

Competition and institutional forces in health care

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3 Competition and Institutional Forces in Healthcare

The Case of the Netherlands

Daan Westra and Federica Angeli

Introduction

In many developed countries around the globe, healthcare constitutes a major source of expenditure. The most recent statistics of the Organisation for Economic Co-operation and Development (OECD) indicate that OECD countries spend on average 9% of their Gross Domestic Product, approximately US\$186 billion per year on health. This includes all health-related activities such as preventive services, curative and rehabilitative care, and long-term care. On average, three-fourths of the expenditure (i.e., 6.5% of GDP) is financed from compulsory, or government-funded, schemes and the remaining 25% consists of voluntary and out-of-pocket payments (OECD, 2017). The share of GDP countries spend on health has furthermore increased steadily over the past two decades. In 2000, for example, the average OECD country spent approximately 7.2% of its GDP on health, which has risen to 9% in 2016. Gaynor et al. (2015) even calculate that if the US healthcare system would be an economy on its own, it would constitute the sixth largest economy in the world. It would only be surpassed by the economies of the US as a whole, China, Japan, Germany, and France, but it would exceed that of countries such as the UK, Italy, and Russia.

The high and increasing amounts of expenditure on healthcare compel nations to design their healthcare systems in the most efficient way possible. The stakes are simply too high, both economically as well as ethically, to tolerate otherwise. In other words, maximizing value (see Chapter 2 for more on the concept of value in healthcare) can be considered the overarching goal of any health system. However, a uniform and widely accepted way to structure a health system, which optimizes value, does not exist. The ways in which countries have designed their healthcare systems consequently vary greatly. Some countries have a healthcare system which is based on private insurers and providers, while others are entirely tax-funded and the government constitutes the main payer. Within countries, the structure, costs, and access of healthcare systems constantly ignite wide and fierce political debates. Looming healthcare

reforms are bound to generate reaction from citizens and politicians alike and are rarely, if ever, passed without being heavily debated and contested. The upheaval surrounding the repeal of the Affordable Care Act in the US is perhaps the most recent and explicit example of such a debate. Similarly, in countries like Germany and the Netherlands, the structure of the health system has been a considerable point of debate during their most recent national elections. In the Netherlands, the debate revolved around abandoning the private insurance system and instead introducing one national health insurance. In Germany, the main point of contention was removing the divide between public and privately insured patients, which according to some parties led to great inequalities in the country's healthcare sector. In sum, healthcare provision, and the optimal systemic structure, can be considered a wicked problem which occurs in an ever-changing environment, punctuated by important socio-economic changes, such as an aging population, rise of chronic conditions, increasing socio-economic inequalities, and similar developments.

Against this backdrop, this chapter will unpack competition as a driving institutional force in the healthcare industry. We will assess the assumptions underpinning competition in the healthcare sector as the reasons to pass pro-competitive healthcare reforms. Next, we assess what competition actually means in the context of healthcare, where it originates from, and which types of competition exist in the healthcare industry. Last, we will focus on the effects of competition and discuss how competition can either hinder or facilitate entrepreneurship within the domain of healthcare.

Understanding Pressure for Competitive Reforms in Healthcare Systems

The distinction between the Bismarck and Beveridge systems has long been the most widely accepted and used way to distinguish between countries' healthcare systems. The Beveridge model, named after William Beveridge, the designer of the National Health Service in the UK, revolves around tax-funded and government-directed healthcare. In these systems, healthcare is typically financed by the state with collective taxes generating the funds necessary to do so. In these systems, the state generally owns most of the healthcare providers such as hospitals as well. The Bismarck model, named after German chancellor Otto von Bismarck, refers to a healthcare system based on a (social) insurance model. In these models, individuals contribute to the insurance schemes of (private) insurers to finance the healthcare sector and healthcare providers are typically private (i.e., non-state-owned) organizations. The healthcare systems to date are no longer exact replications of these two archetypical systems. That is, in many countries elements of both models can be identified. However, the Bismarck and Beveridge models still represent the two most

prominent regulatory frameworks on which healthcare sectors in various countries are based.

Scott (1995) describes regulatory frameworks, or regulatory elements, together with normative and cognitive elements, as the three pillars of institutions. The regulatory elements consist of the rules and regulations under which organizations operate. These determine which actions are considered legitimate and which are illegitimate and subject to legal punishment. In other words, the type of health system a country utilizes will determine what actions organizations in the system can undertake. Normative elements are those elements which are considered appropriate throughout the industry. Cognitive elements refer to the framing which gives rise to meaning within an industry. Together, the normative, cognitive, and regulatory elements form the institutions which govern an industry. According to institutional theorists, these institutions shape organizational behavior in multiple ways. Most prominently, they have a strong influence on the actions undertaken by organizations in a similar field (i.e., adhering to similar institutions). In other words, organizations will behave in ways which are strongly influenced by the rules, regulations, and norms within a specific field. Different sets of rules and regulations will hence generate different levels of organizational performance. Adequately designing the structure of the healthcare system within a country is thus a prerequisite to reaching favorable health outcomes.

In an attempt to maximize the value of their healthcare systems, countries frequently opt to reform or restructure their healthcare system. As the Institute of Medicine (IOM) has indicated, in order to maximize value, these reforms should focus on the system level. Westra et al. (2017) argue that the decisions to pass health system reforms are typically driven by unsatisfactory outcomes of the healthcare system in place. These can include outcomes in terms of costs, quality, and accessibility. In a study of people's satisfaction with their country's healthcare system, Donelan et al. (1999) show, for example, that a large majority of people are far from content with their country's healthcare system. More recent evidence, for example from the Netherlands, reveals that healthcare is still top of mind to many people when inquired about challenges for the future. This is despite the fact that in many international comparisons, the Dutch healthcare system is ranked among the very best in the world. It is these levels of discontent, either with how the system works, or with the outcomes of the system, that will drive politicians to introduce healthcare reforms in their country.

In his review of reforms in the healthcare sectors of various countries, Cutler (2002) identified three waves of reforms which have shaped the way healthcare systems around the globe were structured. Universal access and coverage constitutes the first. While most industrialized countries made significant strides in this area in the post-World War 2 era, the WHO still considers universal coverage as a high priority in many

low- and middle-income countries today. Controlling expenditures and rationing constitute the second wave of reform, according to Cutler. As health expenditures began to exceed affordable levels, countries began to realize that a more stringent control of these expenditures was necessary. This was either done through limiting the access to services or introducing cost-sharing schemes. Incentive-based reforms followed as the third wave of medical care reforms around the turn of the century. These can be categorized into three categories: cost sharing at the patient level, competition at the level of insurers, and incentives within the provider community. Of these three, introducing competition arguably constitutes the largest and most significant restructuring of the healthcare system. It thus has the greatest influence on the institutions (i.e., particularly the regulatory elements which make up those institutions) of a country's healthcare system.

Competition as a Value-Creating Institutional Force

The concept of competition in healthcare is often interpreted in a plethora of ways. In a study in which they inquired various actors in the Dutch healthcare industry (including government representatives, insurers, providers, and patients) about their views towards competition, Paulus et al. (2003) found that competition in healthcare is interpreted by some as perfect competition, while it refers to increased cooperation to others. The authors note that many different definitions in between those two extremes are referenced by respondents. The confusion about what competition (in healthcare) actually is and how it works does not help in facilitating an understanding of the concept and assessing whether it is indeed an appropriate tool to maximize value in the healthcare industry. Let us, towards that purpose, therefore commence with identifying what competition is, how it works in the healthcare industry, and what its underlying assumptions are.

The Oxford dictionary defines competition as: “the activity or condition of striving to gain or win something by defeating or establishing superiority over others.” It is synonymous to terms such as rivalry, opposition, conflict, and battling. To many, these terms are the very reason why competition does not apply well to the healthcare sector. They consider it unjust or unethical to compete “for” and “over” patients. From an economic perspective, however, competition refers to a situation in which two organizations vie for the same resources and for the same goals. In more technical terminology, they occupy the same resources space (Ingram and Yue, 2008). In these situations, competitors can only reach their own goals when their competitors fail to reach theirs.

The major point of contention regarding the practicalities of competition in healthcare among scholars is the level at which competition should occur to produce optimal results. In other words, scholars are not

in agreement as to who should compete with whom in order to reach the goal of optimizing (the outcomes of) the healthcare sector. Enthoven and Tollen (2005) identify two schools of thought regarding this point. The first argues that competition should occur between integrated delivery systems of payers, primary and secondary care providers. The second posits that competition should instead occur between independent healthcare providers. To understand the differences between these two, it is worthwhile to first assess the basic elements of competition in the healthcare sector.

The Structure of Competition in Healthcare

The concept of competition in the healthcare sector has been championed by the American economist Alain Enthoven. In his paper “The History and Principles of Managed Competition,” he defines competition in the healthcare sector as:

a purchasing strategy to obtain maximum value for money for employers and consumers. It uses rules for competition, derived from rational microeconomic principles, to reward with more subscribers and revenue those health plans that do the best job of improving quality, cutting costs, and satisfying patients.

(Enthoven, 1993: 29)

Although some argue otherwise, the most common view is that for competition in healthcare to occur, a rather fundamental criterion has to be met, namely the existence of private purchasing organizations (also known as third-party payers). While perhaps so blatantly obvious to most economists that it remains largely unarticulated, the existence of private purchasing organizations is not self-evident within the realm of healthcare. In countries that use a Beveridge-like healthcare system, healthcare delivery has traditionally been a hierarchical, state-controlled service (Smith et al., 2012). This is the case in countries like the UK, Denmark, Italy, and Norway, and hospitals are (to a large extent) public, state-owned organizations in those countries (Mossialos et al., 2015). In countries utilizing Bismarck-type healthcare systems, hospitals and other healthcare providers are typically not state-owned but are instead private organizations. This is the case in countries such as the Netherlands and the US. It is the private nature of healthcare organizations, also known as the purchaser-provider split within the context of healthcare (Toth, 2010), which constitutes the fundamental prerequisite for price-competition to occur in the healthcare sector.

Several reasons can be found for the existence of third-party payers. The most common explanation is that the information asymmetry between patients and healthcare providers is so grave that a default

model of transactions between those two groups does not function properly. Instead, third-party payers take up this role and negotiate favorable contracts with healthcare providers on behalf of patients. This logically beckons the question of which organizations are considered purchasers of healthcare services. In his recent article, Zweifel (2017) argues that the effect of competition in healthcare will ultimately depend on which type of organization is charged with the responsibility to act as prudent purchaser of healthcare services. He identifies six organizations which can take up the role of purchaser: employers, private health insurers, local governments, medical associations, uniform social health insurance (i.e., a single insurer), and national governments. While all of these organizations can fulfill the same role, Zweifel argues that their incentives and ability to make competition work effectively differ greatly.

Regardless of which type of organization takes up the responsibility of purchaser, the purchaser/provider split creates so-called option-demand markets. The term option-demand refers to the fact that citizens seek out health insurance to ensure that they will be reimbursed for their costs in case they need healthcare services, at which point they utilize the services from providers contracted by the health insurer from which they purchased their insurance policy. Consequently, competition ensues in different stages and between different types of organizations. Gaynor et al. (2015) describe a five-stage model of competition in the healthcare industry. In the first stage, healthcare providers (e.g., hospitals) “determine” their quality levels by making specific quality-related investments. In the second stage, these providers, given their quality levels, negotiate with insurers (or other third-party payers) over the price of their services and whether or not the organization is included in the insurer’s network, a process often referred to as selective contracting. In the third stage, insurers set the premium for their health plans based on the agreements they have made with providers in the second stage. In the fourth stage, consumers decided which insurer they prefer and enroll in one of their plans. In the fifth and final stage, patients who fall ill decide from which provider they wish to seek out care. The five stages described by Gaynor and his colleagues are often simplified to three stages by combining stage 1 and 2 in a first stage of selective contracting, combining stage 3 and 4 in a second stage of enrollment, and referring to the last stage as the service delivery stage (see Figure 3.1).

Healthcare markets thus consist of three main groups of actors: citizens (i.e., potential patients), third-party payers (e.g., health insurers), and healthcare providers (e.g., hospitals), all of which operate on mutually dependent markets as illustrated in Figure 3.1. In these types of health systems, the role of the national government is typically limited to overseeing the effectiveness of the system as a whole and ensuring that favorable outcomes are reached. Third-party payers are positioned in arguably the most crucial position within the system, namely the one which seeks to match supply and demand for healthcare services. That is,

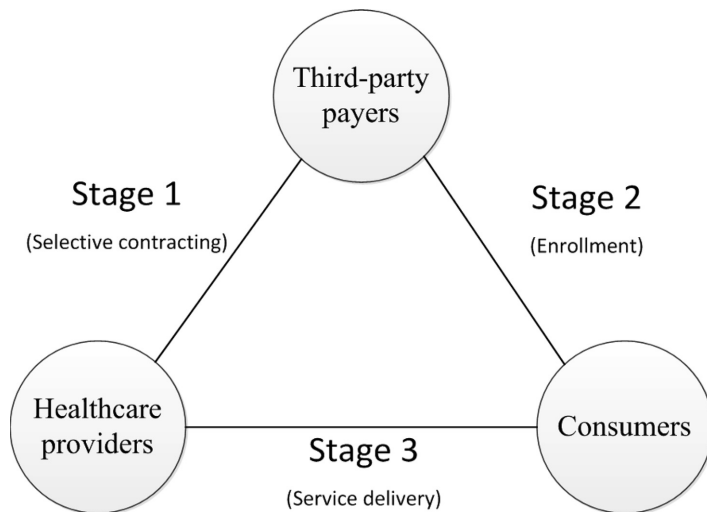


Figure 3.1 Schematic Representation of Competitive Healthcare Industries Based on Gaynor and Town (2012)

they are to contract services from providers which offer to citizens insurance policies with high value for money (i.e., price/quality ratios), which will enable them to offer high value for money (i.e., covering services of high-quality providers against affordable monthly rates).

Even within each of the competitive stages, the specific nature of competition can differ across health systems. This is most notably the case in the first stage of selective contracting and, to a considerable extent, depends on which party fulfills the purchasing role within the system. Within this stage, we can distinguish price-competition and non-price-competition. In the former case, purchasers contract providers based on the price and quality of the services they offer. Prices are thus determined by and in the selective contracting market. As Enthoven points out, competition based on price does not dismiss features such as quality of delivered services from the competitive arena. Rather, it implies that price, just like quality, is one of the features based on which competition occurs. In the latter case, purchasers are not free to negotiate the price of services offered by healthcare providers. In these cases, prices are typically set by a central authority (i.e., they are considered (pre-determined)). It should be noted that in cases where there is only a single purchaser (e.g., a national health insurer) which holds full monopsony power, price can also be considered pre-determined. That is, the purchasing organization can singlehandedly raise or lower the price paid for specific services.

Although in his detailed explanation of the theory and principle of managed competition, Enthoven argues that competition in healthcare

should revolve around price-competition, many healthcare systems (partially) revolve around non-price competition. In the Netherlands, for example, roughly 8% of all specialized care services were subject to price-competition upon introduction of competition in the sector in 2006. The percentage has been gradually increased to 70% of all specialized care services being subject to price-competition since 2012 (Schut & Varkevisser, 2017). However, a considerable amount of the specialized care services still revolves around prices which are pre-determined by the country's health authority. Similarly, the NHS in the UK mandated that all patients be given a choice of five different hospitals from which they could receive treatment. Hospitals were in turn paid fixed prices for treating these patients. Consequently, a situation of non-price competition was created in which quality, in its multifaceted sense, was the only factor on which hospitals could differentiate themselves in an attempt to draw patients to their organization.

Theoretical Assumptions Underpinning Competition in Healthcare

According to some, using the terms competition and healthcare in the same sentence should be avoided at all costs. According to others, uniting these two concepts is the only way to avoid apocalyptic health expenditures. The public and political debate regarding this matter is highly polarized in some countries. The Netherlands is a prime example of a country in which views on this matter are greatly polarized. In its core, the debate surrounding the desirability of competition in healthcare is a debate whether competition indeed drives value creation in this sector. The argumentation towards competition as a value-creating system in the healthcare sector ultimately hinges on two lines of reasoning.

The first explanation as to why competition between organizations benefits consumers is a classic microeconomic one. That is, according to microeconomic theory, markets are the best way to allocate resources efficiently. Competitive markets will reach an equilibrium state in which the unit price per output is such that the quantity of units produced by producers is equal to the quantity of units demanded by consumers. In other words, microeconomic theory assumes that competition forces all organizations to produce in the most efficient way possible and to sell their products at the market-determined price. Organizations that set their price higher will not sell any outputs, and organizations cannot sell for a lower price. If they could, all organizations would sell at the lower price. These theoretical predictions are based on the assumptions of perfectly competitive markets. In perfectly competitive markets, a large number of sellers are free to enter and exit a market (i.e., there are no entry barriers), act independently of each other, and sell as many identical products as they want to a large number of buyers who possess perfect information (Lipczynski et al., 2005). The opposite extreme is a monopoly situation,

in which only one organization sells outputs to consumers. It is thus free to dictate the price of the outputs which, in case the organization seeks to earn abnormal profits, could negatively affect consumer

In practice, markets rarely conform to the extreme cases of perfectly competitive markets or monopolies, giving rise to theories of “imperfect competition” such as monopolistic competition and oligopoly (Robinson, 1969). Monopolistic competition refers to a situation in which a large number of organizations compete based on the price of their products as well as on non-price dimensions. An oligopoly, on the other hand, violates the condition of a large number of organizations. Instead, it is characterized by a low number of interdependent organizations (Lipczynski et al., 2005). The interdependence of the organizations in oligopolistic markets again leads economists to theorize two extreme scenarios in these markets, namely pure independent action of all organizations, of which price wars are an example, and pure collusion, of which price fixing is a prominent example. Again, practice is more nuanced and several types of behavior within oligopolistic markets exist, as initially described by Machlup (1952).

The assumption towards introducing competition in healthcare is thus that it will force healthcare providers to provide their services in the most efficient way possible, ultimately maximizing value for money. It should, however, be noted that the deviations from the perfectly competitive model have been well established within the healthcare industry on multiple occasions. In seminal work by Kenneth Arrow (1963) as early as the 1960's, information asymmetry and uncertainty towards an individual's health were readily identified as a deviation from the competitive model. Furthermore, healthcare markets have been described as highly localized markets (Sohn, 2002), which ultimately violates the assumption of many sellers and healthcare providers do not produce homogenous outputs. Last, although the introduction of diagnosis-related groups (DRGs) is best interpreted as an attempt to create uniform and homogenous products across hospitals, healthcare providers do not produce homogenous outputs. Assuming that these imperfections can effectively be overcome, however, competition should lead healthcare providers to produce their services in the most efficient way possible. Those who fail to do so will not be selectively contracted by purchasers, as there will be cheaper alternatives available.

The second argument as to why competition between organizations benefits consumers is related to innovation. In his book, Baumol (2002: 1) describes this process as the “free-market innovation machine.” The assumption is that in competitive markets, innovation is the only way for organizations to acquire a competitive advantage over their rivals and consequently enjoy higher profits, at least for a while. The promise of abnormal profits places firms in a rat race in which they continuously

seek to one-up their competitors. Firms will therefore keep seeking opportunities to improve their current products or services. As long as customers are willing to pay for these improved products and services, they will thus be better off. Baumol argues that it is precisely this race to the top which explains why capitalism has been able to produce the rapid growth rates that it has over the past centuries. In competitive markets, innovation thus becomes a competitive tool driven by entrepreneurial activity. Competition thus occurs primarily on the basis of the introduction, adoption, and diffusion of innovation rather than merely on price and quality (i.e., efficiency) dimensions.

The innovation argument of competition rests primarily on Joseph Schumpeter's view that technological change and economic growth are two crucial components to creative destruction (Antonelli, 2009). In his view, entrepreneurs are considered destroyers of existing market equilibria. That is, through innovation, entrepreneurs are able to introduce new products or services which are an improvement over existing products or services. Given the hybrid nature of healthcare organizations (i.e., they do not necessarily only seek to maximize their profits; see Chapter 2 for more on hybrid organizations), quality-improving innovations can be considered especially relevant in the healthcare industry. This is particularly true in markets in which prices are pre-determined. A crucial aspect of the effectiveness of the innovation mechanism and innovation as a competitive tool is the existence of entry barriers (or the lack thereof). For entrepreneurs to successfully take up the role of destroyers of existing equilibria, entry barriers should be as low as possible (or non-existent, according to the description of perfectly competitive markets). Although entrepreneurs could have great products or services to offer to consumers, their inability to enter the market will render these useless, locking markets into a state of inertia. To this extent, Porter (1980) considers entry barriers (along with buyer power, seller power, and threat of substitutes) as one of the crucial forces determining the level of competition in an industry. In industries with high entry barriers, incumbent organizations will hence not experience a great deal of competition, and consumer welfare may be sub-optimal as a result.

Effects of Pro-Competitive Regulation for Efficiency, Innovation, and Entrepreneurial Behavior

This chapter illustrates how different countries make use of different types of healthcare systems. Over time, many countries have introduced elements of competitive reform in their healthcare systems with the aim to improve the efficiency of—and ultimately, the outcomes delivered by—the systems. We have furthermore discussed what competition means in the context of healthcare, how it is typically structured, and which

assumptions underpin the belief that competition will indeed foster better outcomes. However, the proof of the pudding is ultimately in the eating. Although it has been well established that the healthcare sector violates some important assumptions of competitive markets, several countries have nonetheless structured their healthcare systems on the premise that competition between healthcare providers will benefit patients. The US and the Netherlands are arguably the two most prominent examples of such systems. Others, like the UK and Italy, utilize National Health Services, which do not revolve around private organizations and price-competition. It should therefore be possible to assess to what extent this is indeed the case.

So it would at least seem. Although it is true that competition plays a more important role in the healthcare system of some countries than it does in that of others, many countries have hybrid health systems in which elements of price-competition and non-price-competition are interwoven. It is therefore often difficult to disentangle the effect of both of these elements in a rigorous scientific way. In those instances where it is possible to do so, it should be noted that each health system is unique in terms of its structure and financing methods. Elements which are investigated in one setting are therefore not by definition transferable to elements studied in other settings. While the Netherlands and the US are both considered competitive, insurance-based healthcare systems, they are far from being identical systems. In the Netherlands, citizens are obliged to take out a basic insurance package and insurers are not allowed to refuse applications for this package. Both features are markedly different in the US, where no mandatory insurance package exists and medical underwriting is common practice. The type of providers that are active in the industry is another prime example of differences between both sectors. Although private hospitals are common in both countries, all hospitals in the Netherlands are not-for-profit organizations whereas hospitals in the US can either be for-profit or not-for-profit. Also, vertical integration between purchasers and providers is uncommon in the Netherlands—a bill was even proposed to make vertical integration between insurers and providers illegal—but it is considerably more common in the US.

Besides being aware of the structural differences of health systems between different countries, it is wise to also take into account which section of the healthcare market one is studying when assessing the effects of competition in health systems, or the functioning of health systems in general for that matter. That is, 'the' healthcare market is essentially non-existent. Rather, the term healthcare market should be considered an overarching term for several distinct sub-markets. Based on the assumption that competitors within a market sell homogenous products or services to consumers, further specification of the provider market is required in order to undertake rigorous comparisons within or across countries. General practitioners, for example, largely offer different services (and

thus do not compete with) specialized care organizations such as hospitals, which are different again from pharmacies, which differ in turn from mental healthcare providers, and so forth. To illustrate: within the mandatory basic insurance package in the Netherlands, roughly 11 cost categories are typically distinguished: specialized care, general practitioners, pharmaceuticals, mental healthcare, dental care, physical therapy, maternity care, ambulance services, supportive care, other paramedical care, and cross-border care. Because different providers offer different services within these domains, these roughly translate into 11 separate and distinguishable markets. The realm of healthcare organizations depicted in Figure 3.1 is therefore best subdivided, as is represented in Figure 3.2 (in which the markets have been arbitrarily placed and sized).

For the purpose of our argument, another distinction between the markets represented in Figure 3.2, apart from the types of services offered within each of these, is the degree to which services are indeed selectively

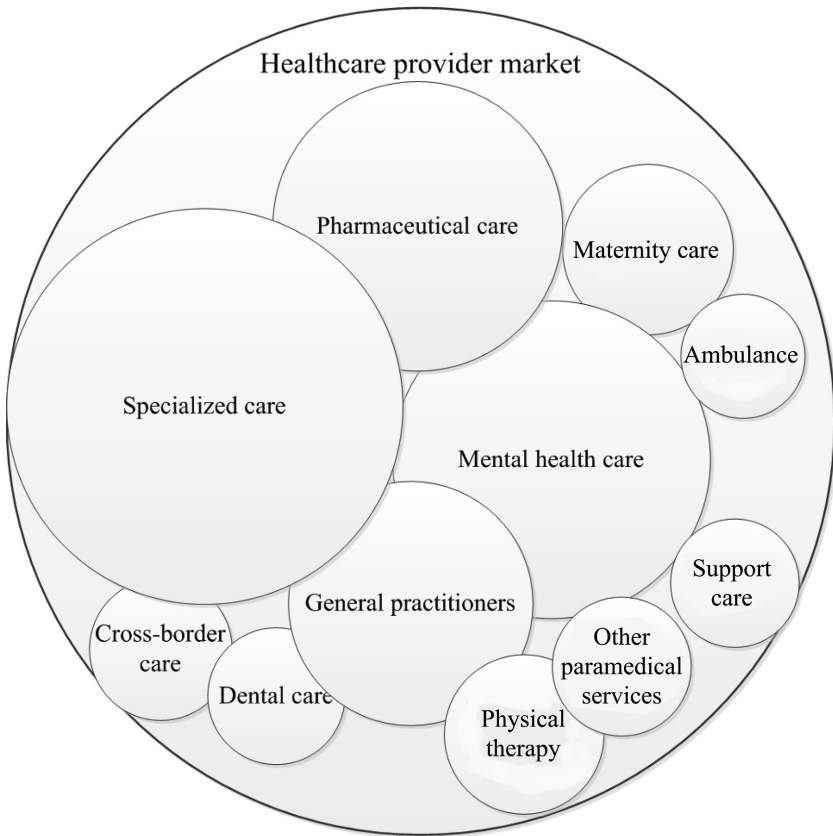


Figure 3.2 Schematic Representation of the Different Healthcare Provider Markets

contracted. In other words, the degree to which (price-)competition actually occurs in the sector and the forces of competition consequently apply can vary across these markets. Dutch insurers rarely, if ever, (selectively) contract healthcare providers in other countries. The level of (price-)competition in cross-border care is thus markedly different from those in specialized care in which providers are selectively contracted on (among other factors) based price-dimensions. Along similar lines, the size of each of the sub-markets, and hence the potential magnitude of the effects of competition, also varies. In terms of expenditure, specialized care is the largest of these markets in the Netherlands. It constituted more than half of the spending within the basic insurance package (i.e., €20 billion) in 2013 (Vektis, 2015). Furthermore, it is also the market in which competition has been most prominently implemented (Van de Ven and Schut, 2009). The market for pharmaceutical care (i.e., through ambulatory pharmacies) and the market for mental healthcare constitute the second and third largest markets in the Dutch healthcare system with an expenditure of approximately €4.5 billion and €3.5 billion under the mandatory insurance package in 2013, respectively. The market for pharmaceutical care furthermore differs from that of specialized and mental health in the sense that providers in these markets primarily sell products (i.e., pharmaceuticals) rather than services, which is particularly the case in the mental healthcare sector. With an expenditure of €2.3 billion in 2013, the general practitioner (GP) market constitutes the fourth largest market in the Dutch healthcare sector. However, given the gatekeeping role of GPs within the Dutch system (Kroneman et al., 2016), adequately leveraging the forces of competition in this realm can nonetheless have a large impact on other, subsequent, markets.

While remaining vigilant towards the differences between specific sub-markets of health systems within countries, as well as the differences between the structures of health systems across countries, we will continue this chapter by discussing the effects of competition in the healthcare sector. We do this along the lines of the two assumptions underpinning competitive markets (i.e., the efficiency and innovation argument). Using the Netherlands as our illustrative case, we first briefly highlight the findings in terms of competition's effect on efficiency of healthcare markets and subsequently turn to the evidence of competition on innovation and entrepreneurship in the sector.

Efficiency of Competitive Healthcare Markets

The effects of competition on the efficiency of healthcare markets have been the focal point of a wide range of empirical studies, each utilizing different methodologies. Gaynor et al. (2015) have reviewed this body of literature. We will therefore only provide the most prudent findings from their review here. We refer the interested reader to the work by Gaynor

and colleagues for a more detailed description of each of the studies undertaken in this field. In their review of the scientific literature, Gaynor and colleagues make a clear distinction between the effect of competition in markets with pre-determined prices (i.e., non-price-competition) and those in which price is determined by the market (i.e., price-competition). They furthermore distinguish between effects expressed in terms of quality of care and those expressed in terms of price and between empirical and theoretical studies. As far as empirical research is concerned, the authors additionally make a distinction between different methodologies employed in the studies which they reviewed.

The review by Gaynor et al. (2015) indicates that theoretically competition has a positive effect on the quality of services in markets in which prices are pre-determined (i.e., non-price-competitive markets), in case the pre-determined price exceeds the marginal costs of providers. In these cases, providers are expected to increase the quality of their services. The authors furthermore find that this prediction is generally supported in empirical studies. They point out that while there indeed seems to be a relation between the level of competition in a market and the quality of care delivered by providers in these markets, it is unlikely that hospitals in less competitive markets deliberately choose to deliver lower quality of care. Instead, Gaynor and colleagues suggest that hospitals in less competitive markets lack the pressure from competitors, which leads to lower efforts than in hospitals in more competitive markets. Under conditions of price-competition, the theoretical prediction is that price and quality will either increase or decrease depending on price- and quality-elasticity of demand. That is, whether competition will increase or decrease price and quality will depend on how price- and quality-sensitive consumers are. In other words, it will depend on whether consumers are willing to pay for higher levels of quality of care. The empirical evidence indicates that the effect of competition on quality of care does indeed seem to vary. Some studies find a positive effect, others find a negative effect, and some find no effect of competition on quality of care. In terms of price, most empirical studies indicate that price-competition decreases prices.

The review by Gaynor and colleagues helps in understanding whether competition is indeed able to improve the efficiency of healthcare markets. As such, it is a valuable resource to test the assumption of the allocative efficiency properties of competitive markets. However, the review also indicates that much of the empirical literature regarding hospital quality has adopted a rather one-sided operationalization of quality. That is, for a long time, scholars in the industrial organization field have modeled quality of care as Acute Myocardial Infarctions (AMI) mortality rates. The argument can be made that hospital-wide quality improvements will ultimately improve the quality of care in the hospital as a whole, including the quality of care for AMI patients. On the other hand, approximately one-third of the AMI patients are believed to arrive at the hospital

by ambulance, indicating that hospitals do not actively compete for these patients. Furthermore, mortality rates constitute only a single dimension of quality of care. Other dimensions such as structure or process indicators or dimensions of a hospital's hospitality are hence disregarded in these studies. These might nevertheless constitute an important aspect of quality of care to many people.

Innovation and Entry Barriers

Unlike the effects of competition on efficiency parameters such as price and quality of care, the effect of competition as an institutional force in the healthcare industry on entrepreneurial behavior and innovation within the industry has not been thoroughly reviewed. Some aspects have, however, been subject to empirical analysis and scientific testing and theorizing. These include, but are not limited to, the spread and adoption of innovation, the role of entry barriers, and signs of market entry. In this section, we will discuss and familiarize the reader with some of these aspects.

Despite the fact that healthcare is often credited with major scientific advancement and innovations (from new drugs to innovative ways of treating patients and curing diseases), healthcare organizations are generally perceived to be rather inert and slow to adopt changes. The gap between the readily available, scientifically proven medical knowledge and the actual application of said knowledge has, for example, given rise to the evidence-based medicine, or evidence-based decision-making movement. This movement strongly promotes the use of scientific evidence in medical decision-making in order to avoid the use of ineffective, inefficient, and ultimately wasteful health services. Various explanations have been put forth explaining the failure to disseminate innovations across the healthcare sector. Perhaps the most prominent is the decision-making autonomy of medical professionals. Based on an extensive case study in the UK's NHS, Ferlie et al. (2005) furthermore suggest that the social and cognitive boundaries between different professional groups in healthcare frustrate the spread of innovations. They argue that professionals typically focus on their own community of practice and have difficulties adopting innovations which stem from different professional groups.

The difficulties in innovation adoption thus make the healthcare sector a difficult setting to scale up innovative products or services. From an entrepreneurial perspective, the conditions thus do not seem optimal in the healthcare industry. These are further worsened by the fact that the healthcare industry is known for having considerable barriers to entry. This holds true for individuals wishing to practice medicine as well as for organizations seeking to enter the provider market. At the individual level, in most countries, practicing medicine is limited to those individuals who

possess the required medical license to do so. While definitely a desirable safeguard of patient's safety and security, becoming a certified medical professional takes years of training. Consequently, the barriers to entering this market are considerable. Introducing competition in the sector will furthermore have little to no effect in terms of lowering this barrier to entry. In the Netherlands, for example, the number of students admitted to medical school has long been determined by the central government. Similarly, the number of residencies towards becoming a medical specialist is also restricted.

At the organizational level, entering the healthcare provider market with new or improved products or services can also be impeded by several barriers to entry. This is true in the provider market, as well as in the insurer market. Investments constitute an obvious example. Opening a new hospital requires capital investments (i.e., buildings and equipment such as scanners and operating rooms), which make it difficult to enter the hospital market. It is thus no surprise that hospital markets in the US, the UK, and the Netherlands have become increasingly consolidated (i.e., hospitals have primarily left the market) rather than having seen a wave of new entrants (Gaynor et al., 2015). Similarly, in a recent study, the Dutch antitrust authority concluded that high entry barriers in the insurer market impede effective competition in that sector. The antitrust authority identified three major barriers to entering the insurers market; the solvency requirements at the European Union (EU) level, the license requirements from the Dutch bank, and various sources of regulatory uncertainty. Although the antitrust authority indicates that lowering entry barriers in the insurer market is an important policy point, they also acknowledge that the barriers are in place to safeguard consumers from negative consequences.

Competition-Induced Entrepreneurship in Healthcare: The Case of Dutch Independent Treatment Centers

Although the insurer market and the hospital market might be difficult to enter, different sub-markets of healthcare provision can be more attractive, especially when the competition (partially) revolves around treatment prices. By introducing price-competition and opportunities for negotiation over prices, the policy reform in the Netherlands has remarkably spurred the increase of a specific form of healthcare providers: the independent treatment centers (ITCs). Independent treatment centers are relatively small ambulatory centers which employ at least two medical specialists and which typically offer only a selected number of treatments to patients in specific specialties, such as dermatology, ophthalmology, and orthopedics (NZa, 2011). Contrary to private clinics, ITCs in the Netherlands offer services which are covered by the mandatory basic insurance package. As such, these clinics are direct competitors

to incumbent hospitals, whereas private clinics commonly offer services which are paid for out of pocket because they are not covered by the insurance package.

The Dutch health authority provides an extensive report of entrepreneurial activity related to ITCs (NZa, 2012). After the reforms in 2006, the number of independent treatment centers has rapidly increased from a few dozen to 313 in 2010, which suggests that the newly defined competitive space and regulation has provided a new profit opportunity to potential entrepreneurs. ITCs' market entry reached a peak in 2008, when 46 new organizations registered as ITCs. Also, the average turnover per ITC doubled in the years 2008–2012, pointing to the fact that the opportunities for generating profits are significant, despite the rise in the competition. Strong points of ITCs' business formula are specialization, flexibility, and prices. ITCs typically specialize on non-acute, low-complexity, high-volume treatments that can be delivered without patient admission. Because of their small size and high specialization, ITCs do not require the same capital investment and costly infrastructure, and they can offer services similar as hospitals but against significantly lower costs—about 10–15%, which becomes particularly attractive for insurance companies. Their stand-alone nature furthermore allows ITCs to innovate their services and achieve more efficient and effective service delivery than hospitals. Between 2007 and 2010, the market share of ITCs in the specialized care market increased from 1% to 2.3%, in particular for plastic surgery, anesthesiology, allergology, orthopedics, dermatology, and ophthalmology. The relatively highest market shares are allergology, dermatology, ophthalmology, for which ITCs' market share amounts to more than 10%.

Interestingly, the relationship with hospitals is ambivalent. One aspect of it suggests fierce competition. ITCs have substantially increased competitive pressures for hospitals, which have systematically lost market share on a number of specialties. Hospitals in turn question the quality of services delivered by ITCs, and referrals by GPs to ITCs are still substantially lower than to incumbent hospitals. However, it appears also that ITCs and hospitals are strongly connected. In 2010, in more than 12% of the cases at least one ITC's manager or director was also affiliated to a hospital in a similar function. Moreover, more than 40% of ITCs directors simultaneously worked as specialists in a hospital at the time when the research took place. This suggests that more complex dynamics might be at play. Because of increasing financial pressures, hospitals might have concentrated on their core competences and strategically driven out some specialties to trusted outsourcing partners—the ITCs. At the same time, hospital medical specialists could have spotted a profit opportunity—generated by the combination of the new regulation, the hospitals' heavier infrastructure and hence high prices, and the presence of low-complexity, high-profit, non-acute treatments that could easily be delivered in an ambulatory setting. It seems therefore that medical specialist have been able to sense and seize an

entrepreneurial opportunity and concretized it through the establishment of an increasing number of ITCs in the Dutch market.

Conclusions

In this chapter, we have explored the role of the institutional context on the efficiency and innovativeness of the healthcare industry. We have indicated that different countries utilize different healthcare systems. These systems can broadly be categorized as Beveridge-type or Bismarck-type systems. The former revolves around state ownership, while the latter is based on a (private) insurance system. The type of healthcare system is an important institutional factor driving the behavior of healthcare organizations, and over the years, several countries have blended elements of both types of systems and increasingly introduced competitive mechanisms into their healthcare sectors. The assumptions of competition in the healthcare domain are that it will improve the value created by organizations in the settings in two ways. First, competition is considered the optimal way to efficiently allocate resources. That is, providers in competitive markets are believed to produce their services as efficiently as possible. Second, competition should stimulate innovation in the sector, which will result in improved products and services for patients. In the healthcare industry, competition occurs in separate markets. Most prominently, it arises from the selective contracting process providers by purchasers. The evidence that competition improves the efficiency of healthcare markets is mixed. In terms of innovation and entrepreneurship, healthcare is a sector in which innovations are slow to disseminate and entry barriers are relatively high. Competitive reforms have, however, sought to lower these barriers and stimulate entrepreneurship within the sector.

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