Faculty of Economics and Business

Market Structure and Competitiveness of Malaysian Private Hospital Industry: A Structure, Conduct and Performance Analysis

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DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The dissertation has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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ABSTRACT

The continuous increase in Malaysia's health-related Consumer Price Index (CPI) reflects rising healthcare expenses, potentially impacting families, and individuals reliant on ongoing medical care. This raises concerns about their ability to access quality healthcare without bearing excessive financial burdens. The primary aim of this research is to analyse the market structure (HHI) of the Malaysian private hospital industry between 2002 and 2021. This study has found that the HHI result shows a significant drastic transition from monopoly to monopolistic market structure, coinciding with the enactment of the Competition Act in 2010. Also, both time series and panel data methodologies are employed to investigate the influence of HHI on medical inflation, and the impact between the market structure, conduct, and performance of this industry, utilizing the Structure-Conduct-Performance (SCP) Paradigm from Industrial Organisation theory. The time series results suggested that medical inflation is influenced by fluctuations in market concentration (HHI). While, in the panel model, it is found that there exists a reciprocal relationship between market share and concentration, with mutual reinforcement observed between capital intensity and return on sales. However, it is noted that only return on assets directly impacts return on sales. These findings emphasise the importance for policymakers to encourage healthy competition among economic entities operating within the Malaysian private hospital sector.

Keywords: Structure-Conduct-Performance Paradigm, Private Hospital Industry, Competition

Struktur Pasaran dan Daya Saing Industri Hospital Swasta Malaysia: Struktur-Gelagat-Prestasi (SGP)

ABSTRAK

Kenaikan berterusan dalam Indeks Harga Pengguna (CPI) kesihatan di Malaysia menunjukkan peningkatan kos perkhidmatan kesihatan, yang mungkin memberi kesan kepada keluarga dan individu yang bergantung kepada perubatan secara berterusan. Ini menimbulkan kebimbangan terhadap kemampuan mereka untuk mengakses rawatan kesihatan yang berkualiti tanpa menanggung beban kewangan yang terlalu tinggi. Tujuan utama penyelidikan ini adalah untuk menganalisis struktur pasaran (HHI) industri hospital swasta Malaysia antara tahun 2002 hingga 2021. Kajian ini mendapati bahawa keputusan HHI menunjukkan peralihan drastik yang signifikan dari struktur pasaran monopoli kepada struktur pasaran yang bermonopoli, yang selaras dengan pelaksanaan Akta Persaingan pada tahun 2010. Selain itu, kedua-dua metodologi data siri masa dan panel digunakan untuk menyiasat impak HHI terhadap inflasi perubatan dan hubungan sebab-akibat dalam struktur pasaran, tingkah laku, dan prestasi industri ini, dengan menggunakan Paradigma Struktur-Gelagat-Prestasi (SGP) dari teori Organisasi Industri. Hasil data siri masa menunjukkan bahawa inflasi perubatan dipengaruhi oleh fluktuasi dalam kepekatan pasaran (HHI). Sementara itu, melalui model panel, didapati bahawa terdapat hubungan berbalas-balik antara bahagian pasaran dan kepekatan, dengan penguatan bersama yang diperhatikan antara intensiti modal dan pulangan jualan. Walau bagaimanapun, diperhatikan bahawa hanya pulangan atas aset yang memberi impak langsung kepada pulangan jualan. Temuan ini menekankan kepentingan untuk pihak berwajib menggalakkan persaingan sihat di kalangan entiti ekonomi yang beroperasi dalam sektor hospital swasta Malaysia.

Kata Kunci: *Paradigma Struktur-Gelagat-Prestasi, Industri Hospital Swasta, Persaingan*

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LIST OF ABBREVIATIONS

2SLS	Two-Stage Least Squares
3SLS	Three-Stage Least Squares
AD	Advertising Intensity
ADF	Augmented Dickey-Fuller
AIC	Akaike Information Criterion
ASA	American Statistical Association
BHF	Board Of Healthcare Funders
BIC	Bayesian Information Criterion
CAP	Capital Intensity
CGM	Continuous Glucose Monitoring
CPI	Consumer Price Index
CR5	Concentration Ratio 5
CRN	Concentration Ratio
DEA	Data Envelopment Analysis
DOJ	Department Of Justice
ES	Efficient Structure

ETRS	Effective Tax Rates
FE	Fixed Effect Model
FTC	Federal Trade Commission
GLS	Generalized Least Squares
GMM	Generalized Approach of Moment
HASA	Hospital Association of South Africa
HHI	Herfindahl-Hirschman Index
HT	Healthcare Traveller
IO	Industrial Organisation
ISUMP	Index Sales Unit Market Performance
K1M	Klinik 1 Malaysia
KKOM	Communications and Multimedia Ministry
LI	Lerner Index
LSDV	Least Squares Dummy Variables
MES	Minimum Efficient Scale
MFRS	Malaysian Financial Reporting Standards
MMC	Malaysian Medical Council

MOH	Ministry Of Health
MPSAS	Malaysian Public Sector Accounting Standards
MS	Market Share
MYCC	Malaysia Competition Commission
NCD	Non-Communicable Diseases
NEIO	New Empirical Economic Organisation
NIM	Net Interest Margin
OLS	Ordinary Least Squares
OOP	Out Of Pocket
PBIT	Profit Before Interest and Taxes
PCM	Price Cost Margin
PHFSA	Private Healthcare Facilities and Services Act
PLS	Panel Least Square
POLS	Pooled Ordinary Least Squares
PPP	Public-Private Partnerships
PR	Panzar-Rosse Model
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses

RE	Random Effect Model
RMP	Relative Market Power
ROA	Return On Assets
ROE	Return On Equity
ROS	Return On Sales
SAMA	South African Medical Association
SCP PARADIGM	Structure Conduct Performance Paradigm
SDG 10	Sustainable Development Goal 10
SDG 8	Sustainable Development Goal 8
SDG	Sustainable Development Goals
SELL	Selling Intensity
SFA	Stochastic Frontier Analysis
SHARE	Market Share
SJMC	Subang Jaya Medical Centre
SLR	Systematic Literature Review
SMES	Small And Medium – Sized Enterprises
SS	Systemic Sclerosis

VAR	Vector Autoregression
VIF	Variance Inflation Factor

CHAPTER 1

INTRODUCTION

1.1 Study Background

Malaysia's healthcare system has earned international acclaim, being recognised as the "Best Country in the World for Healthcare" and securing the fifth spot globally as the best place to retire in 2019. To sustain this status, the government increased the Health Ministry's budget to RM36.14 billion in 2023 (Ministry of Health Malaysia, 2022).

However, the public healthcare sector faces a significant challenge: a shortage of doctors and specialists, attributed to factors like heavy workloads, long hours, low salaries, unattractive working conditions, and preferences for urban areas. This shortage leads to prolonged waiting times for patients seeking treatment and medication (Zainuddin, 2023; Parkaran, 2023; Reporters, 2023).

In contrast, private hospitals excel in perceived service quality, with patients reporting higher satisfaction levels. This is attributed to factors such as staff friendliness, cleanliness, and quality amenities. Malaysia's healthcare system operates on a two-tier structure, with the government funding the public sector and the private sector catering to those who can afford healthcare services. The private sector has seen increased demand due to higher disposable incomes, growing health awareness, and rising healthcare costs (Zhu et al., 2014).

Private hospitals, offering superior facilities and medical professionals, are preferred by those seeking high-quality services. However, public hospitals remain more affordable, making them the choice for patients with limited financial means (Ahmed et al., 2017;

Baharin et al., 2022). The financial burden on patients in both sectors is significant, with a survey indicating that only 11.9% use personal health insurance, leading to an increase in out-of-pocket expenditures (National Institutes of Health, 2019). Rising healthcare costs in Malaysia are linked to an ageing population, increased demand for services, health risk factors, and expenses related to technological advances (Singh & Kumar, 2016). Despite these challenges, technological advancements have significantly impacted life expectancy, increasing from 73 years in 2000 to 76 years in 2019.

Various studies have explored aspects of the Malaysian healthcare system, including lean healthcare practices, institutional frameworks, healthcare expenditure, and the roles of the government and private sector (Habidin et al., 2016; Yorulmaz & Mohamed, 2019; Ashraf & Ong, 2021; Sulaiman & Wickramasinghe, 2014). In Europe, research on competition among private hospitals has revealed their varying policies across European countries and potential trade-offs, such as improved efficiency in public hospitals and healthier patients choosing private surgical centres (Siciliani et al., 2017; Chua et al., 2011; Noether, 1988; Cooper et al., 2018).

The market structure of KPJ Healthcare, a leading private specialist healthcare provider, is emphasised in its annual report. Strategic positioning, core competencies, and a commitment to quality care distinguish KPJ Healthcare in the competitive market (KPJ Healthcare Annual Report, 2002). KPJ's business conduct and pricing strategies align with market position and customer segmentation, as suggested by Bourdon (1992), Mills and Monk (2002), and Kimand Parker (1999). The company's focus on customer care excellence and staff performance contributes to its strong business performance (Ahmetoglu et al., 2014).

In analysing the competition structure of the Malaysian private hospital industry, Past studies have employed the Structure-Conduct-Performance (SCP) paradigm. In the past, the market structure was highly concentrated, with a few dominant players controlling a significant market share. However, with the implementation of the Competition Act 2010, there has been a shift towards a more competitive market structure.

Several studies have explored the impact of market structure on the industry's competitiveness. One study found that a more concentrated market structure is associated with higher prices and lower quality of care, while another found that a more competitive market structure is linked to higher efficiency and profitability of firms.

The Malaysia Competition Act 2010, which became effective on January 1, 2012, was administered by the Malaysia Competition Commission (MyCC). The act aims to promote economic development by safeguarding the process of competition, ultimately protecting consumers' interests. It addresses horizontal and vertical anti-competitive agreements and prevents abuse of a dominant position, and it applies to all commercial activities within and outside Malaysia, affecting competition in any Malaysian market. The act is instrumental in promoting access to medicines and addressing abuse of patents and intellectual property rights.

The Malaysian Competition Commission (MyCC) plays a crucial role in enforcing competition law, striving to promote and sustain healthy competition in the market, protecting consumers' interests, and enhancing economic efficiency and innovation. MyCC investigates and addresses anti-competitive practices, assesses mergers and acquisitions, creates awareness about competition law, and provides guidance and education to market players and the public. Meanwhile, the Ministry of Health (MOH) in Malaysia is central to