



Analysis of the Applicability of the CVS Business Model in the Medical Retail Industry in China

Qingying Gao^{1,*}

¹The University of Michigan, Ann Arbor, U.S. 48104

*Corresponding author. Email: qingyinggao0407@gmail.com

Abstract. CVS is the United States of America's medical retail industry oligarchy distributed in large and small cities in the United States. The rapid development of CVS over the decades since its inception has brought convenience to Americans and has led us to consider whether the Chinese medical retail industry can follow such a model. This paper analyzes the Chinese and American healthcare systems and business models through case studies and comparative analysis and finds that the oligopoly model of CVS does not apply to the complex healthcare market in China. Patients will have access to more precise treatment options when they repurchase because of CVS's extensive national medical records, which also include the diagnostic findings and prescription medicine information from MinuteClinic. Patients would be able to promptly inform their doctors about their particular health conditions when they repurchase prescriptions if there were such a national medical record. Such a method and model could increase the effectiveness of doctors in a nation like China, which has a large patient population. Patients will be able to access more swiftly because of the large national chain and the dense concentration of pharmacies in the city. Oligopolies like CVS are unable to expand in China due to the disparate healthcare systems and healthcare retail profiles between the U.S. and China, but people can also learn from the advantages and disadvantages of the CVS operating model to better create a distinct healthcare retail sector for China.

Keywords: oligopolies, operating models, healthcare, retail, US and China

1 Introduction

Healthcare is an important factor for a country to maintain its society and improving health care can bring more social welfare and steady development of the country. The development of technology and social progress has also made more people aware of the importance of healthcare.

American pharmaceutical retail oligarchy CVS has locations in both big and small cities all around the country. The doctors at MinuteClinic are able to offer consultation services to local residents in addition to offering ordinary retail products and cosmetics. MyChart is the patient portal of MinuteClinic uses to both patients and doctors to access

the medical records. This nationwide network of services provides patients and doctors with detailed medical records and the convenience of off-site visits.

The CVS model's ease of use and effectiveness can significantly boost medical productivity. The ability to track and monitor patients' health would be improved if China's retail healthcare system could build such a unified healthcare system. The vast population of China could benefit more socially if the country's medical retail sector could expand into cities and create a unified networking infrastructure.

This paper analyzes the Chinese and American healthcare systems and business models through case studies and comparative analysis and finds that the oligopoly model of CVS does not apply to the complex healthcare market in China. The different healthcare systems and different healthcare retailing situations between the U.S. and China prevent oligopolies like CVS from developing in China, but people can take the strengths of the CVS operating model and better develop a unique healthcare retailing industry for China.

2 Analysis of Chinese and American healthcare systems and CVS operation models

2.1 A general overview of the Chinese and American healthcare systems

The US and Chinese healthcare systems are very different from one another. The healthcare system and health insurance are very different from one another.

“The U.S. health system is a mix of public and private, for-profit and nonprofit insurers and health care providers” [1]. The United States has primarily adopted commercial health insurance, which does not provide universal coverage. Despite the Affordable Care Act under the Obama administration expanding coverage, some people are still deterred from obtaining it because of the commercial private health system.

China's medical insurance is predominately state-run, and the government has a variety of initiatives to encourage the universalization of the healthcare insurance and medical system. “More than 97% of people in China use public health insurance systems, but the different plans affect the quality of the services they receive” [2]. Additionally, the healthcare system in China is distinct, “there is a robust primary care system in China where community centers address most health issues regarding prevention measures and acute care” [3].

Country	China	Germany	UK	US
Health Care System	Local Social Health Insurance	National Social Health Insurance	Universal Health Care	Commercial Health Insurance
Features	<ul style="list-style-type: none"> ■ Local social health insurance ■ Fees paid by local governments and individuals, regulated by government ■ Growing awareness and emphasis on market rather than government provision of social health insurance 	<ul style="list-style-type: none"> ■ Wide coverage ■ Fee partially paid by citizens, regulated by government ■ Emphasis on market rather than government provision of social health insurance 	<ul style="list-style-type: none"> ■ Wide coverage ■ Heavy burden on government, which funds hospitals through tax appropriations. Services to residents are free of charge or very low cost ■ Emphasis on social equity, lack of market mechanism 	<ul style="list-style-type: none"> ■ Narrow coverage ■ Lighter burden on government, strong market mechanism ■ Individuals obtain insurance through employers or individually

Fig. 1. White Paper on China Commercial Health insurance [4]

2.2 CVS's operating model and development history

After the pharmaceutical reform in the U.S. in the 1970s and 1980s, the pharmaceutical system gradually formed a pattern of pharmaceutical separation, which means that hospitals do not have outpatient pharmacies and most of the drugs are sold at the retail end. This has created a U.S. retail drug market dominated by three large pharmacy chains, CVS, Walgreens and Rite Aid. According to data in the latest “National Pharmacy Market Summary”, the total number of pharmacies of all types in the U.S. mainland will be 66,083 in 2021, and the number of chain pharmacies will be 46,964, with a chain rate of 71% [5]. CVS, the largest medical retail chain in the United States, has an unassailable position in its field.

According to "Top U.S. pharmacies ranked by prescription drugs market share in 2017", the highest prescription drug market share is CVS Corporation at 24.5% [6]. Such a high share has enabled CVS to rapidly acquire and grow since its inception in 1963. In just a few decades of growth, CVS has had a chain of 9,939 stores in the United States [7].

There are a number of factors that have allowed CVS to quickly establish itself as an oligopoly in the U.S. healthcare retail sector.

First, CVS provides residents with convenience in both time and space. In terms of time, "85% of customers in the U.S. live within five miles of a CVS location", so in the event of an accident or emergency, people can quickly come to a CVS that is open 24 hours a day around their home to In the event of an accident or emergency, people can quickly come to a CVS within 24 hours of their home to purchase and treat their medical care. In terms of space, "CVS has introduced home delivery to customers nationwide" [8]. Residents around the area with limited mobility and special reasons are also able to make purchases directly from home.

Second, CVS has the nation's largest pharmaceutical benefits managers (PBMs). "PBMs are the connectors between employers, members, drug wholesalers, pharmacies, and drug companies, working to facilitate the best possible health outcomes at the best possible costs" [9]. PBMs have contracts with and represent multiple health pharmaceutical companies, so it has the ability to bargain with large retail and pharmaceutical companies, which minimizes costs. Maximizing profits allows CVS to have the capital to expand and grow rapidly.

Finally, CVS is expanding its pharmacy and integrating its own model while also exploring overseas markets. In 2014, CVS acquired Navarro Discount Pharmacies, the largest Hispanic-American-owned pharmacy chain in the United States. "The Hispanic population in the United States is considered to be one of the fastest growing populations. With the Hispanic community contributing to almost 50% of the population growth in America, CVS is bound to strengthen its customer base further" [10]. Therefore the acquisition of Navarro not only increase overall sales, but also enable a strong position in the Spanish market. In addition, CVS entered the Brazilian market with the acquisition of Drogaria Onofre, the eighth largest pharmacy chain in Brazil, in 2013. Expansion abroad will allow CVS to have a larger customer base. The diversified pharmaceutical culture will also be more attractive to the medical retail industry and customer base in different regions, which will lay the foundation for future expansion.

2.3 Comparative analysis of Chinese healthcare operation model and CVS operation model

China has also begun a phase of health care reform since the reform and opening up in 1978. The medical landscape in China has undergone a significant transformation over the past few decades, from the era of barefoot doctors to the present-day specialist consultations and from small, rural clinics to large, sophisticated hospitals. Hospitals, outpatient centers, and medical specialty shops have all expanded quickly. Is there anything that CVS, which has developed quickly into an oligopoly over the years, can learn from China's medical retail industry?

First, China's drug retail market has no retail giants, mainly showing the characteristics of "many, small and scattered" [11]. According to pharmaceutical retail sales, "the market share of the top five retail pharmacies in 2019 is about 13%, of which, SinoPharm Holdings tops the list, with a share of only 2.9%" [12]. China has a large number of medical retail pharmacies, and due to low industry concentration, the market share of individual retail pharmacies is quite low. It is challenging to achieve consolidation among the numerous medical retail pharmacies under these conditions. Additionally, a large portion of the Chinese medical retail market is made up of small, privately owned businesses who, in their hasty expansion, neglect to develop their brands or practice good management. In rural places, the medical retail sector faces additional challenges such poor management and unfinished medications. It is challenging to implement a nationwide uniform operation model like CVS because of all these factors.

Second, similar quick domestic expansion to CVS may be challenging for China's medical retail sector. The system of pharmaceutical separation, which is challenging to adopt in China, is tied to CVS's quick growth. According to a 2019 analysis of the

market share of China's medication market by distribution channel, graded hospitals accounted for 68.9% of the total pharmaceutical market, primary hospitals for 10.4%, and retail pharmacies for 18.8% [13]. In China, hospitals are the principal places where medications are sold, and the general pharmacy, as well as the primary healthcare system, are distrusted. The crisis of trust in medical treatment in China has been exacerbated by the high expense of medical care, the uneven distribution of resources, and the prevalence of medical errors. People have resisted small-scale private hospitals due to dishonest tactics like the Putian system of "overpriced" hospitals. For medical care and prescriptions, people prefer to visit large urban hospitals, which makes it challenging for the medical retail sector to see rapid growth.

Third, given the size of the population and the poor penetration of healthcare, most individuals in China are unable to afford expensive medical care. And many medications are still out of pocket costs for even those with insurance. Many low-income and underprivileged areas lack access to retail health care, and some underprivileged people forgo treatment or turn to pseudoscientific "superstitious practices". China's medical retail industry is hindered in rural areas, which stops it from being present in major, medium, and small cities across the country like CVS, along with the poor perception of health issues in some impoverished areas.

Fourth, the industry with the highest incidence of anti-monopoly lawsuits is China, which has rather severe anti-monopoly regulations for all industries. Ten percent of all antitrust administrative enforcement cases in the pharmaceutical and medical sectors were reported in the Panorama Report on Thirteen Years of China's Antitrust Administrative Enforcement Cases (2008-2021) [14]. The cases involved include APIs, finished drugs and medical devices. Even monopolies exist for some individual APIs, which makes managing them more challenging for the pharmaceutical industry. The Chinese medical industry is intricate, with many businesses having intricate organizational systems. Oligopolies can seriously harm a country's ability to provide for its citizens.

2.4 Recommendations for the existing problems in China

The healthcare reform in China has been ongoing for some time and has made tremendous progress, but there is still a significant gap with certain wealthy nations. The creation of new models and the management reform of the medical retail sector should be prioritized by the government.

First, China has a doctor-to-patient ratio that is significantly lower than that of wealthy nations like the United States. Government health spending as a proportion of GDP is still substantially lower than in the United States, as is the gap between urban and rural areas. China has had years of economic growth, and government spending on healthcare has increased quickly, but health expenditure in China as a proportion of GDP is 7.1%, which is much lower than the US' 19.7% [15]. In hospitals, there are frequently long queues and a noisy atmosphere for patients. The concentration of medical staff in big urban public hospitals has increased as a result of China's unequal allocation of medical resources. There are several instances of people standing in line all night long to see a professional. People are more hesitant to obtain straightforward care

in the retail sector in such circumstances. China has to do more to invest in the medical sector and train more healthcare professionals. People would have more access to healthcare in the future if there were more healthcare professionals working in handy retail settings and rural locations.

Second, the public's trust in the medical sector is also highly expensive due to the numerous issues that arise between patients and doctors. Many medical industries struggle to grow on a broad scale due to limited medical resources, trust issues such as medical misconduct, and the tendency of people to exclusively use public hospitals in major cities. As a result, the pace of development in China's medical retail sector still needs to be accelerated. Additionally, there has to be more rigorous media coverage of the medical retail sector. Along with educating more healthcare professionals, we should also raise public awareness of and confidence in other healthcare providers, such as community health clinics and medical retail establishments.

Furthermore, China's healthcare retail sector is homogeneous. There is not a unique medical service that can set any medical retail company apart from the other many drugstore brands. In fact, China's medical retail sector is beginning to test out fresh paradigms for advancement and change. In the current digital era, the medical retail sector has transitioned into the "internet+ medical care" period. JD Group had the foresight to set up its JD Health vertical, initially as a supplier of medicines and healthcare products leveraging its great customer online experience and vast logistics and fulfillment network that reaches into every corner of China" [16]. Even if it has some limits, such an internet healthcare platform can mainly treat several minor ailments that affect individuals on a daily basis. As oligopolies like CVS are not ideal for the Chinese healthcare market, we can also investigate other models to support the growth of the healthcare retail sector.

The system of medical monitoring still has some flaws, which remains the main issue. There are numerous issues at all levels of medical treatment due to the enormous number of pharmacies, the variety of pharmaceuticals, and the challenge of moving the flow of medication from the factory to the patient for evaluation. The medical retail sector needs more oversight and improvement from medical regulators. Can the industry achieve trust in the medical retail industry through transparency regarding the corruption and chain of interests in the industry, so that the medical retail industry can be scaled up and managed in a uniform manner like CVS.

3 Conclusion

This paper identifies issues with China's healthcare system and offers solutions. After analyzing the benefits and drawbacks of the CVS development model, it is envisaged that China's healthcare retail sector would create a distinctive sector that is compatible with the country's healthcare market.

A national healthcare retailer like CVS, an oligarchic healthcare retail industry in the U.S. that has grown quickly and innovated to bring convenience to more U.S. residents, has not been able to form in China due to the differences between the U.S. and Chinese

healthcare systems and the "many, scattered, small, and chaotic" healthcare retail industry there. With a complex industry structure, low health insurance coverage, an unbalanced supply of medical resources, and a high rate of medical malpractice, CVS's business model is still not well suited to China's medical retail industry, according to a comparison of the country's medical market and the industry. However, we can make appropriate decisions according to the characteristics of China's market, and the combination of different pharmacies and Internet platform consultation services are flourishing with the coming of the data era.

A thorough comparison can help people comprehend the many flaws of the Chinese healthcare market, even though there is no clear benchmark for the various healthcare systems and operational methods of healthcare retail enterprises. It is challenging to support an oligarchy like CVS and win the public's trust in China due to resource scarcity, imbalance, and industry complexity.

References

1. Roosa Tikkanen, Robin Osborn, Elias Mossialos, Ana Djordjevic, George A. Wharton, International Health Care System Profile-United States, June 5, 2020, <https://www.commonwealthfund.org/international-health-policy-center/countries/united-states>.
2. Jia Guo, How does healthcare in the U.S. compare with China's? March 28, 2017, <https://supchina.com/2017/03/28/healthcare-us-compare-china/>.
3. Professor Swahn, Looking at healthcare in China as compared to US., February 18, 2021 <http://sites.gsu.edu/gsuglobalhealth/2021/02/18/looking-at-healthcare-in-china-as-compared-to-us/>.
4. Global X team, China Sector Analysis: Health Care, Apr 25, 2019, <https://www.globalx-etfs.com/china-sector-analysis-health-care/>.
5. IQVIA, U.S. National Pharmacy Market Summary 2021, November 2021, https://www.onkeydata.com/downloads/reports/2021_US_Pharmacy_Market_Report.pdf.
6. Matej Mikulic, Top U.S. pharmacies ranked by prescription drugs market share in 2021, Mar 8, 2022, statista, <https://www.statista.com/statistics/734171/pharmacies-ranked-by-rx-market-share-in-us/#:~:text=The%20top%20U.S.%20pharmacy%20in,market%20revenue%20at%20that%20time>.
7. Statista, Top U.S. pharmacies ranked by prescription drugs market share in 2021, <https://www.statista.com/statistics/241544/cvs-caremark-number-of-stores-since-2005/>.
8. Nadee Bandaranayake, How CVS is redefining convenience, October 29, 2018, <https://nrf.com/blog/how-cvs-redefining-convenience>
9. Truveris, What is a Pharmacy Benefit Manager (PBM) and how Does a PBM Impact the Pharmacy Benefits Ecosystem? February 17, 2021, <https://truveris.com/what-is-a-pharmacy-benefit-manager-pbm-and-how-does-a-pbm-impact-the-pharmacy-benefits-ecosystem/#:~:text=PBMs%20increase%20a%20patient's%20access,payments%20based%20on%20adherence%20programs>.
10. CVS Health Corporation (CVS), CVS Purchases Navarro - What Can Shareholders Expect? September 29, 2014, <https://seekingalpha.com/article/2528205-cvs-purchases-navarro-what-can-shareholders-expect>.
11. Jin Rong, "Internet+" surge who can become China's CVS, August 8, 2019, http://www.yyjb.com.cn/yyjb/201908/2019080816050050_5401.shtml.

12. Zhihao Cai, Ten charts to understand the competitive landscape of retail pharmacies: who is the brother of retail pharmacies? Will NUS Pharmacy become the front wave? September 18, 2019, <https://www.qianzhan.com/analyst/detail/220/200918-09ceb2af.html>.
13. Zheng Wen, Comparative analysis of the market development and leading enterprises in China's pharmaceutical retail industry in 2021, August 16, 2021, <https://www.chyxx.com/industry/202108/968870.html>.
14. Yanxi Liu and Yaoqi Li, From 63 public cases, we can see the anti-monopoly of China's pharmaceutical and medical industry, January 10, 2022, https://www.sohu.com/a/515622420_221481.
15. Wenyi Zhang, Health expenditure in China as a proportion of gross domestic product (GDP) from 2010 to 2020, October 2021, <https://www.statista.com/statistics/279402/health-expenditure-in-china-as-a-proportion-of-gdp/>.
16. Jenny Yao, China's online one-stop shop for healthcare, KPMG, <https://home.kpmg/xx/en/home/insights/2021/09/china-online-one-stop-shop-for-healthcare.html>.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

