Way of the Warrior, which specified the behavior of samurai in all things.

By the middle of the Kamakura period, the warriors were established in farming villages across the land. Improvements in farming practices had lifted farm yields and released more farm laborers to practice their skills as artisans and craftsmen. These were as attached to the land as were the farm labor serfs themselves.

Conclusion

Japan's intellectual and spiritual foundations were firmly established as the country entered into its feudal period. Both Buddhism and Confucianism had evolved into their particularly Japanese forms. Shinto, the native Japanese religion, would eventually take on aspects of each of the Korean and Chinese importations. Among the more important of these was its acceptance of filial piety and total loyalty to one's lord.

Confucianism, which was more a philosophy than a religion, functioned more or less unchanged in its basic concept. Buddhism, on the other hand, evolved along several different paths. Among the more important of these Buddhist sects was the school of Zen. Zen's emphasis upon the warrior-like virtues of duty, self-control, loyalty to one's superiors, and self-sacrifice fit neatly into the framework of a warrior philosophy.

Beginning in the tenth century, an increasingly professionalized class of fighting men—the samurai—served in local areas as estate administrators and policemen, and as officials attached to local government. Despite their growing prowess as fighting men, they remained more or less politically immature. The best of them remained only middle-level figures in hierarchies dominated by courtiers and religious leaders in and near the imperial capital. Founding of the *bakufu* in the 1180s changed their role (Mass 1990).

Originally, the samurai were farmer-warriors who had been citizen soldiers much like America's minutemen. However, they became less "farmer" and more professional "warrior" as the feudal period progressed. By the close of the Kamagura shogunate and the beginning of the Tokugawa period in 1603, the samurais' traditional role had changed completely. What they stood for, however, did not change. Rather, the ideal of the samurai warrior became the way of the Japanese businessman, and a standard toward which all society strived.

DISCUSSION QUESTIONS

1. Describe how commerce and industry developed in the Kamakura period of Japan.
2. What happened during the Tokugawa period to shape Japanese commerce and industry?
3. Why was the Meiji period particularly important in shaping Japanese commerce and industry?
4. What were the defining characteristics of the Showa period in Japanese business history?
5. What were the Taika reforms? Why was the Heian period important to the growth of trade?
6. Describe the samurai tradition and its impact on Japanese business practices.

Chapter 10

Commerce in the Kamakura and Ashikaga/Muromachi Shogunates

The Kamakura and Ashikaga periods from 1185 to nearly 1600 instituted some 500 years of shogun dominance in the Japanese empire. In the early years of the era, weak Japanese emperors continued to hold court at Kyoto on the western side of Honshu. During the first half of this era, from 1185 to 1333, a duplicate military de facto government under the shoguns operated from the seacoast village of Kamakura on the eastern side of Honshu; shogun-led forces fought several successful but costly battles against Mongol invaders, the last of which instilled a belief in divine protection in Japan.

Rich and poor alike suffered through a series devastating famines from which they only slowly recovered. Financially strapped, the emperors of Japan were often able to support their appointed regional administrators. They were able to restore a semblance of imperial power in Kyoto, but were not strong enough to completely regain support of regional landowners and clan leaders. As a result, the weak imperial government was unable to defeat a challenge from one of the more powerful generals and the government was forced out of Kyoto in 1336.

As noted in the previous chapter, the feudal social structure that evolved in Japan during the several centuries of this period of changing shogunates followed a pattern similar to what had appeared earlier in Europe. In Japan, feudalism came into being around the middle of the fourteenth century, whereas in Europe manorial feudalism evolved as early as the thirteenth century and was firmly entrenched by the fourteenth century. Not only did Japanese feudalism begin later, it also continued far longer than it did in Europe. Japanese feudalism did

not completely disappear until the early nineteenth century, whereas it had all but disappeared from most of Western Europe by as early as the sixteenth century.

There was also a strong military tone to the feudalism that emerged in Japan, so much so that the military governments of this time are often referred to as "feudal shogunates." Prior to Japan's feudal period, society in the islands had been marked by bitter clan rivalries. These often erupted into localized warfare. Eventually, a few clans became powerful enough to contest each other as well as clans loyal to the emperor, first for regional supremacy and eventually for the biggest prize: de facto control of the entire nation. Troops loyal to the emperor were finally defeated in a series of battles that took place from the eleventh to the fourteenth century.

The Kamakura Period

In 1133, an army of the victorious warlord Minamoto no Yoritomo seized control over the emperors and had himself appointed *shogun,* or "supreme commander," of Japan. The emperor, while not officially deposed, was removed from any effective control over the government or its finances; the court was forced to exist on a strictly limited stipend awarded by the shogun. Thus isolated from the people, the emperor was shunted into little more than a semideified role. He remained the Shinto high priest, but was only a figurehead when it came to ruling the country.

In 1180, the two most powerful clans in Japan were the Taira and the Minamoto. After early defeats by Taira forces, the Minamoto clan leader Yoritomo and his younger brother, Yoshitusune, defeated Taira forces in 1185. Yoritomo brought an end to clan warfare and went on to found a *bakufu* (military government) at Kamakura, a small seaport southwest of Edo (now Tokyo). Without power to establish a centralized system of government such as what existed in China, Yoritomo set up a system of military leaders as district administrators in every province of Japan. The weak imperial court named Yoritomo *sei-i-tai-shogun*—an ancient, temporary, title given to a military leader engaged in battles against the Ainu in the northern islands. Yoritomo was the first to hold the title of shogun for life and to pass it on to his heirs. They remained in power until they were replaced by the Ashikaga shoguns in the fourteenth century.

This was also the beginning of the ascendancy of the samurai, or warrior, class in Japan. It began with defeat of the emperor's forces by followers of the Minamoto clan and the establishment of a military government, or *bakufu* ("tent government"). The founder of the new

military leadership, Minamoto, was officially designated as shogun by the emperor in 1192. The term *shogun* means "military ruler," or "supreme commander." Under the Kamakura military leadership, Zen Buddhism took sway over competing religious doctrines. This is when many of Japan's greatest Zen temples were constructed.

Commerce Under Zen Influence

Zen culture in Japan began to take hold in the last half of the Kamakura period, and reached its peak during the Ashikaga shogunate of 1333 to 1573. The fundamental beliefs underlying Zen were the ideals of strict mental and physical discipline, together with immediate and complete compliance to orders. These military virtues helped the samurai to at least feel superior to the emerging business and merchant classes below them, even though they would soon come to depend on wealthy merchants and farmers for loans. Samurai swore their undivided loyalty to their lords, and in return were granted stipends of tax rice, which they could then turn around and sell or trade to rice merchants for cash or other supplies. But as their influence eroded with the long period of peace, so did the value of their stipends.

Zen's influence was expressed in at least three interrelated cultural dimensions. First was in the fine arts; second was in the area of attitudes; and third in an effort at reaching an understanding of just what constitutes beauty-aesthetics (Hoover 1977). Zen teachings did not differ greatly from their origins in classical Buddhism. According to the Buddhist monk Walpola Rahula (1978), the differences may be more profitably thought of as differences in emphasis rather than in substance. Zen maintained that the study of scriptures did not lead to attainment of a state of enlightenment or awakening. Such study was not proscribed, but it was relegated to a secondary activity.

Zen's emphasis on control was at first expressed in archery and swordsmanship, but ended as a disciplined contempt for death beyond what any other religion inspired. Concern for understanding led Zen to support learning. Its concern for beauty that was "pure" resulted in an asymmetrical art that was simple, basic, and often primitive. Restraint and understatement were virtues. It celebrated the time-ravaged items; wear and tear was a valued characteristic, whereas newness was to be avoided.

The Early Business System

Business at this time was still rudimentary. As late as the thirteenth century, most Japanese farmers lived on what they planted and could

obtain from nearby mountains, forests, streams, and the sea. They bartered the small amounts of rice and other products that exceeded their own needs for such nonself-produced items as pottery, iron hoes, pots and pans, wooden objects and the like. Under the feudal system, all Japanese peasants belonged to their lord in the same way that European serfs belonged to their noble masters and what they produced belonged to the chief lord—the daimyo—who held control over the region in which they lived and worked. Daimyo were responsible only to the shogun.

Artisans, some of whom were employed by regional administrators and others who traveled in search of economic opportunity, were by this time providing most of the nonfood needs of the society. Eventually, many came to settle in areas where a stable market existed for their goods. Capitals, ports, and regional administrative centers drew many, as did temple towns. These artisans and producer-merchants supplied nobles with all the necessities of life: fish, vegetables, fruit, charcoal, straw mats, and many other items. Eventually, many of the merchants began to specialize in one or a few commodities. Before long, groups in the same line of business came together to discuss such similar concerns as the maintenance of prices, avoiding cut-throat competition, and sustaining quality. Out of these informal meetings grew formal associations, the *Za,* which functioned in much the same way and for the same purposes as European guilds. The earliest of these were formed sometime during the last decades of the eleventh century. Za enabled their members to raise their living standards, establish rules of quality, develop apprenticeship systems, and provided many important social service functions, such as insurance and widow's benefits.

The Importance of Trade

Trade was a key contributor to the economy in the first half of the thirteenth century in Japan (Farris 2009). Local markets became increasingly important and traders adopted innovative commercial methods such as bills of exchange. Since much of the trade was in luxury goods that could only be afforded by wealthy landowners, a money economy grew. Iron production also increased, but few peasant farmers could acquire costly farm implements. In addition to the growth of domestic trade, trade with China and Korea also increased during this period. Before long, Chinese merchants set up permanent trade centers in northern Japanese ports from which they shipped Chinese porcelains and other goods to towns and villages on all the Japanese islands. Valuable Chinese products such as costly silks were traded

for Japanese swords, sulfur, gold, silver, and lumber. Soon Japanese traders were making their own trading journeys to China and Korea.

Most goods and nearly all bulk products moved up and down the length of the Japanese archipelago by coastal vessel. As a result, port towns grew rapidly during the Kamakura period. The most important of these were located on the inland sea between Japan and China and Korea. Products such as rice, lumber, paper, salt, and fish destined for the old capital region around Nara and Kyoto were served by the port of Hyogo. A short distance away, the new capital of Kamakura faced the Pacific Ocean and was served directly by sea.

Sea transportation became so important during this period that a new occupation developed to facilitate the process. These were the *toimaru,* who supervised ship captains, crew, and longshoremen, and provided warehousing for cargo. Some also provided local delivery services, using horse- or bullock-drawn carts. Another new development that appeared around this time was the ships that transported cargo on consignment. These were joined by other vessels (similar to what we today call *private flag carriers*) that carried only their owners' cargo. Nearly all land transportation was provided by farmers or merchants using their own wagons, and was generally limited to short hauls or for the pick-up and delivery of ocean cargo. Only late in the period did special contract cartage providers come into use to any degree.

The amount of this trade in the period was cut dramatically in the last half of the thirteenth century, partly due to efforts by the shogun to limit the debt being incurred by his regional administrators, and partly by Mongol invasions in 1274 and 1281. Although unsuccessful, the first invasion required heavy investments in defensive fortifications, money he would never recover. The second invasion was also unsuccessful, but for a different reason. A hurricane struck the invading forces, destroying the Chinese fleet and sending the few survivors back to China. This was the celebrated kamikaze or "divine wind" of Japanese tradition.

The Growing Importance of Money

From the middle of the thirteenth century onward, coins came into more common use across Japan. Most were imported from China at that time, but before long the shogun established his own mint. Copper, silver, and gold coins were issued. By the end of the century, most nobles and temples were paying the majority of their wages, stipends, and allowances in coin rather than in kind. Copper coins were

particularly important, so much so that the amounts that could be exported from China were closely controlled.

The first Japanese bill of exchange on record was dated 1279. It gave the bearer the right to receive payment at the Kamakura capital city. Also about this time there emerged a large number of money-lenders. These individuals also served as pawn brokers and served a predominantly noble clientele.

The Kamakura government was exclusively a military organization, with all power evolving from the shogun in a typical Confucian hierarchy. Varley (1984) described the shogunate as representing a radically new form of government for Japan, far removed from the tradition of court courtier rule. The imperial court continued to operate under the shogunate, even going so far as to appoint district governors who operated alongside shogun-appointed military constables, but final power was retained by the shogun. Military constables soon adopted knight-like positions, thus inching Japan into the period of full feudalism that would follow. Vestiges of Japanese feudalism first appeared around the end of the twelfth century under the Yorimoto Minamoto shogunate. Under Minamoto, feudal control was soon firmly established at every level of society.

Eventually, the title *shogun* would come to mean more than simply a military rank. Japan's shoguns came to rule the country entirely, forcing the nation's emperors to retire into ceremonial duties only. In doing so, they fell into an obscurity that lasted for the next 700 years or so. Minamoto's reason for establishing Japan's first shogunate military government at Kamakura was to avoid potential influence of imperial courtiers.

The Kamakura government was not a truly national government, but rather a military organization designed to control a relatively small band of samurai knights not all of whom were members of the Minamoto family. The most important of these were the 200 or so most powerful family leaders, the *daimyo*. All samurai knights swore their personal allegiance to the shogun, not the emperor. These loyal samurai were not appointed governors or bureaucratic government officials, but were instead named to positions that resembled the role of estate manager. They were responsible for managing blocks of farmland, villages, and all their economic activities and could be moved from one estate to another at the whim of the shogun. In this way the shogun's samurai came to effectively control all classes of society and, therefore, the nation itself.

Daimyo samurai ruled over all peasants, who were serfs on the estates. The shogun controlled the imperial court's expenditures.

Funds to operate the court came from the same rice taxes paid by the shogun and samurai warriors. This was the most effective central government that Japan had ever experienced to that time. However, people in all classes soon recognized that the real power rested in Kamakura, not the imperial court. The people soon looked to the shogun rather than the emperor for leadership, pushing the emperor into the background, where he took on only ceremonial duties (Reischauer 1970).

Japanese Feudalism

Japanese feudalism in the Kamakura period differed from European feudalism in two ways. First, possibly because of Japan's isolation and lack of significant military danger, Japanese feudalism appeared on the scene later than in Europe. It also stayed around longer. As one part of an evolving dual system of government, the Kamakura shogunate retained portions of the imperial system of district governors.

It was not until the late sixteenth century, near the close of the Ashigaka Period (1338–1573) that Japanese political institutions and the land ownership system came to mirror twelfth-century Europe. It was during the Ashigaka shogunate that a complete feudalistic society emerged. The system that finally did evolve then remained in force until Japan opened its borders in the mid-nineteenth century.

Second, European feudalism, being grounded in Roman legal traditions, stressed legal rights and obligations of all individuals in all classes. It was thus a contractual relationship that existed between serfs and lords. While a legal foundation did exist in Japan to some degree, it was overshadowed by the Confucian emphasis on an ethical relationship between classes. Personal feudal obligations were conceived in moral rather than legal terms. Governing well was considered to be a moral obligation in Japan. Both authority and loyalty were absolutes.

Both of these factors, the relatively late development of the Japanese feudal system and its distinctive Confucian-Japanese ethical foundation, helped give Japanese businesses their unique form and Japanese business leaders their distinctive character. Writing in 1970, former U.S. Ambassador to Japan Edwin Reischauer (1970, 54–5) commented on the modern influence of feudalism on Japanese business:

> Because of the long duration of feudal rule in Japan, it is small wonder that the impress of feudalism lies heavily upon modern Japan. It can be seen in the strong military traditions of the Japanese in the late

> nineteenth century, in the unconscious assumption as late as the 1930s that military men were somehow less selfish and more honest than civilians and therefore had a right to political authority, and even today in the pervasive patterns of boss-client (employee) or master-disciple relationships throughout Japanese society. (The warrior's) two outstanding virtues, Spartan indifference to suffering or even death and a great capacity for unswerving personal loyalty, became wide-spread characteristics among the Japanese people as a whole.

Japanese Warlords

Out of the turmoil of local wars during the tenth and eleventh centuries there emerged a few strong, independent warlords. These individuals were victors over their weaker neighbors or had become strong because of good marriages. More frequently from this time on, those marriages were to the daughters of wealth merchants. It did not take long for increasingly strong knights to begin to challenge each other for dominance. Finally, they brought the Kamakura system crashing down around their bloody heads. In doing so, they also sowed the seeds of Japanese feudalism's final dissolution.

The Kamakura system worked for more than 150 years, giving Japan a stable, secure government for one of the longest periods in its history. However, like European feudalism, it could not last forever. It was effective as long as the samurai appointed by the Minamoto shogunate remained a relatively small and cohesive group, loyal to one another and to the shogunate itself. With the passage of time, loyalties based on old family and military comrade relationships faded. The samurai had been scattered to all corners of the country, where local ties and new families and local friendships came to overshadow ancient loyalties.

While the thinning of personal loyalty to the Kamakura tent government was taking place, the number of samurai was increasing, along with a general population increase that was taking place across Japan. Samurai estates became smaller and smaller, divided among inheriting children, so that by the start of the fourteenth century many could not support the growing number of farmers who were restricted to the land, let alone the nonproductive samurai as well. As more samurai found it difficult to survive and pay traditional rice taxes to their lords, political disruption and confusion reappeared. Soon, the question of maintaining old samurai glory and dignity gave way to the exigencies of survival. By the fifteenth century, central control was disintegrating.

Agricultural production increased greatly during the last half of the Kamakura period, brought about by the introduction of new seeds, increased use of fish-based fertilizers, and improved irrigation methods. This sparked a general rise in economic activity. A few merchants acquired great wealth during the fourteenth and fifteenth centuries, although most businesses remained very small. Their wealth was tapped by the shogun to fund the government between harvests. These were loans, not taxes; merchants' profits were not taxed at all during this period.

Also during this period, towns and cities continued to grow, both in size and in number. A majority of them were centered not far from the capital regions, or were new port cities being established on both the Sea of Japan and Pacific Ocean sides of the islands. The most powerful force for town growth at this time was the growth of commerce. Trade became interregional, which meant that most of it was carried by sea. Also serving to drive more goods to the coastal traders were the many toll barriers between daimyo districts.

The Ashikaga/Muromachi Period

The Kamakura years of military government and civil war were followed by the Ashikaga or Muromachi period (Mason and Caiger 1972). The period began in 1336 with the ascendency of Ashikaga Takuji to shogun and continued to 1568. The extent of trade and commerce was sparked by increases in agricultural productivity and trade with China that had expanded slowly during the Kamakura period. The emperor Go-Daigo had regained power from the Hōjō family late in the thirteenth century, but was unable to consolidate his power. As a result, another military family led by Ashikaga Takauji capitalized on his weakness, imprisoned the Go-Daigo, and took control of the government. He was named shogun in 1338, with the line continuing as shoguns until 1573. Ashikaga moved the seat of government from Kamakura to the Muromachi district of Kyoto in the west. This resulted in the period also known as the Muromachi period. It is particularly important for understanding the evolution of Japanese commerce and trade because of its rapid growth in agriculture, trade, and commerce, and because the nation's international trade was brought to a complete halt due to the isolationist policies of the shoguns.

Internal dissention, dynastic rivalry, and warfare between impoverished vassals resulted in more than a century of continued weakening

of the resources of the Kamakura shogunate, so much so that by 1333 the Kamakura bakufu could no longer sustain its control of the military government. The emperor had been murdered and the shogun was a suicide victim. Kamakura was reduced to ashes as opposing forces vied for leadership in the power vacuum that followed (Farris 2009).

The Ashikaga clan came to power out of this turmoil. Ashikaga Takauji, a samurai war leader and former imperial general, was appointed shogun in 1338. Rather than return the shogunate government to Kamakura, he established a new military government center in the Muromachi section of Kyoto. Thus, the last half of this period is known as the Ashikaga or Muromachi or period. During this period Japan underwent a general expansion of population, commercial activity, and wide-ranging foreign trade.

The Ashikaga dynasty reached its peak of power and influence between 1368 and 1408, under the third Ashikaga shogun. Although unable to successfully usurp the position of emperor, he was powerful enough by 1402 to be named "King of Japan" by the Ming Chinese court. He maintained an army of 25,000 foot soldiers and a cavalry of nearly 3,000. Together, his forces were larger than any eight of the most powerful daimyo. His three sons continued to lead the bakufu from Kyoto for the rest of the period.

During the Ashikaga/Muromachi period the population of the Japanese islands began to grow again. From nearly six million in the late thirteenth century it approached 10 million in 1450. Most of the growth occurred in the villages and towns of central and western Japan. Although some 50 new towns were established, Kyoto, with its population of more than 200,000, was the largest and most powerful town of the period. Advances in agricultural productivity, early industry, and domestic and international trade helped make this growth possible. Moreover, the growth continued despite an irregular series of crop failures and periodic peasant uprisings.

Advances in Agriculture

With 80 percent of the population still involved in farming, it is no wonder that innovation should have emerged first in the agricultural sector. Major contributions included an expansion in the availability of iron tools, more farm animals, more and better fertilizers such as ash, and the increasing availability of livestock manure. Advances in farm technology included the invention of the water wheel, which greatly facilitated irrigation.

Changes in farming practices also occurred. Traditional rice growing was augmented by the cultivation of other grains facilitated by changing the planting system. The new system involved the use of two fields, one in which the soil was removed and spread on the second field, raising it above the rice field and allowing it to be moved to a dry field for growing other grains. The deepened field made rice farming easier, and, with the use of fertilizers, more productive. This was also a period of dry, sunny weather, which also improved yields. From the one rice crop per year, two and even three crops in some areas greatly increased the food supply and improved farmers' income. Another and even more important innovation, from a health standpoint, was the introduction to early industry of a Korean variant of rice that was far more resistant to flood, drought, and disease. Although reportedly it did not taste as good as the traditional Japanese rice, its survival during these disasters greatly reduced famine deaths due to crop failures.

Advances in Industry

Two factors contributed disproportionately to the advances in industry that occurred from 1280 to 1450. The first was the increase in population; the second was the growth in trade with China and Korea. Increased population meant larger markets for food supplies and nonfood products that appeared in the early markets, such as luxury items among the wealthy landowners and regional military administrators.

Increases in iron production brought about by the reintroduction of the smelter process and the introduction of draft animal-powered bellows made possible stronger and more durable tools and weapons. Japanese swords were in high demand in China and a major trade item with the Ming court. More and better iron tools also improved agricultural and construction productivity. Other manufactured goods included pottery produced by Japanese artisans, which were desired in China and Korea; saws and other woodworking tools; fishing and trading vessels; better fish nets; and lumber products. Ship building became increasingly important as coastal and trade with mainland China continued to grow. Little was done to improve land transportation during the period, however, despite the expansion of domestic trade and more than 100 new permanent markets established. A chief reason for this neglect was the practice of regional warlords to charge tolls as great as 10 percent of the value of the shipment. In addition, pirates and robbers continued to plague commercial transportation.

Advances in Trade

Both domestic and overseas trade grew significantly during this period. A variety of shipping and receiving professions evolved to support this growth. In addition to skilled ship builders and the sea captains and crew to handle the vessels, dock workers, warehousemen, insurers, money changers, lenders, shop tenders, merchant traders, record keepers and scribes, customs brokers and agents—the whole gamut of skills and professions necessary to support international trade—were needed to support and help facilitate commerce in the growing town markets and seaports. Yet, despite this success, little of the commercial infrastructure would remain in place after 1600 as trade and economic growth was replaced by isolation and economic stagnation.

End of an Era

The era of powerful shogun-led military bakufu began to fade after the assassination of Ashikaga Yoshamori in 1441. His son was only seven years old when named shogun. As he came to maturity he tried to reconcile rival daimyo families, but was unsuccessful in his efforts even to control rivalry over succession claims in his own family. Supporters of each claimant sent armies to Kyoto in order to press their claims, thus setting into motion the 10-year Ōnin War in 1467. This war was the opening salvo in the more than 100 years of violent warfare among rival warlords, some of whom eventually led field armies of 50,000 and more soldiers.

During the Ōnin War, contesting armies fought over Kuyoto's Muromachi center of the shogun's power, eventually reducing most of the government facilities to ashes. The shogun's forces were unable to exercise control over much more than Kyoto, however. Violence among competing daimyo accelerated in district after district. Unable to bring an end to these local wars, by the 1530s the Ashigawa shogunate ceased to exist. With no higher power to control their deprivations, regional daimyo were almost constantly at war with weaker neighbors as they sought to expand their essentially independent domains.

Yet the population of Japan continued to grow despite this continuing warfare. By the end of the sixteenth century, the population of Japan was estimated to be between 15 and 17 million. Most of that growth occurred in towns and cities. Farris (2009, 171) found that more than 150 new towns were established during the 150 years prior to 1600. These consisted of 67 government centers, 51 temple or

shrine towns, 47 postal centers, 26 port cities, and 11 market centers: making Japan one of the most highly urbanized societies in the world at that time. This growth could only have occurred if advances in agriculture, trade, and industry occurred.

Advances in agriculture production consisted largely through the larger number of rice paddies put into production during this period. Rice was the staple food for Japanese peasants and artisans. Surpluses were necessary to feed the large standing armies as well.

Town growth meant an expansion in public and private construction. This, in turn, brought a need for building materials, skilled carpenters with better tools, and the money to pay for it all. Advances in the supply and effectiveness of iron tools that began prior to the collapse of the Ashigawa bakufu continued right through the years of constant warfare. Production of precious metals also increased, which helped to pay for the large armies and samurai of warring daimyo. Despite the improvements in iron production and metalworking skills, Japanese artisans were unable to master the art of gun making. Portuguese traders and missionaries, active in Japan since 1543, were happy to provide all the muskets Japanese warlords wanted.

Conclusion

The 500 years of the twelfth to fifteenth centuries were a period of brutal feudal warfare, famine, and epidemics; they were also a period of renewed population growth and economic growth led by advances in agriculture, industry, and trade. The collapse of the Ashikaga shogunate began in 1441 with the murder of the clan leader. A 10-year war between competing families and their supporters for control of the bakufu in Kyoto followed. District military constables that had been appointed by the shogun saw that because of the bakufu's insolvency and loss of its military power they could no longer count on receiving financial assistance for their regional administrations. They would have to look out for their own interests if they were to survive. Loss of control by both the emperor and shogun further weakened both positions and threatened the leadership by self-reliant landholding territorial lords, the shugo daimyo. By the last half of the fifteenth century, shugo daimyo were becoming replaced by sengoku daimyo, landholding warlords who controlled large land areas that either they or their vassals owned. These became all but completely independent states within the state that fought each other for more land and greater control. This began more than 400 years of daimyo warfare, castle building, and territorial consolidation.

As the feudal states became larger through victory in wars for territory, their need for cash to support their armies, and territory administration, the military centers became economic centers as well. Daimyo used trade as a means of acquiring the funds they needed. In areas where it was possible, mining for gold, silver, and copper took on new importance that led to development of industrial skills and made these landowners immensely wealthy. In other areas, intensive agriculture was implemented along with application of new technologies. Yields were greatly improved with application of new fertilizers, and irrigation tools and new cash crops such as vegetable dyestuffs added to daimyo wealth. Merchants and artisans gathered in towns and began their rise to economic power alongside landowners. Trade with China was greatly expanded, which also led to adoption of new products, methods, and customs—the most important of which was the introduction of a money economy through the first extensive use of Chinese copper coins in Japan.

The more than 100 years of near-constant warfare that followed the demise of the Ashigawa shogunate had little negative effect upon the growth in trade and commerce that occurred during the same period. This time, however, the daimyo themselves participated in and benefited from the growth in commercial activity.

Discussion Questions

1. How was it possible for Minamoto Yoritomo to seize control over the emperors and have himself appointed shogun?
2. What was a bakufu, and why was it important at this time in the history of Japan?
3. What role did the Za play in early business development in Japan?
4. How did Japanese feudalism in the Kamakura period differ from European feudalism?
5. Describe the advances in agriculture, industry, and trade that occurred during the Moromachi period.

Chapter 11

Tokugawa Isolation, Commerce, and Industry, 1603–1868

The Tokugawa period, also known as the Edo period, began in 1603 and continued until 1868, when Japan finally ended her policy of isolationism. This was the last of Japan's feudal shogunates. The founder of the dynasty, Ieyasu Tokugawa, emerged victorious from a series of great civil war battles that raged during the end of the sixteenth century. Tokugawa established his military government at the small village of Edo, located at the head of what is now Tokyo Bay. Over the next several decades, Edo grew rapidly, in part due the edict of the third Tokugawa shogun, which dictated that all 270 of Japan's clans build and maintain residences at the capital. Right up until 1862, clan leaders were required to keep their families at Edo all year, while they themselves had to spend every other year at their country estates overseeing agricultural production. With about half of Japan's lords in court attendance in any one year, the town soon grew to be a great commercial as well as political center. The richest lords brought thousands of retainers with them to Edo and required all kinds of services, from fresh food to new clothing and housing, paper and glass, leather goods and weapons, and many more.

The Tokugawa shogun established a system of government (*bakufu*) that was in many ways similar to the European feudal pattern. Clan leaders were set up as hereditary feudal lords (*daimyo*). Numbering around 250, these daimyo governed estates awarded to them by the shogun. The local lord was given the right to tax his farmers' rice crops. In return, the daimyo were responsible for maintaining law and order in the domain. Assisting him were his military retainers,

the samurai. When not training for war, the samurai took on other roles, such as farm overseers, civil servants, administrators, and similar bureaucratic positions. The Tokugawa shogun was the most powerful of these feudal lords, taxing the largest of the fiefs for funds to run his own household and the national government (Franks 1992).

The daimyo were only permitted to tax the annual rice crop for funds to run their administrations. Their share of the total crop averaged somewhere near 30 percent, with another 10 percent or so divided among the daimyo's samurai. Peasant farmers seldom retained more than 20 percent of their crop, with the rest going to the shogunate.

A Changing Economy

A class of wealthy farmers, merchants, samurai government administrators, and daimyo emerged during the Tokugawa period. Japan was an urban society; by 1800, for example, it had more large cities than any other country in the world (Franks 2009). The growing number of well-off citizens demanded more and more luxury goods. Local craftsmen and artisans met that demand, and in the process joined the first merchant entrepreneurs as the new commercial innovators. Together, they constituted a class of business leaders ready and willing to step in and take command of the business system when the shogunate ended in the late 1860s. In doing so, they were the leaders of Japan's first economic miracle.

A New Role for Samurai

Before the Tokugawa era, the samurai tended to be something like civilian soldiers, farmers who tilled their land during peace but who followed their lords into battle when needed. Warfare underwent a revolutionary change beginning around the 1400s, however, which eventually altered the role of the samurai entirely. The old farmer-warrior tradition was forced to give way to something approaching a full-time professional army. The changes were so dramatic that from that time on, farmers were entirely forbidden to carry arms. The samurai retreated behind walled cities and castles, from which a larger region of land could be defended. Ordinary samurai had their land taken from them, but in return were rewarded with a regular stipend, the value of which was based on the annual yield of their original land parcels.

But as peace continued, the samurai were needed less often as warriors. Instead, they came to be appointed to jobs such as guards, policemen, and minor administrators. Beasley (1981), citing a seventeenth

century court author, described the emerging responsibilities of samurai during the Tokugawa period. The samurai's primary duties were to maintain peace and order in the community, oversee rites and festivals, govern states and districts, manage forests, rivers and ports, supervise farms, rice fields, temples and shrines, and minister justice in suits and appeals between people in the four classes of society. While carrying out such tasks, the samurai was also required to personally follow traditions and rules regarding dress, dwelling, food, and all implements and their uses.

Eventually, samurai divided into separate ranks. Highest of these were those men connected to the lord's own house, either as a relative or having been a long-time retainer. These few were the wealthiest of the samurai, and often retained ownership of some land of their own. The second rank was made up of men who, for some reason, were excluded from the highest positions, although they were still full members of their class in rank and privilege. These individuals seldom owned any land. The third rank, the lesser samurai, held such posts as foot-soldiers or served as minor functionaries. They owned no land, and were in many cases samurai in name only. There was very little upward movement among these three levels; rank was both inherited and fixed.

In this society everyone's place was firmly set and reinforced by extreme rules that concerned their dress, speech, education, and place and type of residence. The dominant philosophy of the time, Confucianism, provided further rationale for the system. In the Confucianism of the period, all relationship positions were narrowly defined. Wives were subordinate to husbands, sons to fathers, vassals to lords, and subjects to the ruler. A breach of the system brought extreme personal shame, with the only expiation often being through ritual suicide.

This highly structured system combined Confucian subservience with Buddhist loyalty and self-reliance. The ideas of filial piety and loyalty were added to an earlier code of warrior behavior. This new philosophy evolved into *bushido*, the samurai warrior's code. To die in service to one's lord was the ultimate act of loyalty and was considered to result in a type of religious salvation. In times of peace, when this sacrifice was not possible, providing devoted, honest service to the lord was almost as worthy. Learning and training were also valued, as was frugality.

Importance of the Rice Crop

The fundamental economic factor throughout Japan was the rice crop. Daimyo usually employed the services of entrepreneurial merchant-traders to store, ship, and sell their share of the annual rice production.

In time, these merchants were asked to advance the daimyo funds against the next year's crop. In this way were sown the seeds of a banking system in Japan. The merchant traders soon expanded their activities to also handle other surplus products produced in the *han*, the daimyo's district or estate. Leather, wood, and straw products, cloth, ceramics, sake, and other agricultural products were produced in the Han villages and towns by the lord's artisans. These products were the property of the daimyo, who usually retained the lion's share of the proceeds of their sale. More importantly, it was not necessary for the daimyo to share any of that income with the shogun, who only taxed the rice crop. It did not take long for many daimyo to see that their incomes could be greatly enhanced if they diversified out of rice farming into more valuable crops and manufactured goods.

Trade in a Tokugawa Village

The classic Tokugawa village of this time was a community of peasant farmers who were bound to the soil. Each cultivated a plot large enough to support his family, paying all of any surplus to the lord as feudal dues. This was the ideal that feudal administrators tried to maintain across the land. However, the system broke down early in the seventeenth century, primarily due to three changes that were taking place. The first of these had to do with farm production itself; improvements in agriculture meant that fewer peasants were required to produce the same quantity of food items. The second was the emergence of a commercial trading economy, which grew out of the need to store, transport, and dispose of farm surpluses, while ensuring sufficient supplies to the increasing nonproductive sector. The third development is closely related to the first two. Since fewer persons were needed on the farm, many had to leave in order to survive. Also, the growing commercial economy required a central location, together with commercial infrastructure, such as warehouses, ports, roads, and retail outlets. Thus, a dramatic increase in the number and size of towns and cities took place.

The commercial economy that was emerging during the sixteenth and seventeenth centuries was driven by the large samurai class. They not only needed basic commodities to feed and supply their large followings of retainers, they also demanded a host of luxury items. At the same time, wealthy owners of large farms and small-plot cultivators found themselves forced to move more and more toward a money economy. The rice crop had to be converted to cash. For the daimyo, samurai, and farmer groups, the cost of living was becoming

onerous. Profits were often taken from farmers in the form of forced loans by daimyo landlords. Prices for everything were increasing while the profits they could squeeze out of their limited farmlands required investments in labor, seed, fertilizer, and farm equipment. Merchants who supplied both the samurai and farmers tended to keep prices high, which often resulted in farmers borrowing on their land for the seed, fertilizer, and other supplies needed for production. The use of fertilizers increased. Fertilizers such as dried fish and oil cakes were purchased from merchant suppliers.

Squeezed between merchants and money lenders at one end and lords and samurai overseers at the other, it was not long before many farmers lost their land. In this way, there emerged a growing pool of labor that would support the enterprises of artisans and craftsmen as they evolved into larger manufacturing industries. As a consequence, the population of towns and cities continued to grow throughout the Togugawa period.

Many of the daimyo and their samurai retainers came to depend on rich merchants for loans to tide them over between harvests. An impoverished samurai might be persuaded to marry the daughter of a wealthy merchant or to lend his name to a commercial venture. Marrying into the samurai class became an increasingly important path of upward mobility for many merchant families during the feudal period.

Throughout the seventeenth and early eighteenth centuries more and more land was put into cultivation, and improvements in techniques and seeds increased the yields per acre. Even while this was occurring, increased yields freed more people to either become artisans or to specialize in crops other than subsistence rice farming. The age-old traditional relationships in the triad of farm-village-manor were changing dramatically. As more cash crops were replacing rice, there was an additional need for merchants and craftsmen to convert those crops to resources usable by the new industries and for investments in trade and shipping. Two important examples of cash crops included rapeseed for producing cooking oil and indigo plants for the production of textile dyes. The impact of events in this period has been summarized by Beasley (1981, 17):

> [The early Tokugawa period saw] the development of a commercial economy, especially in the central, south and west Japan, that finally proved disruptive of the traditional village structure. It not only brought to the farmer new implements, fertilizers and improved strains of seed, but also made possible a decrease in local self-sufficiency. Once trade became widespread, it was no longer necessary for every man to

> grow his own grain. Instead . . . he could turn to one of the cash crops for which the growth of city culture and the rise in standards of living had created a demand: silk, cotton, paper, wax, rapeseed, indigo, and others . . . The result . . . was to involve the village deeply in the commercial sector of the economy.

Over the roughly 250 years of the Tokugawa period, several Japanese cities became important centers of economic activity, and grew dramatically in the process. Edo (Tokyo), which had been little more than a small fishing village in 1590, had upwards of three-quarters of a million residents in 1721. Roughly half of those were samurai. Osaka, the city of merchants, held some 300,000 residents by the early eighteenth century, while the old capital city of Kyoto grew to hold more than 400,000. Other than Nagasaki, these were the Japan's only true cities; although a number of country towns became important as local centers of administration and as market towns. With little or no surface transportation system available, Japanese merchants turned to the sea.

Relying on Japanese documentation from period, U.S. Information Agency employee Robert Flershem (1964 and 1966) was able to piece together a detailed picture of the growth of shipping and trade in the Sea of Japan during the Tokugawa period. Because of Japan's isolation the trade described was all internal. In the 1600s, a large amount of trade developed between the three main commercial and political regions, Osaka, Kyoto, and Edo (Tokyo). Moreover, trade grew with the rest of the country to supply these regions. In addition to the basic rice crop, much of this "interregional" trade occurred in luxury products desired by the daimyo and samurai class.

Approximate numbers of large vessels engaged in this trade from 1804 to 1867. The location of their registration or ownership are shown in Table 11.1, which illustrates the importance of ocean shipping to the daimyo of this area. The number of ships from the Kaga *han* is twice that of its nearest competitor on the list. Tables 11.2 and 11.3 reveal the variation in the exports and imports from the Kaka han (feudal area or state). The daimyo of this region on the central west coast of Honshu were large and important landowners but did not hold positions in the government of the shogunate. To fund the goods needed to maintain their wealthy lifestyle, they needed to convert their rice crops to cash to pay for their imports.

Under the Tokugawa government, society was viewed as a fixed hierarchy. At the top were the daimyo and their samurai (all lords and clan leaders thought of themselves as samurai). These were the country's professional soldiers and administrators. Samurai were expressly forbidden to engage in trade or manufacturing. Next in the hierarchy

Table 11.1 A list of transactions with different large ships, 1804–67

Registration Location	Number of Shipowners	Number of Ships Owned
Kaga *han*	235	400
Fukui *han*	170	210
Chōshū and Suō	165	165
Echigo	115	200
Hyōgo and Osaka	100	125
Dewa and Nambu	10	15
Matsumae *han*	5	10
Bizen	4	4
Satsuma *han*	3	3
Owari	2	5

Source: Flershem 1966, 183.

Table 11.2 Major exports from the Kaga *han* in the Takugawa period

Products	Description
Rice	A major export, likely the tax portion of the crop shipped south to Osaka for sale
Salt	Because of its location on the sea, production of salt was a regional monopoly. Shipped mostly to the north for local use and resale
Sake	Rice wine shipped south to a number of coastal towns
Tobacco, rapeseed, fish fertilizer, pepper, textiles, dried fish, lumber and kindling, bamboo products, and others	Products either produced regionally or transshipped to large and smaller towns
Matting, horses, soybeans, sesame, iron, wire, charcoal, wheat, gunpowder, lead, whale meat and sea slugs, cotton cloth, umbrellas, linen, and others	Products either produced regionally or transshipped to large and smaller towns

Source: Modified and abbreviated from Flershem 1966, 198.

came the farmers. These produced the rice upon which the entire feudal economy was based. Although the Tokugawa shoguns minted coins, all stipends and taxes were paid in quantities of rice.

Table 11.3 Major imports to the Kaga *han* in the Takugawa period

Products	Description
Timber	From Hokkaido and northern Honshu
Wax and candles	From Aizu *han*
Fish fertilizer	From Hokkaido
Rice	Often prohibited and likely only in small quantities
Eggs	Various sources
Cucumbers	From Aizu *han*
Sweet potatoes	From Kyushu
Oranges	Probably from Chūgoku
Cotton, silk	Various sources
Iron, wire, lead	Various sources
Seafood, medicines, firewood	Various sources

Source: Modified and abbreviated from Flershem 1966, 198.

Other than rice, exports (Table 11.2) from the Kaga region consisted almost exclusively of manufactured products, suggesting the strong contribution to the economy of early industry and cottage industries. Imports (Table 11.3) appeared to be largely food items not available locally and several raw materials such as timber and metals.

Artisans and Craftsmen

The third level in society consisted of artisans and craftsmen. While initially not as important as farmers, these would soon evolve into a class of entrepreneurs and industrial leaders. At the bottom of the hierarchy were merchants, who were despised because they engaged chiefly in the pursuit of profit. During the early Tokugawa period, all commerce was restricted to merchants, or townsmen, who were at the bottom of the four-group class system; the word for townsmen, *chonin*, became the same word used to mean *merchant*. The class division of warriors, farmers, artisans, and merchant tradesmen continued throughout the Edo period.

As was the case both in the United Kingdom and in Germany, these early merchant traders would soon become indispensable; they become bankers, founders of industrial enterprises and, after the 1860s, leaders of Japan's great international trading companies.

Influence of Confucianism

During the Edo period, the Tokugawa shogunate promoted Confucianism as the official religion of the samurai. By this time the Confucianism of Japan was far different from the Chinese model. In China, the Confucian hierarchy included the emperor, lords, high officials, gentlemen and, finally, the populace, or everyone else. In Japan, the emperor was the same as in China; the warrior class corresponded to the Chinese ruling class, while the two classes of farmers and artisans belonged to the populace.

One of the most far-reaching of Confucian values absorbed into all levels of Japanese society at this time was an interest in learning. Samurai, saved from war, spent many hours reading and practicing the arts, including writing, landscape gardening, and painting; they expanded on the courtly tradition of writing poetry. In the early years of the Tokugawa shogunate, only samurai had to obey the rules of loyalty, righteousness, and propriety. Farmers and artisans did not have to worry about Confucian ethics and were free to pursue their own worldly interests and pleasures. A few became wealthier than the average samurai, whose income was restricted to the historical level of his rice stipend. Wealthy farmers and merchants first attempted to outdo the samurai interest in learning and art, but after a while they retreated and simply copied samurai aesthetics.

With no wars for 250 years, justification for the samurai faded away. Although they continued to practice military arts, they also became the country's minor intelligentsia. Stressing class distinction and loyalty to one's overlord, Confucianism was particularly appropriate for the time. Japanese society became a model Confucian feudal system with very little opportunity for movement between classes. In time, many merchants, artisans, and farmers did acquire wealth. After a brief period of conspicuously showing it, however, many came to accept samurai Confucian principles. Farmers and traders learned that they, too, were called upon to be faithful to their employees, bosses, and guild leaders, as well as their friends, family, and even to their customers.

Commerce during the Tokugawa Era

Large-scale shops and new manufacturing businesses appeared as demand for their products grew. Shops became factories and stores, wholesale merchants expanded their activities into other lines, and some were on the road to becoming full scale agribusinesses. Shopworkers, servants, and tenant farmers, who were taught that they should devote themselves to their masters in much the same way as the samurai did toward their lords, came to adopt the social values of the

samurai as their own. However desirable this filtering down of bushido ethics may have seemed, it resulted in eroding the Tokugawa caste system. Merchants were given almost as much respect as were samurai. That erosion continued as the number of impoverished samurai grew, and more and more samurai joined the ranks of merchants in order to survive. As the Tokugawa era neared its end in the nineteenth century, Japan's traditional class division system had all but lost its significance.

The orderly system established by the Tokugawa shoguns, where the entire economic and social structure revolved around the annual rice crop, started coming apart as early as the eighteenth century. The shogun's policy of requiring the daimyo to maintain two places of residence and to annually move between them with their large retinues became a steady drain on their cash reserves. Before long there was no way to squeeze additional tax revenue out of their farmers. Some daimyo began to encourage the growing of crops more valuable than rice on their lands. They also came to rely more and more on local merchants, distributors, and moneylenders. Thus, a large part of the country's economic activity came to be centered outside of the traditional rice farming basis. It became apparent that the financial base of the shogunate was becoming commercialized, rather than agricultural. It was difficult for the shoguns to accept these changes. As they continued to resist change to meet changed conditions, they found themselves less able to fund the many tasks of government.

Although merchants and farmers were becoming wealthy and changing their lifestyles during the Tokugawa period, the rest of society as a whole was at first slow to accept the new ideas or new technology. Shintoism and Confucianism continued to encourage people to value ancestor worship, self-sacrifice, and harmony with other members of society. Neither competition for promotion within the firm, nor in the capitalist business sense of business firm against business firm was encouraged.

Advances in social conditions and technological innovations were not welcomed by everyone in Tokugawa Japan (Morishima 1982). Businesses were expected to operate fairly, of course, and the making of a profit was approved. However, the amount of profit should not be too large, nor should it be made at others' expense. Fair play was the ethic of the Tokugawa business system.

As the nineteenth century progressed and the Tokugawa period neared its end, Japanese business became a reflection of the greater society as a whole. It was generally conservative, paternalistic and anti-individualistic. The Japanese had their eyes opened to the huge technological gap that existed between them and the industrialized West when

European and American businessmen and military appeared offshore beginning in the 1860s. They had not been required to compete much with their fellow domestic firms, but were quickly forced to develop a business system that would allow them to compete with foreigners. The development of such a system could only come by learning from the West. However, after more than 200 years of extreme isolation, few were ready to do so. Revolutionary change had to happen before the country could take its place in the modern world. That change came about as a result of the dissatisfaction of a group of middle and lower level samurai bureaucrats. These men saw recognition and advancement in government service go more often to men with influence at the court, rather than to the better prepared and better educated but noninfluential administrators. Their motives were not all selfish, however. They were genuinely concerned about Japan's weak military position compared with that of the Western powers. They were humiliated by the loss of control over their customs policies, as Western nations negotiated highly unfavorable trade treaties upon the weaker Japanese negotiators.

Tokugawa Isolation

Japan's isolation from the rest of the world—the system of *sakoku*—began during the 1630s. Brought on by a desire for the political stability that would allow for the dynastic transfer of power to future generations, the Tokugawa shogunate prohibited all Japanese from leaving the country, and banned foreign traders and missionaries from entering. The only exceptions were a few Dutch and Chinese merchants who were permitted to operate isolated warehouses in Nagasaki. These early foreign traders became Japan's only significant sources of information about the West until well into the 1800s.

During Japan's long period of isolation, a number of positive developments took place. These were to eventually make the transition to an open economy easier than might otherwise have been the case. First, the tradition of provincial samurai having to spend alternate years at Edo resulted in a countrywide road network with inns and other facilities at regular intervals. Large numbers of people from all parts of the nation were required to congregate at one location every other year. This, in turn, contributed greatly to the creation of the concept of a unified nation-state. Japan was able to move into its role as a powerful, cohesive nation quickly after the Meiji revolution largely because of the continuous internal communication and exchange that took place during the Edo years. The Japanese language became standardized, ways of thinking and acting made similar,

and provincial attitudes and social rules forced to give way to the systems of the Edo political, economic, and cultural metropolis.

Economic Growth

The growth of the Japanese economy during the Tokugawa period was a product of several interrelated forces taking place from the eighteenth to nineteenth centuries. Among these were (1) unprecedented population growth, (2) increases in demand for consumer goods and services, (3) advances in manufacturing technology, and (4) movement of people from agricultural areas to the cities. Isolated from the self-reliance aspect of farm life, town dwellers had to turn to prepared products to meet their needs. Hence, the purchase of daily necessities triggered the nascent consumer economy. Daimyo and their samurai retainers needed to purchase luxury goods to maintain their lifestyle.

Franks (2009) touched upon the similarity of this phenomenon to a similar progression in European precapitalism in her study of the early consumer economy in Japan. Early consumer goods purchases began with demand for basic food and drink products. This soon evolved to include nonessential "luxury" items, such as tea, coffee, chocolate, sugar, and tobacco. Often called "creature comfort" items, tobacco, tea, and sugar—once the purview only of the wealthy and the privileged—soon became essential to Japan's growing number of city dwellers. The growth in consumption of these three products—all of which were manufactured items—is shown in Table 11.4. The growth in tobacco consumption from a little more than two million yen in 1875 to more than a third of a billion yen in 1935 is a reflection of this shift from basic necessities to comfort goods.

As the relative prosperity of the Tokugawa period progressed, the movement of men and women drawn to jobs in the cities also resulted in changes in the consumption of alcoholic beverages. Sake, which is wine fermented from rice, had long been consumed largely in association with special occasions such as religious festivals and family or office parties. In agricultural areas it was often produced in small quantities at home. Beer, on the other hand, was a relatively new Western product available only in small, expensive quantities imported from Europe. By the closing days of the nineteenth century, both sake and beer became increasingly available in taverns, and other "drinking places" were opened in urban and rural areas. While consumption of sake appeared to peak at the 1925 five-year average of 19.0 liters per capita, the consumption of beer, while never coming close to consumption of sake, continued to grow even through periods of economic instability (Table 11.5).

Table 11.4 Retail values of tobacco, tea, and sugar in Japan, 1875–1935

	Total Value of Consumption, Current Prices (thousands of ¥)			Value of Per Capita Consumption 1934–36 Prices (¥)		
Year	Tobacco	Tea	Sugar	Tobacco	Tea	Sugar
1875	2,033	1,007	2,052	–	–	–
1890	6,955	633	6,002	0.72	0.07	0.62
1895	11,965	2,420	6,358	1.06	0.21	0.56
1900	29,253	2,813	13,443	1.64	0.16	0.75
1905	54,628	2,004	12,526	2.48	0.09	0.57
1910	88,208	3,668	25,306	3.48	0.14	1.00
1905	88,186	7,654	31,358	3.11	0.27	1.10
1920	248,848	32,233	101,540	3.33	0.43	1.36
1925	275,801	39,642	81,278	3.60	0.53	1.09
1930	323,526	30,569	71,799	5.04	0.48	1.12
1935	333,424	28,332	84,272	4.78	0.41	1.20

Source: Franks 2009, 148; assembled from diverse sources.

Table 11.5 Supply and consumption of sake and beer in Japan, 1876–1935

	Sake		Beer	
Year[3]	Supply (thousands of koku[1])	Consumption[2] per capita (liters)	Supply (thousands of koku[1])	Consumption[2] per capita (liters)
1876	3,355	17.0	2.4	0.01
1880	3,460	17.0	2.8	0.01
1885	3,259	15.3	10.4	0.05
1890	3,786	17.1	17.2	0.08
1895	4,642	20.1	32.0	0.14
1900	4,938	20.2	88.4	0.36
1905	4,172	16.1	111.8	0.43
1910	4,794	17.5	142.2	0.52
1915	4,764	16.3	235.6	0.80
1920	5,982	19.2	545.2	1.75
1925	6,331	19.0	770.2	2.32
1930	5,206	14.5	761.2	2.12
1935	4,683	12.2	949.4	2.47

Notes: [1]One koku = 47.65 US gallons; [2]1 liter = 0.26 US gallons or 1.06 quart; [3]five-year averages centered on years shown.
Source: Franks 2009, 155.

Table 11.6 Japanese government records of manufactured goods output in 1874

Category/item class	% of total output[1]/value[2] (thousand ¥)	Category/item class	% of total output[1]/value[2] (thousand ¥)
Processed food and drink	**41.9%** 18,605	**Oils and wax**	**6.3%**
Sake	6,338	Oil	5,443
Soy sauce	6,137	Wax	1,432
Miso	3,951	**Paper, writing materials, and books**	**5.2%**
Tea	2,394	Paper	5,167
Salt	1,380	**Furnishings**	**1.7%**
Sugar		Floor coverings	1,432
Textiles and clothing	**27.7%**	**Other**	**9.5%**
Woven cloth	17,159	Instruments and appliances	3,061
Dyed cloth	3,033	Fertilizers	3,057
Ready-made items	1,367	Medicines and toiletries	1,539
Raw silk	6,165		
Cotton thread	1,234		
Footwear	1,816		
Household goods	**7.7%**		
Pottery	2,092		
Metalware	1,537		
Sundries	1,485		

Notes: [1]Percent of total manufacturing output; [2]In thousands of yen of all items with total output valued over one million yen.
Source: Franks 2009, 146, adapted from Yamaguchi 1963, table 28.

City dwellers were also forced to purchase clothing items and eventually expand purchases to include accessories such as hats, shoes, ribbons, fans, buckles, watches, and fashion items. The next phase in the consumer revolution in the rapidly industrializing Japan included demand for small, disposable household goods such as cups and saucers, cutlery, bedding, floor coverings, mirrors, clocks, and furniture. The growth of the consumption of these and related goods are shown in Table 11.6.

Managed Capitalism

Japanese capitalism was able to function more or less as a market economy from the very start. The government controlled rice production, but left much of the rest of commerce in the hands of merchants. Furthermore, roads, markets, relay-station communities, large towns, and cities provided much of the needed commercial infrastructure.

Isolation also served to protect Japan's infant industries from foreign competition. Had free trade between Japan, with a very limited endowment of natural resources, and the industrializing West been possible earlier, the mass-produced products from advanced technologies might have wiped out the Japanese handicraft manufacturing industries. However, with the "only game in town," these early Japanese businesses were developed enough to survive the transition to an international economy. According to Morishima (1982), the relative ease with which the post-1860s government succeeded in industrializing Japan was in large part to the earlier administrations' fostering of workshops for the manufacture of gunpowder, shipyards, porcelain, textiles, and metalworks. The transition of these to Western-style factories was at first supported financially by the Meiji government, but they were built on a foundation that proved to be solid, indeed.

This system of *sakoku*, or closed country, began to weaken somewhat by the second quarter of the nineteenth century, as more traders from the industrialized West pressured Japan to open its doors to trade. Finally, a number of trade treaties, all of which were unfairly favorable to the West, were negotiated during the 1850s. By 1859, the ports of Kanagawa, Nagasaki, and Hakodate were open to foreign traders. The way was finally open for the modern Japanese business system to emerge. When it did, it would take a form similar to, but distinctly different from, the best that Europe and America had to offer. Like Buddhism and Confucianism, it would be thoroughly "Japanized."

Finally, among the most important assets that modern Japan developed from the Tokugawa period were the attitudes and values of a people willing to work long and hard to achieve a goal. Among these attitudes were the maintenance of communal discipline, dedication to hard work, a desire for learning, respect for seniority and hierarchy with a willingness to submit to authority, loyalty one's group, and devotion to tradition.

Reversing its isolation policy was not beneficial to the Tokugawa shogun dynasty. Only a decade after Japan's first three ports were opened to Western traders, the Tokogawa government was overthrown, an emperor returned to the throne, and Japan's social traditions were turned upside-down. Japan had entered the modern age; but the transition was not an easy one.

Conclusion

For something like 1,500 years, the string of mountainous islands off the east coast of Korea and China remained one of the most isolated

regions of the world. Over that long period a warrior class evolved and ultimately united the various clans and warring family groups into one homogeneous nation. Eventually clan warfare resulted in the emperor being relegated to a strictly ceremonial role, with rule of the country taken over in the twelfth century by warriors who had themselves appointed shogun, or supreme commander, of the emperor's armed forces. These warrior chieftains set up what came to be known as a bakufu, or tent, government at Kamakura.

The Kamakura shoguns ruled Japan for more than 250 years , during which time the country slipped into a classical feudal system, with estates awarded to vassals who pledged their fealty to their sovereign lord. Eventually some 250 or so chief clans emerged; these chief vassals, known as daimyo administered the estates in the name of the shogun and the emperor. Lesser warriors, or samurai, received smaller grants from these chief vassals, with a number of lower ranks also recognized. At one time, 17 separate ranks were recognized. The economy of the time revolved around the annual rice crop, with payments to samurai of all classes made in portions of the crop.

The first vestiges of the Japanese business system appeared during this feudal period. Businesses grew out of a need for some type of organization to store, ship, grade, and distribute the annual rice crop, and do the same for other farm goods and the products of farmers' cottage industries, particularly silk. These early merchants, lowest on the social structure, were expressly forbidden to enter into manufacturing, although near the end of the feudal period a number were doing so. They were particularly active in food processing and brewing. Villages and towns supported local craftsmen and artisans. Eventually local merchants' businesses became synonymous with family; their business and "house" became one. To facilitate their trading operations, these early merchants became money lenders and money changers, and set up insurance services and extensive transportation networks.

Throughout Japan's feudal period, all contact with the West was channeled through the port of Nagasaki, where only the Dutch had been permitted to maintain permanent trading operations. From 1603 until the late 1800s, the country was ruled by Tokugawa shoguns who established strict isolation policies, with the only news of the developments outside of Japan to be found in Dutch books and newspapers. Despite the country's isolation, this was the period when the first modern Japanese businesses came into being, many of which were established by the daimyo families. Increases in agricultural production and improved prices for Japanese exports raised the level of

wealth in the country. Eventually, this growing wealth fueled improvements in demand for all types of goods and services.

Discussion Questions

1. Describe the characteristics of Japanese business during the Japanese Kamakura period.
2. How were goods and people transported during this period of Japanese history?
3. When did money first become important in early Japanese commerce and industry?
4. Discuss the new political and philosophical patterns that emerged during the Kamakura period.
5. What happened to Japanese commerce and industry during the Tokugawa period (also known as the Edo period)?

Part V

Competitive Commerce and Industry in the United States

Chapter 12

Commerce and Trade in Colonial America: 1609 to 1789

The great migration of Europeans from the Old World to the New that began as a trickle in the sixteenth century continued for the next three centuries, often achieving the status of a flood. The early settlers, regardless of their reasons for giving up everything they knew to migrate to the Americas and other emerging colonies, soon established a business system and institutions similar to the ones they knew at home. However, it was not long before the colonial business system took on a character of its own, one that was best suited to the exigencies of poor internal transportation, isolated settlements, and the mercantilist policies of the mother country (McAllister 1989).

Stages in the Evolution of the American Economy

The business system of North America evolved in six distinct stages, the last of which began in earnest in the mid-1990s and is currently shaping a business system unlike any seen before.

Stage I: Commerce and Trade in Colonial America, 1607 to 1789

This was the period of the general merchant and merchant trader in the northern colonies and the plantation planter and factor in the southern colonies, where the emphasis was on such cash crops as tobacco, rice, and indigo. This period was also characterized by the steady success of the artisan craftsman and the appearance of early,

one-activity small manufacturing activities (Acemoglu, Johnson, and Robinson 2001).

The defining characteristic of England's colonists from the earliest days was as much economic as it was the quest for religious freedom. Colonists endured the dangerous experience of crossing the ocean in small ships and efforts at carving out a livelihood in a harsh and unforgiving environment to provide a better life for themselves and their families. Hence, the first small farms were worked as much as entrepreneurial ventures as they were for survival (Perkins 1989). British capital financed colonies with the goal of profits and—more importantly—planted the seeds of an entrepreneurial spirit that would characterize the colonies for the next 200 years.

Stage II: Post-Revolutionary War Commerce and Trade, 1790 to 1860

This period saw the emergence of the first large, specialized manufacturers and the slow disappearance of the old general purpose producer and merchant in the north. The southern states went through a growing dependence upon slave labor to produce cotton for British mills. An even more distinctive feature of this period was the appearance of the large sums of capital during the 1840s and 1850s—most of which came from European investors—that was needed for development of the nation's railroads.

Stage III: Building a National Market, 1860 to 1910

This was the period in which U.S. business and industry transformed into "big business" in every sense of the word. The period also saw the shift from owner-operated businesses to business bureaucracies with professional managers. This was a new organizational form in which ongoing institutions took on a life of their own and that would remain long after the death of their founder-owners; it was reinforced by changes in the U.S. commerce and industry that would occur after the Civil War.

Stage IV: Forging an Industrial Nation, 1900 to 1950

During most of this period many small entrepreneurial businesses coexisted alongside the larger firms that emerged during the preceding era, which resulted in a dual system of *central* and *peripheral* businesses. This was also a period of extensive diversification

and decentralization for many U.S. manufacturing industries, with big business becoming even bigger through a series of several merger manias. In terms of management emphasis, this period saw the triumph of marketing over production that would shape all future periods. As a result of a number of management abuses, a fever of stock speculation, and the breakup of large holding company trusts, the early decades saw a wave of government regulation over business that continued in one form or another until well into the next stage, when deregulation began replacing regulation as the national policy. The latter half of the period saw the U.S. business system emerge as the "arsenal of democracy" and a global leader in manufacturing and marketing of all types of industrial and consumer goods. U.S. commerce and industry in the interwar years of the twentieth century and during the first full decade after World War II would result in the world's largest economy.

Stage V: Transition to a Global Economy, 1950 to 2000

At some time during the first decade of this period the U.S. business system reached its peak of success. Some observers have characterized the last half of this period as the time when the U.S. business system entered into a period of high-cost, low-quality decline, as U.S. manufacturing industries were forced to give up their global leadership to Japanese, German, and other competitors in both Asia and Europe. Many large U.S. businesses were forced to change their traditional top-heavy structures and labor unions to limit their demands. In just one industry, for example, more than 350,000 once highly paid manufacturing jobs were lost forever. This was the era of downsizing and reengineering—policies that too often proved to be more disastrous than the conditions that had brought them about.

The 1990s saw the triumph of the free market system over the command economic policies and the collapse and eventual dissolution of the former Soviet Union. This period witnessed the final transition of the United States from an industrial economy to an information, or knowledge, economy, with an explosion of entrepreneurial activity in the information and communications technology industries. Despite the increasingly strong forces of global competition, U.S. business began to take back its world leadership position in many fields even while it saw the continued shrinking of its market share in its traditionally strong industries, such as automobiles and aviation. This period of major transformation set the stage for the global economy that would follow.

Stage VI: Commerce and Trade in the New Millennium, 2000 and Beyond

During this period, the economies of Japan and Germany fluctuated from stagnation to rapid growth and back, as many emerging economies continued to exhibit double-digit growth in GDP. By 2005, the U.S. business system, while still strong and growing, faced a host of challenges that many sectors seemed ill-qualified to meet and surmount. The story of the U.S. business system during this period of globalization is influenced by adoption of s global system of support for international trade as administered first by the General Agreement on Tariffs and Trade (GATT) and its successor, the World Trade Organization (WTO).

Trade and Commerce in the Colonial Period

In North America, most of the earliest settlements were products of commercial ventures such as the Virginia Company. These early ventures failed to produce the promised wealth in gold and silver coming out of Spanish colonies farther south, and were soon converted to large land grants made by to Crown favorites, such as that awarded to William Penn. Despite their great distance from the mother country, colonists were not, in the commercial sense, isolated (Andrews 1914). Rather, they were units in a widespread body of a European-based economic system. By the 1700s, the colonies were peopled by representatives of most of the trading nations of Europe.

That network extended beyond the Americas to include Africa and Asia as well. For example, American colonists would drink the Indian tea from cups made in China and sweetened by sugar from Central America processed in Spain and shipped to Boston in British trading vessels. Britain's primary interest in her colonies was commerce. Moreover, they did not consider or value that trade any different than they did trade at home. Laws established for governing the colonies were in the first sense laws regulating commerce. C. M. Andrews (1914) discussed this point:

> Commerce was . . . the corner stone of the British system. Naturally other interests, legal, political, institutional, religious, and military, assumed large proportions as the British colonial system was gradually worked out; but in the ultimate analysis it will be found that the building up of strong, self-governing communities in America and the West Indies was a contributory rather than a primary object, furthering

> the commercial aims of British merchants and statesmen through the establishment of vigorous but dependent groups of producers and consumers; for England was bound to protect and develop the sources of her wealth and power. England valued her colonies exactly as far as they were of commercial importance to her. (pp. 47–48)

This intense interest in commerce was as much a characteristic of colonists as it was of people at home in England. To the colonists, engaging in trading was a natural activity considering the colonies' location and lack of an established production and distribution system. Lacking north-south land transportation and hugging the east coast of the North American continent made them dependent upon the sea for travel: The North Atlantic was their access to the world.

The Europeans who settled the New World from the sixteenth to the eighteenth centuries forged a commercial system that was shaped by three important traditions. First was the mercantilism of both Spain and Great Britain, the two most important of the colonizing nations. Second was a laissez-faire policy approach to business within the newly settled lands. Third was a dependence upon the mother country for most manufactured goods and specie. The mercantilist policies of Great Britain set the stage for subsequent development of business activities in the colonies.

Mercantilism in the New World

For its first two centuries, the business system of what was to become the United States of America was a reflection of the mercantilist strategies of its mother countries, first Spain and later Great Britain. Both of these Old World nations depended upon their New World colonies for the raw materials that made them the strongest and wealthiest nations of their time. Spain was the first country to enforce mercantilism in the New World. The Spanish American colonies were not allowed to trade directly with Europe. Instead they had to funnel all their agricultural products and precious metals through Spain. At that time, the most desired commodities of the New World were primarily silver, sugar, and tobacco. These were all produced in the warmer climates of the Central and South American colonies and were closely controlled by Spain and Portugal. This made Spain the richest country in Europe, and financed Spanish wars on the European continent.

From the 1600s through the 1700s, mercantilism also had a major effect on the economies of North America, where English-speaking colonies were affected by England's mercantilist policies and acts.

These policies and acts allowed Britain to control colonial merchants while also strengthening the central government in its efforts to wrest control of world trade from the Dutch, who had controlled the majority of ocean trade since the early 1600s. Owning some 75 percent of Northern Europe's ocean vessels, being well-financed and experienced, the Dutch had every intention of remaining in control of the ocean transport and trading market.

Great Britain took its first steps in the drive to oust the Dutch in 1651, when Parliament enacted the first Navigation Act. This act required that all trade between Europe—particularly France—and the English colonies and between the colonies among themselves must be carried in English ships, which also included British colony vessels. Excluding the Dutch from trading with English colonies would enable the British economy to grow while also producing an expansion of British shipping interests. This first act was passed to ensure that all profits from trading "invisibles" such as transportation, dock fees, and maritime insurance would accrue to Englishmen.

The Navigation Acts were Britain's first attempt to enforce a policy of mercantilism. However, the first act failed to achieve the desired result. The failure of the act was caused by Great Britain's inability to enforce the law with its relatively small navy at the time and lack of a strong police power in the colonies. Colonial merchants publicly defied the act and continued to trade with whomever they pleased.

The restoration of Charles II brought about major changes in 1660. The 1660 amended act added the proviso that certain products produced in the colonies, including the West Indies, were to be exported only to British ports. Included in the list were sugar, tobacco, and dyestuffs such as indigo. A further amended bill passed in 1663 required that all European goods to be imported into the colonies be shipped only from London, Bristol, or other English ports. An amended bill in 1673 required shipment of a list of products exported to foreign markets had to be shipped only to England or other colonies and then transshipped. Laws enacted under Oliver Cromwell—including the Navigation Act of 1665—were considered illegal and were replaced by new legislation. King Charles did not do away with the act, but he did give it new teeth. The Navigation Act of 1660 was a restatement of the 1651 act, but it also barred a list of specific items such as tobacco, cotton, wool, and indigo from shipment from colonial ports to anywhere outside of the Britain. The Navigation Act was a blow to colonial merchants as it excluded them from trade with other countries. However, the consensus is that the acts helped colonial exporters more than it hurt them, as the following analysis attests:

> The point of all this was, of course, to ensure that the economic benefits from the colonies accrued exclusively to England. The [Navigation Act] laws created a closed system within which only the citizens of the empire had the right to trade, but this included all [British] citizens, no matter where they lived. As far as the Navigation Acts were concerned, the colonies were a simple extension of the metropolis, the equivalent of new counties, somewhere west of Cornwall. . . . By closing the empire to the Dutch, the Navigation Acts created as many opportunities in trade and commerce for Bostonians as they did for Bristolers. (McCusker and Menard 1991, 47)

The Staple Act of 1663 expanded the provisions of the Navigation Acts, requiring that all European goods bound for the American colonies must first land at an English port and then be transshipped to the colonies only in English vessels. In addition, all the important crops and products of the colonies—tobacco, sugar, cotton, indigo dye for cotton goods, marine stores, copper, beaver and other furs—all had to be shipped to a British port before they could be shipped to any other country. The British economy benefited from this new act in several ways. First, the British Treasury was enriched by custom duties imposed on all goods intended for transshipment. Second, English merchants profited by the sale of insurance, warehousing and stevedoring, and shipping fees to the colonies. The act of transshipping was a valuable source of income for British traders and shippers, although by the end of the colonial period and Britain's wars with the French that value had declined somewhat. The decline in the value of three important commodities transshipped from 1768 to 1772 are displayed in Table 12.1. Values are of freight on board (FOB) in

Table 12.1 Official values of items transshipped from Britain to the 13 colonies, 1768–72

Commodity	Year				
	1768	1769	1770	1771	1772
Tea	168,759	45,328	21,726	71,830	52,829
German linen[1]	71,818	63,688	95,145	140,384	94,468
Pepper	9,997	3,370	8,447	21,310	6,961
Total	250,574	112,386	125,318	233,524	154,258

[1] *Linen*, also called *German linen*, was a composite term applied to linen produced in a variety of northern regions on the European continent. *Germany* was a descriptive term, not a political one.
Source: Shepherd and Walton 1972, 186; from London public record office data.

pounds sterling in Britain, but do not include shipping, insurance, commissions, wharf handling, and other "invisible costs."

By 1713, the colonial trade system followed the model established in the Navigation Acts and related legislation almost entirely, and did so almost up to the American Revolution. A noteworthy example of where compliance bogged down included the smuggling into the colonies of sugar, molasses, and rum from the non-English Caribbean islands.

Four Types of Colonial Commerce

In addition to farming, which constituted probably 90 percent of all economic activity, four types of businesses existed in Colonial America. The first of these were the joint-stock companies formed in England for the purpose of founding colonies, along with havens for persecuted members of nontraditional religious groups. The second period emerged when the mother country was involved in a bloody revolution. During this period the joint stock companies evolved into independent or semi-independent self-administered provinces. During the third or late-colonial period, the proto-states that had been ignored during the revolution in England became projects for development that would eventually evolve into the 13 colonies. Owners of Crown grants recruited settlers from Britain and Europe. These settlers bought needed skills and knowledge to the new lands. Buoyed by the disruption of commerce and industry during the Napoleonic wars in the fourth period the colonies became net exporters of food, raw materials, and manufactured goods for the besieged countries of Europe. This in turn spurred greater invention and innovation in the colonies.

During the first period, colonists were to be resupplied by company-owned trading posts, thus providing quick profits for the investors regardless of whether precious metals were found or not. The Virginia Company, chartered in 1606, and the Massachusetts Bay Company, in 1629, are examples. Other companies were formed in the same way by investors in other European countries, including the New Amsterdam (New York) colony by the Dutch West India Company and the Delaware colony by the Swedish New South Company.

The Virginia colony struggled for twenty years as a plantation formed for the express purpose of producing profits for its investors. However, the harsh conditions in Virginia and lack of proper planning and resupply by the parent company soon resulted in the scheme's failure; two-thirds of the original Jamestown settlers died within the

first year. Initially, the settlers were nothing more than employees. All colonial lands remained under company ownership. As a result, residents were unwilling to labor long hours for no personal gain. This resulted in a number of changes, but did not save the company from failure as a profit-generating enterprise. For example, to attract new colonists, the company was forced to grant tracts of land that became the property of the settler after a stated period of time and labor. The colonists in Virginia were also given a measure of control over their affairs by establishment of provisions for self-government.

The early stock companies soon gave way to large tracts of land granted by the king to individual noblemen either in return for political favors at home or promises of a share in the profits. William Penn's Free Society of Traders in Pennsylvania, Lord Baltimore's Maryland Colony, and the Hudson's Bay Company are examples of these crown grants. Lord Baltimore's colony was conceived as a place of refuge for Britain's persecuted Catholics as well as a commercial enterprise.

This first phase of enterprise in the colonies did not last long for two reasons. First, the feudalistic nature of the companies' colonies made it difficult if not impossible to attract a large number of immigrants. The best potential colonists refused to emigrate unless they were guaranteed an opportunity to improve their position in life by land ownership or a promise of religious freedom, or both. The second reason was that the colonies were unable to generate a profit for their investors. William Penn, for example, died nearly penniless, having sunk his entire fortune into developments in the Pennsylvania colony.

Collapse and Near Anarchy

The second group of businesses in the emerging colonial system followed the collapse of company authority sometime after 1630. The colonies that survived this period plodded along independently. They remained relatively isolated along a thin strip of land along the coast or rivers that led to the sea. They continued growing, but very slowly, and doing so largely without much interference from the mother country, which was in the midst of a civil war. However, the colonies did remain on the minds of one class of people in Britain and France at the time: colonial business opportunists. With the breakdown in military security following Cromwell's beheading of the king, a sense of adventure and promise of quick and easy profits drew a number of these opportunists to the colonies. They included early independent fur traders, operators of a few small shipyards, a growing number of

independent merchant traders and smugglers sailing their locally built small coastal traders up and down the coast and to ports in the West Indies. At the extreme end of this group of adventurers were a number of pirates sailing out of small ports in the Carolinas.

Traders and shippers in the colonies had been restricted by the Navigation Acts from trading directly with other British colonies. The first of these had been introduced as early as 1650. Those laws had regulated colonial commerce in four major ways. First, trade between the colonies and the rest of the world were required to be carried in English or approved colonial ships. Second, goods destined for the colonies had to pass through British ports first. Third, most items exported from the colonies destined to buyers elsewhere in the world had to be transshipped first through England. And fourth, bounties or subsidies were paid to American suppliers and planters for producing certain items, such as indigo for dying English cottons and naval stores for the British navy and merchant fleet. Before the American Revolution, the Navigation Acts had resulted in some economic value to many Americans. However, this specialization caused significant hardship when trade income was curtailed during and after the Revolutionary War.

The Late Colonial Period

As the colonies progressed from the embryonic stage of growth in the seventeenth century, financial trade and commerce, together with the availability of land at very low prices, encouraged more immigrants from Europe. By the middle of the eighteenth century colonies from Newfoundland to Georgia were economically viable and contributing to the economic success of British traders (McCusker and Menard 1991). Coastwise trade, while still important, was soon exceeded in value by oceanic trade. Imports came mostly from British ports and exports went mostly to the motherland, carried in British ships.

By the 1760s, European countries were finding it increasingly difficult to feed their growing populations. They began to import more grains and other foodstuffs from the colonies.

The value of annual exports from the 13 colonies plus the northern maritime colonies came to nearly 2.6 million pounds sterling (Table 12.2). The total value of exports from the 13 colonies and two Northern colonies of British Canadian grew from £2,203,000 in 1768 to £3,487,000 in 1772. In pounds sterling, the average annual values of the top five commodities exported during this five year period were (Shepherd and Walton 1972, 98):

1. Tobacco	£766,000
2. Bread and flour	412,000
3. Rice	312,000
4. Dried fish	287,000
5. Indigo	117,000

Colonial Manufactured and Processed Goods

The fourth period saw the 13 colonies well on the path to self-dependence in manufactured goods, although the economy was quickly becoming specialized. In the north, the list of goods and products manufactured or processed in the 13 colonies for domestic and export market by the 1760s was varied and surprisingly long (Table 12.3). By this time water power had been harnessed in all the colonies. A number of technological advances had also been implemented. Gristmill operators, for example, had installed the latest technological advances, including continuous process equipment and methods that made them equal to the best mills in Britain. Other colonial inventors

Table 12.2 Average annual commodity exports from 13 North American colonies, 1769–72

Region/Colonies	Total (£ sterling)	Per capita estimates
New England:	489,000	0.84
New Hampshire	47,000	0.65
Massachusetts	265,000	0.99
Rhode Island	83,000	1.43
Connecticut	94,000	0.51
Middle Colonies:	572,000	1.03
New York	191,000	1.17
New Jersey	2,000	0.02
Pennsylvania	361,000	1.30
Delaware	18,000	0.51
Upper South:	1,181,000	1.82
Maryland	398,000	1.96
Virginia	783,000	1.75
Lower South:	614,000	1.78
North Carolina	76,000	0.39
South Carolina	463,000	3.73
Georgia	75,000	3.21
13 Colonies Total	2,859,000	–

Source: Shepherd and Walton 1972, 47.

Table 12.3 Categories of colonial manufactured and processed goods

Product Category	Product Items
Food and related products	Wheat flour, tobacco products, animal products, meatpacking, leather goods, shoes, whale products including oil and candles, fermented and distilled beverages, refined sugar, other food products
Textiles and textile products	Woolen textiles, cotton textiles, linen goods, other textile goods
Forest products	Sawmill products, casks and other wooden containers, masts, spars and other ship timbers, pitch, tar and turpentine, furniture, other forest products
Paper and printed materials	Paper, newspapers and periodicals, books, other paper products
Chemicals and allied substances	Industrial chemicals, consumer chemicals, salt, other chemical products
Stone, clay, and glass products	Construction materials, domestic utensils, other stone, clay, and glass products
Metals	Precious metals, iron and steel products, other metal products
Equipment and apparatus	Agricultural and nonagricultural machinery, tools, guns, waterborne vessels, land vehicles, other equipment

Source: McCusker and Menard 1991, 328, from material in V. Clark, *History of Manufactures* 1929.

had increased the productivity of lumber, iron, and sugar mills. In the south, large plantations specialized in cash crops such as cotton and tobacco on a mix of large plantations using slave labor and small, family farms.

In addition to the factory-produced goods, home-manufactured handicrafts also contributed to the manufactured-goods economy. Although the relatively high cost and limited technology available limited their growth opportunities, such artisan home businesses were the precursors of the vast small business component of today's economy. Colonial small home-based businesses have been described thus:

> What we do know about colonial artisans is that few worked in a factory setting. Instead, the family was the unit of production, the workshop was attached to the home, and the master craftsman provided the labor with the help of his wife, children, and an occasional apprentice. Work

> was performed with simple hand tools, unassisted by power or elaborate machinery and without an extensive division of labor. Most shops were what could be called "neighborhood manufacturers," dispersed rather than concentrated, producing a wide range of goods in small quantities, often made to order, for a few customers. The size of such establishments was constrained by the high price of labor, primitive technology, and small markets; their inefficiencies were protected by the high cost of production. (McCusker and Menard 1991, 329)

Conclusion

Wresting a living from the harsh environment was difficult, indeed, for the first 50 years or so of the history of the British colonies in North America. The problem was that for the earliest colonists, the stock company owners were interested in a fast return on their investments and often did not pick people with the right skills for wresting a living from the land—those who knew how to farm or bring down wild game. The settlements were there to establish profitable trade with the natives. The sponsors neither equipped the people they sent for success in the New World, nor ensured they could replenish the settlers on a regular basis. The early attempts at colonization were inspired by the lust for gold and other precious metals that had rewarded Spanish efforts in the Southern Hemisphere (Morison 1965). The colonization schemes of Sir Walter Raleigh that occurred after a successful exploration expedition in 1584 began with setting up a trading post and gold prospecting center on Roanoke Island in what is now North Carolina. Drake returned in time to save those hapless first prospectors and return them to England. He next attempted to establish a colony in Virginia in 1587. When a supply ship arrived in 1590 after being delayed by the war with Spain, all the settlers were gone, either by starvation or by murdered by unfriendly Indians.

Those early attempts revealed that to be successful, establishing a successful colony required far more money and different skills than those held by the "get rich quick" early adventurers. Yet, the quest for reward remained behind most of the seventeenth century British attempts to establish colonies, including Jamestown in 1607, Plymouth in 1620, and Massachusetts Bay in 1628, all of which were established as trading posts. The first English colony to include a serious farming aim occurred in Bermuda, where there were no Indians to trade with. No one involved in any of those early colonies was permitted to acquire private ownership of any land. They could only do so after 1616 in Virginia, 1623 in Plymouth, and 1630 in Massachusetts

Bay. By then, it appears, the sponsors of British settlements in the New World were interested in more than just engaging in trade with local Indians. They began to take a longer view, buttressed by more than one motive. Morison (1965) identified six of those forces: (1) transport the mother country's growing poor and unemployed to where they can be productive, (2) provide the settlers in the cold northeast with the ability and need to earn enough to purchase English woolens, (3) encourage settlers to search for and acquire needed precious metals, (4) replace desired food products grown and produced in Mediterranean countries with similar goods grown and produced by British citizens, (5) continue the search for a shorter way to the East Indies, and (6) bring Christianity to the heathen native population. Morison saw these as the "basic motives of English colonization for a century and a half."

With a new humanistic rationale to justify the desire to turn a profit either by selling lands to new settlers or by selling them needed products manufactured at home, new colonies established by royal charters planted roots and thrived in the New World. In doing so, they supported the growth of a large number of British citizens in first a growing commerce and trading class and later a class of entrepreneurial manufacturers both at home and in the colonies.

Discussion Questions

1. Explain what is meant by the statement: "Commerce was the corner stone of the British system" in the colonies.
2. Describe the mercantilism of Great Britain. How did it affect colonists?
3. What role did sugar and tobacco play in the economy of the British colonies?
4. Name and describe the four types of businesses that existed in Colonial America.
5. What role did naval stores play in colonial trade with Britain?

Chapter 13

Post-Revolutionary War Commerce and Trade

Commerce and industry in the United States underwent vast changes in the decades between 1789 and the Civil War. In a conclusion that ran counter to many earlier historians, Edwin Perkins (1989) emphasized that this transformation process was evolutionary, not revolutionary. Big changes were, indeed, needed when the revolution cut the colonies' ties with the mother country. The changes began with a transition from nearly complete dependence upon British markets for their products and British suppliers for the goods and services they could not produce themselves. As noted in chapter 12, the British Navigation Acts and the resulting loss of access to their traditional markets and suppliers drove many American traders to find new markets or develop new businesses. Southern planters and Philadelphia merchants, for example, joined together to begin shipping American tobacco directly to continental European markets, sidestepping English or Scottish middlemen.

Prior to the Revolutionary War, 55 percent of the colonies' trade was with buyers in Britain, while direct trade with other markets had been close to zero. In 1790, trade with Britain declined to 31 percent of the country's exports, while direct trade with other northern European markets accounted for 16 percent of America's total exports. New trade opportunities were also developed, such as those with China. American trading vessels sailed around South America, stopping on the west coast of the North American continent to trade with natives for furs—mostly sea otter pelts—which they then exchanged in China for tea, silk, porcelain, and other fine products. These were

shipped to markets in the United States to be sold at high profits, or transshipped to European markets in competition with English traders.

The Revolutionary War also cut off access to British manufactured goods and colonial entrepreneurs jumped in to meet the growing domestic demand. American artisan-entrepreneurs, for example, expanded their operations enough to supply the revolutionary army with clothing, guns, and gunpowder. By 1790, American factories were turning out nearly every type of food, clothing, iron, glass, paper, or naval stores needed by the colonists. In some industries, the new small nation became completely or nearly self-sufficient.

Changes in Key Sectors

Between 1800 and 1860, the American economy experience explosive growth. With that growth came several crucial changes—revolutions, if you will—in the way business was organized and managed. First, except for the farthest reaches of westward movement, the general merchant of colonial times all but disappeared, to be replaced by specialized firms that developed to meet the needs of the rapidly growing domestic and international markets. New inventions and advances in transportation, communication, agriculture, and industry helped fuel the tremendous growth. Entrepreneurs appeared everywhere, investing in the emerging opportunities, forging the new American business system based on laws of supply and demand rather than the old mercantilism system and family-oriented business establishment and funding. During this transformative period, American business was particularly influenced by significant "revolutions" in three sectors of the economy: transportation and communication, agriculture, and industry.

Advances in Transportation and Communication

From colonial times to the early nineteenth century, the movement of goods from places of production to market and shipping ports continued to be a major brake on growth for farmers, planters, merchants, artisans, and consumers. Some freight did, of course, move over the primitive, rutted, and stump-filled roads, but in many cases the absence of roads meant that goods could only be transported by packhorse or on the backs of humans. With the absence of passable roads, early settlers had turned to rivers, creeks, and coastal estuaries

for transportation. But this was not always possible once the country expanded off the eastern seacoast. Therefore, new methods had to found, and with limited capital, so did new ways of funding. The answer was the development of the joint-stock development organization, often sponsored by a combination of public and private investments (Bryant and Dethloff 1990). The thick forests and long distances limited widespread construction of a British-like system of turnpikes with their stage coaches and freight wagons, although a few famous turnpikes were constructed. Construction of the National Road, the first road constructed by the federal government, authorized by Congress in 1806. Until this and additional roads were built, canals and riverboats were the major ways to transport goods.

In 1789, however, the colonies contained few passable roads. As an indication of how bad and costly passable surface transportation really was, as late as 1816 shippers could bring a ton of goods 3,000 miles from Europe for about nine do. That same sum could move the same ton of goods inland by wagon only 30 miles. The high cost of overland shipping encouraged a number of civic and state boosters to move ahead with the construction of canals.

President George Washington urged Congress to fund construction of a national road to tie the eastern seaboard to the rapidly developing central and western regions of the country. At the time commercial transport was slow and expensive. Hauling charges over existing primitive trails and pathways by mule or oxcart raised the cost of goods over even short distances six times. Although he did not live to see construction begin, building the National Road (also called the Great National Pike) commenced in 1811 and finished in 1834. It would take 25 years before it could reach the 800 miles to the Mississippi River at Vandalia, Illinois.

Construction of the 363-mile-long Erie Canal began on July 4, 1817, and was completed just eight years later in 1825. Soon afterward packets and line boats were connecting the Great Lakes and Ohio Valley regions with ports such as New York and Philadelphia. By the 1840s and 1850s railways were supplanting canals. By the start of the Civil War, a rail network was well establish in the northern and central Atlantic states and less so in the southern agricultural states. Julius Rubin (1961, 5) described the Erie Canal as "one of the great American technological feats of the early nineteenth century, one that revolutionized the transportation system [and] a dominant factor in the rapid development of the interior of the country." His study of

the canal's influence on the transportation infrastructure projects that soon followed is a comprehensive description of the economic competition that existed between the former colonies.

Profit-minded schemes to replicate the success of the Erie Canal quickly followed. However, those early privately financed efforts soon failed due to the high cost of constructing canals and the limited capital available in the new country, which resulted in the most viable of the schemes being taken over by state and local government administrations. Rubin added,

> The [Erie] Canal was not simply another success; it was an enormous, astounding, almost unbelievable success. Throughout the country, the press printed and reprinted astonishing accounts of the size of the toll revenues, which were impressive as early as 1823, when large sections of the Canal were open to traffic. Just as impressive were the descriptions of the marvelously rapid development of the affected regions of western New York. Inevitably, the Erie Canal sparked a national canal craze. (1961, 5–6)

Maryland and Pennsylvania, which had benefited from construction of National and the Cumberland roads, saw their dream fading as the Erie Canal moved freight faster and cheaper than surface transportation. Boston, hemmed in from the west by the Berkshire Mountains, believed that a canal connecting Boston to the Hudson River would reroute some of the freight going to New York to Boston. Philadelphia believed a canal connecting the Chesapeake and Ohio rivers would allow them to enjoy more of the western traffic in goods. These and other cities on the eastern seaboard dreamed of building their own canals. However, another impressive technological advance in transportation was becoming a commercial success even as canals were being planned and constructed.

The Erie Canal linked the Port of New York with almost all of the old northwest through the Great Lakes and the Hudson River, making New York the wealthiest port city in the nation. Farmers and food processing firms were suddenly able to ship their goods from the rich farmlands of the great prairies of the Midwest to the east coast and the world beyond. A group of wealthy civic leaders in Baltimore decided to match that success by building their own canal to connect with the Ohio River. Table 13.1 lists the major canals in operation in the United States a year before Civil War hostilities broke out. By this time, however, the heyday of canal construction was over; railroads had become a viable alternative.

Table 13.1 U.S. canal ton-mileage in 1859

Canal	Receipts (dollars)	Tonnage (thousands)	Average haul (miles)	Freight charges per ton-mile	Ton-mileage (millions)
New York System	–	–	–	–	544.3
Chesapeake and Ohio	–	–	–	–	58.8
Mainline (Pennsylvania)	197,549	–	–	3 mills	65.8
Lehigh	–	1,307	80	–	104.6
Schuylkill	–	1,699	80	–	169.9
Delaware Div.	–	770	40	–	30.8
Union	–	263	70	–	18.2
Susquehanna	145,276	–	–	5 mills	29.1
Erie (Pennsylvania)	93,817	–	–	3 mills	31.2
Monongahela	89,957	–	–	3 mills	30.0
West Branch	140,997	–	–	3 mills	47.0
Wyoming	101,449	–	–	3 mills	33.8
Chesapeake and Delaware	–	496	14	–	69.4
Delaware and Raritan	–	1,500	50	–	75.0
Morris	–	638	80	–	51.0
Delaware and Hudson	–	979	90	–	88.1
Ohio System	234,679	–	–	3 mills	70.4
Wabash and Erie	65,679	–	–	5 mills	13.0
Illinois and Michigan	–	367	70	–	25.7
Total					1,554.5

Source: A. Fishlow 1965, 21, collected from diverse sources.

Impact of Canals on Towns

Canals were a tremendous boon to many eastern towns hurt by a post–War of 1812 recession and deprivations of invading British armies. Georgetown, Virginia—the small trading town on the Potomac River near the nation's new capitol city—was an example. For years before and after the Revolutionary War Georgetown had been a thriving port

for the tobacco exports of large plantations in southern Maryland. After 1815, however, Georgetown's tobacco processing and shipping trade moved to other, larger ports in growing urban centers. Moreover, Maryland tobacco plantations had undergone wanton destruction by British invaders. By the early 1830s, the trade in Georgetown had all but disappeared. This helped to throw the town into a severe, decades-long depression during which the population declined from 8,444 in 1830 to 7,312 in 1840 (Hurst 1980).

Things changed dramatically for Georgetown with construction of the Chesapeake and Ohio Canal. By the 1940s, the economy was almost entirely based on inland trading. Large amounts of grain and flour were shipped east on the canal, with such products as fish, salt, and construction materials shipped to the new settlements and rural areas in western Virginia, Pennsylvania, and Ohio. Gradual expansion of a local flour milling and lumber processing industry occurred when the canal reached and passed through the Cumberland Gap in 1850. This also gave Georgetown industries access to coal from southern Virginia and what would become West Virginia during the Civil War. By 1860 there were 22 flour dealers and seven flour mills in Georgetown. Under this new prosperity, Georgetown became a locally important trading center. The 1859 census listed some 80 small retail businesses that included grocery stores, bakeries, confectionaries, apothecaries, shoemakers and the like. A horse-drawn trolley connected the town with nearby Washington, DC.

In an era when a net-worth from $20,000 to $50,000 was considered a fair-to-sizeable fortune, Georgetown in the late 1850s was a relatively wealthy community. Georgetown had a large supply of citizens in this category. The small town's wealthiest families included dry goods merchants, owners of large tracts of real estate, foundry owners, flour millers and shippers, hardware merchants, lumber millers and lumber merchants, coal merchants and shippers, hotel owners, livery stable operators, possessors of fortunes established during the town's exporting heyday, and even the headmistress of a girl's academy (Hurst 1980, 1721).

Growing Importance of Railroads

By the early 1820s, as canals were still being constructed through Europe and planned in the United States, steam-powered locomotives riding on iron rails were proving their practicability in England. The first line licensed to carry freight and passengers began operations in September 1825 to near unanimous acclaim. That engine was capable of pulling as heavy a load as 80 tons up an easy rise at speeds of from

10 to 15 miles an hour. No canal boat could reach let alone sustain that speed. The message of its success quickly traveled across the Atlantic to the former colonies. Now, civic promoters were faced with having to decide whether to build a canal or try a railroad. Although railroad technology had not yet been adequately tested in the United States, the Baltimore group decided to begin construction of a privately funded rail line from Baltimore to the Ohio River. That plan went nowhere, however. The costs were higher than expected and the supplies all had to be imported from England. In the meantime, civic leaders in Boston had also tried to interest public administrators in funding a line from Boston to the Hudson River. They, too, failed. Finally, the idea caught on in Baltimore. The Baltimore and Ohio Railroad (B&O) became the country's first interstate common carrier of passengers and freight. The pace of the line's construction is illustrated in Table 13.2. The technology finally having been proved safe and reliable, they were quickly followed by other trunk lines: the Mobile and Ohio and the Pennsylvania, both in 1847, the Illinois Central in 1851, the Delaware and Lackawanna in 1856, and the New York Central in 1857 (Previts and Samson 2000). On the same day that ground was broken on the B&O railroad, 40 miles away President John Quincy Adams was breaking ground on the Chesapeake and Ohio Canal; the two would parallel each other for a good part of their length (Fishlow 1971).

As late as 1852, freight tonnage carried on the network of canals in the eastern United States was double what was carried on these

Table 13.2 B&O construction progress, 1828–1957

Location	Date	Miles from Baltimore
Baltimore, MD	July 4, 1828	Groundbreaking
Frederick, MD	1831	61
Harpers Ferry, WV[1]	1834	83
Washington, DC	1835	35
Cumberland, MD	1842	178
Piedmont, MD	1851	198
Grafton, WV[1]	1852	265
Wheeling, WV[1]	1853	379
Parkersburg, WV[1]	1857	344

Notes: [1]Prior to the Civil War, these were in the state of Virginia.
Source: Previts and Samson 2000, 4.

young railroads. In less than 10 years, however, canal's dominance over railroads was already in question; 1861 is considered the year railroads began to carry more freight than canals. Ton-mileage had doubled during the 1840s. From 1850 to 1859 it had grown by 7 percent. Ton-miles carried in 1859 by major canals reached their peak of 1.55 billion ton miles. Some of that tonnage was limited to canals carrying only anthracite coal. During this same year, the total carried by railroads exceeded two million ton-miles. In many transportation corridors, canals and railroads competed for the same freight; many ran side by side so it was easy to see the advantages in time that railroads held.

All these transportation improvements improved communication throughout the former colonies. But the first real breakthrough in communication had to wait until the telegraph was invented. Samuel Morse's invention of the telegraph was the nineteenth century's most important new development in communication until steam driven railroads were established in the last half of the century. The electric telegraph revolutionized the distribution of business information. Only proved viable in 1837, by October of 1861 the Western Union Telegraph Company had completed a line all the way from the east coast to California. Technology to allow telegraph lines to function underwater made it possible to extend nearly instant communications from continent to continent. The first underwater line crossed the English Channel in 1851; Europe and the United States were connected across the Atlantic in 1865. The telegraph was a second important advance in communications in the nineteenth century; the telegraph made long-distance communication almost instantaneous (Lew and Cater 2006).

Advances in Agriculture

The developments in transportation and communication opened up the vast American interior to agriculture. Most of the farm products produced in the northern and central states were meats and grains—particularly wheat—which went either to feed a rapidly growing domestic population or for sale to European markets, where growth in the older nations was outpacing their ability to feed themselves.

As advances in transportation made it possible for more and more immigrant farmers to take up cheap land west of the Appalachian Mountains and ship their production to markets affordably and safely, advances in agricultural technology also progressed. John Deere

invented the steel plow in 1838. Grains still had to be planted by hand, but when the seed drill and sickle corn harvester were invented in the 1860s, farm production skyrocketed.

Helping to make possible this growth in productivity in American agriculture were inventions such as Cyrus McCormick's horse-drawn reaper for soft grains such as wheat and rye in 1831. The new horse- or mule-pulled reaper could harvest two acres of grain an hour whereas previously one adult laboring with a scythe from dawn to dusk could harvest little better than two acres a day. This produced tremendous changes in the organization and orientation of farms. By the start of the Civil War in 1860, the family subsistence homestead had been all but replaced by farm businesses that focused on growing crops for the marketplace. Near the end of this revolutionary change in agriculture railroads, steamboats and food processing industries had reached the prairie farmlands to provide the needed links between the cities and ports and the centers of agribusiness.

Agriculture in the South

In the southern states, cotton was often erroneously considered king, with tobacco, dye stuffs, rice, and other important cash crops. Eli Whitney had invented a way to separate the short fibers of American cotton from the seeds in 1793, thus greatly improving the marketability of the American product in European markets. It was in great demand in England where the spinning jenny and new water-powered looms were quickly permitting British industry to dominate the world textile market with its cheap cotton goods. With colonial independence, however, American entrepreneurs began to establish a strong domestic textile industry, one that became a critical contributing force in the emergence of American manufacturing and overall economic growth before the Civil War, as noted by Brant and Dethloff (1990):

> The establishment of the cotton textile industry is central to the story of the development of manufacturing in the United States. It also illustrates the conversion of merchant-shipowner wealth into manufacturing capital, the disruption of the traditional economic alliance with England, and the role of the entrepreneur, or economic innovatory, in business. (61)

During this same pre-Civil War period, American tobacco growers in the central states joined with factors and merchants in eastern cities

to develop their export markets in Europe, thereby cutting out British middlemen and improving their own profits. In the Deep South, rice growers enjoyed the same growth in demand for grains in European markets as the central and northern wheat growers.

Importance of Corn

Cotton was, indeed, king among gentlemen plantation owners in southern states during the half-century before the Civil War. But it was actually so in only four of the states where slavery was legally recognized (Kemmerer 1949). Overall, corn was far more important than all export crops combined. Corn was the basis for much of the food consumed by the "common man" in the south as well as the agricultural states in the north and north central regions of the country. It was distilled into whiskey—an important cash crop throughout all farm areas—and eaten by farmers and their families, as well as a staple for the slave population. It was prepared as corn-pone, hoecake, johnnycake, hominy, mush, corn bread, and succotash. It was fed to farmers' hogs and cattle. It was valuable in both the north and south, as figures for 1839, 1849, and 1859 in Table 13.3 illustrate.

Table 13.3 Comparative values of cotton and corn before the Civil War, 1839–59

	1839		1849		1859	
	Bushels or bales (million)	Value ($ million)	Bushels or bales (million)	Value ($ million)	Bushels or bales (million)	Value ($ million)
North:						
Corn	182.3	$94.8	243.0	$136.1	401.7	$293.2
South:						
Corn (bushels)	195.2	100.5	349.3	199.6	437.0	319.0
Cotton (bales)	1.65	50.2	2.46	106.6	5.39	232.8
Four key cotton states:						
Corn			97.6	54.6	110.0	80.3
Five border states:						
Corn			161.4	90.4	244.5	178.5

Source: Kemmerer 1949, 237.

Advances in Industry

The events taking place in the transportation and agricultural sectors illustrate some of the changes that were reshaping the economy of the new United States after 1789. But possibly the greatest changes were taking place in manufacturing. In the textile industry for example, complex machinery tended by men, women, and children characterized the new factories that were appearing in New England and the Ohio Valley. These new machines were powered initially by falling water, but not long afterward steam engines were the norm. Together, these products of industrialization changed the way goods were produced in three ways. First, machines replaced most handicraft labor. Second, new sources of raw materials, such as coal and iron, and new power sources gained importance in the production process. And third, workers became concentrated in factories away from their homes and farms.

One of the earliest innovators in the textile trade was Samuel Slater, an Englishman who migrated to New York in 1789, bringing with him the secrets of the English textile factories. Financed by Rhode Island merchant Moses Brown, Slater developed small, water-powered mills patterned after similar mills in England in which he employed whole families of men, women, and children. Slater's mills were an economic success by 1801, setting the stage for larger mills at locations on larger rivers in New England. One of the most important of these was funded by a group of merchants in Massachusetts led by Francis Cabot Lowell. Lowell, a successful trader in the nascent stock exchanges, and others merged their capital to form a group they call the Boston Associates. They established the Boston Manufacturing Company in 1813 with a capitalization of $400,000—a huge sum at the time—to produce cotton textiles. Initial success led them to form America's first company town—Lowell, Massachusetts—in 1823, where both textiles and textile machinery were manufactured for sale to world markets. Others followed their lead until the start of the Civil War, when textiles manufactured from southern plantation-grown cotton constituted the largest entrepreneurial opportunity in the country. Fortunes made in the business provided the capital needed to fund later development of the iron, railroad, insurance, and banking industries.

The success of the Boston Associates illustrates a trend common in the development of American business at this time: successful merchants investing in new manufacturing operations the profits they earned through trading. Often, alone or with partners, they operated

the new manufacturing plants. Other merchant investors financed inventors and entrepreneurs who sought to start or expand operations by substituting machine production for hand labor. This pattern of artisans joining with merchants did much to facilitate the revolution in industry that was characteristic of the United States in its early independence. As a result, by the 1850s the United States was second only to Great Britain in per capita income (McCusker and Menard 1991). American artisan-industrialists eventually became world leaders in the invention and manufacturing of wood and metalworking machinery.

This growth in agricultural and industrial productivity and transportation's effectiveness fueled the development of a host of new, specialized service industries, which in turn facilitated further growth. For example, traveling merchants called "factors" began touring the back country of the South to help bring planters crops to market, earning a commission for their assistance. In doing so, they began to provide important financial and market information services. Soon, brokerage houses developed in major shipping centers where they brought foreign and domestic buyers together with growers and their representatives. Contracts for future delivery of grain evolved into full-fledged futures markets and commodity exchanges to trade them. Merchants in larger towns and cities began to specialize in handling the product lines of a group of small manufacturers, thereby becoming wholesale distributors. Others, becoming known as "jobbers," took a small manufacturer's entire output on consignment. They then sold it in smaller quantities, usually for a 5 percent commission—performing the service we now recognize as "breaking bulk." Traders familiar with bills of exchange and letters of credit began to form both commercial and savings banks with their pooled trade earnings. Others formed insurance and credit-ratings services.

Conclusion

The first attempts at improving roads in the colonies had followed the British "turnpike trusts" model, in which improvements were paid for by investors who then recovered their investments by charging tolls. Similar applications of this model extended well into the last decades of the nineteenth century as entrepreneurs in new settlements built and charged for passage on roads and bridges. However, real improvements in inland transportation had to wait for the practical application of steam engines to riverboats, and, not long afterward, steam engines moving on iron rails. The first riverboat traveled down the Ohio and

Mississippi rivers in 1811. The first to travel up the river from New Orleans to Pittsburgh made the trip in 1815.

Canals and railways developed almost simultaneously in the central and northern former colonies before moving into the southern states. Canals were first, led by the famously successful Erie Canal from Buffalo to Albany, New York. Canal boats transported cargo and passengers faster and cheaper than oxcarts, but not fast enough to retain their lead over the nation's railroads, By the Civil War, major trunk lines provide service to most of the northern and north central cities. They contributed the victory of the North over the South in the Civil War.

Because of this solid foundation in early business services, American commerce and trade institutions would be ready after the Civil War to facilitate the country's heady, explosive growth. By the close of the nineteenth century American business institutions would stand alongside older firms in Germany and Britain as world leaders in commerce and industry.

Discussion Questions

1. Trace the history of the British Navigation Acts and explain the positive and negative effects on the colonies before the Revolutionary War.
2. How did the Revolutionary War affect the manufacturing industries in the colonies?
3. What forces were driving the explosive growth that occurred in the colonies from 1800 to 1860?
4. Which was more important to the U.S. economy leading up to the Civil War, corn or cotton? Explain your answer.
5. Why did the textile industry emerge in New England instead of the cotton-growing South?

Chapter 14

Beginnings of an Industrial Nation, 1865–1920

In the 50 years between the end of the Civil War and the start of the World War I in Europe, the United States drifted steadily away from its agrarian foundations to become an urbanized, industrialized nation with an economy controlled for the most part by big business. It was, as historian Vernon L. Parrington (1963, 6) described, a time in which "capitalism was master of the country."

During the three postbellum decades of the nineteenth century, American business transformed itself from the young, agricultural nation into its modern form as a leading industrial giant. During this time the country progressed through post-Civil War Reconstruction, the Gilded Age, and a decade of critical reaction to the way business seemed to be riding roughshod over workers and the national economy, the Progressive era. The Progressives attempted to control business and started a movement toward reform, control of political corruption, and conservation of natural resources that lasted from 1890 to 1917 (Bryant and Dethloff 1990).

The Reconstruction period from the end of the Civil War to about 1877 saw the Union government take control of each of the Confederate states. President Lincoln had proposed reintegrating the South into the national system as soon as possible. His assassination resulted in hardliners gaining control over much of the North's efforts. Much of the old southern plantation economy in which slaves constituted the labor force was replaced by subsistence agriculture carried out by freed men and women. By the end of the period, two distinct economies had emerged: a slowly industrializing New South in the more

central states, and an agricultural, small-business Old South in those states farthest from the North's economic leadership. Most difficulties with integrating freed slaves into social, political, and economic life occurred in the Old South states.

The Gilded Age got its name from the many great fortunes created during last decades of the nineteenth century and the way of life that wealth supported. Mark Twain's novel, *The Gilded Age*, was set in the last decades of the nineteenth century—a time of amassing huge fortunes by business and financial leaders such as John D. Rockefeller, Jay Gould, Andrew Carnegie, and others. Twain saw the way of life made possible by those fortunes as thin glitter gilding on base metal, not anything of real value. Although considered by many of their critics to be *robber barons* for the way they built their businesses, they were behind the tremendous growth in production of iron and steel, gaining access to natural resources such as lumber, gold, and silver, and for the construction of transcontinental railroads. The wealth they acquired was often made possible through ruthless business deals. Their excesses would ultimately lead to a shift in state and the national governments' dealings with business from a hands-off policy to one of strict control.

The Progressive era emerged near the turn of the century as a series of writings by crusading journalists on the perceived excesses of businesses and public institutions that triggered a demand for government intervention. A landmark Supreme Court case in 1870 established the right of government to regulate private businesses. Responding to demands by farmers, the State of Illinois set maximum rates that owners of grain elevators could charge for storage and distribution of grains. Munn and Scott, owners of a grain elevator in Chicago, refused to accede to the rate regulations, claiming it was an unconstitutional infringement on their rights of property ownership without due process of law. Moreover, the rate setting was an unconstitutional usurpation of the federal government's right of control over interstate commerce. In deciding the case, *Munn v. Illinois*, in favor of the state, the U.S. Supreme court based their decision on a 1676 decision by the Lord Chief Justice of Britain. The Justice found that if a privately owned wharf was one that all persons used for loading and unloading cargos, it thus became "affected with a public interest." Therefore, just and reasonable rates had to be charged for its use. The Supreme Court ruled that the Munn and Scott elevator was "affected with a similar public interest" because its use was not restricted to any specific users. It was, therefore, a public warehouse (Barnes 1938). As such, according to the Court's majority opinion, the decision did not abridge the

Fourteenth Amendment, which forbids states to deprive any person of life, liberty or property without due process of law. This "doctrine of affectation with the public interest" became the basis upon which governments' rights to regulate businesses was established (Koontz 1941).

Shaping the Business System

Led by a compliant government with a laissez-faire economic philosophy, from 1870 to the early twentieth century commerce and industry in the northern states underwent tremendous growth and technological advancements in almost all sectors of the economy; only agriculture suffered. Population surged, railroads tied the nation together, new ways of organizing and managing economic institutions emerged, and businesses in manufacturing and trade grew to meet the needs of a rapidly growing internal market for goods and services.

A number of fundamental themes underlay the transformation of business in America following the end of the Civil War. Four closely related factors shaping American businesses in this period are shown in Figure 14.1. The first of these changes was a revolution in the way

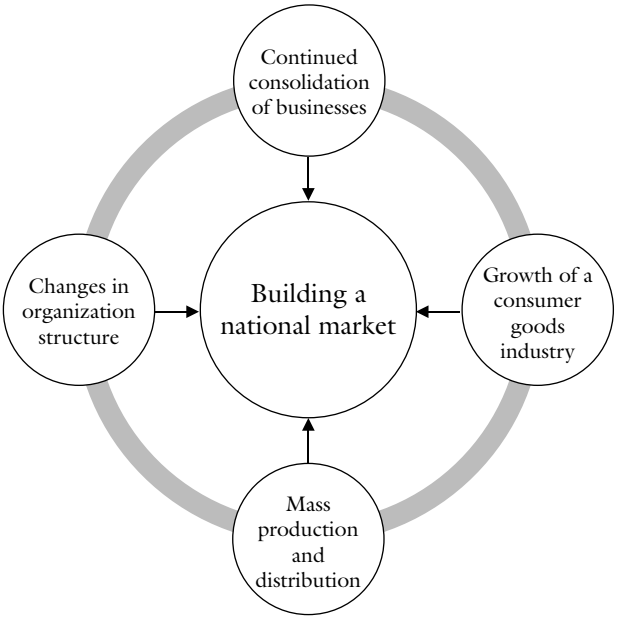

Figure 14.1 Forces helping to build a national market in the United States, 1865–1920.

organizations were structured. This was brought about because of the inability of the older, informal, sole-proprietorship managerial organization practices that were common prior to the Civil War to support the increased size and complexity of what were on the way to becoming large, international enterprises. As firms grew larger or acquired others they had to consolidate functions and procedures while also finding and training the managers to run them.

The second was the trend in the consolidation of businesses that began in this period and then expanded rapidly well into the twentieth century. This was the beginning of the dual economy in the United States: a few very large businesses in the United States and many very small businesses. Consolidation was brought about largely through the nation's first protracted spate of mergers and acquisitions. As firms grew in size it became necessary to develop new management process.

The third change was a shift from an economy founded on manufacturing producer goods industries to one with an emphasis on consumer goods. A fourth change occurred in the way in which products were produced and distributed: mass production and mass distribution, particularly in consumer goods, became the norm. Previously management decisions had been made through the free play of market forces, based on Adam Smith's popular theme of the "invisible hand" of the market. In the new economy, however, they would be based more and more on the scientific knowledge of consumers' needs and wants. Scientific principles were also applied to maintaining and repairing the new steam-powered machines. By the 1880s, it was also applied to the way workers' pay was determined.

Changes in Organizational Structure

By the end of the 1850s individual railroads had become the largest and most powerful businesses of their day. Construction of the Baltimore and Ohio Railroad, the first commercial line in America, started in 1828; the first transcontinental connection occurred in 1869 when the Central Pacific and Union Pacific met at Promontory, Utah. The early lines had been largely financed with British capital and rolled on rails of British steel. After the war, American capital and American steel facilitated their continued growth. By 1890, the nation had 166,000 miles of track linking together cities and production centers by a coast-to-coast network of rails. By 1886, all lines but a few special mining or other industry lines had adopted a standard-gauge track. The laying of nearly a quarter million miles of track by 1916 completed the network. From then on, consolidation and short-line

construction dominated in the industry. The railroads were among the most important business institutions in the nation at their peak. For example, it was the railroads not the government that established the four continental time zones in the United States. The zones were needed to standardize schedules of the competing lines.

New or improved forms of communication occurred along with the growth of the nation's railroads. In 1866, the nation's three leading telegraph companies merged to form the Western Union Telegraph Company (Western Union). The company completed the first transcontinental telegraph line in 1861 and by 2001 had more than 100,000 agent offices. It sent its last telegram in February of 2006. By then it had become a subsidiary of a global financial services company.

Because of their early rapid expansion railroads faced unprecedented managerial problems. They were soon much larger than any other private institution, larger in terms of the numbers of people employed, regions served, and capital invested than any other companies of the period. Not even the largest textile company could match railroads in size. Even more problematic were the railroads' complex strategic problems, including unparalleled demands for capital for responding to competitor's moves (Fishlow 1965).

Business executives who were new to an entirely new enterprise like the railroads could not organize their rail lines in haphazard ways and hope to survive for long. Both operating and strategic problems called for the systematic installation of management methods. Railroad executives solved their management problems through the establishment of business bureaucracies, the first in American history, and turned to government—another bureaucratic institution for employees.

Before the late 1840s, the U.S. Army had played a significant role in the development and construction of railroads. For example, Benjamin Latrobe, chief engineer for the B&O Railroad, had never served in the army. Therefore, he organized his own bureaucratic structure to build and run the line. Latrobe set up an administrative structure that separated the company into two parts. One was a finance department to handle the internal and external financial needs of the line and to take care of forming "grand strategy." The second was an operations department to run and repair the trains and rails. The operations department was then divided into separate units based on geographic divisions. Each division had three chief managers: one in charge of scheduling and running the trains, another in charge of constructing and repairing the roadbed, and a third in charge of repairing machinery and rolling stock.

Daniel McCallum made more refinements to railroad management. McCallum was general manager of the New York & Erie Railroad.

Trying to control the line's soaring operating expenses, McCallum issued his *General Principles of Management*. These spelled out the clear definition of responsibilities for each railroad officer in what later came to be known as *job descriptions*. He then drew up one of the first organization charts in the history of American business. In addition to requiring daily reports from his operating conductors, agents, and engineers, he stressed that lines of authority should also be lines of communication. Another line, the Pennsylvania Railroad, had by 1857 become known as the gold standard railroad of the world because of its good management. Herman Haupt, a West Point graduate, had organized the Pennsylvania line and later established one of the country's first internal legal departments.

Other railroads soon followed McCallum's lead in separating policy-making from operations. Soon different groups of executives were placed in charge of overall planning and of operating details. The job of top management was to plan for the future and to coordinate the functions of the different parts of the line. Directly related to this action, they began to build bureaucratic organizations staffed by middle managers—an essential step in transforming railroads into the big businesses they became.

In addition to these structural changes, railroads developed better financial reporting procedures and new types of accounting methods to satisfy domestic and offshore financial sources. Rather than continuing to only use simple profit-and-loss statements of double-entry bookkeeping, they pioneered the use of operating ratios—the first American business managers to do so. Operating ratios relate a company's earnings to their volume of business. Even today they are the basic standard by which an organization's profitability is assessed.

Capital Intensive Industries

Railroads were among the first industries to be capital-intensive rather than labor-intensive. As a result, the cost of capital became their major expense. For this reason they were also among the first companies to develop systematic capital accounting. By the 1970s, railroad executives were charging the repair and replacement of equipment against their operating revenues—an early form of depreciation.

Finally, railroad managers developed the use of cost accounting. They did this by dividing their company's costs into various categories of fixed and variable costs. They then used cost accounting to pinpoint problems in their operations and to aid in setting profitable and competitive rates. The men responsible for accounting thus pioneered

the use of administered pricing as opposed to allowing invisible market forces to determine what to charge.

Consolidation of Businesses

The last half of the nineteenth century saw the full flowering of a trend toward a dual economy in the United States. Commerce and industry were becoming dominated by a few very big businesses at the core of the sector with a flood of small, entrepreneurial businesses at the periphery, many of which supplied the larger firms with components and supplies. One of the largest of these pioneering big businesses was the railroads. By the early 1850s the United States from the Atlantic to the Great Plains had become what has been described as a "national business system knit together by rail and water, with a rapidly growing population spurred by a high domestic birth-rate and heavy immigration" (Cochran 1977, 51).

The Civil War introduced a huge expansion of industrial capacity in the northern states while decimating southern state agriculture-based economy. From the end of the war to a decade beyond, economic growth was based on meeting the demands of this new national market. As markets grew in size, so did the firms that successfully supplied those markets. That growth occurred largely through mergers and acquisitions.

Mergers became increasingly common from the 1880s on, as the goal of growth and more growth came to dominate business thinking, culminating in America's first major merger movement from 1895 to 1904. More than 2,000 firms disappeared through consolidations during this period. Not all of these mergers were successful, however; only about half lasted for more than a few years. But that meant that many did survive. By the opening of the first decade of the twentieth century, key segments of U.S. industry were characterized by oligopoly—a handful of very large companies dominating their markets. Oligopoly was particularly characteristic of the metal, oil, rubber, chemical, tobacco processing, electrical machinery, transportation equipment, and sugar refining industries. The trend of earlier entrepreneurial businesses growing into large diversified mass producers that began after the Civil War continued for the rest of the century, so that by 1900 a few very large businesses dominated most industries in the United States. By the middle of the first decade of the new century, a few major companies controlled at least half of the output of 78 industries in the United States. The nineteenth century closed with the nation poised to accelerate the shift from an economy that was predominantly agricultural to one that was mostly industrial.

As firms continued to grow in size and complexity, decisions came to be internalized within the new gigantic firms. Management made decisions on price, production, and distribution to influence and control long-term demand, rather than simply reacting to fluctuations in market demands brought on by fads or economic panics. By the early twentieth century, 7 of what would become by the twenty-first century the 20 largest businesses formed in the United States, United Kingdom, European Union, Japan, Australia, and Canada were U.S. firms.

Thus, during the last decade of the old century and the first of the twentieth century the structure of much of American industry was assuming its modern form. It was predominantly oligopolistic and concentrated, with an important fringe of small, highly specialized producers operating just as businesses had since the Revolutionary War. It was ready and capable to enable the United States to emerge only a few short decades and two world wars later as the most powerful and industrialized country in the world.

Growth of a Consumer Goods Industry

Consumer goods include durables, nondurables, and services. Durables are tangible goods with a relatively long lifespan. As a result, they often require maintenance and repair over their lifespan. Durable goods in the nineteenth century included bicycles, ranges, ice boxes, carriages, saddles, furniture, and similar items. Their longer lifespan contributed to the growth of a service industry in the late nineteenth century. Nondurable goods are products that are either for immediate consumption or to be used in a shorter time period. Processed food items, cosmetics, medicines, household cleaners, shoes, clothing, and the like are nondurable goods. Consumer services are intangible products that are typically produced and consumed at the same time. Examples included services of doctors and lawyers, carriage and wagon repairs, and housecleaning. The demand for all these consumer goods in the late nineteenth century grew with population growth and the increased urbanization of the population. The change in the numbers of Americans born outside of the United States jumped to nearly 15 percent by 1890.

Population growth during the last third of the nineteenth century and first decades of the twentieth resulted in dense concentrations of immigrants into large central cities linked by the nation's new railroads. This important demographic change allowed entrepreneurs to

Table 14.1 U.S. population, place of birth and percent increase and distribution, 1850–1920

	Population				
Year	1850	1890	1900	1910	1920
Total population	23,191,876	62,622,250	75,994,575	91,972,266	105,710,620
Percent increase		58.81	17.59	17.37	13.00
Born in the U.S.	20,947,274	53,372,703	65,653,299	78,456,380	91,789,928
Percent of total[1]	90.3	85.2	86.3	85.2	83.7
Foreign-born	2,244,602	9,249,547	10,341,273	13,515,886	13,920,692
Percent of total[1]	9.7	14.8	13.6	14.7	13.2

Note: [1]May not equal 100% due to small number born abroad to American parents.
Source: U.S. Census Bureau 2011a.

develop large consumer-oriented businesses, matching mass production with mass distribution to supply the needs of the new national market. The population grew from 31 million in 1860 to 63 million in 1860 and 106 million in 1920. Most of that growth occurred in cities. In 1860, 16 percent of Americans lived in towns or cities with greater than 8,000 residents. By 1900, that proportion had risen to 33 percent of a much larger total. Table 14.1 displays total population and foreign and native born totals from 1850 to 1920.

Growth of a Service Sector

The increasing size and complexity of businesses and government required more midlevel managers than were available. As a result, an industry was born to provide the many services required for continued operations. The rapidly growing population and the large firms that manufactured the goods for that market opened new entrepreneurial opportunities for service businesses—the companies that provided such services to other businesses as accounting, marketing, advertising, security, construction and maintenance, and others. These specialized businesses helped finance corporate growth, and provided needed market and business information. Corporate service providers included banks, insurance companies, stock brokerages and stock

exchanges, and commodity exchanges. Market information providers included credit-rating agencies and research firms.

When changing fashion trends reduced the western fur trade to a trickle, the quest for mineral wealth was one of the forces that enticed prospectors and miners into the Mountain West just before and after the Civil War (Bruchey 1990). Even more settlers followed with their families to establish businesses that served the needs of the miners, resulting in the beginning of a service industry. Mining regions in California, Colorado, Arizona, New Mexico, and the Dakotas were soon populated by shopkeepers, saloon keepers, traders, teamsters, bankers, and farmers.

Mass Production and Mass Distribution

Mass production evolved almost simultaneously with mass distribution, and for many of the same reasons. Both were a part of the Second Industrial Revolution, which was the application of new management processes and technology to production; both depended upon consolidation of the larger firm's structure, including increasing the numbers of midlevel managers; and, in the United States, both were products of improvements in a national transportation system. After the Civil War, a system of canals, navigable rivers, a long coastline with many port facilities, and the emergence of a nationwide system of railroads made it possible to establish a national market. This encouraged manufacturers to boost their production, which in turn brought about the development of new technological and management processes that made increased output possible.

Mass Production

Mass production developed in the North during the Civil War and was fueled after the war by growth in consumer demand that resulted from the tremendous increase in immigration. The industrial economy that emerged in the first decades of the next century resulted in a complete transformation of the national economy. National income from manufacturing was first seen to pass income from agriculture in the 1889 Census Bureau's national income statistics (Table 14.2). Although income from agriculture led again in the 1899 census report, it would grow at about the same rate as income from manufacturing until World War I.

The earliest mass producers appeared in the 1870s and 1880s in industries processing liquids—oils, sugar, fats, and alcohol—where the application of new heat and chemical processes made it possible

Table 14.2 National income in selected sectors, 1859–99 ($ millions)

	Sector					
Year	Total private production income	Agriculture	Manufacturing	Communication and transportation	Trade	Services
1899	13,836	2,933	2,714	1,528	2,578	2,578
1889	9,578	1,517	2,022	1,154	1,803	1,803
1879	6,617	1,371	960	896	1,166	1,166
1869	6,288	1,517	1,000	718	1,089	1,039
1859	4,097	1,264	495	694	494	494

Source: U. S. Census Bureau, Series A 154–164, 1976, 14.

to produce more products in less time with fewer workers. The adoption of continuous-process machinery similar to what had been introduced in the cigarette-making industry soon the mass production of matches, soap, grain and other foods, and other items in the 1880s and 1889s (Bruchey 1990). At nearly the same time, the establishment of mass production in the metal-producing and metal-working industries did the same for these industries.

Innovation in mass production owed much to the spread of federal armory practices. Processes developed during the Civil War to manufacture of armaments led to the creation of mass-machine-produced interchangeable parts for simplified products. At the same time, the use of water power and then steam-powered machinery and then electrical power made mass production possible. The influx of immigrants that began in the 1870s produced the labor force needed in all sectors of the economy. A way was needed to merge the labor of unskilled workers with increasingly complex machinery and production processes. It emerged in the 1880s from the mind of an industrial engineer named Frederick W. Taylor, who called the system *scientific management*. For the first time, it promised to control production output by first accurately determining what the production output should be. Taylor's and related systems were described in 1914 by a Harvard University supporter:

> The primary object of [Taylor's] system is to increase output, reduce the cost per unit of product, and raise the wages of operators. This is accomplished: first, by determining the best equipment, materials, and methods to use; second, by selecting and training the workmen best fitted to accomplish the result desired; third, by determining in advance

> a standard of achievement for the workmen, providing them with the necessary working conditions, and rewarding them with a bonus for attaining this standard. This standard is set with reference to standardized conditions, by which is meant the determination and adoption of the best material and the best equipment obtainable, for exclusive use until a better is found and adopted. In accordance with the policy of specialization, the workman's activity is so far as possible confined strictly to actual handling of the machine or tool and of the material only so far as necessary to apply the tool to it. All other work is the function of management. This is what is meant by the separation of planning from execution. (Thompson 1915, 270.)

The process establishing the optimum time needed to successfully perform a job begins with an analytical time study of a workman's tasks on one activity, job, or action on a single machine. Analysts then determine what they consider to be a reasonable time to complete the task or process, eliminating all nontask-related ("management") elements to establish a total minimum time for each individual element of the task; these were then summed. A reasonable percentage was then added to compensate for unavoidable interruptions such as fatigue, inertia, and similar interference. The final time became the standard production time used to determine workers' earnings. A bonus was to be paid on achieving this base time. After studying the changes in output and costs in firms in which the Taylor system had been implemented, Thompson reported that instances of two- and three-fold increases in output were common, with even greater improvement in selected industries.

In addition to better use of labor resources, increased output was achieved by scientific management's implementation of inventory controls, improvements in purchasing and stocking inventory, and cost analysis and control (Nelson 1974). With manufacturing processes known, it was no longer necessary to maintain large stocks of raw materials and components on hand to avoid unnecessary delays due to out-of-stocks. Production materials could be produced or purchased and delivered as needed. A refined application of these principles occurred in Japan after World War II with implementation of the just-in-time (JIT) production process.

Mass Distribution

The creation of a national market through improvements in transportation and communications revolutionized the marketing and distribution of goods in the United States. Major changes occurred in wholesaling and retailing. These followed changes in the handling of both industrial and agricultural products.

The country was growing rapidly at this time, fueled by the increase in immigration of Europeans from more regions than the earlier wave of Northern Europeans. Nearly 28 million immigrants arrived in the United States between 1965 and 1918, most of whom settled in cities and towns east of the Mississippi River. Business institutions evolved rapidly to tap this ever-growing supply of workers, who were also among the millions of new customers that supported the growing number of retail stores. Chain stores, for example, expanded greatly in the early interwar years. For example, by 1929 the Atlantic and Pacific (A&P) chain of food stores had 15,418 stores in across the United States; Woolworth operated 1,825 stores; J. C. Penney 1,395 stores; and Safeway 2,660 outlets. Sears, Roebuck and Co., founded in 1893, had become the nation's largest mail order house by the 1920s. Sears's sales topped $200 million in 1920. Looking for new ways to grow, Sears opened their first retail store in 1925. By 1954, its peak sales year, the company was the world's largest merchandising organization with annual sales of more than $3 billion. Income from retail wholesale and retail trade ($8.51 billion) would eventually surpass the income from agriculture in 1921 ($7.57 billion).

Some of the most dramatic changes occurred in the distribution chain of manufactured products. For example, jobbers increased in importance as a link between manufacturers and retailers. However, instead of working on a consignment basis as they had before the Civil War, jobbers now purchased the goods they handled, thereby providing manufacturers greater access to capital needed for operating and expansion. Jobbers also set up expensive purchasing networks throughout the nation to negotiate quantity-based price breaks. They also established closer relations with retailers, who now included specialized retail outlets in large cities and traditional country stores in farming areas.

Jobbers' dominance in distribution in the early years after 1865 was soon challenged, however, by the emergence of large mass retailers. Department stores came into existence in cities across the nation during the 1860s, 70s, and 80s. Among the pioneers were Macy's, Bloomingdale's, and Marshall Field. For smaller towns and rural Americans, mail-order companies appeared, selling everything from buttons and nails to guns and houses out of large diversified catalogs. Montgomery Ward, established in 1872, was the first. It was followed by Sears 15 years later. These large retailers soon functioned as their own jobbers and in some cases even as their own suppliers.

Twentieth Century Change

Economic activity in nearly all sectors increased dramatically during the years from 1915 to 1920 (Table 14.3). Total private production

Table 14.3 National income in selected sectors, 1900–20 (in $USmillions)

	Sector					
Year	Total private production income	Agriculture	Manufacturing	Communication and transportation	Trade	Services
1920	60,995	10,569	16,811	7,474	10,048	5,436
1915	29,114	5,921	6,401	3,346	5,677	2,837
1910	25,569	5,563	5,447	2,853	4,496	2,557
1905	19,363	3,678	4,032	2,210	3,692	1.939
1900	14,550	3,034	2,941	1,626		1,774

Source: U. S. Census Bureau, Series A 154–164, 1976, 14.

income more than doubled from a little less than $30 billion to $61 billion, largely because of the buildup to U.S. engagement in World War I and supply to war-ravaged economies in Europe. While income from agriculture nearly doubled from $6 billion to $10.6 billion, income growth in the industrial sector nearly tripled from $6.4 billion in 1915 to nearly $17 billion in 1920.

The population of the continental United States in 1860 was a little more than 31.4 million. It grew at a rate exceeding 10 million each decade to reach 76 million in 1900 and 118 million in 1920. American commerce and industry grew at similar rates. A number of factors contributed to this growth of American business in the 50 years from 1920 to 1970. A large labor force; an extensive and dependable rail, canal, and river transportation system; reasonably accessible mineral and energy resources; and the availability of free or low-cost farmland were key factors contributing to this rise. Others included access to investment capital and a strong and inventive body of entrepreneurs.

The increase in the size of the labor force was largely due to the unprecedented growth in migration to the United States from eastern and southern Europe. Most of these immigrant families settled in the manufacturing centers of the eastern United States. The shift from an agricultural to an industrial nation can be seen in the decline in the number of workers in agriculture from 1910 to 1920 and nearly 50 percent gain in the number of manufacturing workers in this same period (Table 14.4). The growth in manufacturing also led to an increase in the numbers of workers in trade/distribution/finance and in the service sector over this 20-year period.

Table 14.4 Distribution of U.S. labor force in selected industries, 1900–20 (in thousands)

		Industry					
Year	Total Employed	Agriculture	Manufacturing	Transportation	Construction	Trade, distribution, finance	Services
1920	41,339	10,718	11,013	2,608	1,582	5,643	6,552
1919	42,029	10,489	10,989	2,432	1,808	5,847	7,373
1918	44,187	10,731	11,448	2,311	1,767	5,631	8,889
1917	42,685	11,191	11,436	2,172	1,722	5,808	7,117
1916	40,127	11,382	10,184	2,072	1,694	5,436	6,247
1915	37,728	11,371	8,991	2,035	1,644	4,962	5,969
1910	37,580	11,610	8,990	2,015	2,177	4,622	5,467
1905	33,032	10,795	7,278	1,772	2,285	3,978	4,740
1900	27,378	9,552	6,090	1,355	1,639	3,224	3,942

Source: U. S. Census Bureau, Series D 62–76 1976, 65.

Conclusion

The first efforts and establishment of needed management techniques occurred in the 1830s and were patterned after the U.S. Army's structure. Like all armies of the time, the U.S. Army featured a separation between staff officers who made strategic decisions at a headquarters, and the widely scattered line officers who carry out the decisions in the field. In fact, many of the new railroads had been surveyed by army officers on active duty. When they left the army to work for the railroads their contact with management resulted in the adoption of many of their army organizational practices. Another new adoption was implementation of precise recordkeeping that allowed headquarters to stay abreast of events in the field and plan future moves. Thus, following the example of the army in this way, railroad executives changed the nature of business management in America and eventually in the Western world. Nothing like these organizational advances had existed in the United States until the railroads; their implementers were creating entirely new ways of managing a business.

In terms of the transformation of American business structure, the nineteenth century can be said to really have ended when America decided to enter World War I. Along with conscription, the nation needed to manufacture the arms, uniforms, vehicles, medicines and bandages, and the barracks and training grounds to support an army, navy and marine corps to fight the battles.

Discussion Questions

1. In what way did Mark Twain's novel *The Gilded Age* describe business in the United States in the last quarter of the nineteenth century?
2. What was *Munn v. Illinois* and how did it affect the federal and state governments' relations with business?
3. Name and define the four closely related factors that shaped American businesses from the end of the Civil War to the World War I.
4. Describe the role of mergers, acquisitions, and trusts in shaping the business system of the United States during the last half of the nineteenth century.
5. Describe the transformation of the system of mass distribution that occurred in the late nineteenth century.

About the Author

David E. McNabb, Pacific Lutheran University School of Business professor emeritus, is the author of seven books and coauthor of two others, including two comprehensive research methods texts. The first edition of his *Research Methods in Public Administration and Nonprofit Organizations* was awarded the 2004 John Grenzebach Research Award for Research in Philanthropy. He continues to teach at colleges and universities in the United States and internationally. He is an adjunct professor at Olympic College. He has been an adjunct professor in Public Administration at The Evergreen State College, the University of Maryland–University College, the University of Washington–Tacoma, Olympic College, the Stockholm School of Economics in Riga, Latvia, a visiting professor at the American University in Bulgaria, and a Fulbright Senior Specialist in Latvia. He earned a bachelor of arts degree from California State University–Fullerton, a master's in communications from the University of Washington, and a PhD in administration and marketing from Oregon State University.

References

Acemoglu, D., S. Johnson, and J. A. Robinson. 2001. The colonial origins of comparative development: an empirical investigation. *The American Economic Review*, 91 (5): 1369–1401.

Aldcroft, D. H. 1982. Britain's economic decline, 1870–1980. In *The British Malaise: Industrial Performance, Education and Training in Britain Today*, G. W. Roderick and M. D. Stephens, eds., pp. 31–61. Barcombe: Falmer Press.

Ancestry.com. 1999. Roman Britain around 369. http://freepages.genealogy.rootsweb.ancestry.com/~jwg3/HAtlas/roman.html.

Andrews, C. M. 1914. Colonial commerce. *The American Historical Review*, 20 (1): 43–63.

Ashley, M. 1961. *Great Britain to 1688*. Ann Arbor: University of Michigan Press.

Barnes, I. R. 1938. Munn v. Illinois a landmark case. *Cases on Public Utility Regulation*. 3–7. New York: Crofts.

Baron, H. 1957. Fifteenth-century civilization and the Renaissance. In *The New Cambridge Modern History*, vol. VI, G. R. Potter, ed., pp. 50–75. Cambridge: Cambridge University.

Beasley, W. G. 1981. *The Modern History of Japan*. 3rd ed. London: Weudenfeld and Nicolson.

———. 1989. The foreign threat and the opening of the ports. In *The Cambridge History of Japan,* vol. V: The Nineteenth Century, M. B. Jensen, ed., pp. 259–307. Cambridge: Cambridge University Press.

Blackford, M. G. 1988. *The Rise of Modern Business in Great Britain, the United States and Japan*. Chapel Hill: University of North Carolina Press.

Brady, T. A., Jr. 1996. Economic and social institutions. In *Germany: A New Social and Economic History, 1450–1630*, B. Scribner, ed., pp. 259–290. London: Arnold.

Briggs, A. 1983. *A Social History of England*. New York: The Viking Press.

Brown, D. M. 1993. The *Cambridge History of Japan*. Vol. 1: Ancient Japan. Cambridge: Cambridge University Press.

Bruchey, S. 1990. *Enterprise: The Dynamic Economy of a Free People*. Cambridge, MA: Harvard University Press.

Bryant, A. 1984. *Set in a Silver Sea: The Island Peoples from the Earliest Times to the Fifteenth Century*. London: Collins.

Bryant, K. L., Jr., and H. C. Dethloff. 1990. *A History of American Business,* 2nd ed. Englewood Cliffs, NJ: PrenticeHall.

Calleo, D. 1978. *The German Problem Reconsidered*. Cambridge: Cambridge University Press.

Cameron, K. N. 1973. *Humanity and Society: A World History*. Bloomington: Indiana University Press.

Chandler, A. D. 1990. *Scale and Scope: The Dynamics of Industrial Capitalism*. Cambridge: Belknap.

Cipolla, C. M. 1993. *Before the Industrial Revolution*. 3rd ed. London: Routledge.

Clapham, J. H. 1926. *An Economic History of Modern Britain*. Cambridge: Cambridge University Press.

———. 1957. Commerce and industry in the Middle Ages. In *The Cambridge Medieval History*, vol. VI, J. B. Bury and P. Dalen, eds, pp. 433–504. Cambridge: Cambridge University Press.

Cochran, T. C. 1977. *200 Years of American Business*. New York: Dell.

Collins, I. 1964. *The Age of Progress: A Survey of European History from 1789 to 1870*. London: Edward Arnold.

Cornwell, E. L. 1976. *History of Railways*. London: Hamlyn Publishing.

Court, W. H. A. 1954. *Concise Economic History of Britain from 1780 to Recent Times*. Cambridge: Cambridge University Press.

Crafts, N. F. R. 1996. Deindustrialization and economic growth. *The Economic Journal*, 106 (434): 172–183.

Crouzet, F. 1982. *The Victorian Economy*. London: Routledge.

Dahmus, J. 1968. *The Middle Ages*. Garden City, NY: Doubleday.

Day, L. 1985. *Broad Gauge*. London: HMSO.

Deane, P. 1979. *The First Industrial Revolution*. 2nd ed. Cambridge: Cambridge University Press.

DeMente, B. 1987. *Japan Almanac*. Lincolnwood, IL: Passport Books.

Elbaum, B., and W. Lazonick. 1984. The decline of the British economy: an institutional perspective. *Journal of Economic History*, 44 (2): 567–583. www.euromonitor.com/repor_print.asp?docid=32236.

Ensor, R. C. K. 1992. *England, 1870–1914*. Oxford: Oxford University Press.

Farris, W. W. 2009. *Japan to 1600: A Social and Economic History*. Hilo: University of Hawaii.

Fishlow, A. 1971. *American Railroads and the Transformation of the Antebellum Economy*. Cambridge, MA: Harvard University Press.

Flenley, R. 1963. *Modern German History*. London: J. M. Dent & Sons.

Flershem, R. G. 1964. Some aspects of the Japan sea trade in the Tokugawa period. *The Journal of Asian Studies*, 23 (3): 405–416.

Floud, R. 1997. *The People and the British Economy*. Oxford: Oxford University Press.

Fulbrook, M. 1990. *A Concise History of Germany*. Cambridge: Cambridge University Press.

———. 1991. *The Fontana History of Germany, 1918–1990*. London: Fontana Press.

Gagliardo, J. 1991. *Germany Under the Old Regime, 1600–1790*. London: Longman Group.

Gamble, A. 1981. *Britain in Decline*. Boston: Beacon Press.

Germany GenWeb Project. 2007b. Map of the German empire in 1871. www.rootsweb.ancestry.com/~wggerman/map/germanempire.htm.

Google Maps. Japan in the Azuchi-Momoyama Period [late sixteenth century]. www.google.com/imgres?imgrefurl=http%3A%2F%2Fen.wikipedia.org%2Fwiki%2FSengoku_period&tbnid=W9OHm2vbYwLVkM:&docid=dTwWoqsWQBaJnM&h=898&w=930.

Hahn, H. J. 1995. *German Thought and Culture*. Manchester, UK: Manchester University Press.

Halliday, S. 2009. The first common market? *History Today*, 59 (7): 31–37.

Harley, C. K. 1991. Substitution for prerequisites: endogenous institutions and comparative economic history. In *Patterns of European Industrialization; the Nineteenth Century*, R. Sylla and G. Toniolo, eds., pp. 29–44. London: Routledge.

Harris, J. R. 1988. *The British Iron Industry, 1700–1850*. London: Macmillan.

Harrison, J. F. C. 1973. *The Birth and Growth of Industrial England, 1714–1867*. New York: Harcourt Brace Jovanovich.

Havercamp, A. 1988. *Medieval Germany, 1056–1273*. Trans. by Helga Braus and Richard Mortimer. Oxford: Oxford University Press.

Hills, R. L. 1989. *Power from Steam: A History of the Steam Engine*. Cambridge: Cambridge University Press.

Hirschmeier, J., and T. Yui. 1975. *The Development of Japanese Business, 1600–1973*. London: George Allen & Unwin.

Hobsbawm, E. J. 1965. *The Age of Revolution, 1789–1948*. New York: Mentor Books.

Holborn, H. 1973. *A History of Modern Germany*. New York: Alfred A. Knopf.

Hoover, T. 1977. *Zen Culture*. London: Routledge & Kegan Paul.

Hower, R. M. 1932. The Wedgwoods: ten generations of potters, 1795–1920. *Journal of Economic and Business History*, 4 (May): 665–690.

Hudson, P. 1986. *The Genesis of Industrial Capital: A Study of the West Riding Wool Textile Industry, 1750–1850*. Cambridge: Cambridge University Press.

Hurst, H. W. 1980. Business and businessmen in pre-civil war Georgetown, 1840–1870. *Records of the Columbia Historical Society of Washington, D.C.*, 50: 161–171.

Hyde, C. K. 1977. *Technological Change and the British Iron Industry, 1700–1870*. Princeton: Princeton University Press.

Inland Waterways Association. 2013. Map of inland waterways in Great Britain. www.waterways.org.uk/waterways/individual_waterways.

Jenkins, D. T., and K. G. Ponting. 1982. *The British Wool Textile Industry, 1770–1914*. London: Heinemann.

Jeremy, D. J. 1991. The hundred largest employers in the United Kingdom in manufacturing and non-manufacturing industries, in 1907, 1935 and 1955. *Business History*, 33 (1): 93–111.

Kanefsky, J., and J. Robey. 1980. Steam engines in 18th century Britain: a quantitative assessment. *Technology and Culture*, 21 (2): 161–186.

Kemmerer, D. L. 1949. The pre-civil war South's leading crop: corn. *Agricultural History*, 23 (4): 236–239.

Koontz, Harold D. 1941. *Government Control of Business*. Boston: Houghton-Mifflin.

Kreiger, J. 1987. The United Kingdom: symbiosis or division? In *Ideology and National Competitiveness,* G. C. Lodge and E. F. Vogel, eds., 29–53. Cambridge: Harvard Business School Press.

Langford, P. 1989. *A Polite and Commercial People*: *England 1727–1783.* Oxford: Clarendon.

Le Goff, J. 1964. *Medieval Civilization, 400–1500.* Trans. by Julia Barrow. New York: Barnes & Noble Books.

Lew, B., and B. Cater. 2006. The telegraph, co-ordination of tramp shipping and growth in world trade 1870–1910. *European Review of Economic History*, 10 (2006): 147–173.

Lindberg, E. 2008. The rise of Hamburg as a global marketplace in the seventeenth century: a comparative political economy perspective. *Comparative Studies in Society and History*, 50 (3): 641–662.

Maehl, W. H. 1974. *Germany in Western Civilization.* University, AL: University of Alabama Press.

Marshall, D. 1962. *Eighteenth Century England.* Harlow, UK: Longman Group.

Mason, R. H. P., and J. G. Caiger. 1972. *A History of Japan.* New York: The Free Press.

Mass, J. P. 1990. The Kamakura Bakufu. In *The Cambridge History of Japan.* Vol. III: Medieval Japan. Kozo Yamamura, ed., pp. 46–85. Cambridge: Cambridge University Press.

Mathias, P. 1983. *The First Industrial Nation: An Economic History of Britain, 1700–1914.* London: Routledge.

McAllister, J. 1989. Colonial America, 1607–1776. *The Economic History Review* (New Series), 42 (2): 245–259.

McCloskey, D. N. 1981. *Enterprise and Trade in Victorian Britain.* London: Allen & Unwin.

McCusker, J. J., and R. R. Menard. 1991. The *Economy of British America, 1607–1789.* Chapel Hill: University of North Carolina.

McNabb, David E. 1991. Shaping the 18th century consumer society: The *London Post and General Advertiser*, 1734–1809. *Proceedings of the 16th Annual European Studies Conference.* Omaha, Nebraska.

Mead, M. 1953. National character. In *Anthropology Today*, A. L. Kroeber, ed., pp. 642–647. Chicago: University of Chicago Press.

Miskimin, H. A. 1969. *The Economy of Early Renaissance Europe, 1300–1460.* Englewood Cliffs, NJ: Prentice Hall.

Morishima, M. 1982. *Why Has Japan "Succeeded?"* Cambridge: Cambridge University Press.

Munro, J. H. 1991. Industrial transformation in the North-West European textile trades, c. 1290—c. 1340: economic progress or economic crises? In *Before the Black Death*, B. M. S. Campbell, ed., pp. 110–149. Manchester: Manchester University Press.

Musson, A. E. 1978. *The Growth of British Industry.* London: Batsford.

Nelson, D. 1974. Scientific management, systematic management, and labor, 1880–1915. *The Business History Review*, 48 (4): 479–500.
Nitobe, I. 1969. *Bushido: The Soul of Japan*. Rutland, VT: Charles E. Tuttle.
Northern Mine Research Society 2013. Iron mining areas in Britain. www.nmrs.org.uk/mines/iron/index.html.
Ono, S. 1962. *Shinto: The Kami Way*. Rutland, VT: Charles E. Tuttle.
Parker, G. 1997. *The Thirty Years* War. New York: Routledge.
Parnell, M. F. 1994. The *German Tradition of Organized Capitalism: Self Government in the Coal Industry*. Oxford: Clarendon.
Parrington, Vernon L. 1963. The Progressive Era: a liberal renaissance. In Arthur Mann, ed. *The Progressive Era*, pp. 6–12. New York: Hold, Rinehart and Winston.
Payne, P. L. 1988. *British Entrepreneurship in the 19th Century*. London: Macmillan.
Perkin, H. 1969. *Origins of Modern English Society*. London: Ark Paperbacks.
Perkins, E. J. 1989. The entrepreneurial spirit in colonial America: the foundations of modern business history. *The Business History Review*, 63 (1): 160–186.
Plumb, J. H. 1950. *England in the Eighteenth Century*. London: Penguin.
Poole, A. L. 1980. Germany in the reign of Frederick II. In *The Cambridge Medieval History*, vol. 6, J. W. Tanner, C. W. Previte-Orton, and Z.N. Brook, eds., pp. 80–109. Cambridge: Cambridge University Press.
Porter, R. 1982. *English Society in the 18th Century*. London: Penguin.
Previts, G. J., and W. D. Samson. 2000. Exploring the contents of the Baltimore and Ohio railroad annual reports. *The Accounting Historians Journal*, 27 (1): 1–42.
Pride, W. M., R. J. Hughes, and J. R. Kapoor. 2010. *Business*, 10th ed. Mason, OH: South-Western Cengage Learning.
Rahula, W. 1978. *Zen and the Taming of the Bull: Towards the Definition of Buddhist Thought*. London: Gordon Fraser.
Ramm, A. 1982. The making of modern Germany, 1618–1870. In *Germany*, M. Pasley, ed., pp. 203–258. London: Methuen.
Reischauer, E. O. 1970. *Japan: The Story of a Nation*. New York: Alfred A. Knopf.
———. 1988. *The Japanese Today*. Cambridge, MA: The Belknap Press.
Rösener, W. 1996. The agrarian economy, 1300–1600. In *Germany: A New Social and Economic History, 1450–1630*, B. Scribner, ed., pp. 63–83. London: Arnold.
Rosenberg, N., and L. E. Birdzell. 1986. *How the West Grew Rich*. London: I. B. Tauris.
Rubin, J. 1961. Canal or railroad? Imitation and innovation in the response to the Erie Canal in Philadelphia, Baltimore, and Boston. *Transactions of the American Philosophical Society*, New Series. 51 (7): 1–106.
Sagarra, E. 1977. *A Social History of Germany, 1648–1914*. London: Methuen.

Saito, O. 2005. Pre-modern economic growth revisited: Japan and the West. Department of Economic History Working Paper 16/05. London: London School of Economics.

Schmitz, C. 1993. *The Growth of Big Business in the United States and Western Europe, 1850–1939*. London: Macmillan.

Scott, T., and B. Scribner. 1996. Urban networks. In *Germany: A new Social and Economic History, 1450–1630*, B. Scribner, ed., pp. 115–143. London: Arnold.

Sheehan, J. J. 1989. *German History, 1770–1866*. Oxford: Clarendon.

———. 1981. German History? Reflections on the role of the nation in German history and historiography. *The Journal of Modern History*, 53 (1): 1–23.

Shepherd, J. F., and G. M. Walton. 1972. *Shipping, Maritime Trade and the Economic Development of Colonial North America*. Cambridge: Cambridge University Press.

Shumpeter, E. B. 1960. *English Overseas Trade Structure, 1697–1808*. Oxford: Oxford University Press.

Smellie, K. B. 1962. *Great Britain Since 1688*. Ann Arbor: University of Michigan Press.

Snooks, G. D. 1996. *The Dynamic Society: Exploring the Sources of Global Change*. London: Routledge.

Sylla, R., and G. Toniolo. 1991. *Patterns of European Industrialization; the Nineteenth Century*. London: Routledge.

Tames, R. 1972. *Economy and Society in Nineteenth-Century Britain*. London: George Allen & Unwin.

Thompson, C. B. 1915. Scientific management in practice. *The Quarterly Journal of Economics*, 29 (2): 262–307.

Trebilcock, C. 1981. *The Industrialization of the Continental Powers, 1780–1914*. London: Longman.

Turner, E. S. 1952. *The Shocking History of Advertising*. London: Michael Joseph.

U.S. Census Bureau. 2011a. Nativity of the population and place of birth of the native population: 1850 to 1990. Tech Paper 29. Retrieved January 17, 2014, from www.census.gov/population/www/documentat9ion//twps0029/tab01.html

Varley, H. P. 1984. *Japanese Culture*. 3rd ed. Honolulu: University of Hawaii Press.

Weiner, A. 1968. The Hansa. In *The Cambridge Medieval History*, vol. 2: Decline of Empire and Papacy, pp. 216–247. Cambridge: Cambridge University.

Williams, E. E. 1896. *Made in Germany*. London: William Heinemann.

Wilson, C. 1962. Economic conditions. In *The New Cambridge Modern History*, vol. XI, F. H. Hinsley, ed., pp. 49–75. Cambridge: Cambridge University Press.

Wright, W. J. 1996. The nature of early capitalism. In *Germany: A New Social and Economic History*, A. Ogilvie and B. Scribner, eds., pp. 181–208. London: Arnold.

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