CHAPTER

1

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.

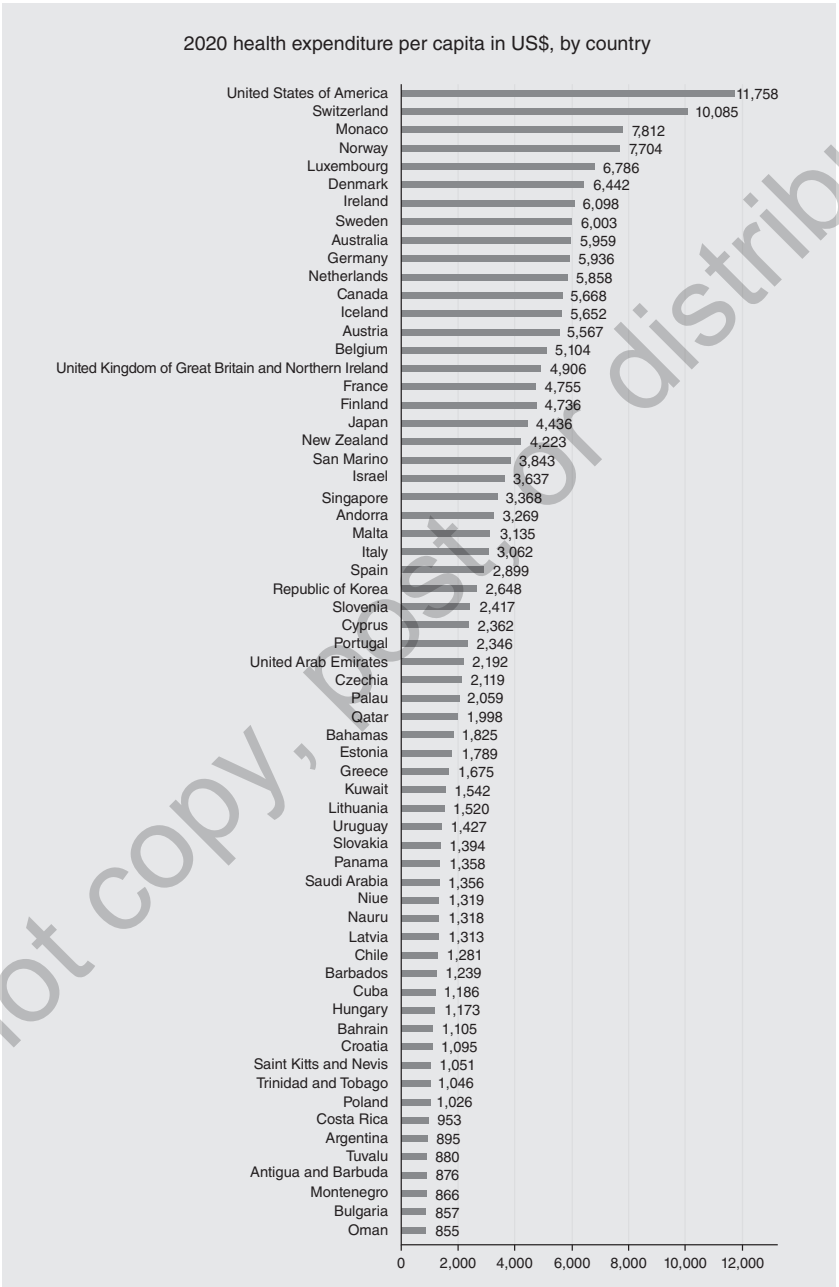
Barriers to exiting the healthcare market, specifically the specialized nature of healthcare resources that cannot be easily repurposed in other industries, would likely keep some incumbents in the market accepting lower income, while other incumbents would likely dissolve, and new entrants would be 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

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)

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.

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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CHAPTER

2

The Healthcare Market

Barriers to Entrants

If a company like Amazon—with vast access to capital, technology capabilities, and business acumen—cannot easily enter the healthcare market, the barriers to entry are significant, making the threat of entry a relatively weak force for healthcare incumbents. In 1999, just two years after its initial public offering, Amazon first attempted to enter the healthcare market by purchasing a 46% stake in drugstore.com and selling its over-the-counter products via Amazon's online store. However, as a step toward entering the prescription drug market, Amazon's first effort failed due to challenges dealing with the myriad of complicated regulations, logistics, and existing business partnerships that became stronger in the face of an outsider like Amazon. In 2011, prescription drug retailer incumbent Walgreens acquired drugstore.com, paying a 102% premium for the company, and then shut it down just a few years later to focus on making improvements to its own website Walgreens.com. While the premium purchase and shutdown marked a financial loss for Walgreens, the strategic gain was the elimination of its online competitor drugstore.com and of Amazon's ability to leverage the company to enter Walgreen's prescription drug market turf.

From the perspective of healthcare incumbents, the threat of entry is both from large corporations like Amazon wanting to move in and from new startup companies like drugstore.com. Just two years before Walgreens shut down its drugstore.com threat, PillPack launched as a new, independent pharmacy aiming to take market share from Walgreens and other big retail pharmacy chains. PillPack is known for its online ordering and home delivery of medications in presorted pill packets, each of which is marked for a specific day and time with support from a medication reminder app. By the time drugstore.com was closed, PillPack was operating in 48 U.S. states. According to PillPack cofounder and then-CEO TJ Parker, they launched the online pharmacy to transform the process of managing medications for those who take them regularly. Their goal was to streamline not only the daily process of sorting and remembering which pills to take when but also the process of getting the prescriptions filled by seamlessly connecting with prescribers and health insurance companies to ensure the patient always has a supply of the medications they need with the convenience of home delivery.

In 2018, Amazon outbid Walmart—a major existing competitor and pharmacy incumbent—to purchase PillPack for nearly $1 billion, causing major declines in shares of Walgreens, other chain retail pharmacies, and pharmacy middlemen (e.g., pharmacy benefit managers and wholesalers) due to concerns about the potential for Amazon to disrupt the pharmacy market and its supply chain. Nearly 20 years after Amazon first attempted to enter the prescription drug market via drugstore.com, Amazon was in with PillPack. Their acquisition of the company allowed Amazon to enter the market much faster relative to building their own in-house online pharmacy. While this purchase made entering the market quick, Amazon still faced complex healthcare regulations and a network of complicated relationships between established incumbents that threatened the success of its new pharmacy business.

However, Amazon's goal was not the success of its pharmacy business; its goal was the success of its business more broadly, and PillPack was just a first step into healthcare toward that goal. A year later, Amazon launched Amazon Care, a healthcare service for its employees that was built in-house as part of Amazon's Haven venture with Berkshire Hathaway and JP Morgan. Amazon Care outlasted Haven, but not for long. It was launched for employees in the Seattle area, offering virtual urgent care and consultations as well as in-person visits and delivery of prescription medications to the employee's home or office.

Amazon Care expanded rapidly to offer in-person care in multiple cities and telehealth services in all 50 states landing contracts with Hilton and other corporations to offer the Amazon Care benefit to their employees. However, three years after the launch of the Amazon Care pilot, Amazon shut it down and announced the acquisition of primary care provider One Medical for nearly $4 billion. Specifically, Amazon indicated that its Amazon Care service was not comprehensive enough for its employer customers. Amazon's abandonment of its internally built outpatient service in favor of buying one underscores the benefits of the acquisition approach as the most viable way to deal with barriers to entry for healthcare industry outsiders.

Amazon's aggressive push into healthcare with the purchase of One Medical—a topic further addressed in the first business case in Chapter 9—has raised many questions about where it might be headed next. Amazon's pharmacy and primary care investments do not include suppliers of the sector that consumes the largest share of the U.S. healthcare expenditure—hospital care—which accounts for about one-third of the annual $4 trillion total spending. Yet Amazon's moves have sent a strong reminder to healthcare incumbents that the barriers to entry are not impenetrable. This section dissects these barriers that protect incumbents and daunt any organization aiming to enter the healthcare industry. Identified by Porter, these entry barriers give incumbents a competitive advantage by making it difficult for potential new competitors to enter the market.

Economies of Scale in Production

In any industry, larger businesses have a competitive advantage because they can produce at a lower per-unit cost than smaller businesses—this is also known as supply-side economies of scale. Production costs can be divided into fixed costs and variable costs. Fixed costs are those that don't change with the volume produced (e.g., buildings, equipment, management salaries). Variable costs change with volume and include the cost of the raw materials and the product/service workforce (i.e., the workers who turn raw materials into finished products or provide services). Organizations that produce larger volume have lower costs per unit because they are spreading out their fixed costs over more units. Greater volume also means better negotiating power in the purchase of supplies needed for production as well as more opportunities to use more efficient technologies in the production process. This barrier requires new competitors to either enter the market with economies of scale in order to be cost competitive or to compete on differentiation.

In the healthcare industry, the economies of scale are a barrier to entry across major segments. In 2023, the Drug Channels Institute reported that in the retail pharmacy market, CVS and Walgreens continue to dominate with a combined total of about 41% of the total U.S. prescription dispensing revenue in 2022. The top 15 companies claim 76% of the market share. Amazon is not among the top 15, the smallest of which has less than a half-percent of the market share. Amazon does not have local community pharmacies unlike its major retail competitor Walmart, which was among the top 15 pharmacies with 4% of the market share of prescription revenue in 2022. With mail order as the only option, some customers might be reluctant to switch to Amazon's pharmacy if they prefer the simplicity and flexibility of using one pharmacy with both virtual and in-person options.

The economies of scale are so essential in the retail pharmacy market that Target's nearly 2,000 stores were not enough to stay viable in this market. Despite $4 billion in annual sales, Target's pharmacy business was losing money, so in 2015, Target announced it was selling its pharmacy business to CVS, which had nearly 8,000 stores at the time. CVS thus leveraged and expanded its vast economies of scale in its drug supply chain with the purchase of Target's pharmacies while also eliminating Target as a competitor in the pharmacy market.

Although the massive retail chains CVS and Walgreens have put many pharmacies out of business, particularly small independent pharmacies, by leveraging economies of scale, some small community pharmacies continue to thrive on a differentiation strategy. They offer specialized niche products and services not offered by the chains, and often have customers referred to them from the chains. PillPack demonstrated that a small independent pharmacy not only can enter the market but also can grow into

a national competitor through a differentiation strategy, such as PillPack's unique customer-friendly packaging and mobile app.

With PillPack, Amazon's move into primary care services reflects a widespread acceleration of national pharmacies growing their economies of scale from prescriptions to prescribers. To address stagnant growth, Walgreens acquired a majority stake in VillageMD, a primary care clinic chain, with the plan to attach clinics to hundreds of Walgreens pharmacies. Meanwhile, CVS announced a deal to purchase Oak Street Health, a company specializing in primary care for older adults with over 100 locations across the US, for $10.6 billion.

The moves by these major pharmacy players have been part of a larger trend in the consolidation of outpatient medical care, which used to be delivered largely by solo and small local group practices. In 2021, The American Medical Association reported that the percent of physicians working in private practice—defined as a practice that is wholly owned by physicians—dropped below 50% for the first time in 2020. The percent working in a practice partially or wholly owned by a hospital increased to more than 30%, and the percent working in a practice owned by a private equity firm—an emerging trend—has increased to more than 4%. Regardless of ownership, the increasing importance of economies of scale as a barrier to entry continues to be seen in physician practices. The percent of physicians working in a practice with fewer than five physicians dropped to one-third in 2020 (from 49% in 2012), and those working in a practice with 50 or more physicians grew to 17%—up from 12% in 2012.

The increase in hospital ownership of physician practices is part of the trend in hospital consolidation aiming for economies of scale. Hospitals, like physician practices and pharmacies, used to be mostly single independent entities serving their local communities. Definitive Healthcare reported that, as of 2022, only 20% of hospitals are independent—that is, not part of a healthcare system or network—while the existing healthcare systems continue to grow through mergers with and acquisitions of more hospitals and physician practices. Mergers and acquisitions in other segments of the healthcare industry—from health insurance to drug development and manufacturing to home health, hospice, and other health services—also reflect the drive toward achieving greater economies of scale in production that protect incumbents.

Network Effects

The other side of the economies of scale in production (which increase an organization's capacity to compete on cost by reducing per unit production cost) are network effects, otherwise known as demand-side economies of scale. Network effects are the increases in the value of a product or

service to users or buyers that are due to increases in the number of users or buyers. This can occur, for example, when a large company becomes recognized as a trusted brand, which drives more users. In 2022, Newsweek reported that among retail pharmacy chains, CVS has both the largest market share and is voted by consumers as being the most trusted brand in the United States. Walgreens comes in second place, both in market share and consumer trust.

Examples of network effects in e-commerce include Amazon and eBay, both of which rely on platforms that connect buyers and sellers and become more valuable to users with the increased number of users. Increases in users can add value in e-commerce by increasing the number and sources of products available for purchase as well as by adding more information to guide purchases via customer ratings and comments about products. Social media companies rely heavily on network effects. Increases in the number of Facebook and LinkedIn users, for example, enrich the user experience. Network effects can be very powerful barriers to entry once incumbents have captured sufficient market share in segments where market share itself, as with social media and e-commerce companies, is a key part of the value proposition to customers.

These network effects that have helped to create big technology *platform companies* and protect their market share from new entrants can be leveraged as they move into other sectors. As Amazon begins to penetrate the barriers that have thwarted its efforts to enter the healthcare industry, it will aim to use its platform to capture sufficient market share such that the network effects become a key barrier that will reduce the threat of other entrants. This approach is evident in its purchase of PillPack, whose cofounder and then-Chief Technology Officer Elliot Cohen described PillPack's PharmacyOS software on which the company operates: "PharmacyOS is more than a rethinking of a pharmacy system. It truly represents the early stages of a platform that over time will create a radical shift in chronic care management."

Investments in platform companies in healthcare are expected to continue to grow because they offer solutions to many key problems in the industry. In particular, these companies are expected to erect new barriers to entry due to the network effects from eliminating inefficient middlemen in the healthcare supply chain, improving access to healthcare knowledge and expertise, and improving transparency to enhance consumer decision making around pricing and quality. While critical mass to realize these benefits is difficult to achieve, particularly in the healthcare industry, the platform companies that get there first will make it very difficult for others to enter.

The healthcare industry is in the early stages of being radically transformed by e-platforms that connect healthcare providers, health insurance companies, and consumers in a way that adds value to all those who use

it. Companies that create and operate these healthcare platforms and successfully grow the number of users to a critical mass will benefit from the network effects that increase barriers to entry. This will allow them to grow their healthcare business through use of the platform by diverse healthcare participants rather than through mergers and acquisitions. Incumbents that invest in the creation of healthcare platforms will not need to control more of the supply chain through vertical integration.

Amazon has grown into a retail giant, not by acquiring all the suppliers that use its platform, but through the creation and operation of a user-friendly retail platform that is beneficial to buyers and suppliers. When the strength and competitive advantage of network effects as a barrier to entry are understood, it becomes quite easy to imagine that Amazon's PillPack Pharmacy OS acquisition, Haven venture, Amazon Care program, and One Medical acquisition have been key efforts to find and develop the right platform to reach that critical mass in the healthcare ecosystem. Network effects are not currently a significant entry barrier, but as big technology companies move in, they will be.

Customer Switching Costs

Switching costs are the fixed costs—in money, time, effort, and/or psychological cost—when a customer switches from one supplier to a competitor. These can serve as barriers that help lock in customers when a company offers a unique enough product or service and that help lock out new entrants. However, companies that offer equivalent products to their competitors will typically have low switching costs (and low barriers to entry), particularly as the internet makes the cost of comparing and switching even lower. Exit fees, such as an administrative fee for closing an account or an early termination fee, are used by some companies to reduce switching. Companies can also increase switching costs by making it a hassle to switch, such as needing to wait in line or complete paperwork. Costs of switching also may include additional investment of time to learn how to use a new product after switching. Companies with equivalent products can increase switching costs by offering convenience (e.g., number of locations or ease of buying products) that customers would lose by switching to an otherwise equivalent competitor. Finally, companies that build strong relationships and trust with customers make it more difficult for customers to switch due to the emotional and other psychological costs (e.g., sense of risk) from switching.

In the prescription drug market, patents and market exclusivity provide a period of legal restrictions against competition, allowing the pharmaceutical company that developed the drug to maintain higher pricing. This period of market exclusivity provides incentives for drug companies to invest in research and development. At the end of this period,

generic drug companies can legally enter and begin competing, offering much lower prices for an equivalent drug. Sometimes the brand name drug company will offer incentives—such as copay assistance programs—to entice patients not to switch to the generic drug after market exclusivity ends. Some patients might also experience psychological costs of switching to a generic to the extent that they have a sense of trust in the brand name company.

However, organizations that bear at least some of the risk for managing drug costs have Pharmacy and Therapeutics (P&T) committees that facilitate switching from brand to generic when available. These committees continuously review and evaluate new drugs approved by the FDA as well as available generics and maintain a preferred drug list (i.e., *formulary*) based on cost-effectiveness. This results in higher out-of-pocket expenses for patients who want to continue taking the brand name drug rather than switching to the generic. Thus, switching costs implemented by brand name companies are generally not a significant barrier to generic companies entering the market. As Amazon Pharmacy grows as a healthcare platform, its tools that allow customers to more easily compare prescription drug prices will likely further lower the switching costs as a barrier for new entrants.

In the healthcare industry, a more significant switching cost that serves as a barrier to entry pertains to consumer choices in selecting a health plan and healthcare providers. This has been studied in countries where there is competition in health insurance markets, such as the United States and Switzerland. In the United States, there are generally low rates of customers switching health plans (both within or between insurance companies) and even lower rates of switching to a different insurance company. Medicare Advantage plans for older adults in the United States are offered by private companies under Medicare rules that limit the amount of annual out-of-pocket costs for patients, though typically require patients to use healthcare providers who are part of the plan's network. For patients with Medicare Advantage plans, there are higher switching costs when a patient chooses a different insurance company due to the structure of the Medicare program. Specifically, the high number of choices of plans (even with limited number of insurance companies) means significant complexities in comparing plans across companies, making the decision to switch to a different company particularly time-consuming and potentially risky. In 2020, Adam Atherly and colleagues sampled beneficiaries with a Medicare Advantage plan and found that the beneficiary needed to be compensated $233 per month on average to switch to a different plan with the same insurance company and $1,107 per month to switch to a different plan with a different company.

In Switzerland, the government requires that all residents purchase health insurance from private nonprofit companies. In addition, residents may purchase supplemental private insurance for services that are not covered by the mandatory health insurance. This supplementary insurance

gives residents access to a greater choice of physicians and the ability to obtain better accommodations in hospital settings. According to a 2020 report by Karine Lamiraud and Stadelmann, analysis of consumer behavior in Switzerland indicated that low-priced supplemental insurance products are important in the health insurance market both in attracting customers and in keeping them from switching to other companies. Again, the complexities of the health plans and lack of access to user-friendly comparisons across insurance options and companies is considered a significant cost of switching in the Swiss health insurance market.

The importance of comparative information in overcoming switching costs is also apparent in a study of consumer choice of a primary care provider. Enrollment in Sweden's universal health system is automatic, and provider fees and patient copayments are set regionally. In 2021, Anders Anell and colleagues published research on two large field experiments, in which participants were randomly selected to receive information sent out via mail by the regional healthcare authority, which contained comparative information on the accessibility, quality, and available services of the individual's primary care provider as well as the provider's three geographically closest competitors. In addition, a subset of those participants received a prepaid choice form to make it easy to choose a new provider if desired. The results indicate that those who received this intervention were significantly more likely to switch providers.

The cost for consumers to switch providers is a significant barrier to entry for new competitors, largely because there is a lack of user-friendly information about the choices available. Switching providers also costs the consumer time in transferring their medical history from one provider to the next. These barriers of complex choices, limited consumer access to information to support informed decision making, and medical record management are just the types of problems platform companies like Amazon may solve by creating more consumer-friendly healthcare ecosystems.

In the United States, the Affordable Care Act launched a health insurance exchange system that gives consumers easier access to individual health insurance, including the ability to compare plans within and across health insurance companies via a national website. New entrants have increased with this exchange system, likely due at least in part to the reduced uncertainties of switching. Research by the AMA in 2023 further supports the effect of the health insurance exchange on reducing barriers to entry for new health insurance plans to enter new markets. Their analyses indicate that larger health insurance companies have generally gotten smaller, while smaller companies have grown.

Healthcare incumbents that have previously benefited from the switching costs incurred by consumers—in time, effort, and risk—will continue to face a stronger threat of entry as more user-friendly information becomes available to help consumers compare options.

Capital Requirements

Large capital investments needed to compete can be a significant barrier to entry; however, to the extent that investments are likely to provide an adequate return, the capital requirement barrier is not as significant. The healthcare industry, though very labor intensive, has major capital requirements to compete in certain areas, including fixed facilities and equipment (e.g., hospitals, drug manufacturing plants, research and development laboratories). Pharmacies and the pipeline that supplies them need to maintain adequate drug inventory to meet the demand for prescription medications, and pharmaceutical research companies need major capital investments to develop new drugs. In 2020, Olivier Wouters and colleagues reported that, based on an analysis of new drugs and biologic agents approved by the U.S. Food and Drug Administration, the median capitalized cost to bring one new medicine to market is $1.1 billion, including the cost of failed products. In the insurance industry, regulators set the minimum amount of capital required to support operations and write coverage. In the U.S. healthcare industry, insurance companies must maintain a minimum surplus (i.e., assets minus liabilities) level per regulations. Most health insurance companies maintain a surplus level well above this minimum required.

In 2019, Deloitte reported findings from their analyses of return on capital in the healthcare industry by segment as a measure of efficiency in turning capital investments into profit. They measured return on capital as the ratio of earnings before interests and taxes to capital employed, with capital employed measured as total assets minus current liabilities. They found that hospitals have the lowest return on capital (about 6%). In the medtech sector—composed of companies that create tools to diagnose or treat patients, such as magnetic resonance imaging, microscopy, implantable medical devices such as pacemakers, and dialysis machines—the return on capital was approximately 10% in 2017, down from 14% in 2011. Health insurance companies and pharmacy benefit management (PBM) companies—which manage prescription drug benefits on behalf of insurance companies by negotiating contracts with drug manufacturers, wholesalers, and retail pharmacies or their agents—have a 12% return on capital. Return on capital among pharmaceutical companies dropped from over 16% in 2011 to 12% in 2017, among drug wholesalers from 18% to under 15%, and among pharmacies from under 20% to almost 18%.

The Deloitte authors note that pharmacies and wholesalers tend to have lower profitability and slim margins relative to other healthcare industry segments, particularly compared to the pharmaceutical and medtech life sciences companies that advance medical innovations. Yet because they have lower capital requirements, pharmacies and wholesalers demonstrate higher relative return on capital. Life sciences

companies, which have very high capital requirements to innovate and develop new products, experienced the greatest decline in return on capital between 2011 and 2017.

Companies with a focus strategy tend to have higher return on capital performance; for example, return on capital was 17% among pharmaceutical companies specializing in a therapeutic area compared to 9% for diversified companies. Generics-focused and primary care–focused pharmaceutical companies were similar to diversified companies in return on capital performance. Medtech companies with a specialty focus also outperformed those with a diversified portfolio, with 11% return on capital versus 9%. Similarly, specialty hospitals tended to outperform general hospitals.

Although return on capital has declined across most healthcare segments, the healthcare industry continues to be attractive for investors. In 2022, Sharon Fry and colleagues reported that the internal rate of return on private equity deals in healthcare has increased over the past two decades, and the median rate in the healthcare industry is 27% compared to 21% across all industries. This robust performance indicates that, even where capital requirements in the healthcare industry are significant, they are not likely to be a major barrier to entry.

Incumbency Advantages Independent of Size

Porter described several ways incumbents can have cost or quality advantages that are not available to new entrants and not dependent on company size. These include proprietary technology, special access to raw materials, special geographic location, established brand identity, and production experience. A key advantage CVS and Walgreens had over aspiring entrant Amazon, despite its scale, was deep pharmacy industry experience. Successful entrant PillPack had no scale at startup but did have two generations of pharmacy experience on its core team. PillPack's CEO and pharmacist TJ Parker not only learned the traditional pharmacy business working in his father's pharmacy, but he also recruited him to serve as vice president of pharmacy for PillPack. Father and pharmacist Lenny Parker started Northeast Pharmacy, which delivered medications to nursing homes and assisted living facilities. Lenny joined his son after TJ and PillPack cofounder Elliot Cohen won a Boston hackathon pitching their concept for a new pharmacy model. The PillPack team then leveraged this experience and invested heavily to develop proprietary software (PharmacyOS) to streamline and automate the complexities of managing prescription renewals, billing insurance, obtaining authorizations from providers, and

sending notifications to customers. This customer-friendly proprietary software created by experienced industry insiders was a barrier to others entering the market, making it the right acquisition target for Amazon to enter the market with a differentiation strategy it could further protect through scaling.

Brand identity can also be a powerful barrier to entry in the healthcare industry. When Walgreens registered to do business in Hawai'i in 2004, the state's leading pharmacy chain was California-based Longs Drug Stores, which had more than 500 stores across several states. Walgreens' first Hawai'i store opened in 2007 as part of its aggressive national expansion, putting additional market share pressure on Longs, which was already experiencing competition from Walmart and Safeway. In addition, there were rumors that Target—which had been registered to do business in Hawai'i since 1999—was looking for store locations to enter the Hawai'i market across the islands.

Longs had nearly 40 stores in Hawai'i and a 50-year history of doing business in the state when CVS acquired the regional chain less than two years after Walgreens opened its first Hawai'i store. CVS converted the hundreds of stores in Longs' home state of California and in other states to the CVS brand but kept the Longs brand for its Hawai'i stores. This was because of the strong Longs brand identity and loyalty among customers in Hawai'i, where Longs was considered local despite its headquarters being located in California.

While Target entered the Hawai'i market in 2009, adding to the pharmacy competition in the state, CVS continued to grow its Hawai'i market share by leveraging the Longs brand. The 50th Longs store to open in Hawai'i was the first to pilot the CVS layout with wider aisles arranged in a different configuration. Yet, CVS maintained the local traditions of the Longs brand in Hawai'i, including opening the store with a traditional Hawaiian blessing and stocking inventory of popular island footwear, local foods, and lei. While there have been some complaints that Longs has lost some of its local appeal under CVS management, the Longs brand has endured. When CVS acquired Target's pharmacy business in 2015, the CVS pharmacy brand became a key feature in Target stores across the United States, except in Hawai'i where the Longs brand was used. Today, CVS owns 61 stores across four counties in Hawai'i, including its Target stores, while Walgreens owns only 13 across two counties.

The power of an established brand identity as a barrier to new entrants is also seen in other segments of the healthcare industry. Many academic medical centers—those owned by or affiliated with a medical school—have brands associated with prestige and innovation. For example, Massachusetts General Hospital promotes its status as Harvard medical school's first and largest teaching hospital where most of the physicians are Harvard

faculty. Academic medical centers do not just deliver care; they advance it through cutting edge research and help sustain it through the clinical training they provide to future generations of healthcare professionals. This tripartite mission, however, has been challenging to manage, particularly when reimbursement models began changing under managed care, leaving academic medical centers at a disadvantage because of their relatively higher cost structure and production inefficiencies.

Challenges of managed care in the 1990s led the MD Anderson Cancer Center at the University of Texas to financial decline, despite its history and national reputation as a top hospital. They were losing business to lower cost community hospitals. After reading Porter's book *Competitive Advantage*, Mendelsohn, a cancer researcher and the hospital's new president, told the *Wall Street Journal* in 2000 that Porter "taught me that you can be Kmart or Saks Fifth Avenue, but you can't be both . . . I decided I wanted to compete on quality." MD Anderson's success demonstrates the applicability of Porter's core concepts to academic medical centers.

MD Anderson doubled down on its quality differentiation strategy by leveraging its brand, investing in national advertising, staff, and customer service, and being an early adopter in the use of the internet to recruit patients willing to travel to get the best care. It also applied its scientific expertise to study ways to improve efficiencies in the clinical processes without adverse impacts on patient outcomes. It found that better quality can also reduce costs by reducing complications and the need for subsequent treatments. Meanwhile, it defended its practices that focused on the best patient care even when it added cost.

Over the years, instead of focusing on patients coming to MD Anderson, it began partnering with hospitals across the nation to bring MD Anderson's clinical care to patients where they live. The MD Anderson Cancer Network partners deliver the same treatment protocols and are held to the same standards of care as those in place at MD Anderson. The benefits to the network partners include rapid implementation of best practice high quality specialty care for their local cancer patients, access to the MD Anderson cancer experts, participation in cutting edge cancer research, and cobranding their facilities with MD Anderson's highly regarded and recognized name and reputation.

This network has expanded the reach of MD Anderson's clinical and research operations, strengthening its brand as a barrier to entry for new entrants in cancer care. This brand also serves to differentiate the quality of care among its partner hospitals as they compete for cancer care business in their respective local communities. Thus, an established brand identity, along with other incumbent advantages independent of size—such as proprietary technology and production experience—are significant barriers to entry that can be leveraged by healthcare industry incumbents.

Unequal Access to Distribution Channels

As described above, the MD Anderson Cancer Network is more than just a branding barrier for new entrants. This network provides MD Anderson with special access to its network partners, which serve as distribution channels through which MD Anderson delivers its clinical care and research opportunities to patients globally. Distribution channels are the steps involved in getting a product or service from its producer to the end customer, which typically occurs through intermediaries, such as wholesalers, distributors, retailers, and the internet.

In the healthcare industry, the service of patient care is typically delivered to the end customer in a hospital or clinic facility by the producer—that is, the clinician. Thus, unequal clinician access to these facilities as distribution channels is a barrier to new clinician entrants. For example, hospitals often contract with physician groups to deliver medical care services in key areas, such as the emergency department (delivered by *emergency physicians*) or inpatient care (delivered by *hospitalists*). Traditionally, these physician group companies were focused on one specialty area—hospitalist companies competed with each other for the inpatient care business, while emergency medicine companies competed with each other for emergency department business. However, some emergency medicine companies began offering these services as an integrated package with hospitalist care. These integrated service companies solve a key hospital problem—the coordination of resources for patients who transition from the emergency department to an inpatient unit. Thus, companies that have developed this more seamless coordination between physician groups can gain better access to hospital facilities, which serves as a barrier to new physician group companies entering the market offering standalone emergence medicine or hospitalist services.

While much of healthcare must still be delivered in person at hospital or clinic distribution channels, the internet now serves as an important new channel for delivering patient care services. The use of telehealth and investments in digital health companies increased dramatically with the COVID-19 pandemic—accounting for nearly one-third of all outpatient visits—as did physicians' comfort level delivering care virtually, according to a 2022 McKinsey report. The internet has reduced barriers to new entrants that have taken market share from traditional channels and have expanded markets by reaching consumers in areas where there are clinician shortages via traditional channels and in rural and remote areas that lack easy access to traditional in-person patient care distribution channels.

The product side of healthcare is dominated by prescription medications, most of which follow the path from the manufacturer through a wholesale distribution company to a pharmacy then to the patient.

According to a 2022 HDA report, approximately 94% (nearly $600 billion) of all pharmaceutical sales were channeled through distributors in 2021. More than 1,300 manufacturers use distributors to deliver their pharmaceutical products to more than 180,000 locations where they are dispensed. As of 2018, AmerisourceBergen, Cardinal Health, and McKesson, the *Big Three* pharmaceutical companies, claimed 95% of the market share. The use of wholesale distributors to supply pharmacies has increased over time as these wholesalers have developed highly efficient methods that consolidate payments to manufacturers (rather than receiving payments from each pharmacy), consolidate deliveries to each pharmacy (rather than having deliveries from each manufacturer), eliminate the need for retailers to have their own warehouses, and perform numerous compliance functions such as verifying licenses, inspecting pharmacies, and monitoring for suspicious orders per federal *know your customer* policy.

As the value distributors provide and the market share they hold have increased, so has their control over access to the primary drug distribution channel. In particular, generic medication manufacturers that do not have a contract with one of the three major wholesale distributors are largely blocked from the market. Thus, incumbents with established contracts have preferential access to pharmacies, an advantage that serves as a barrier to entry for new generic drug companies. Because by regulation generic medications are equivalent to the brand drug in safety and effectiveness, generic drug manufacturers compete on price in their efforts to obtain and retain contracts for market access via wholesalers. With Amazon's purchase of PillPack, access to distribution channels might become more equal if it offers generic manufacturers an alternative to the current three wholesalers as it uses its supply chain management expertise to gain prescription medication market share.

Restrictive Government Policy

Federal and state regulations are a key reason why the U.S. healthcare industry is considered so complicated and why industry outsiders face significant barriers to entry. PillPack's cofounder and founding CEO TJ Parker's ability to navigate this barrier as a new startup entrant was, in part, because he was a second-generation pharmacist. As a teen, Parker worked in his father's pharmacy and delivered medications to customers' homes, which inspired his career choice and his passion to find a better way to help customers who take multiple medications. Parker's experience and credentials guided him in the arduous tasks of getting PillPack licensed to operate in all 50 states in the United States and to earn national accreditation. Amazon gained this regulatory experience when it acquired PillPack and retained Dr. Parker as CEO.

Government restrictions are a significant barrier to entering nearly every part of the healthcare system in the United States. State licensing laws restrict scope of practice among each type of clinician (e.g., physicians, pharmacists, nurses, psychologists). State *certificate of need* laws restrict the creation or expansion of healthcare facilities while federal regulation now prohibits the establishment of new physician-owned hospitals and prohibits the expansion of existing physician-owned hospitals. Likewise, state and federal regulations establish requirements for health insurance companies. Federal *conditions of participation* and *conditions for coverage* determine standards hospitals, clinics, and other healthcare organizations must meet to participate in Medicare and Medicaid programs—the largest healthcare payers in the United States. Federal regulations govern every step of bringing a new drug to market, from preclinical testing in animals, to testing in humans, to what must be included in advertisements, and federal regulations require health information technology to meet industry-specific privacy and security standards.

Local restrictions are a barrier to entry across intranational markets, and national restrictions are a barrier to entry across international markets. Internationally, healthcare systems differ in key structural ways that restrict new entrants, including policies that determine who has health insurance and who owns the care providers. Some governments require all residents to have health insurance or pay a fine. In countries or regions where health insurance is universal and provided by a single payer, private insurers face a solid barrier to entry and can only enter the supplemental plan market. In countries or regions where the government provides insurance, owns the facilities, and employs the clinicians, there are solid barriers that deter new healthcare providers from entering the market.

The United States has a mixture of all these models with both government-funded and private insurance options. The Patient Protection and Affordable Care Act (also known as "Obamacare") mandated that all residents have insurance or pay a fine for the first time in U.S. history. However, in 2017, the fine was removed. Michelle Doty and colleagues' 2020 international survey of physicians in 11 high-income countries demonstrated that there is fragmentation in the U.S. healthcare industry in primary care settings. U.S. physicians reported the lowest levels of receiving timely information from other providers that is needed for managing care, conducting home visits themselves or through a member of their team, and having an after-hours care system for their patients to avoid use of the emergency department when nonemergency care is needed.

While this lack of a coordinated healthcare system has created many problems, the lack of federally mandated single system means that government restrictions as a barrier to entry into the healthcare market are significantly weaker in the United States relative to other countries. In fact,

there are examples where the U.S. government has advocated for reducing state-level barriers to entry or implemented policy changes at the federal level to reduce barriers.

Certificate of Need (CON) laws are a major barrier to entry. Over half of all U.S. states and Washington D.C. continue to have CON laws, which require state approval before establishing new major healthcare facilities or expanding existing facilities, a significant deterrent to new hospitals and other healthcare facilities entering the market in those states. While the original intent of these laws, which vary by state, was to control costs, there is little evidence that CON laws have served this purpose.

In 2008, the Antitrust Division of the U.S. Department of Justice and the Federal Trade Commission issued a joint statement on "Competition in Health Care and Certificates of Need" before the Illinois Task Force on Health Planning Reform that was convened to evaluate Illinois' CON program and identify recommended changes to improve the healthcare system in the state. The federal joint statement included several arguments against CON laws. They stated that CON laws harm consumers by protecting healthcare incumbents from potential new competitors offering better value—that is, higher quality, lower prices, or both. The statement said these laws "impede the efficient performance of health care markets" because they "undercut consumer choice, stifle innovation, and weaken markets' ability to contain health care costs." Another argument against CON laws relates to payment model changes. As described further in Chapter 3, the payment model for hospitals changed dramatically in 1983 from paying hospitals based on their cost of care to paying them a fixed amount per hospital admission. The federal joint statement explains the historical link between healthcare payment models and CON laws, which were designed to prevent further increases in healthcare costs. In their joint statement, the federal agencies posited that these laws are no longer justified under current payment models because healthcare payors no longer reimburse on a cost-plus basis. Furthermore, the claim that CON laws help control healthcare costs is not substantiated. The joint statement noted that "the best empirical evidence shows that 'on balance . . . CON has no effect or actually increases both hospital spending per capita and total spending per capita,'" concluding that these laws have not fulfilled their intended purpose.

The joint statement reported that CON laws facilitate the use of harmful nonmarket approaches to securing market share, including tactics focused on protecting turf rather than increasing value to customers, unethical soft corruption reflecting abuse of power afforded under CON laws, and even illegal forms of corruption. Several organizations were found to have exploited the CON process to prevent new competition from entering the market and to protect their own revenues. In one example, the agencies noted in their joint statement that a member of the Illinois board

that approved a hospital CON was convicted for accepting a kickback from the construction company that benefited from the approval.

The two federal agencies that authored the compelling arguments against CON laws support repealing them to remove this barrier to entry that deprives consumers from the benefits of competition. They concluded their statement by urging the state of Illinois to consider the net harms of their CON laws relative to their purported benefits. In 2008, the Illinois Task Force on Health Planning Reform recommended that the CON state laws be continued, with a goal to ensure "a predictable, transparent and efficient CON process."

Today, facilities regulated under Illinois' CON laws continue to include, hospitals, long-term care facilities, dialysis centers, ambulatory surgery centers, alternative health care delivery models, free-standing emergency centers, and birthing centers. Illinois state legislation enacted in 2019 added the requirement of CON approval for *closing* a healthcare facility, creating a new barrier to *exit*. Exit barriers keep struggling organizations in a market longer than they would otherwise stay, which, as Porter noted, causes harm to the healthy organizations in the market.

While CON laws remain as state-level barriers to new and expanded healthcare facilities, some federal government policies reduce these barriers. In rural areas where there is less access to care due to insufficient population size to sustain a hospital, federal laws support critical access hospitals entering these markets through cost-based reimbursement subsidies. In addition, federal laws allow cost-based reimbursement subsidies for designated Rural Health Clinics and Federally Qualified Health Clinics. Federal laws and funding also subsidize the development of new drugs and other treatments by funding biomedical research via the National Institutes of Health (NIH). This funding helps reduce barriers to new companies entering the market by reducing the capital investments required to develop treatments. In 2022, Berna Uygur and colleagues observed that early-stage companies that receive funding from or collaborate with the NIH National Cancer Institute are more likely to have a successful exit (e.g., be acquired, merge, or issue an Initial Public Offering) and less likely to file for bankruptcy or be dissolved compared to other companies.

In another example, U.S. legislation has been proposed to address the physician shortage by reducing a significant barrier to new physicians entering the market—completion of clinical training. While the number of medical students in the United States has increased, the residency slots available to provide the required clinical training for medical school graduates to practice medicine independently has not kept up. The federal government pays teaching hospitals for providing graduate medical education to physician *residents* (i.e., those who have completed medical school and are in clinical training) but caps the number of federally

funded resident slots at each hospital. These caps, along with challenges finding other funding sources for these residency slots, have created a bottleneck in new physicians available to enter the market. Bipartisan legislation proposes to increase these caps, particularly in areas with significant physician shortages. Thus, government policies can and do increase and decrease the barriers to new entrants across all segments of the healthcare industry.

Expected Retaliation

Porter (2008) notes that potential entrants' expectations of retaliation by incumbents—which can be based on observation of responses to previous entrants—can be a barrier to entry if these expectations dissuade entry. If there is little growth in the industry, potential entrants might expect greater retaliation by incumbents who stand to lose more market share. Incumbents threatened by a new entrant might cut their prices to make it difficult for the newcomer to compete on price. Incumbents with special relationships with suppliers and customers might leverage those ties to try to squeeze out the new entrant.

Large incumbents tend to be slower and less aggressive in retaliating against new entrants. The CEOs of both Walgreens and CVS reported not being worried about Amazon's purchase of PillPack, yet after Amazon became their new competitor, the two big retail chain pharmacies began showing signs of retaliation by rejecting customers' requests to transfer their prescriptions to PillPack, claiming PillPack did not obtain proper consent. In 2019, CNBC reported that PillPack's spokesperson, Jacquelyn Miller, responded: "While incumbent pharmacies may be disappointed in the loss of business, it is unacceptable to make unsubstantiated allegations about PillPack's practices while simultaneously creating systemic barriers that make it harder for a customer to switch pharmacies."

While PillPack was on a mission to compete with the big retail pharmacies, smaller entrants can reverse retaliatory tendencies of larger incumbents by entering with complementary products and services that benefit the incumbent. Small independent pharmacies often complement retail chains by offering products and services not offered by the chains. Then, these pharmacies can share rather than fight over customers in ways that benefit them both.

Barriers to entry impact organizations in the healthcare industry globally. Despite the number and complexity of government policies in the United States, the U.S. healthcare industry has fewer impenetrable barriers relative to other countries. Thus, potential new for-profit and nonprofit entrants, both large and small, will continue to take aim at this large market.

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