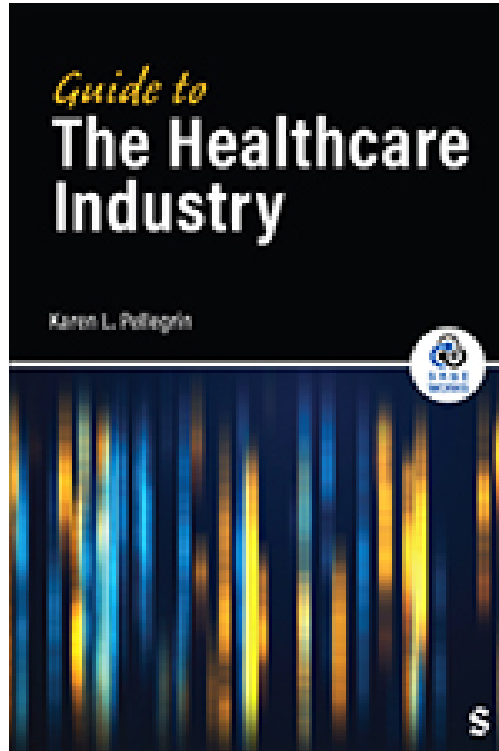


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Preface

This book is designed to guide students, healthcare professionals, leaders, and innovators through the structure of the healthcare industry from a business perspective and to demonstrate the dynamics that shape it. Michael E. Porter's evidence-based framework for industry analysis is used as a disciplined and rigorous approach to support understanding of this highly complex industry. This guide covers each of the competitive forces in healthcare, describes the social and environmental factors shaping the future of the industry, applies these forces in real world business cases, and provides insights to support innovation. While the book focuses on the healthcare industry within the United States, given its size and uniqueness, international and global issues are included throughout.

[Chapter 1](#) describes Porter's framework and demonstrates its application to the healthcare industry. The immense challenges disrupting the industry are highlighted by the failure of a joint venture between three of the most successful businesspersons in the United States—Warren Buffett, Jeff Bezos, and Jamie Dimon. The size of the global healthcare industry is included with comparisons in per capita health expenditures by country. [Chapters 2](#) through [6](#) cover each of Porter's competitive forces as applied to the healthcare industry. In [Chapter 2](#), key barriers to entry into the healthcare industry are described with a focus on the complexities of federal and state regulations that make it so difficult for industry outsiders to break in. Amazon's long but ultimately successful push into healthcare is featured. [Chapter 3](#) examines the suppliers of healthcare, including the hospitals, clinics, pharmaceutical companies, and workforce that provide patient care, along with suppliers of public health and research. The factors that increase the power of suppliers to drive up costs of healthcare are featured. [Chapter 4](#) examines the factors that increase the power of buyers to negotiate price and types of buyers of healthcare, including health insurance companies, employers, governments, taxpayers, and patients. [Chapter 5](#) addresses the potential substitutes that threaten to replace conventional healthcare, including online care, alternative and complementary providers, self-treatment with over-the-counter supplements, and wearable devices and apps that help consumers adopt healthier lifestyles to reduce the need for so much healthcare. In [Chapter 6](#), the intensity and basis of competition in the healthcare industry are explored, with a focus on the impacts of decelerating industry growth and improvements in price transparency.

After covering the competitive forces within the industry, the next two chapters address key issues that are influencing the future of healthcare and how value is defined. [Chapter 7](#) examines health disparities, social determinants of health, and potential opportunities to improve health by focusing efforts outside of the healthcare system. [Chapter 8](#) addresses the environmental impact of the healthcare industry and describes the promising One Health approach to resolving both human and environmental health issues. [Chapter 9](#) presents six real-world case studies that illustrate the dynamics of the competitive forces covering organizations including Amazon's One Medical, the hospital chain HCA, the nonprofit Civica, the

biopharmaceutical company Pfizer, the health insurance company Elevance, and the small business ZetrOZ. Finally, [Chapter 10](#) considers opportunities for innovators to improve healthcare value not only through new technologies but also through new care models and payment methods and concludes with the importance of better healthcare value to the broader economy.

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Introduction: Porter's Framework in the Healthcare Industry

Warren Buffett, one of the most well-known and successful businesspersons and investors, described the healthcare industry as a “hungry tapeworm,” detrimental to the U.S. economy as it consumes significant income without significant return on those investments. In 2018, Buffett announced that he was joining forces with two other business luminaries, Amazon's Jeff Bezos and JPMorgan Chase's Jamie Dimon, in the launch of a new company, Haven, that would focus on improving healthcare value. At the launch of the venture, Bezos stated that reducing the burden of healthcare on the economy is a worthwhile endeavor that requires “talented experts, a beginner's mind, and a long-term orientation.” Three years later, these business leaders dissolved the new company, with Buffett acknowledging how difficult it was to make progress on improving healthcare value. The failure of Haven, despite the resources and business acumen of its founders, reflects the challenges of the healthcare industry that are analyzed in this guide.

Though medical advances continue to inspire awe and save lives, healthcare often fails to deliver good value to those who pay for it. While costs have continued to increase, quality improvements arguably have not kept pace. Some assert that business, and specifically profit, should be driven out of healthcare, a sentiment reflected in the Buffett-Bezos-Dimon team decision to launch Haven as not-for-profit. This guide invites business and healthcare students and professionals to consider that sound evidence-based business practices may be able to counteract the negative effects of the healthcare industry on the economy.

Development of Porter's Framework

The organization of this guide is based on one of the soundest evidence-based business frameworks: Michael E. Porter's approach to analyzing industries to support effective competitive strategy by delivering value. Porter's framework has been tested and applied for nearly a half-century across many industries. That it has not been routinely applied or adopted in the healthcare industry suggests there is great untapped opportunity to improve value in this industry through Porter's more disciplined approach. Porter is a distinguished emeritus professor at Harvard Business School, where he earned an MBA and a PhD in business economics. At a time when the field of strategy was in its infancy and the simplistic strengths-weaknesses-opportunities-

threats (SWOT) analysis was the primary strategy tool taught in business schools and used in industry, Porter set out to create a more robust, disciplined, and useful framework. His 1980 book *Competitive Strategy: Techniques for Analyzing Industries and Competitors* marked the beginning of the modern era of business strategy and has been translated into 19 languages.

Porter's core tenet is that organizations should choose a generic strategy, low-cost leadership or differentiation and choose whether to compete within a focused niche or the total industry-wide market. Empirical evidence supports this approach. Organizations that align with a generic strategy tend to outperform those that do not across industries and types of organizations.

Five Competitive Forces of Porter's Framework

In 2008, Porter identified five competitive forces that are essential to understanding an industry's structure and the strategic positioning of a company to perform better. These five forces are the threat of entry, the power of suppliers, the power of buyers, the threat of substitutes, and rivalry among existing competitors.

The Threat of Entry

New entrants in an industry can intensify competition as they seek market share by offering lower prices and differentiated products and services, pressuring incumbents to respond by making investments to protect their market share. Porter identified that new entrants already established in other markets or industries can be particularly disruptive if they can leverage existing resources to rapidly gain a competitive advantage in the new market. One of Porter's examples of this is Microsoft leveraging its dominant position in the market for operating system software for personal computers to enter the market for internet browser software.

From the perspective of existing businesses in an industry, the competitive landscape is not limited to current competitors but includes the potential for new competitors to enter the market. The threat of entry to incumbents is a strong force if it is easy for new competitors to enter the market and a weak force if there are significant barriers to entry. After many years and attempts, big tech companies are accelerating their push into the healthcare market. With the size of the market, the surprise is not their interest in healthcare but rather why they haven't been more successful breaking in. Key barriers to entry have made the threat of entry a relatively weak force for existing healthcare organizations. These barriers include the complexity of federal and state

policies and regulations, including Medicare and Medicaid rules; the Affordable Care Act; privacy and security requirements; health information sharing requirements; Physician Self-Referral law; licensing laws; pricing requirements; telehealth laws; drug and device marketing laws; and laws governing federally qualified health clinics, rural health clinics and other federally designated entities. Amazon's moves into healthcare demonstrate that acquisition (i.e., buy rather than build) may be the most viable approach for new entrants—even those with the vast scale and resources Amazon has—given the industry's complexity. Other barriers to entry in some segments of the healthcare industry include the need for economies of scale (e.g., healthcare insurance) or capital investments (e.g., hospitals and other specialized facilities), as well as other incumbent advantages (e.g., clinical expertise) and potential responses that discourage new entrants.

The Power of Suppliers

Suppliers provide goods and labor to a business, and they affect the profitability of the business. Every business has suppliers—the people and organizations the business pays in the process of running the business. The company's key business expenses reflect its key suppliers, such as employees or contractors, sources of raw materials and finished products used in production or service delivery, computers and other technology used by the business, and building owners from whom office or retail space is leased. When key suppliers are very powerful, the business has little leverage to negotiate how much they pay. Powerful suppliers can charge higher prices, which reduce the profitability of the business that uses the supplies if it cannot pass the cost on to its customers.

The healthcare industry includes vast and diverse suppliers that are used to deliver healthcare. The COVID supply chain disruptions affected most industries worldwide; in healthcare, these disruptions made it difficult to maintain adequate clinical staffing levels, adequate inventory of high-grade masks and other safety gear, and adequate medications and life-saving equipment. The suppliers in the healthcare industry are highly specialized, which adds to their power. This includes suppliers of information technology, for example suppliers of electronic medical record software, suppliers of equipment and facilities, and suppliers of labor—doctors, nurses, pharmacists, and other healthcare workers who need a specialized license that determines scope of practice. Health profession associations can increase the power of these clinical suppliers by advancing or protecting their respective scopes of practice and otherwise lobbying for regulations that increase their power.

The Power of Buyers

Every business has buyers—the people or organizations that pay the business for the products and services they offer. The company's key business revenues reflect its key buyers. When key buyers are very powerful, the business has little leverage to negotiate how much the buyers pay them. Powerful buyers can reduce the profitability of the business by driving prices and revenue down and by demanding higher quality products or services, which increases business expenses. Typically, buyers are considered the customers or users, but not in all industries. For example, in the social media industry, the users typically do not pay for use of the media. Rather, the key buyers are the advertisers who buy ads with the media companies to reach their users. While patients are typically considered the key customers of healthcare, they frequently are not the key buyers of healthcare. In some cases, patients are partial or indirect buyers and in other cases, patients are not buyers at all. Patients may have employer-based insurance wherein their employer buys insurance while the insurer buys most of the healthcare, and patients make copayments. In addition, taxpayers pay for healthcare of others via government insurance programs, which are key buyers of healthcare for program beneficiaries.

The healthcare industry is highly unique in the extent to which suppliers are paid by insurance (private or public) as the primary direct buyers. This is in stark contrast to other industries, such as the auto industry and real estate industry, where auto and homeowners pay for most maintenance and repairs and rely on insurance to pay only in rare exceptions. Thus, insurers play a dominant role as direct buyers in the healthcare industry. However, the primary buyers of that insurance are employees and employers. While individual employees are not powerful as buyers of insurance, employers—especially large ones—are.

To the extent that employers are unhappy with insurance companies serving as the healthcare buyers for their employees, they can self-insure and buy healthcare directly. In some cases, large buyers that are unhappy with available suppliers will themselves enter the market to provide their own supply, including in the healthcare industry. Increasingly, large employers, unhappy with the value of healthcare they buy for their employees, are entering the healthcare industry themselves. These are classic examples of buyers becoming suppliers and disrupting the competitive environment in the quest for better value.

The Threat of Substitutes

The extent to which a product or service could be replaced by another that offers the same or similar function

but in a different way that delivers value to the buyer is the threat of substitutes. When Amazon was launched, it offered a different way to buy books, a substitute for shopping at local bookstores. Similarly, e-books and e-readers offer a different way to read, a substitute for physical books. Substitutes may be downstream. For example, e-readers are also a substitute for bookshelves, and software that allows e-books to be downloaded directly from the internet rather than shipped to the customer on a disc is a substitute for book warehouses and book wholesalers.

There are potential substitutes for every business's product or service. The extent to which those substitutes offer a compelling relative value—quality for the cost—to buyers determines how big a threat it is to the business. While regulations and the nature of some health conditions limit potential substitutes for some hospital and emergency care, other aspects of healthcare face the threat of being substituted. Urgent care clinics and concierge medicine are potential substitutes for traditional primary care, while telehealth and mail-order pharmacies are alternatives to in-person care. During the pandemic, many healthcare providers began offering healthcare visits virtually. In particular, the availability and use of virtual mental healthcare services grew dramatically as technology startups modified the delivery of mental health services. The increasing availability of innovative consumer products threatens to replace traditional healthcare. Examples include Kardia (home EKGs for heart monitoring), wearables to promote health and prevention (e.g., Whoop, Apple), and online help (e.g., WebMD resources for consumers, Roman's direct-to-consumer online care targeting men's health issues). Many consumers globally also turn to over-the-counter supplements, herbal medicine, and traditional healers as substitutes for conventional medicine.

Rivalry Among Existing Competitors

Existing competitors can vie for market share by reducing their prices, offering new versions of their products, enhancing service, and launching advertising campaigns. The greater the rivalry, the greater the limitations are on industry profitability as competitors must sacrifice revenue via lower prices or spend more on product enhancements or advertising to maintain or grow their market share. The extent to which profitability is limited depends on both the intensity of the rivalry and whether the rivalry is based on price competition or differentiation among products and services.

Competitors within an industry or segment compete for existing buyers within a market and to grow the market

by finding new buyers. Price sensitive buyers seek acceptable quality for the lowest cost, inspiring price competition, while other buyers shop for various levels of quality at an acceptable cost, inspiring competition around differentiated quality (e.g., customer service, speed, convenience, durability, luxury, status, experience). In the healthcare industry, buyers have had great difficulty shopping for value because of lack of transparency to allow comparisons of price and quality. In addition, the complexity of healthcare makes evaluation of the quality of care challenging for most buyers. Competitors in the healthcare industry often use nonmarket approaches to protect their turf from competition. This includes competing over legislation regarding price controls and transparency, marketing of drugs and other health products, and scopes of practice—for example, who can diagnose conditions and prescribe medications. Fraud and corruption as nonmarket strategies are unfortunately not uncommon in healthcare in the competition for buyers. These unethical organizations often prey on price-sensitive buyers who do not have the capacity to meaningfully compare healthcare options based on quality.

Porter's Framework in Action in the Healthcare Industry

Governments play a major role in shaping the competitive forces of healthcare within nations, and differences in this role provide opportunities for comparative analyses. Nations vary in the extent to which public funding is provided for healthcare, whether all citizens have health insurance coverage, the benefits and services that are covered, to what extent prices are set and how they are set, whether providers are public or private and for profit or nonprofit, and the extent to which new treatments are developed and available. In their 2020 review of 20 countries, the Commonwealth Fund provided a detailed comparison of healthcare systems and insurance coverage and financing. The report indicated that only two nations studied, India and the United States, do not have universal coverage and provided detailed comparisons of the user fees and safety nets by country. The report provided type of ownership—public or private—of the primary care providers and hospitals, along with comparisons of how they are paid and the extent of gatekeepers in using the facilities. Medical education models—whether medical schools are public or private and whether tuition is charged to the student or subsidized—are also compared by nation in the report.

There is broad recognition that the healthcare system in the United States is the most unique across the diversity of national systems. Healthcare in the United States can be described as lacking in system-ness, as

a fragmented collection of partial systems and independent organizations. The United States is consistently an outlier in terms of its high costs per capita, inspiring efforts to identify the root causes, reduce costs, and improve quality. In 2022, the Organisation for Economic Co-operation and Development (OECD) conducted an analysis to explain the high cost of healthcare in the United States relative to the OECD average and the other Group of Seven (G7) nations of advanced economies. The analysis found that per capita spending in the United States cannot be explained solely by higher income levels, as it remains an outlier after accounting for income. Relative aging across nations partially masks the extent to which the United States is a high-cost outlier, as age adjustments reported by the OECD reveal even greater cost differences between the United States and other nations. The OECD report indicates no simple explanations can be found in differences in lifestyle. While the United States has a higher portion of the population that is overweight or obese, it is among the lowest in portion of the population that smokes daily. The quality of care also does not provide easy explanations, with the United States performing relatively better on effective cancer care and survival and relatively worse on effective primary care in the management of diabetes.

The OECD analysis identifies significant differences between the United States and the other G7 nations in terms of the funding sources of healthcare. In the other nations, approximately three-fourths of healthcare expenditures are funded by government compared with only about half in the United States. In other G7 nations, private health insurance is supplementary, funding less than 15% of healthcare expenditures, compared with funding approximately one-third in the United States, where private insurance is the primary or only health insurance for many. In terms of proportion of per capita spending, administrative costs are particularly high in the United States relative to the other G7 nations, accounting for 8% of expenditures, though completely eliminating this expense would do little to close the total per capita healthcare spending gap. The OECD report documents that the higher per capita healthcare spending in the United States relative to other G7 nations is due to both greater consumption of healthcare and higher prices for that care.

Put into Porter's framework, in other nations, the government buyers are much more powerful relative to the United States. When there is only one buyer—that is, a buyer's monopoly such as single-payer healthcare systems—that buyer has tremendous power over the healthcare suppliers to drive down supply prices to whatever it wants and to limit consumption by restricting what it will buy. The only options for suppliers in response are to accept the reduced income, cut expenses, or exit the market. In the United States, where physician income is significantly higher than in other countries, the cost of medical school tuition has soared, so accepting reduced income makes it more difficult for the physician to achieve return on that educational investment. With lower income, cutting expenses is another option, though doing so without jeopardizing quality

of care may be challenging. Barriers to exiting the healthcare market, specifically the specialized nature of healthcare resources that cannot be easily repurposed in other industries, would likely keep some incumbents in the market accepting lower income, while other incumbents would likely dissolve, and new entrants would be discouraged from entering the market. In response to the suppliers' actions, the single buyer might choose to increase the price they will pay to prevent a decline in quality or availability of healthcare suppliers. The buyer might also seek substitutes for traditional healthcare (e.g., substitute lower cost practitioners who have less training for more highly trained and expensive physicians). Finally, the monopoly buyer might enter the market itself as a healthcare supplier (e.g., establish and operate public hospitals, clinics, pharmacies, and pharmaceutical manufacturers). The only other check on the power of a single government buyer of healthcare is the voting power of the public in nations that hold free and fair elections.

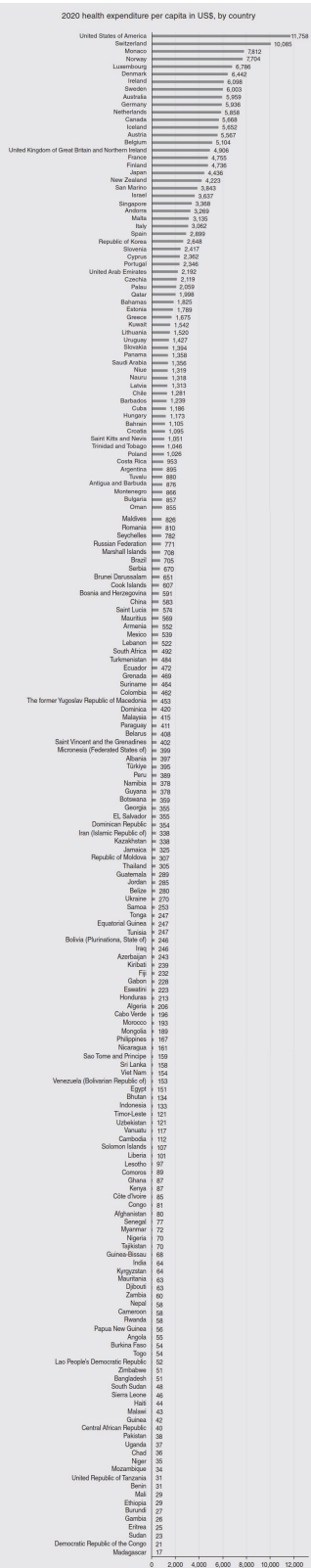
In the United States, the federal government is a powerful buyer, but it is not the only buyer of healthcare. However, as it continues to struggle to sustain its insurance programs in the face of an aging population and federal deficits, it is increasingly exercising its buying power. In response, healthcare suppliers have increasingly consolidated into large healthcare systems (e.g., growing into larger hospital, clinic, and pharmacy chains) and other large companies (e.g., pharmaceutical companies and healthcare technology companies) to increase their power in negotiating prices with the government and other large buyers. These larger suppliers are demanding even higher prices from private insurance buyers to make up for cuts by government buyers. Some providers are refusing to accept patients with certain federal insurance, both Medicaid and Medicare, due to the low prices they pay. Private insurance companies then, which are also consolidating to increase their buying power, are passing along the higher prices they are paying healthcare suppliers to the employees and employers in the form of higher health insurance premiums. These higher health insurance premiums translate to higher business expenses for employers across all industries and lower discretionary income among their employees, which harms the U.S. economy.

Sizing Up the Healthcare Industry

In 2022, the World Health Organization stated that healthcare spending hit \$9 trillion in 2020, representing 11% of the global gross domestic product. The United States accounted for nearly half of those expenditures at \$4 trillion, and high-income countries combined accounted for more than 80% of global healthcare expenditures. High income countries spend significantly more than other countries as a percentage of gross domestic

product and as a percentage of government spending. On a per capita basis, healthcare expenditures in the United States were more than twice that in Canada, with only Switzerland close to the U.S. amount at 86% of U.S. per capita expenditures. The United States also has the highest health expenditures as a percentage of gross domestic product at 19% compared to Switzerland at 12% and Canada at 13%. [Figure 1](#) shows the dramatic variation in per capita healthcare expenditures by country according to the World Health Organization's Global Health Expenditure Database.

Figure 1 Current Health Expenditure Per Capita in USD in 2020



Source: WHO, the Global Health Observatory Indicators: Current Health Expenditure per capita

in 2020 (<https://www.who.int/data/gho/data/indicators/indicators-index>)

Cost, however, is only one side of the value equation. Healthcare quality indicators cover a broad range of important topics, including prevention and management of disease, mortality rates for surgery and medical conditions, overuse and underuse of medical procedures, patient safety, coordination of care, end-of-life care, patient experience, care team member satisfaction, health equity, and innovation. While debates around the challenges of measuring both cost and quality will continue to be complex, the demand for better healthcare value, particularly in the United States, has become clear.

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