THIRD EDITION

AMERICAN BUSINESS SINCE 1920

How It Worked

THE AMERICAN HISTORY SERIES

Thomas K. McCraw and William R. Childs

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INTRODUCTION

Past and Present

In 1920, most Americans lived very differently from the way they do now. In that year half of all Americans lived on farms or in very small towns. Many communities remained unconnected to the rest of the country by railways, highways, or telephones. Except for immigrants, most Americans did not travel more than 150 miles from where they were born.

Only one-third of the nation's homes had electricity in 1920. Cooking, cleaning, and laundry tasks consumed 70 hours a week. Today, after one of the greatest social changes in human history, that total has plunged to 15 hours because of the availability of such appliances as electric refrigerators, microwave ovens, washers and dryers, vacuum cleaners, dishwashers, garbage disposals, and fast food and take-out restaurants.

In 1920 no Americans had a TV, computer, or cell phone, let alone an iPad or smart watch. They did not email, text-message, or purchase retail goods and invest in the stock market online or with their cell phones. They did not take the family to eat at McDonald's or any other restaurant chain. They did not fly in

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airplanes, draw cash from ATMs, or use credit cards. There were no malls or supermarkets (the shopping cart was not invented until 1937). Most Americans did not graduate from high school, given the pressure to find a paying job in their mid-teens; today 85 percent graduate from high school. Only 1 person in 30 graduated from college in 1920; today 1 in 4 do so.

In 1920 care of children, the elderly, and the ill took place in the home; doctors often made "house-calls." Deaths from pneumonia, tuberculosis, cholera, diphtheria, measles, influenza, and typhoid fever ran at more than ten times the current rates. Premodern sanitary conditions held forth in many areas. Only 1 in 5 households had an indoor flush toilet. Controlling the size of families was difficult, as reliable birth control methods (other than abstinence) were unavailable or illegal. Most of these conditions true for America in the 1920s still exist for a majority of the world's population.

Nearly four decades would pass before most Americans and some consumers in other nations enjoyed modern products such as refrigerators. In the invention, development, manufacturing, and marketing of such products, American firms led the way. By 1960, the year John F. Kennedy was elected president, 96 percent of American homes had electric refrigerators, but only 41 percent of French and 30 percent of English and Italian homes had them. That Europeans caught up to Americans by the end of the century suggests how ubiquitous the American-style refrigerator had become.

The Story Told Here

The story of American business since 1920 logically divides into six periods: the 1920s; the Depression of the 1930s; the New Deal and World War II; the postwar era; the 1980s to the 2000s; and the Financial Crisis of 2007–2008 and the Great Recession of 2007–2009. In the chapters to follow, particular individuals, firms, and industries are highlighted in the era in which they made the most impact, even though their beginnings might have come earlier or they may remain important today.

Many of the chapters to follow take the vantage point of entrepreneurs working at firms in American industries, showing from the inside how businesses operated. The "overview" chapters describe and analyze the social, cultural, and political contexts of the evolving American capitalist system within which the entrepreneurs made management decisions. As the story unfolds over the twentieth century and into the twenty-first, the internationalization of American business and comparisons between American-style capitalism and other nations' political economies become more prominent.

Trends

Four potent trends in American business since 1920 underpin the narrative that follows. None proceeded without temporary setbacks, but all kept moving forward:

1. *The relentlessness of change*. All capitalist economies share this characteristic, but it applies with special force to the United States, where it is accurate to speak of relentlessly accelerating relentlessness. After 1920 the tempos of economic change grew faster, and then faster still. No generation in human history before 1920 has experienced more rapid and relentless change than have the generations following.
2. *A growing empowerment of consumers and entrepreneurs*. Here the main driving force was the increase in per-capita incomes *by a factor of six* from 1920 to 2014. This unprecedented rise in the nation's affluence was accompanied by a profound shift in the nature of jobs. In 1920, 30 percent of the population worked on farms; today, 1.5 percent do so. In 1920, almost 30 percent of the population labored in goods-producing

industries such as mining, construction, and manufacturing; today the percentage is 12.6. Jobs in service industries such as retail sales, banking, restaurants, medical services, house cleaning, music teachers, etc. comprised nearly 40 percent of all jobs in the 1920s; today 80 percent of Americans work in the service sector.

Together these two big changes – sharply rising incomes and radical redeployments in jobs away from agriculture and production toward services – brought tremendous gains in both consumer power and entrepreneurial opportunity. To cite just one example from early in the story: with the advent of motor vehicles, millions of Americans enjoyed a new sense of freedom and vast opportunities to start new automobile-related businesses such as taxis, buses, and delivery services.

The evolution of electronic media stimulated the growing empowerment of consumers and entrepreneurs as well. This growth began with AM radio in the 1920s, continued with FM radio and black and white television in the 1940s, accelerated with color television in the 1960s, and high definition television (HDTV) and digital cable in the 1990s and early 2000s, and today advances with streaming online content accessible by laptops and cell phones. Meanwhile, a small government project created in the 1980s – the Internet – led to the World Wide Web in the 1990s. Products and services competed for the consumer, and especially with the privatization of the Net in 1995, undreamed of opportunities beckoned the entrepreneur.

This growing empowerment extended to groups previously excluded from complete participation in the capitalist system. In large measure because of national government responses to political pressure in the 1960s and 1970s, women and minorities exerted more influence as consumers and entrepreneurs during the latter decades of this story.

3. *An increasing tension between centralized and decentralized decision making in business, and the general triumph of decentralization*. Constant decision making lies at the heart of business. Every hour of every day, millions of decisions are made within companies. But by whom? On what basis? In whose interest?

   During and after the 1920s, as many companies grew ever larger, tensions about decision making became increasingly complicated. The best-run firms began to develop effective ways to push authority downward to the person best informed to make a particular decision, regardless of where in the hierarchy that person might rank. This was a gradual and often painful lesson for managers to learn, as many stories in this book will show. Companies whose leaders failed to learn the lesson not only suffered, but often perished. In the latter twentieth century, the tensions increased as financial considerations began to influence entrepreneurs to change the way they made business decisions. More and more the focus fell on making short-term profits, rather than developing long-range strategies that would ensure the emergence of useful new goods and services.
4. *Progress toward controlling the dark side of business, so that the system did not destroy itself from within*. Competition can bring out the best and worst of human actions. The pressure to make profits often tempts managers to use every advantage, and that sometimes results in unethical and illegal behavior toward their competitors, workers, and consumers. New laws and regulations typically emerge after the exposure of serious problems, rarely in anticipation of them.

   The American economy is a *mixed economy* in which most businesses are privately owned and markets are the dominant form of coordination, but there is some government spending on oversight and regulation in order to promote social aims. There is in American business–government relations a constant tension between promoting business and regulating business. Governments promote entrepreneurship through enforcing contract law and supporting infrastructures (transportation, communications, and banks). In economies and societies embracing constant change, governments must always play catch-up in their efforts to regulate business. In the years since the 1930s to the 1980s, US regulators did a fairly good job of reining in bad behavior without stifling entrepreneurship. The regulatory regime was not perfect, however, and in the 1970s government restraints began to loosen over a variety of industries. That loosening led to some positive results – more consumer choice and entrepreneurial activity in telecommunications and airlines – but also to the Savings and Loan Crisis of the 1980s and the Financial Crisis of 2007–2008.

A Matter of Size

Almost every business begins as a small firm (in today's parlance, a "start-up"). Those that become big do so because their managers develop winning formulas that meet the demands of the market. With one exception, all of the firms analyzed in this book are now big businesses (the Radio Corporation of America (RCA) no longer exists).

Their large size is also a function of the kinds of industries in which they operate. Firms that managed to survive long competitive struggles in automobiles, airplanes, consumer electronics, oil, chemicals, and other industries that require huge capital investments, almost always grew big – in the United States and elsewhere. But in the majority of industries, including printing, furniture, jewelry, pubs and restaurants, house painting, plumbing, carpentry, and repair services of all kinds, even successful companies rarely grow into big businesses. Only a few thousand of the millions of enterprises now operating in the United States are truly large. In no country in the world does a majority of the labor force work in a big business having more than 1,000 employees.

Businesses of different sizes deal with one another constantly. Big businesses buy from and sell to networks of small- and medium-sized suppliers and subcontractors. The big firms generally have the preponderance of power in these relationships. But even tire manufacturers have very little bargaining power to set prices of new tires to the automobile manufacturers; almost all of their profits come from selling replacement tires direct to the consumer. And megastores like Walmart, large franchising systems like McDonald's, and e-commerce stores like Amazon exert tremendous power over their suppliers of any size.

Earlier political debates over whether business should be allowed to become and remain large often took place without the understanding we have now about how these business relationships developed. Small businesses have been prosecuted under antitrust laws to prevent them from banding together to compete with big firms, and in other cases to maintain more competitors while sacrificing economic efficiencies.

There is no question that sometimes businesses can grow too big; or that executives can be paid too much; or that lobbyists actually write legislation advantageous to their large corporate clients and not necessarily for consumers or the public. Starting with the railroads in the mid-nineteenth century, these sorts of outcomes have happened many times in American history. The key issue is how long the electorate will tolerate abuses without pressing government to correct them.

The Key Internal Problem

The most difficult problem for management of a firm of any size is where to lodge the power to make different kinds of decisions. How do managers balance the necessity for centralized control and the equally strong need for employees to have enough autonomy to make maximum contributions and derive satisfaction from their work?

This balance between centralized and decentralized decision making applies to any organization of people. In the family, for example, these questions arise: Must the family eat together every night? Should the parent or the child set the appropriate bedtime hour? Should the adults or the students choose what kinds of clothing may be worn to school? No single rule will guarantee the best result every time, or in all families. Similarly, in the American military, which appears from the outside to be rigidly centralized (there are 23 different ranks), there has been a concerted effort to encourage officers throughout the command structure to respond to specific events around them within the larger context of the battle plan.

In business, good managers continuously evaluate and adjust the balance between centralized and decentralized decision making. The better a company is organized, the more naturally decisions gravitate to the spot where the best information on the particular issue is available.

This book illustrates the historical struggle over business decision making through the stories of individual firms. The failures of Henry Ford at Ford Motor Company and David Sarnoff at RCA to find the balance between centralized and decentralized decision making contrast with the successful stories of Alfred Sloan at General Motors, Neil McElroy at Procter & Gamble, Ferdinand Eberstadt and the Controlled Materials Plan during World War II, and Ray Kroc at McDonald's. In the latter years under study, a radical decentralized approach burst onto the scene with the emergence of information technology and e-commerce, where Jeff Bezos at Amazon, Meg Whitman at eBay, and Sergey Brin and Larry Page at Google led the way.

Broader Contexts

In addition to the four major trends outlined above, two broad contexts, overlapping in part, surround the narrative in this book: the notion of three industrial revolutions and the evolution from managerial capitalism to financial capitalism.

The story that follows began during the middle of the Second Industrial Revolution and ends in the midst of the third one; aspects of the first two informed the third. The definitions that follow apply to Western Europe and the United States; other areas of the world encountered the changes at later dates.

In the period of the *First Industrial Revolution*, which lasted from about the 1760s to the 1840s, steam engines powered by coal replaced human and animal energy. During this time, people began to regiment their work by the clock, not by the sun as they had done for millennia. Large factories appeared in the textile industry and a few others. Scale economies based on interchangeability of parts and sub-division of labor enabled the mass production of cloth, clocks and watches, and small arms, all of which became less expensive to consumers. For the most part, market forces shaped competition among businesses. Financing of business was based on credit, and family connections often anchored this era of market capitalism.

Stretching from the 1840s to the mid-twentieth century, the *Second Industrial Revolution* rested on technological changes in transportation – railroads, autos and trucks, airplanes – and communication – telegraph, telephone, and radio. Steam power gave way to electric and internal combustion engines, both of which required more coal and petroleum fuels to run the transport systems and machinery in larger factories and assembly plants. Mass marketing arose to distribute the increased mass production of goods. Large-scale businesses and new forms of business evolved to make the transport, mass production, and distribution systems more efficient, thus reducing prices to consumers even more. During this era of managerial capitalism, financing took place in the stock markets and investment banking houses in Europe and the northeast US. American businesses in the late nineteenth and early twentieth centuries began to invest in mining operations, factories and distribution networks overseas, mainly in Europe and South America but in China as well.

With impetus from businesses needing to manage large amounts of information and military intelligence operations during World War II, the *Third Industrial Revolution* began at mid-century and continues today to shape and reshape American business enterprise. It features information technology and knowledge work, and has sped up the divergence between the numbers of service sector jobs and those of agriculture, mining, construction, and manufacturing. Science-based industries such as electronics, synthetic chemicals and pharmaceuticals, and computer hardware and software, along with an unparalleled expansion of financial services, have led economic growth. All kinds of businesses, of varying sizes, connect more to the global economy than ever before.

In the early decades of the twentieth century, numerous large-scale businesses dominated the American economy. Firms in such industries as railroads, iron and steel, petroleum, and mining were highly capital intensive; large sums of money were required to operate them. Such sums came first from investors and then from retained earnings. Because these firms were so large (in the 1890s the Pennsylvania Railroad employed more workers than did the federal government), the management of them was separated from the ownership. Hundreds or even thousands of stockholders could not meet at one time to make decisions on how to manage the business. Instead, professional managers – more and more of whom were trained at business schools – made decisions on finance, manufacturing, marketing, and labor relations. And they did so with the long-term health of the company in mind.

For the most part, these large business firms were managed within centralized, functional management structures that focused on reducing costs through developing scale economies. Some of them were vertically integrated firms in which raw materials acquisition, production, and marketing were directed from a central office. The professional managers oversaw large-scale technologies like railroad and electrical systems, and steel manufacturing plants and large labor forces of factory workers, clerks, and secretaries. Together, managers and their staffs, and eventually factory workers, became part of the growing American middle class.

This form of managerial capitalism – centralized, functional, professional – evolved over the next century as business leaders struggled to respond to incessant changes in the markets. Many times the responses worked, but sometimes they did not.

American Business and the World

In 1920 the United States was already producing more agricultural and industrial goods than any other country, and its people were enjoying the highest per-capita income. The growth of that income by a factor of six by the 2010s has no precedent in human history. Notwithstanding its faults, the most significant fact about American business since 1920 has been its outstanding economic performance. This generalization applies to all types of businesses – small, medium, or large and low-tech or high-tech. The longest interruption of this growth spiral was the Great Depression, but even then, many businesses grew.

The rags-to-riches story of the American Dream came true for enough people so that many others were motivated to try. And while most failed to achieve riches, standards of living improved for them and their children. On a per-capita basis, Americans started more businesses, saw more of them fail, and then started still more new ones than the citizens of any other country.

This cycle of creation, failure, and re-creation is a truism of capitalism. The Harvard economist Joseph Schumpeter (1883–1950) liked to argue that internal turbulence epitomizes modern business. Capitalism itself, he wrote, is a process of transformation. It "incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one." Schumpeter's metaphor for this process – a "perennial gale of creative destruction" – was more emblematic of the US economy than of any other.

Schumpeter and others labeled the agents of creative destruction *entrepreneurs*, a French word meaning business adventurers. The success of one entrepreneur did not necessarily mean the destruction of another entrepreneur, despite what the German socialist Karl Liebknecht said in 1907: "The basic law of capitalism is you or I, not both you and I." Contrary to Liebknecht's ideological assertion, the American capitalist system evolved as a positive sum game. As consumers' purchasing power increased, more and more entrepreneurs and firms flourished.

The American Business Achievement

In most academic books on American history in the last half-century, assertions of high achievement have been out of fashion, and for good reason. From about 1800 to the 1960s American history was taught as an uninterrupted march of progress: George Washington never told a lie; slavery would have died out without the need for a bloody civil war; women always had it better here than elsewhere; the US never took unjust military action. All of these teachings were highly inaccurate and questionable, and academics in the last half of the twentieth century rightly believed that perpetuating them ill-served the interests of students and the nation.

Beginning in the 1960s, the pendulum of interpretation swung the other way. Historians focused on fuller coverage of the ugly aspects of the American experience, including racism, sexism, imperialism, and warped distribution of incomes. In the case of business, critics pointed out correctly that capitalist success of the American sort had an obnoxious side in its unbridled pursuit of money. American capitalism at its worst promoted a vulgar egocentrism that emphasized the materialistic self to the detriment of the spiritual. It elevated individual rights at the expense of familial and community duties. It made some people fabulously wealthy while others remained dirt poor. Its endless advertising assailed the senses and affronted the soul. It despoiled the land, water, and air of North America and contributed to global environmental degradation. Whether or not these negative aspects *inevitably* accompanied economic progress is not wholly understood, even by experts. The question remains a controversial topic among academics and public intellectuals.

Aspects of the dark side of American capitalism will appear in the story that follows *but the main thrust of the book will remind the reader that what may have been lost in the criticism of the last half-century is the irrefutable fact that American business enterprise has improved the material lives of millions of people*.

To begin the story of the American business achievement since 1920, we turn first to the business leaders who made the motor vehicle the key consumer durable of the Second Industrial Revolution.

CHAPTER ONE

Modern Management in the 1920s: GM Defeats Ford

Cars, Trucks, and Freedom

During the first half of the twentieth century, the motor vehicle industry best symbolized the genius of American business. Even before World War II began, the car came to be regarded as a necessity, just as televisions, computers, and cell phones later became essentials of modern life.

The first cars and trucks were built in Europe in the1880s and 1890s. By 1899, 30 American firms produced 2,500 cars annually. Because the American market was the richest in the world and expanding rapidly, it furnished the necessary mass market for the automobile manufacturing industry to prosper; by the 1920s it was the largest in the nation. Its connections with suppliers of steel, rubber, and glass, plus its reliance on the oil industry for fuel, lubricants, and service stations made the car the most important product of the twentieth century. By the 1970s about one-sixth of all business firms in the United States participated in some way in the manufacture, distribution, service, or operation of cars and trucks.

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Meanwhile, governments at the local, state, and national levels played catch-up to promote and regulate the industry. They financed the construction of roads and bridges, registered motor vehicles and licensed operators, installed traffic lights and set speed limits, and expanded police and state trooper forces. Later in the century, governments mandated safety and fuel efficiency standards.

During the 1920s, the car became the center of the national consumer economy, and until the successful Japanese challenge of the 1970s it remained a pre-eminently American-made product. An astounding 80 percent of all cars in the world were made in America by the mid-1920s. There was one automobile for every 5.3 people. In contrast, in Britain and France, there was one car for every 44 people.

The word *automobile* expresses the exhilarating idea of autonomous mobility, and for a great many people everywhere, driving became a means of escape, a way to express personal freedom, and, perhaps, the biggest leap in world history toward a sense of individual freedom.

Trucks, too, were liberating, for both consumers and entrepreneurs. Trucks deliver agricultural products to towns and cities, transport retail goods from assembly plants to department stores, and transfer household goods from one home to another. Entrepreneurs may offer painting or plumbing services or tacos to paying customers right from their trucks, and they always have the option of growing their business by adding more trucks. Today online commerce depends on fleets of trucks of United Parcel Service (UPS), FedEx, and owner-operated trucking firms.

As in the case of most new industries, a few bold entrepreneurs created the mighty US automobile manufacturing industry. These included Ransom Olds, James Packard, the Dodge brothers, and Walter Chrysler. The two greatest giants were Henry Ford, who became the best known manufacturer of anything anywhere, and Alfred P. Sloan, Jr., who built General Motors into the world's largest industrial corporation. The competition between Ford and Sloan in the 1920s and 1930s remains one of the epic stories in the history of business, and a near-perfect example of the superiority of decentralized decision making.

Henry Ford, Mass Production, and Centralized Management

Growing up in Dearborn, MI, Henry Ford (1863–1947) loved to tinker, amusing himself by taking apart watches and putting them back together. At the age of 16 he worked in a Detroit machine shop, and later he became chief engineer at an electric utility. His first two auto making companies failed, but his third one would change the world.

When Ford launched his third company in 1903, other makers were building cars in small numbers of diverse and expensive models. But Ford, now a handsome, self-confident, fit-looking man, instructed one of his partners: "The way to make automobiles is to make one automobile like another automobile, to make them all alike, to make them come from the factory just alike – just like one pin is like another pin when it comes from a pin factory …." His goals were "to build a motor car for the great multitude … constructed of the best materials, by the best men to be hired, after the simplest designs that modern engineering can devise … so low in price that no man making a good salary will be unable to own one – and enjoy with his family the blessing of hours of pleasure in God's great open spaces." Ford's Model T, brought out in 1908, revolutionized the industry. From that point he stopped work on all other models, and concentrated his efforts on improving the T and reducing its costs of production.

A major step in Ford's miracle of production was the refinement of the moving assembly line. By 1914 the time of assembly for a Model T chassis had dropped from 12 ½hours to 1 ½. Ford's incessant focus on improving the assembly process reduced the selling price of the Model T (originally $850 in 1908) to $290 in 1925 (the equivalent of $3,988 in 2016). That year, Ford Motor Company sold its ten millionth car.

The very standardization that made lower prices possible, however, also led to high turnover rates among the workers. By 1914, to maintain an annual workforce of 15,000, Ford had to hire 50,000. This whopping 300-percent turnover rate derived from the pressures and boredom of assembly-line work and almost complete management centralization. Ford's response was to increase wages to $5.00 a day (twice the prevailing rate) and reduce the length of the workday from nine hours to eight. The combined magic of the assembly line and the five-dollar day made Henry Ford famous all over the world. Indeed, by the 1920s, planners in the Soviet Union studied his techniques carefully.

Increased pay and reduced working hours did not improve shop-floor conditions, but the changes partly compensated workers for the monotony of their tasks. In the 1920s Ford went a step further and shortened the work week from six days to five, without a commensurate decrease in pay. Assembly-line production represented a dramatic contrast with the pre-industrial identification of the craftsman's product with his personal pride and sense of self. Paradoxically, the *ownership* of a car by those who assembled them offered an offsetting sense of autonomy. Ford wanted his employees to be able to buy one of his cars, and many thousands of them did.

But it was Ford's overbearing centralized management style that undermined his attempts to humanize the factory experiment. Perhaps no one has so clearly and insightfully analyzed this aspect of Ford's system as did Upton Sinclair in his novel, *The Flivver King: A Story of Ford-America* (1937). In it, Sinclair recognizes the good in Henry Ford, as well as why so many followed him, but he also shows clearly that Ford never understood how truly debilitating working in his assembly plants was; never understood why workers rejected his attempts to force them to follow his values (an infamous undercover police force spied on the workers' private lives); and never understood why those who worked in the plant wanted to join a union.

This myopia also shaped Henry Ford's business strategies. Ford held to two basic principles: he would produce high-quality cars and sell them as inexpensively as possible. He liked to assert that every dollar he could chop off the price of a Model T would attract at least a thousand new buyers. Many customers, he said in 1916, "will pay $360 for a car who would not pay $440. We had in round numbers 500,000 buyers of cars on the $440 basis, and I figure that on the $360 basis we can increase the sales to possibly 800,000 cars for the year – less profit on each car, but more cars, more employment of labor, and in the end we get all the total profit we ought to make."

Although Ford was one of the richest men in the world, remarks such as these appealed to everyday people, who seemed to admire and trust him as the embodiment of the common man, somebody much like themselves. The Ford Motor Company courted journalists, and Henry was always good copy. Thus, it is not surprising that it was often said that Ford's fortune of more than a billion dollars had been earned "cleanly," unlike the wealth of "robber barons" such as John D. Rockefeller and Andrew Carnegie. Ford himself made no secret of his disdain for some of the trappings of capitalism. He spoke harshly of "financeering." He detested stockholders, whom he described as "parasites."

In 1919, to rid himself of any stockholder influence, Ford bought up all the outstanding shares of his company and took it private. This was a profound and ominous step. At a single stroke, it put the gigantic Ford Motor Company under the absolute control of one erratic "Genius Ignoramus," as biographer David Lewis calls Ford. The centralization of management had now become total. A short time later Ford forced his dealers to buy his cars with cash, which caused many of them to borrow money from banks. So much for hatred of "financeering." And at just that moment, Ford's company was about to confront a formidable competitor, the emerging General Motors Corporation.

Alfred P. Sloan, Jr. and Decentralized Management

The man who became Henry Ford's great rival grew up a city boy in New Haven, CT, for the first ten years of his life. Alfred Sloan's (1875–1966) prosperous merchant father moved the family to Brooklyn in the mid-1880s, and Sloan achieved a splendid academic record at Brooklyn Polytechnic Institute, where he studied electrical engineering. Working "every possible minute, so that I might be graduated a year ahead," he finished his degree at the Massachusetts Institute of Technology in three years.

When Sloan graduated from college in 1895 ("I was thin as a rail, young and unimpressive"), he took a job at the Hyatt Roller Bearing Company, a small New Jersey firm with 25 employees and $2,000 in monthly sales. Sloan's father helped finance the firm's survival in hard times, and then its expansion. Sloan came to know the car industry well as Hyatt marketed its products to more and more manufacturers. He sold roller bearings to Ransom Olds and William C. Durant, and his best customer was Henry Ford.

"Blue-eyed Billy" Durant, a business visionary, had put together the General Motors Corporation in 1908, the same year the Model T first appeared. A wheeler-dealer, Durant enjoyed buying and selling whole companies. General Motors continued to grow, but it remained a loose group of separate firms that often competed with one another! Buick, the best of the lot, made money that Durant then dissipated among the less successful companies. Buick's leaders, Charles Nash and Walter Chrysler, became so angry with this mismanagement that they walked away and set up their own auto firms. Alfred Sloan summed up the problem: "Mr. Durant was a great man with a great weakness – he could create but he could not administer."

Still, Durant envisioned what others had not: the car industry's future lay in combining within one big firm all the diverse elements involved in the production of cars: engine and parts manufacturers, chassis works, body companies, and assemblers. Only through this kind of "vertical integration," bringing together all manufacturing and assembly steps from raw materials to finished product, could a reliable flow of mass-produced output be achieved. Exploiting these economies of scale would increase output and lower the cost of each car. Durant and Ford, then, held similar obsessive commitments to vertical integration. While Ford developed them from within his firm, Durant did so by buying related companies and integrating them into General Motors.

Hyatt Roller Bearing was a company Durant wanted to include in a group of accessory firms, which he called United Motors. By 1916 Hyatt had grown into a prosperous enterprise with 4,000 employees, and Sloan and his family now owned most of the company. Durant paid $13.5 million (the equivalent of almost $300 million in 2016) for Hyatt and named Alfred Sloan president of United. Two years later Durant merged United Motors into General Motors and made Sloan a vice-president and member of the GM Executive Committee. A stockholders' revolt in 1920 forced Durant out. Pierre du Pont, a major investor in GM and one of the shrewdest business executives in the country, assumed the GM presidency and made Sloan his chief assistant.

Forty-five years old and at the peak of his abilities, Sloan faced daunting problems. Internally, GM remained an organizational mess, and Durant's maneuvers had put the firm in bad financial shape. Externally, and worst of all, the economic depression of 1920–1921 was threatening to kill the company. As Sloan later wrote, "The automobile market had nearly vanished and with it our income."

With some difficulty, GM weathered the short depression, and in 1923 Sloan became president of the entire firm. He turned out to be a very different kind of businessman from either Bill Durant or Henry Ford. Whereas Durant and Ford wooed the press and welcomed media coverage, Sloan shunned personal publicity. He did not have much of a private life, seemingly uninterested in any subject other than the welfare of General Motors. In what is arguably one of the most brilliant performances in the history of business, Sloan proceeded to turn GM around and build it into the largest company in the world.

As a writer in *Fortune* described him, Sloan "displays an almost inhuman detachment from personalities [but] a human and infectious enthusiasm for the facts. Never, in committee or out, does he give an order in the ordinary sense, saying, 'I want you to do this.' Rather he reviews the data and then sells an idea, pointing out, 'Here is what could be done.' Brought to consider the facts in open discussion, all men, he feels, are on an equal footing. Management is no longer a matter of taking orders, but of taking counsel." Unlike Henry Ford, Sloan valued the contributions of the many supervisors to whom he delegated major responsibilities. An associate compared Sloan's style to the roller bearings he once sold: "self-lubricating, smooth, eliminates friction and carries the load." By rejecting self-aggrandizement and empowering his junior associates, Sloan led General Motors to a very advantageous position.

General Motors Versus the Ford Motor Company: The Triumph of Decentralized Management

At the time Henry Ford took his company private, he also embarked on an expensive construction project at his River Rouge manufacturing complex near Detroit. These costs, coupled with the recession of 1920–1921 and Ford's dislike of banks, led him to force his dealers to buy his cars with cash. In contrast, Alfred Sloan established a subsidiary of GM called General Motors Acceptance Corporation. This financial agency enabled GM dealers to finance bulk purchases and customers to buy cars and trucks on credit. The use of the installment plan (which Ford never embraced) empowered consumers and entrepreneurs alike. And it helped GM weather the recession.

Among other ways in which Sloan out-managed Ford in the 1920s and 1930s, he recognized that a fast-changing situation in the automobile industry demanded more sophisticated management:

> There was no awareness of the used-car market. There were no statistics on the different cars' market penetration; no one kept track of registrations. Production schedules, therefore, were set with no real relationship to final demand. Our products had no planned relation to one another or to the market. The concept of a line of products to meet the full challenge of the market place had not been thought of. The annual model change as we know it today was still far in the future. The quality of the products was sometimes good, sometimes bad.

Well before Henry Ford, Sloan saw that the industry was becoming a trade-in business. Eventually, used cars would account for three units out of every four sold. Additionally, Sloan realized that Americans viewed the purchase of their cars as status symbols of their progress up the income scale. He responded by diversifying GM's product line, starting with Chevrolet, which was designed to compete with Ford's Model T. At progressively higher prices to imply higher social status, GM created Pontiac, Oldsmobile, Buick, and at the top, Cadillac. Its advertising touted "a car for every purse and purpose." Significantly, by the mid-1920s, GM's cars and trucks equaled and sometimes surpassed Ford's in styling, basic engineering, and production qualities.

Henry Ford stuck to his simpler approach: building a better version of one car in one color (black) and continually cutting costs. While successful in the early years, this strategy wilted in the relentlessly changing market of the 1920s and 1930s. In 1921 Ford's share of the domestic market stood at 56 percent; by 1925 it had dropped to 40 percent. Meanwhile, GM soared from

13 percent to 20 percent. In 1929 each firm produced 1.5 million cars. By 1937 GM's market share had shot up to 42 percent while Ford's slumped to 21 percent. Meanwhile, the Chrysler Corporation took over second place with 25 percent of the market.

Ford resisted the changes of the new economy of the 1920s. He was slow to respond to consumer demand for "closed cars" that protected riders from the elements, for different styles in different colors, and for annual model changes. After shutting down the River Rouge plant for nearly a year to retool, Ford finally produced the Model A in 1928. While it was clearly superior to the Model T, it was only one model. A second model produced in 1929, the Lincoln, did not compete effectively with Cadillac. Only in 1933 did Ford begin to bring out yearly models, and not until 1938 did the firm offer a new mid-sized car (the Mercury) to compete with GM's higher-income lines of Pontiac, Oldsmobile, and Buick.

Internally, chaos reigned at Ford Motor Company. Information flows grew confused and irregular. Managers could not seem to identify problems or pinpoint responsibilities. Budgeting procedures fell so far behind that overburdened accountants actually began using scales to weigh piles of invoices rather than add up the numbers written on each sheet. The company had become a victim of its own success: It had grown too large to manage in the way Henry Ford insisted on managing it.

Not surprisingly, Ford's once-stellar management team disintegrated. Long before turning 70 in 1933 Henry Ford had become a rigid, peevish, and arbitrary chief executive. His autocratic management style pushed young executives out, and an emerging commitment to decentralized management at GM and a few other companies drew them to other opportunities. What saved the Ford Motor Company from going under completely in the 1930s were the brand name and its high quality of manufacturing, as well as the fact that Sloan purposely kept GM's share of the market under 45 percent in order to avoid anticipated antitrust action.

While Sloan developed engineering and marketing strategies to meet the demands of the new consumer economy, he would not have been successful without forging a better management structure to implement them. The tradition in business before the 1920s was to organize a large firm not according to its *products*, but according to just three *functions*: purchasing of raw materials, manufacturing, and selling. The executives who oversaw these functions had responsibility for all of the company's products, no matter how many or diverse they were. When things went wrong with a product under such a system, it was impossible to pinpoint how to respond.

In answer to the demands of the new consumer economy of the 1920s, Sloan devised the decentralized, multidivisional management structure. Consumer choices led to the diversification of product lines, which led to the creation of separate product divisions, each one headed by a semi-autonomous chief executive. Each executive had "bottom-line responsibility" for the operation of his division. This meant that he oversaw purchasing, manufacturing and marketing of the division's product.

The idea of having semi-autonomous product divisions within one big company sounds simple today, as does the idea of an assembly line. But in the 1920s it was an intellectual breakthrough of the first order, and it took Sloan some time to work out the particulars. Years later, he realized that the puzzle of centralization versus decentralization "is the crux of the matter," and "interaction … is the thing." Centralization had to be mixed with decentralization in order for the firm to prosper.

The multidivisional structure made such a mixture possible. Among its other virtues, the new structure in effect turned a large company into groups of smaller-scale entities. It provided incentives for numerous managers to work together in a spirit of cooperation as they moved up the corporate ladder. Sloan fostered this behavior when he established cross-divisional committees, and made sure that executives served on several of them at one time. This ensured that important decision makers communicated with one another and helped reconcile the goals of "decentralization with coordinated control."

Coordinated control came primarily through financial reporting and capital allocations. Sloan worked hard on these issues, and GM soon became one of the most sophisticated of all American companies in its use of budget targets and financial ratios such as inventory turnover, fixed versus variable costs, and profit as a percentage of sales. This was difficult to pull off, and GM did not always do it well. Managers made continual adjustments along the production lines based on what the numbers were telling top executives at headquarters. Sloan summed it up: "From decentralization we get initiative, responsibility, development of personnel, decisions closest to the facts, flexibility. … From co-ordination we get efficiencies and economies. It must be apparent that co-ordinated decentralization is not an easy concept to apply."

Lessons Learned

What can we learn from the battle between Ford and GM in the 1920s and 1930s? For one thing, "first-mover advantages" that Ford enjoyed, while powerful, do not ensure permanent supremacy. The market punishes those who will not or cannot adapt.

Henry Ford understood part of the relentlessness of change, particularly the creative destruction on the manufacturing side. "Not a single item of equipment can be regarded as permanent," he wrote. "Not even the site can be taken as fixed. We abandoned our Highland Park plant – which was in its day the largest automobile plant in the world – and moved to the River Rouge plant because in the new plant there could be less handling of materials and consequently a saving. We frequently scrap whole divisions of our business – and as a routine affair."

Ford, however, did not translate this insight to marketing. He refused to see that marketing, in every aspect from product policy to styling to advertising to sales, is as important to success as is manufacturing. He had little respect for the tastes of consumers, whom he (correctly) regarded as fickle. Ford thought he knew what they needed. He could not bring himself to admit that in a market economy the consumer really does reign supreme, and that for an organization to act otherwise is to invite disaster.

The car wars also reveal that in the modern economy how decision making takes place looms as a key to continued success. If all decisions are made at the top of the organization, as they were at Ford, then sooner or later two things will happen. First, the quality of decision making will deteriorate as the business grows larger. There is too much to know and much of that is changing constantly. Second, employees not directly in touch with the process of decision making will grow bored with routine, their potential contributions lost to the organization. Just moving decision making down the organizational chart is not the answer, however, for such a course will lead to faltering cooperation and anarchy.

The car wars, then, reveal that the pivotal challenge of modern management lies in finding the right balance between centralization and decentralization, and in continually adjusting the mix in response to changing circumstances. Fixing the decision making at the point at which the best information is available requires the right design of the organization. And the answer for GM in the 1920s and 1930s, and after World War II for thousands of other firms, was the multidivisional, decentralized management organization.

The contrasts between Henry Ford and Alfred Sloan illuminate a characteristic irony in American business and in the national culture as a whole. Many strands of American cultural traditions romanticize the solitary hero and underrate the necessity for cooperation through structured organization. *Individualism* is prized, while *bureaucracy* remains a dirty word. While Henry Ford – the unschooled solo genius and bombastic opinionated billionaire – was perhaps the more typically "American" personality, Alfred Sloan – the quiet, persuasive engineer and systematic organization man – better epitomizes most successful American business leaders of the twentieth century.

But the main lesson of the car wars is the relentlessness of change. American car manufacturers eventually fell victim to better managed Japanese auto manufacturers. Later still, the family firm of Ford Motor Company would make a stunning recovery while GM had to be bailed out by the government. Relentlessness of change, indeed.

CHAPTER TWO

Overview: Business Welfare Capitalism, the Financial System, and the Great Depression

Before moving on to the next case study, we take a moment here to expand on three themes: (1) the attempt to bring a "New Era" into business relations with labor and society; (2) the role of the financial system in business success and failure; and (3) the longest and most severe economic depression in American history. These stories help place in context the American business achievement of the twentieth century.

Responding to the Dark Side – Business Welfare Capitalism in the 1920s

Like most Americans, businessmen reacted to events and forces that the Great War had accelerated. These included turnover and unrest in the workforce; the emerging consumer society, which created intense competition, placing a premium on efficiency and lower prices; and a negative public image of businessmen as "robber barons" and "war profiteers."

American Business Since 1920: How It Worked, Third Edition.
Thomas K. McCraw and William R. Childs.