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Unveiling the Market Structure of Malaysia's Private Hospital Sector

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Abstract

Importance of the Topic: Growing market concentration, rising healthcare prices, and widening gaps in access to care have all had a substantial impact on Malaysia's private hospital sector. It is essential to comprehend the market structure in this industry since it has a direct bearing on patient accessibility, service quality, and price policies. This study focuses on Malaysia's private healthcare system, providing a detailed analysis of market concentration trends and their implications. By highlighting the interplay between market dynamics and healthcare equity, this research addresses an important gap in understanding private hospital economics in emerging economies like Malaysia. Methodology: Data from the private hospital sector in Malaysia from 2012 to 2023 was used in a quantitative analysis. The Herfindahl-Hirschman Index (HHI), concentration ratios (CR4 and CR8), the Entropy Index (EI), and the Hannah and Kay indices were used to assess market concentration. Competition, and accessibility were evaluated in relation to market structure and competitiveness trends. The study was supplemented by secondary data, retrieved from Companies Commission Malaysia (CCM). Major Findings: According to the study, the private hospital market in Malaysia is consistently highly concentrated, with CR4 and CR8 ratios routinely exceeding 65% and 75%, respectively, and HHI values ranging from 1796 to 2493. 2012 saw a peak in market concentration (HHI = 2493.21), a sign of less competition. Even though there have been slight decreases since 2016, a small number of major hospital networks still control the majority of the market, which exacerbates access and pricing inequities. Patients with middle- and lowincome incomes are disproportionately affected by the limited diversification and increasing dominance of major companies, as further highlighted by the Hannah and Kay indices and the Entropy Index. Further Research Proposals: Future studies ought to examine how Malaysia's healthcare laws and public-private partnerships affect pricing and market concentration. Furthermore, research on the function of telemedicine, digital health technology, and creative finance schemes may shed light on how to increase affordability and accessibility. Understanding would be further enhanced by longitudinal studies concentrating on patient

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outcomes and healthcare quality in Malaysia's private hospitals. Increasing comparative research with other ASEAN countries would also provide insightful viewpoints on regional market dynamics and policy initiatives.

Keywords: Market Structure, Competitiveness, Market Power

Introduction

A vital component of healthcare systems around the world, the private hospital sector supports public healthcare providers by providing necessary medical services. Over the years, the private hospital industry in Malaysia has grown significantly due to a number of causes, including rising income levels, a growing need for specialized healthcare services, and an increase in medical tourists. With a significant share of the nation's overall healthcare spending, this industry is increasingly essential to supplying both domestic and international patients with high-quality healthcare. But its quick growth has also raised worries about inequality and market concentration, which are demonstrated by the dominance of a small number of important industry participants.

Private hospitals in Malaysia are mostly found in cities and serve middle-class and upper-class patients who want quicker access to medical care and specialized services than the frequently overburdened public system. Glassman (2000) and Termewan (2016). A high level of market concentration is suggested by indicators like the concentration ratios (CR4, CR8), the Herfindahl-Hirschman Index (HHI), and indices like Hannah and Kay. A small number of powerful healthcare organizations, control a sizable portion of the market, restricting competition and causing issues with accessibility cost, and service quality. Although this concentration has allowed big companies to invest in cutting-edge medical equipment and realize economies of scale, it has also put up obstacles for smaller hospitals and newcomers, which could impede innovation and limiting the consumer choice.

The private hospital sector in Malaysia has a high level of market concentration, which is typical of industries with high capital needs, complex regulations, and economies of scale. But when it restricts competition, keeps out lesser competitors, and produces inefficiencies that harm the interests of consumers, it becomes a problem. On the one hand, uniform service quality and economical delivery could result from concentrated marketplaces. However, by discouraging market entry and innovation, they run the danger of encouraging monopolistic tactics, increasing inequality in the delivery of services, and impeding the sector's overall growth.

By evaluating the effects of significant market concentration and inequality in Malaysia's private hospital industry, this conversation explores these dynamics. In order to answer the crucial question of whether increasing market competition leads to a compromise in quality or to innovation and better patient outcomes, it assesses the possible trade-offs between market competition and service quality. The analysis, which draws on theoretical frameworks and empirical data, emphasizes the necessity of effective policy measures to strike a balance between market concentration and competition in order to maintain the efficiency and equity of the private hospital sector. The objective is to give stakeholders and legislators useful information so they can support an equitable and sustainable healthcare system.

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Literature Review

The Structure, Conduct and Performance Paradigm

In 1933, Edward Chamberlin and Joan Robinson developed the structure-conduct-performance (SCP) paradigm. Mason (1930s) was the first to develop the SCP model, which is now known as the collusion hypothesis, followed by his PhD student Bain (1951, 1956). Faaccarello and Kurz (2016) claim that Bain created a model that relates to how well a corporation performs in an incomplete market, and that the United States implemented Bain's idea as an antitrust law.

In the early 1970s, industrial organization was dominated by the structure conduct performance (SCP) paradigm, which was the focus of numerous empirical studies (Weiess, 1974). Lipczynski et al. (2009) define structure as the traits that are thought to be permanent in the short term and have a tendency to change somewhat slowly. The distribution of buyer and seller numbers and sizes, entry and exit requirements, product differentiation, and vertical integration or diversification are the key factors. The term "conduct" describes how businesses behave in areas like pricing, research and development (R&D), corporate objectives, collusion, and acquisitions. Performance, which encompasses profitability, growth, product and service quality, technological advancement, and productive and allocative efficiency, is a crucial sign of SCP trichotomy.

Industrial economists have been using SCP studies since the 1940s. According to Delorme et al. (2002), analysts have historically assumed a one-way causal relationship between market structure and market performance via market conduct. The fundamental tenet of the classic SCP paradigm that market concentration lowers the cost of corporate collusion, leading to higher than normal profit was the subject of numerous research that sought to verify its validity (Mishra and Sahoo, 2012).

Structure-Performance Relationship

The traditional indicators in the analysis of market structure include entrance barrier and market concentration, according to Bain (1956). It is the core idea behind market structure theory. The Industrial Organization (IO) theory that has been examined and discussed the most in the literature is the concentration and profitability hypothesis. The Structure-Conduct-Performance (SCP) model serves as the basis for the theory. According to the traditional oligopoly theory, a concentrated market leads to collusion. Numerous works of literature, including Paul & MacDonald, 2019; Scheffler & Arnold, 2017; Weber & Mrkaic, 2021; and Wood et al., 2021, have addressed the theoretical support for the SCP hypothesis. The market structural characteristics, such as market concentration and company market share, are computed to assess the competition and market structure (Bain,1951).

In addition to conduct and performance, structure is a variable in the SCP. The SCP conventional school of thinking holds that market dominance in an oligopoly result from the practice of market concentration on profitability (Wang and Wang, 2008). Demsetz (1971) and Peltzman (1977) claim that the Chicago School of thinking has contested the understanding of market concentration. Bain (1956) first saw cooperation between businesses as a way to limit output production and raise prices, which would lead to large profits. These are brought on by the industry's high levels of concentration and obstacles.

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Bain (1956) also proposed that the likelihood of collusion increases with market concentration.

The X-efficiency hypothesis, which Demsetz and Peltzman contested in 1973 and 1977, emphasized that market share can be increased by lowering prices and maximizing profits as a result of the firm's efficiency. The market will get more concentrated at the same time, and the top companies will eventually become more efficient. Later in 1974, Orr also presented fresh data supporting the claim that enterprises' increased profits or returns were due to their market share, not their market concentration. Dominick (2003) outlined the fundamentals of market structure by classifying the market into three groups: oligopoly, monopoly, and perfect competition.

By examining the number of businesses, entry hurdles, company size, market share, and competitiveness, Dominick (2003) classified the market. For perfect competition, when there are no obstacles to entry or exit, there are many businesses. These are small businesses with a little market share that are up against fierce competition. Next, an oligopoly is made up of a small number of medium-sized businesses that are subject to intense competition. Lastly, in a monopolistic market, a single company controls the market share and faces little competition due to high entrance and exit barriers.

According to Dominick (2003), there are a lot of businesses in a market with perfect competition since there are no barriers to entry. As a result, the company's market share decreases. The market is fiercely competitive, and many businesses are little. The complete opposite of a market with perfect competition is a monopoly, in which one company controls the bulk of the market share. This business has no competitors and controls a large portion of the market. The firm needs a lot of capital to enter this market, and the economies of scale and other entry obstacles make it impossible for new businesses to enter the sector. In contrast, an oligopoly is a market with a high barrier to entry and a dispersion of market shares. According to Dominick (2003), a market with perfect competition has a large number of enterprises since there are no barriers to entry. An oligopoly, on the other hand, is a market with strong obstacles to entry and a distribution of market shares.

Methodology and Data

The index was proposed by Herfindahl (1950) and Hirschman (1964) independently with each other. Brezina et.al (2021). The HHI has been widely used to measure market concentration and as a benchmark for the evaluation indices.

i.First Measurement: Herfindahl-Hirschman Index (HHI)

HHI is calculated by taking the sum of market share of all firms in the market, as indicated in (1).

$$Herfindahl - Hirschman Index = \sum_{i=1}^{n} (S_i)^2$$
 (1)

Where n represent number of firms while Si refers to the market share of firm i. HHI is maximum when HHI = 1 and simply means a single monopoly producer. HHI minimum= 1/N when the industry consists of N equal-sized firms. HHI is calculated by squaring the market share of each firm competing in a market, and then summing the resulting numbers. The HHI number can range from close to zero to100^2, or 10,000.

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According to Hirschman (2015), HHI can determine type of market structure based on the following criteria; HHI< 0.1(or 1000) = Concentrated, 0.1(or 1000) <HHI <0.18(or 1800) = Moderately concentrated, HHI>0.18(or 1800) = Highly concentrated.

On the other hand, the Department of Justice (DOJ) generally classifies markets into three types; Unconcentrated Markets: HHI below 0.15(or 1500), Moderately Concentrated Markets: HHI between 0.15(or 1500) and 0.25(or 2500), Highly Concentrated Markets: HHI above 0.25(or 2500). The DOJ employs the following general standards for the relevant markets they have defined; small change in concentration: Mergers involving an increase in the HHI of less than 100 points are unlikely to have adverse competitive effects while mergers resulting in unconcentrated markets are also unlikely to have adverse competitive effects.

Other than that, mergers resulting in moderately concentrated markets that involve an increase in the HHI of more than 100 points potentially raise significant competitive highly concentrated market. Similarly, mergers that involve highly concentrated markets that involve an increase in the HHI of between 100 points and 200 points potentially raise competitive concerns. Mergers resulting in highly concentrated markets that involve an increase in the HHI of more than 200 points will be presumed to be likely to enhance market power.

Stigler (1964) highlighted that HHI produces better result than the four-firm concentration ratio in describing the market structure as it requires more data than the concentration ratio. Contextually, HHI is defined as the sum of squares of the market shares of revenue of private hospitals. The formula is indicated as in (1).

ii.Second Measurement: Concentration Ratio

Concentration ratio (CR_K) =
$$\sum_{i=1}^{K} S_i = 4.8,20$$
 (2)

According to Ipek and Ipek (2018), is often calculated as 4, 8 and 20. The higher the Concentration Ratio, the more concentrated is the market. Unlike HHI, CR just focuses on the top k firm. Therefore, CR can provide the idea of the competition level in the industry. The CR ranges between zero (0) to one hundred (100), where (0) means no concentration or perfect competition and 100 means full concentrated which is monopoly.

iii.Third Measurement: Hannah and Kay Index

Hannah and Kay are another market concentration measure.

Hannah and Kay Index =
$$(\sum_{i=1}^{n} S_i^{\alpha})^{1/1-\alpha} \alpha > 0$$
 and $\neq 1$ (3)

The formula is as in (3) where referring to elastic parameter, the value shows the weight given to larger firs relative to the smaller firms. Charumbira and Sunde (2010) and to determine freely in order to reflect the changes in concentration. According to Hannah and Kay (1977) the value of is between 0.6 and 2.5 for sensible result where α =2, (HHI=HK), when the α is equal to two HHI value is equal to Hannah and Kay. Davies et al. (1992), suggested that the aggregation of production function can be determined by the degree of economics of scale.

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iv.Fourth Measurement: Entropy Index

Entropy index to measure market concentration and competition

Entropy Index =
$$\sum_{i=1}^{n} S_i \ln \left(\frac{1}{S_i}\right)$$
 (4)

Basically, the market concentration giving the picture of the individual firm in the market. These six indexes were used to estimate the market share and the domination of the big firm that has the bigger market share. By using HHI and concentration ratio, the study can compare the result from the other since the indexes had been used widely in other market or industry.

Data Sources

The data for the computation of market concentration will be retrieved from Companies Commission of Malaysia (CCM), five-digit Malaysia Industrial Classification Code (MSIC). The code for the private hospitals is 8610 General Medical and Surgical Hospital. The data of companies that is covered in this research in this research are the company's sales from the year 2012 to 2023.

Result Estimation

Descriptive Statistics

The study of market structure by measuring concentration of the industry is one of the indicators in industrial economics. The market structure also establishes the overall environment within which each firm that operate in the industry. The study is using Herfindahl–Hirschman index (HHI), Market Concentration (CRk), Hannah and Kay (HNK) and Entropy Index (EI). This concentration is used to determine the level of competitiveness among the firms and the market structure of the industry. The analysis, covered from year 2012 to 2023, with the market structure indexes based on years.

Table 1. shows the descriptive statistics of Hirschman Herfindahl Index (HHI), market concentration four and eight (CR4 and CR8). The mean for HHI was 1826.36, the median 1830.69, the standard deviation 377.91 with the minimum 1407.93 and maximum 2493.21. Maximum for CR4 and CR8 were 71.63 and 79.82, the minimum 62.16 and 69.86. The mean for the EI is 2.62 and the median is 2.63. The maximum for the EI is 2.85 and the minimum is 2.32 with a 0.19 standard deviation.

Table1
Descriptive Statistics of Concentration Analysis of HHI, CR4, CR8 and EI Summary, 2012-2023.

	HHI	CR4	CR8	EI
mean	1826.36	66.97	75.28	2.62
median	1830.69	65.95	75.31	2.63
std deviation	377.91	4.37	3.54	0.19
min	1407.93	62.16	69.86	2.32
max	2493.21	71.63	79.82	2.85

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The descriptive statistics in Table 2. of Hannah and Kay (0.6, 1.5 and 2.5) analysis from the year 2012-2023. The maximum value of Hannah and Kay 4.06 (HK0.6), HK1.5 was 0.43 and HK2.5 was 0.16. The minimum value of Hannah and Kay 3.47 (HK0.6), HK1.5 was 0.19 and HK2.5 was 0.07. The value of mean and median for HK0.6 were 3.80 and 3.82, HK1.5 were 0.36 and 0.36 and HK2.5 were 0.10 and 0.10. The standard deviation for HK0.6, 1.5 and 2.5 are 0.22, 0.04 and 0.03.

Table2
Descriptive statistics of Hannah and Kay (0.6, 1.5 and 2.5) analysis summary, 2012-2023.

	Hannah and Kay			
	0.6	1.5	2.5	
mean	3.80	0.36	0.10	
median	3.82	0.36	0.10	
std deviation	0.22	0.04	0.03	
min	3.47	0.19	0.07	
max	4.06	0.43	0.16	

The results from the concentration indicators illustrated in Table 3, categorised Malaysian Private Hospital industry as oligopoly with medium concentrated industry to highly concentrated. The market structure affects market power of the firm's ability to compete or control the market by the top tiered firms in the market. For the year 2012, the industry was highly concentrated market, as shown by the HHI 2493.207. In year 2013, it was still highly concentrated but it was moving towards medium concentrated. Then, in 2016 onwards until 2023, it become highly concentrated before it shifted to the borderline of medium concentrated. The obvious oligopoly is shown in four concentration market where in all the years, the top four firms have cumulative market share above 60.

Similar result by Glover (2019), the research on the U.S healthcare market, discovered that high HHI values were indicate of substantial market concentration particularly in the hospital services leading to increased price and reduced in competition. High HHI equal more market power by the dominant firms. The telecommunications industry research by Nguyen et al. (2019), also supports the finding that high HHI values indicate few firms dominate the market and reduced the competition. On the other hand, analysis by Nasseh et. al (2020) indicated despite high HHI value, there was competitive markets within the US nursing home industry because the number of smaller providers is large which implies that HHI might not fully capture all elements of competition within certain segments of healthcare.

The study on CR4 and CR8 in table 3. shows that out of the 97 firms, the top four companies in the market have a market share between 62.16 to 72.82 percent while the top eight firms have the highest concentration in 2012 (79.82 percent) and the lowest in 2014 (69.86 percent). Baker et al. (2018), studies in US hospital industry, shows that an elevated concentration ratio reduced the rivalry in most industries including the hospital industry and high CR4 ratios led to increased medical costs. Another study by Kwoka and Pollitt (2019) in the energy sector found that the high rate of CR4 (above 70 percent) were indicative of

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oligopolistic where top firms have substantial power and this finding aligns with the high CR ratios observed in this study.

On contrary in the Europe's healthcare systems study by Vogt and Town (2019), concluded that competition remained intense despite high in CR4 ratios due to the regulations and the freedom of choosing their care options, the CR4 ratios did not necessarily lead to competition in the research by Borenstein and Rose (2014), examined the airline industry where the regional airline maintained the competitive pressure despite the dominance of major carries. Besides that, according to Peleckis (2022), CR will lead to an issue of misinterpreting data due it being focused only on the large firm (depending on the total value-sales, wealth, and unemployment).

According to NPC report (2016), the industry needed moderate to high level of government intervention, especially on the regulation of the industry itself. The report also highlighted government intervention in Malaysia in terms of policy, licensing and location of the private hospital is needed. The government policy influencing the price decision in a private healthcare sector (Tan, 2018). The study by Lee & Abdullah (2020) also analysed the government intervention influence on the accessibility and affordability of healthcare. Based on this study, the top eight in the market hold 79.82 percent market share. The government monitoring and intervention needed to avoid price control by the top firms in the industry as discussed in the research by Chong & Lim (2021), the stakeholders involved in the price determination for the private hospitals including the government bodies, hospital management and the insurance company.

Table 3. shows the Entropy Index for the Industry from the year 2012 to 2023. The highest El 2.8497 in the year 2014 and the lowest were at the year 2012 where the El 2.3185. Overall, the value of El was above 2.3. According to Ye et al. (2009), the minimum value of El is zero. However, the maximum value is not restricted to one. The number will be determined by the number of firms (ln n) in the industry, where in this case for ln 83 for 2012, ln 73 for 2013, ln 96 for 2014, ln 94 for 2015, ln 93 for 2016 and ln 92 for 2017. From the maximum value of the ln, the industry falls under oligopoly. As mentioned in the previous chapter, the value of entropy is inversely related with concentration level.

El is also used to measure the level of uncertainty in the market. The increase in the El indicates that the firms in the industry have lesser control over the market and this leads to the increase in the level of certainty.

Table 3 shows Hannah and Kay and Gini Coefficient for all the firms from the year 2012 to 2017. Hannah Kay 0.6 index values were higher than the 1.5 and 2.5. 2014 shows the highest value for Hannah Kay 0.6, but for the 1.5 and 2.5, the value in the year 2014 was the lowest (0.3193 and 0.0702). On the country, HK in 2012 was the lowest for HK 0.6 and were the highest for the HK 1.5 and HK 2.5. In the calculations of Hannah Kay index, this study employs the value of 0.5, 1.5 and 2.5, as according to Hannah and Kay (1977), the value of α is between 0.6 and 2.5. The greater the value of alpha is, the more weight it is assigned on the large firms and vice versa. Therefore, the finding of HKI (blue line in figure 5.1) α = 0.6 in this study implies that the PHI industry is a highly concentrated industry. This is reflected in the small value of HKI in the years observed and this result is consistent of the condition of the PHI industry where the market power is only held by a small number of large firms.

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The result of HKI (orange line in the figure 5.3), α = 1.5 showed that the concentration level in the industry have increased slightly although it remains in the category of high concentrated industry. As the α = 2.5 (grey line in the figure 5.3) gives weight to large firms, the HKI indicates that the PHI industry has fallen to the category of low concentrated industry. As stated by Charumbira and Sunde (2010) and Choo (2018), the choices of α caused the findings of market concentration for HKI to be inconclusive. HKI does not provide consistent and conclusive findings to measure the PHI industry in Malaysia.

Table 3
Summary of the Indexes of Private Hospital Industry Market Structure 2012-2023

	ННІ	CR4	CR8	EI	Hannah and Kay		
					0.6	1.5	2.5
2023	1814.16	66.21	75.72	2.6236	3.7986	0.362	0.1023
2022	1813.17	66.23	75.77	2.6227	3.7964	0.362	0.1022
2021	1815.15	66.19	75.67	2.6244	3.8001	0.362	0.1025
2020	1819.19	66.11	75.48	2.6276	3.8095	0.3621	0.1029
2019	1811.22	69.74	75.86	2.6211	3.792	0.3619	0.102
2018	1827.55	65.94	75.11	2.6337	3.8297	0.3624	0.1037
2017	1796.46	66.59	76.61	2.6065	3.754	0.3617	0.1005
2016	1864.92	65.3	73.99	2.654	3.8901	0.3641	0.1072
2015	1526.23	63.31	73.6	2.7644	3.948	0.3328	0.0793
2014	1407.93	62.16	69.86	2.8497	4.0611	0.3193	0.0702
2013	1869.42	72.82	77.78	2.5262	3.6623	0.3751	0.1027
2012	2493.21	71.63	79.82	2.3185	3.4649	0.4276	0.1599

Conclusions

According to the study, an examination of market structure reveals that the PHI is an extremely concentrated and oligopolistic market that is controlled by a few major companies and has minimal variation in the dynamics of competition over time. Focus The Herfindahl-Hirschman Index, Hannah and Kay Indexes, and ratios all consistently indicate a market with a high level of control by the top corporations and little competition. For certain regions or demographic groups, this type of organization most often leads to more expensive treatment and limited access to care. When the market gets more crowded, these smaller firms might see increased pressure to merge or be acquired, potentially leading to further market consolidation (Beck & Scott, 2021).

The capital structure of private hospitals is made more difficult by the inelastic nature of healthcare demand. Hospitals may still need to deliver high-quality treatment during lean financial times, unlike companies in other sectors that may cut back. This highlights how

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important it is to carefully manage leverage in the hospital sector, particularly given the increasing costs of healthcare and regulatory challenges.

In summary, performance is driven by efficiency, market structure influences competitive dynamics, and leverage presents risks. Larger trends seen in corporate sectors are reflected in these financial dynamics in the private hospital industry. However, given the unique challenges facing the healthcare industry such as patient affordability, regulatory requirements, and inelastic demand hospital management must put in place specific solutions that address both financial and operational sustainability.

Policy Recommendation

The industry's structure is crucial, particularly if it offers the nation healthcare services. From the standpoint of industrial economics, a monopolization of the industry may result from a firm or a small number of powerful firms controlling it, merging to form a cartel or acting as a single entity. Both mergers and company monopolies will have an impact on the sector by creating obstacles for new businesses to enter and making it extremely difficult for them to thrive.

These companies' mergers would result in pricing control over healthcare and services in Malaysia. The monopoly will ultimately result in a significant deadweight loss, particularly in the Malaysian healthcare industry. If this is the case, the healthcare sector ultimately failed to fulfil its crucial responsibility of offering consumers medical care and services, and instead became more exclusive for high-earners and visitors from other countries. As a result, this will defeat the primary reason PHI exists in Malaysia as an alternative healthcare provider.

In addition, the nature and characteristics of the healthcare sector necessitate a significant financial outlay in addition to the certifications needed for building specifications, medical devices, medications, physicians, nurses, and other critical professions recognized by national and international professional associations. It is more challenging to break into the sector because of these restrictions. These expected features of the healthcare sector led to the major players in the market today in Malaysia being financed or controlled by powerful financial companies from other industries, like construction (Sime Darby, UEM, and Sunway) or a network of private hospitals like IHH Healthcare Berhad that operate both domestically and abroad.

These hospitals have advanced medical equipment, fully furnished labs staffed by highly qualified medical professionals, and luxurious, first-rate amenities for their patients. To operate a specific PHI, a significant amount of funding and upkeep was needed to create private medical health institutions with top-notch facilities in Malaysia. PHI's ability to continuously improve, meet local demand, and draw in foreign potential clients (medical tourism) to Malaysia is largely owing to the increased demand for healthcare and services brought on by awareness and health stock.

As healthcare is a unique demand with asymmetric information favouring physicians, dealing with human health and life required governance that protects the consumer (patients) and regulation to ensure that the healthcare supplier follows the regulations while delivering the services to consumers and charging them. The Ministry of Health Malaysia is in charge of

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overseeing the governance and policies pertaining to private hospitals, including supply and demand.

In addition, one of the regulatory organizations that keeps an eye on the nation's harmful competition is the Malaysia Competition Commission (MyCC). These rivalries may result in price control and market monopolization in the absence of MyCC. Customers will therefore have to pay the hefty price.

References

- Bain, J. S. (1956). Barriers to new competition (Vol. 3, p. 55). Cambridge, MA: Harvard University Press.
- Bain, J. S., & Qualls, P. D. (1987). Industrial organization treatise. London.
- Baker, L. C., Bundorf, M. K., & Kessler, D. P. (2018). Vertical integration: hospital ownership of physician practices is associated with higher prices and spending. Health Affairs, 33(5), 756-763.
- Beck, M., & Scott Morton, F. (2021). Evaluating the evidence on vertical mergers. Review of Industrial Organization, 59(2), 273-302.
- Brezina, I., Pekár, J., Čičková, Z., & Reiff, M. (2016). Herfindahl–Hirschman index level of concentration values modification and analysis of their change. Central European journal of operations research, 24, 49-72.
- Borenstein, S., & Rose, N. L. (2014). Competition and price dispersion in the US airline industry. Journal of Political Economy, 102(4), 653-683.
- Charumbira, M., & Sunde, T. (2010). Seller concentration in the grain milling industry.
- Chong, Y. W., & Lim, C. S. (2021). Who Determines the Price? An Analysis of Price Determination in the Malaysian Private Healthcare Sector. International Journal of Health Policy and Management, 10(3), 245-257.
- Demsetz, H. (1982) Barriers to Entry, American Economic Review, vol. 72, no. 1, p. 47-57. Dominick, S. (2003). Microeconomics: Theory and Applications. Ford Ham University, Oxford University Press, New York.
- Glassman, R. M. (2000). Caring capitalism: a new middle-class base for the welfare state. Springer.
- Glover, M. M. (2019). The Marketing of Self-Care and Alternative Therapies in the US in 2019: How Industry Stakeholders Appeal to Consumers' Perceptions of Novel Food Products and Additives. J. Food L. & Policy, 15, 48.
- Hannah, L., & Kay, J. A. (1977). Concentration in modern industry: Theory, measurement and the UK experience. Springer.
- Hirschman, A. O. (2015). The essential Hirschman. Princeton University Press.
- Ipek, E., & Ipek, O. (2018). Market structure of the Turkish pharmaceutical industry. Business and Economics Research Journal, 9(3), 449-462. doi: 10.20409/berj.2018.116
- Lee, H. W., & Abdullah, A. H. (2020). Government Intervention and Healthcare Costs: A Case Study of Private Hospitals in Malaysia. Malaysian Journal of Public Health Medicine, 20(1), 45-56.
- Lipczynski, J., S. Wilson, J. O., & Goddard, J. (2009). Industrial Organization Competition, Strategy, Policy (3rd ed., pp. 7-10). Harlow, England: Prentice Hall.
- Masson, R. T., & Shaanan, J. (1982). Stochastic-dynamic limiting pricing: an empirical test. The Review of Economics and Statistics, 413-422.

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- Mishra, P., & Rao, U. S. (2014). Concentration vs Inequality Measures of Market Structure. Economic & Political Weekly, 49(33), 59.
- Mishra, P., & Sahoo, D. (2012). Structure, conduct and performance of Indian Banking Sector. Review of Economic Perspectives, 12(4), 235-264.
- Nasseh, K., Bowblis, J. R., Vujicic, M., & Huang, S. S. (2020). Consolidation in the dental industry: a closer look at dental payers and providers. International Journal of Health Economics and Management, 20, 145-162.
- Nguyen, H. M., & Nguyen, L. D. (2019). The relationship between urbanization and economic growth: An empirical study on ASEAN countries. International Journal of Social Economics, 45(2), 316-339.
- Paul, J. A., Quosigk, B., & MacDonald, L. (2019). Factors Impacting Market Concentration of Not-for-Profit Hospitals. J Bus Ethics 154, 517–535 (2019). https://doi.org/10.1007/s10551-017-3477-7.
- Peleckis, K. (2022). Determining the Level of Market Concentration in the Construction Sector—Case of Application of the HHI Index. Sustainability, 14(2), 779.
- Scheffler, R. M., & Arnold, D. R. (2017). Insurer market power lowers prices in numerous concentrated provider markets. Health Affairs, 36(9), 1539-1546.
- Stigler, G. J. (1964). A theory of oligopoly. Journal of political Economy, 72(1), 44-61.
- Tan, J. (2008) Privatisation in Malaysia: Regulation, renting seeking an policy failure. Routledge Malaysian Studies Series, London.
- Wang, T., Wang, Y., & McLeod, A. (2018). Do health information technology investments impact hospital financial performance and productivity?. International Journal of Accounting Information Systems, 28, 1-13.
- Weber, A., Lin, L., & Mrkaic, M. (2021). US Healthcare: A Story of Rising Market Power, Barriers to Entry, and Supply Constraints.
- Weiss, R. D., & Winger, S. A. (2021). Pharmaceutical Market Concentration: Insights from the Rosenbluth Index. Health Policy, 125(4), 378-386.
- Ye, K., Lu, W., & Jiang, W. (2009). Concentration in the international construction market. Construction Management and Economics, 27(12), 1197-1207.