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WHAT DO WE KNOW ABOUT THE FINANCIAL SUSTAINABILITY OF PRIVATE HOSPITALS? EVIDENCE FROM A PRIVATE HOSPITAL CHAIN

ÖZEL HASTANELERİN FİNANSAL SÜRDÜRÜLEBİRLİK DÜZEYLERİ İLE İLGİLİ NE BİLİYORUZ? BİR ÖZEL HASTANE ZİNCİRİNDEN KANITLAR

Doğancan ÇAVMAK⁽¹⁾

Abstract: Private for-profit healthcare providers significantly contribute to health system in Türkiye. Therefore, the ability of the private providers to sustain their operations is critical for the success of the health system. At this point, the sector's financial sustainability emerges as an important determinant. This study aims to assess the financial sustainability of private healthcare sector in Türkiye. To explore this phenomenon, data for a decade were obtained from a private hospital chain which has nine hospitals in different regions in Türkiye. Given the multidimensional structure of financial sustainability, the evaluation was carried out across four categories encompassing various variables such as real growth rate, profitability ratios, asset turnover rates, and cash conversion cycle. Based on the variables, a financial sustainability index was formed. The analyses showed that the hospital's level of financial sustainability had a fluctuating trend and exhibited a decline for a significant portion of the analysis period. Despite real increases in sales, relatively stable profitability ratios, and high asset turnover rates, it was determined that high production costs and prolonged collection period for accounts receivable adversely impacted the level of financial sustainability.

Keywords: Private Hospitals, Financial Sustainability, Financial Analysis, Healthcare Management

JEL: I11, G32, G33

Öz: Özel sağlık hizmet sunucuları Türkiye sağlık sisteminde önemli düzeyde hizmet üretimi gerçekleştirmektedir. Dolayısıyla varlıklarını devam ettirebilmeleri sağlık sisteminin başarısı açısından önemli bir konudur. Bu noktada sektörün finansal sürdürülebilirlik düzeyi en önemli belirleyici olarak ortaya çıkmaktadır. Bu çalışmada Türkiye özel sağlık sektörünün finansal sürdürülebilirlik düzeyine yönelik bir değerlendirme yapılması amaçlanmıştır. Konuyu irdeleyebilmek için Türkiye genelinde farklı bölgelerde hastanelere sahip bir grubun 10 yıllık verileri kullanılarak analizler gerçekleştirilmiştir. Finansal sürdürülebilirliğin çok boyutlu bir konu olması sebebi ile reel büyüme düzeyi, kârlılık oranları, varlık kullanım oranları ve nakit döngüsü gibi birden fazla değişkenin yer aldığı dört kategoride bir değerlendirme yapılmıştır. Bu değişkenler baz alınarak bir finansal sürdürülebilirlik endeksi oluşturulmuştur. Analizler sonucunda şirketin finansal sürdürülebilirlik düzeyinin dalgalı bir seyir izlediği ve analiz döneminin önemli bir kısmında düşüş gösterdiği tespit edilmiştir. Satışların reel olarak artış göstermesine, kârlılık oranlarının büyük düşüşler göstermemesine ve varlık kullanım oranlarının yüksek olmasına rağmen, yüksek seyreden üretim maliyetlerinin ve alacak tahsilatında yaşanan gecikmelerin finansal sürdürülebilirlik düzeyine olumsuz yansıdığı tespit edilmiştir.

Anahtar Kelimeler: Özel Hastaneler, Finansal Sürdürülebilirlik, Finansal Analiz, Sağlık Yönetimi

⁽¹⁾ Tarsus University, Faculty of Applied Sciences, Department of Health Management; dogancavmak@tarsus.edu.tr, ORCID: 0000-0002-3329-4573

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1. Introduction

The health care sector is a complex ecosystem of public and private businesses that aims to deliver optimal patient care. Hospital sector is cornerstone for all health system around the world (Dubas-Jakóbczyk and Kozieł, 2020). In Türkiye, the private hospital sector also holds an important role in the health system. Development plans encouraged the private sector after the 1982 constitution. Investments in healthcare services by the private sector have continued to grow after the announcement of the Health Transformation Program in the 2002 (Atasever and Bağcı, 2020). According to the latest data provided by the Ministry of Health, 572 of the 1,555 hospitals are privately owned by 2022. The private sector accounts for 21% of the hospital beds in Türkiye. It can be also observed that the share of private hospitals has shown a significant increase in terms of the physician consultation. In 2002, the application rate to private hospitals was 0.1 per person, and this value reached 0.9 in 2022 (Ministry of Health, 2022). The agreements between private hospitals and the Social Security Institution (SSI), which is the sole public health insurance, have also led to the significant enhancement of the role of the private healthcare sector in service delivery in Türkiye (Yıldırım and Konca, 2018). Consequently, the existence of private healthcare services has become a crucial part in the Turkish healthcare system, allowing the public to access services from private hospitals under the coverage of social health insurance.

Functionality of a healthcare systems is highly depended on adequate and sustainable financing. With the increasing operating costs, declining reimbursements, advancements in technology and the growing expectation for quality from the society, all healthcare systems are seeking for financing strategies to support healthcare delivery (Thomson et al., 2009). Considering the significant role of private healthcare sector in the healthcare system of Türkiye, it can be concluded that financial sustainability is a crucial requirement for the healthcare system. At this juncture, it is imperative to examine the concept of sustainability within the healthcare services.

Sustainability has become the main objective of both companies and societies worldwide (Gleißner et al., 2022). The concept of sustainability is broad and strictly related to needs and resources. One can comprehend the perspective of sustainability via the definition of sustainable development provided by United Nations in the “Report of the World Commission on Environment and Development- Our Common Future” as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (United Nations, 1987). Dyllick and Hockerts (2002) transposed the same idea to define corporate sustainability. They defined it as “meeting the needs of a firm’s direct and indirect stakeholders without compromising its ability to meet the needs of future stakeholders.” They identified three key elements for corporate sustainability: economic, environmental, and social. Economic sustainability concerns sufficient cash flow, liquidity, and return on equity, according to their definitions. Financial sustainability is the ability to generate consistent value for the owners and provide a long-term continuity in operations (Zabolotnyy and Wasilewski, 2019). In this study, we follow the definitions provided by Günther et al. (2020) as “providing a continuous financial success without jeopardizing future financial success” and by Gleißner et al. (2022) as “dealing with a company’s long term financial security” to discuss financial sustainability. Financial sustainability is not equal to profit or cannot be solely

explained by sales. It is imperative to consider a set of different indicators collectively to be able to assess the level of financial sustainability for businesses. In the literature, hospital financial performance is measured by diverse indicators related, e.g., to profitability, liquidity, assets, and debt, as well as composite measures (combining multiple indicators (Akinleye et al., 2019)). This study aims to discuss the financial sustainability condition of private hospitals in Türkiye using a data from a private hospital chain. The financial sustainability of private hospitals was evaluated based on the basic arguments provided by Gleißner et al. (2022).

2. Conceptual Framework

Sustainability is widely defined by triple bottom line (TBL). TBL refers to combination of social, environmental and economic goals which are dimensions for ensuring sustainability. This agenda focuses on economic value added by corporations also considering the creation or destruction of value for the environment and social life (Elkington, 2013). Financial sustainability is a multifaceted concept that encompasses a wide range of practices and associated with the economic dimension of sustainability, which is about the efforts to ensure a company's long-term existence. However, Gleißner et al., (2022) showed that financial sustainability is rarely addressed as a part of the economic dimension in the existing literature. Therefore, they conducted a methodological approach to address financial sustainability of companies. They basically proposed three characteristics for companies with financial sustainability; "the expected value of the net income of the company is retained in real terms", "the probability of the company's insolvency is limited to an acceptable low level", and "the volatility of the net income is acceptable to the investor". Basically, financial sustainability refers to an organization's ability to maintain financial resources and operations over the long term. Financial sustainability cannot be defined solely by profit because it involves strategic planning and management of assets and liabilities (Othman and Ameer, 2014). Managing resources, generating revenue, containing costs, and ensuring the ability to meet current and future obligations of the company are integral to the financial sustainability. (Campbell, 2012).

Sustainability has become a fundamental goal for health systems globally, encompassing both public and private hospitals as prominent components. The increasing costs, and the complexity of patients and cases have pushed hospitals to seek for ways to operate more sustainably (Zurynski et al., 2022). Financial sustainability is also important for enabling hospitals to deliver high quality of healthcare services (Akinleye et al., 2019). Therefore, achieving financial sustainability is not solely a financial objective but also a prerequisite for providing good quality and sufficient amount of healthcare. However, many private hospitals around the world (Enumah and Chang, 2021; Ramamonjiarivelo et al., 2015) including those in Türkiye (Yener and Öksüz, 2017) suffer from financial problems and distress. Therefore, examining the financial sustainability of private hospitals is of growing interest to policy makers and scholars.

The number of private hospitals in Türkiye has rapidly increased since the early 1990s. Influenced by the global trend of liberal thoughts, privatization became a prominent aspect of policies in Türkiye (Tüleykan and Erden, 2023). In the late of 1980s, the private health sector began operating in the market with small polyclinics and dispensaries, and the number of private hospitals started to increase in 1990s (Dömbekçi et al., 2018). A significant milestone for private hospitals was the

declaration of Health Transformation Program (HTP) in 2002. One of the program's important components of HTP was sustaining universal health coverage by establishing a compulsory social insurance, known as general health insurance (GHI), aiming to ensure equity in access to healthcare (SB, 2003). Healthcare services have been provided through contracts between social security institution (SSI-SGK) and healthcare providers, with reimbursements determined according to the tariff of SSI (Yıldırım and Konca, 2018). Private hospitals became important providers, signing contracts with SSI and gaining popularity among the population covered by SSI. The increasing demand created a suitable market for more investments (Sezgin, 2015). Evidence supports this trend: in 2002, there were 50 private hospitals in Turkey out of a total of 1,156 hospitals. By 2022, the number of private hospitals had reached 572 out of 1,555 total hospitals. The total number of hospital beds in private hospitals increased from 12,387 in 2002 to 55,069 in 2022. The service volume of private hospitals has also significantly increased over the last two decades, with the number of visits to private hospitals per person rising from 0.1 to 0.9. Private hospitals also play a crucial role in employment, with 29% of total healthcare providers, including physicians, nurses, midwives, and dentists, working in the private sector (SB, 2023). These factors underscore the importance of private hospitals within Turkey's healthcare system. Private hospitals bear a significant burden within the healthcare system and, that is why their financial sustainability is pivotal for the health system's success in Turkey. Therefore, this paper aims to explore the financial sustainability of private hospitals in Turkey.

3. Methodology

3.1. Study Model

This study adapted the indicators provided by Gleißner et al. (2022) according to purpose of the study. They use four major criteria to evaluate the financial sustainability level of companies. These are (1) real preservation of the company, (2) a company's ability to survive without making demands on its owners, (3) total earnings risk exposure acceptable to owners, (4) economic interests of the owners in a lasting continuation of the company. The financial ratios, which has been used in or related to these indicators, were extracted, and used to evaluate the financial sustainability of the private hospital chain. The chosen indicators are as follows in the Table 1.

Table 1. Financial Sustainability Indicators

Indicator Groups	Indicators
1) Real preservation of the company	Growth in Net Sales / Average Yearly Inflation Rate
2) Company's ability to survive without making demands on its owners	Return on Capital Employes-ROCE, Equity Ratio
3) Total earnings risk exposure acceptable to owners	EBITDA Margin and Cash Conversion Cycle (CCC)
4) Economic interests of the owners in a lasting continuation of the company	Return on Equity-ROE and Return on Assets (ROA)

To operationalize these conditions, corresponding financial ratios were selected. Real growth rate was calculated by the ratio of growth in sales to annual average producer price index, reflecting the inflation-adjusted growth.

The company's ability to survive was assessed by calculating the return on capital employed (ROCE) which is indicating the effective utilization of capital and Equity Ratio. High ROCE is essential for long-term financial stability because it measures the efficiency and profitability a business's capital investments. Equity ratio is one of the significant indicators of financial risk level of a company. This indicator plays a crucial role in evaluating a company's financial sustainability by illustrating the proportion of assets that is financed by the company's own resources (Fraser and Ormiston, 2010).

To evaluate the acceptable level of risk exposure, EBITDA Margin and cash conversion cycle were used. EBITDA margin provides an insight on the operational profitability of a company (Fraser and Ormiston, 2010). It reflects the ability to generate earnings from the fundamental production of a company which is strongly related to financial sustainability. Cash conversion cycle quantifies the time duration of converting the investments in inventories into cash flows. Given the context of an inflationary conditions, the immediate acquisition of cash takes on a significance in the sustainability of business operations. A lack of adequate cash often pushes companies to use debt financing, which carries with it the risks of insolvency and the additional burden of interest payments. Hence, it is important to include cash conversion cycle in the model of financial sustainability.

Lastly, the attractive earnings risk profile was examined by calculating return on equity (ROE) and return on assets (ROA), providing insights into the firm's efficiency in generating returns from its equity and assets. ROA measures the level of effectiveness of a company in using assets to generate profits. ROE measures the profitability of shareholders' equity (Fraser and Ormiston, 2010). Both reflects the sustainability of operations and profitability for shareholders which are significant for financial sustainability.

3.2. Sample

Convenience sampling method was used in the study. The hospital chain that was analyzed is a publicly held corporation. The company has nine operating hospitals in different regions of Türkiye; Marmara region, Central Anatolia and East Anatolia. Additionally, they also have been making investments in foreign countries. Operating with a total capacity of over 800 hospital beds and employing more than 2200 employees, they provided healthcare services for more than 600.000 patients in 2022. The company reached over 500 million Turkish Lira revenue for 2022. The 45% of the revenue obtained from out-of-pocket payments, while payments from social insurance have a share of %28,6. The hospital chain also generated revenue from health tourism activities which account for 12% of the total revenue. Therefore, based on these features, the company emerges as a significant hospital network to explore the Türkiye's private healthcare sector. The financial statements that published after independent audit process have been obtained from the investor relations webpage of the company.

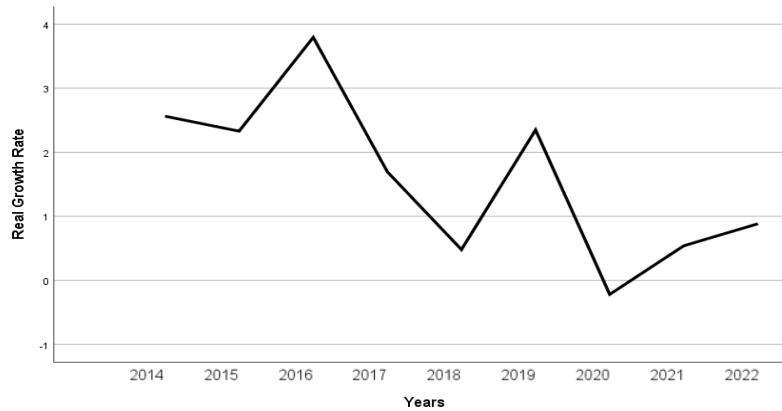
3.3. Data Analysis

Annual financial statements spanning the years 2013-2022 have been acquired, process and reported by line charts using Microsoft Excel 2016 and SPSS 23. Inflation data were obtained from the Turkish Statistical Institute-TUIK (<https://data.tuik.gov.tr/Kategori/GetKategori?p=Enflasyon-ve-Fiyat-106>).

To provide a holistic view on the financial sustainability, a financial sustainability index was calculated. In accordance with the criteria outlined in the study of Gleißner et al. (2022) as "all four conditions must be met for a company to qualify as financially sustainable"; the index is calculated considering all four essential conditions which are — real growth rate, company's ability to survive, acceptable level of risk exposure, and an attractive earnings risk profile — as equally important to be financially sustainable. To compute the financial sustainability index, firstly, key financial ratios were normalized which adjusts values to a 0-1 scale for uniformity. All criteria were calculated as an average of their relevant indicators. Finally, the overall financial sustainability index was derived by averaging the four major criteria, accepting each with equal importance.

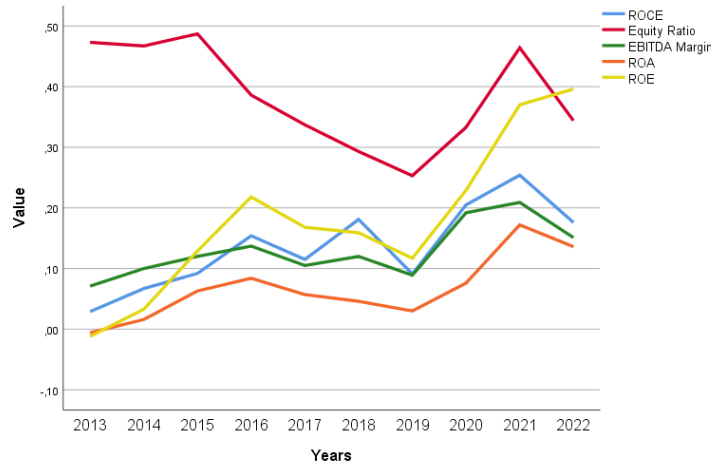
4. Results

It can be observed that inflation adjusted growth rate fluctuates in the analysis period.



Graph 1. Real Growth Rate by years

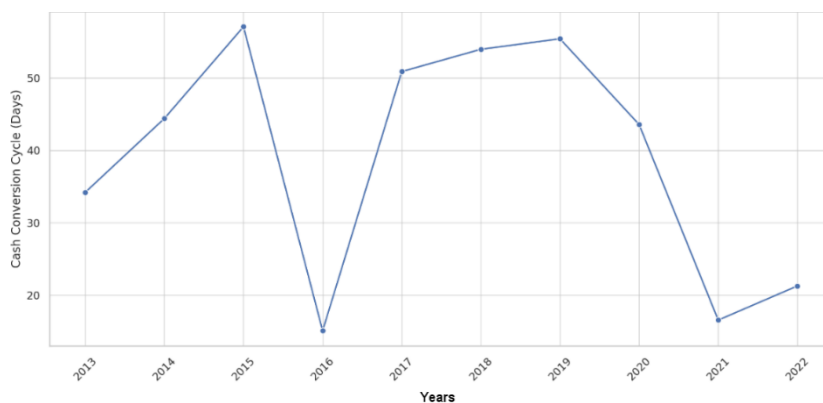
As Graph 1. shows, the growth rate in sales generally remains above the annual inflation rate. However, the line is not consistent and in a decreasing trend. The real growth, which was in decline from 2013 to 2020, started to recover after 2020. However, it can be stated that the values between 2018 and 2022 are quite low. The sharp decline begun in 2019, especially when the effects of the Covid-19 pandemic were intense, is also striking by causing a growth rate remains behind the inflation rate in 2020. Years with high growth rates could indicate successful market expansions or product launches, whereas lower growth periods might reflect increased competition or market saturation.



Graph 2. ROCE, Equity Ratio, EBITDA Margin, ROA and ROE by years

As Graph 2. shows, there is a general upward in ROCE, ROE, and ROA values. As a measure of capital efficiency, ROCE is generally in an increasing trend. This shows that the company made effective capital investments and had strong operational management, leading to higher profit margins. The interplay of ROE and ROA offers insights into the company's earnings quality and asset utilization. These values for the company mainly demonstrate effective asset management and strong return on equity investments.

However, two indicators have significant fluctuations through the analysis period; equity ratio and EBITDA margin. Equity ratio has been decreasing over the years. And EBITDA margin fluctuates throughout the period, without a clear long-term trend. Low levels of EBITDA margin indicate that production costs are high for businesses in the sector. The high dependence on imported equipment and the high level of inflation in the country possibly make it difficult to control production costs.

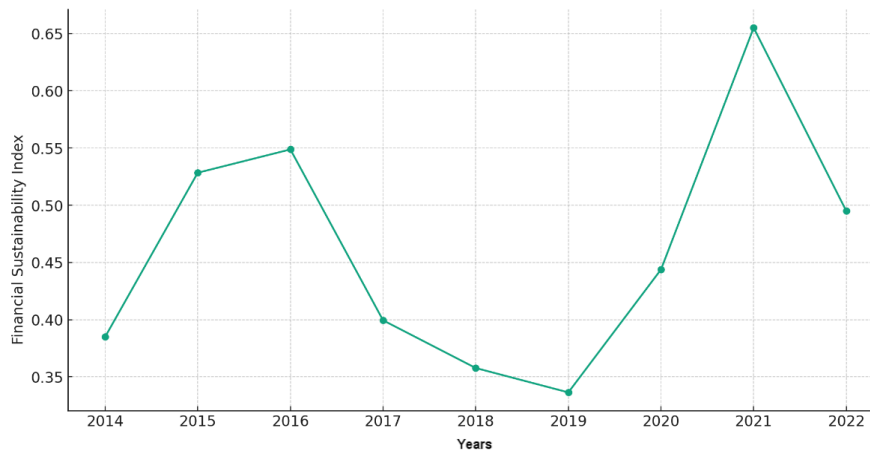


Graph 3. Cash Conversion Cycle by years

As Graph 3 illustrated, throughout the observed period, CCC exhibited notable fluctuations indicative of changing operational dynamics. The fact that the cycle was 34.21 days in 2013 shows that resources are converted into cash relatively quickly. However, this productivity showed a downward trend and reached its peak with 57.09 days in 2015. A remarkable turnaround was observed in the following years; CCC dropped dramatically to 15.08 days in 2016. After 2016, the cycle lengthened again, while it was around 50 days in 2017 and 2018, it increased slightly to 55.42 days in 2019. The years 2020 and 2021 showed a reduction in the CCC to 43.57 and 16.55 days, respectively. In 2022, the CCC was 21.27 days.

When all financial indicators are combined to measure financial sustainability, as mentioned in the methodology section, a timeline like the one in Graph 5 is formed. The comprehensive analysis of the index, considering its individual components, reveals that financial sustainability is not static but dynamic and is affected by both internal strategies and external market forces.

As can be seen in the graph, the level of financial sustainability was in a continuous decline from 2016 to 2019. The value, which started to improve as of 2019, peaked in 2021 and started to decline again in 2022. When the years of decline in the sustainability index are examined, ROCE, ROA, ROE and EBITDA Margin indicators did not show significant decreases and remained stable, while the equity ratio decreased in these years. More importantly, the real growth rate was in a downward trend and at the same time the cash cycle was increasing at the same time.



Graph 4. Financial Sustainability Level of the Company by years

Although high operating efficiency and profitability rates are important factors for financial sustainability, cash conversion appears to be one of the important determinants of financial sustainability, especially in an inflationary environment.

5. Discussion and Conclusions

The financial sustainability has become a central challenge for healthcare sector policies due to many factors such as scarcity of resources, raising costs, changing

demand. Hospitals are the fundamental part of healthcare sector and so private hospitals have significant roles in health systems worldwide. They need to be financially sustainable because a well-functioning hospital requires adequate workforce, facilities, and other medical consumables, contemporary medical and information technologies (Roj, 2023). Private hospitals operate in a financial environment which is characterized by continuous competition, evolving relationships between health insurances and healthcare providers and changing reimbursement policies. Due to advancements in medical procedures, there is increasing need for more resources, and this makes this environment more challenging to manage. Consequently, many studies have reported healthcare organizations with experiencing financial distress (Enumah and Chang, 2021). The public healthcare providers are in financing guarantees and supported by the government or social insurance although financial sustainability is crucial for them. However, in contrast, private hospitals operate to exist amidst significant investment risks. Accordingly, some studies have reported that for-profit private hospitals experience a higher financial distress level (Langabeer et al., 2018). Therefore, the financial health of private hospitals which significantly support health system towards the burden of health needs, is crucial to maintain their existence and more broadly for ensuring the continuity of the needed healthcare.

Based on these reasons, this study aimed to form a system to assess the financial sustainability of private hospitals and to provide a holistic evaluation within this system's framework. A majority of studies conducted financial analyses based on financial ratios (Çil Koçyiğit, 2012; Bülüç and Ağırbaş, 2017; Lee, 2019; Khullar et al. 2020; Dubas-Jakóbczyk et al. 2020). For instance, a study focused on financial health of hospitals included EBIT/Sales, debt ratio, assets turnover, etc. ratios to make an evaluation (Bem et al. 2019). Lee (2015) also explored the financial health of university hospitals using ratio analysis. However, there is limited study focused on financial sustainability of hospitals. Marques Clemente et al. (2018) explored the financial sustainability of private health companies and used indicators such as cash management, bill policy, credit policy to make evaluation. Kruse and Jeurissen (2020) gave a perspective on financial sustainability of hospitals during Covid-19 and explored organizational and contextual factors that could be associated with financial sustainability. Kourtis et al. (2021) conducted a study to explore sustainable financing in private hospitals and used revenues, costs, assets and cash flows as indicators. Lee et al. (2023) conducted a study on the relationship between financial sustainability and equity in healthcare access using Altman Z score for measuring financing sustainability.

A distinctive contribution of the current study is that it considered a systematic and multidimensional approach to assess financial sustainability. To determine the financial sustainability level of the analyzed hospital chain, the real growth in the business's sales, profitability ratios on investments, financial structure ratios, and cash cycle were used. The rationale here is related to the multidimensional nature of financial sustainability. Financial sustainability is not just a phenomenon that can be examined solely by profit rates. Profit is merely an output of accounting procedures (Brigham and Houston, 2013). Although profit and asset turnover ratios are significant indicators for the continuation in existence, the inability to convert the profit into cash can jeopardize the ability of businesses to maintain their existence.

The analyses revealed that the financial sustainability level of the private hospital chain had significant fluctuations over the past decade. It was observed that the sales of the hospitals consistently increased over the annual inflation rates. However, the cash conversion cycle did not have the similar consistency. The prolonged of the cash conversion cycle has been shown to negatively impact the financial sustainability level. One of the important risks to the private health sector in Türkiye is related to the collection of payments for provided services. The private health sector in Türkiye largely relies on revenues from patients who applied under the coverage of Social Security Institution-SSI-SGK. The SSI's complicate and detailed reimbursement processes can lead to errors in billing, thereby extending the collection period of receivables (Yener and Öksüz, 2017). At this point, reimbursement agencies in the Turkish health system can be stated as significant determinants of the financial health of private hospitals. Some studies also highlighted this situation. A study conducted by Balcı and Gümüş (2021) stated the significant impact of the reimbursement system in the Turkish health system on financial sustainability. Similarly, Yiğit and Yiğit (2016) conducted a study focusing on university hospitals in Türkiye, which highlighted the role of reimbursement and pricing processes in the level of financial sustainability. Recent studies also emphasized the ongoing problems with the collection of receivables in the private hospital sector (Aydemir, 2018; Erkiş, 2021; Aksoylu and Çavmak, 2023).

Another critical aspect of financial sustainability in private health sector of Türkiye is production costs. It has been seen that the increase in sales does not reflect in the profit margins. Profit ratios have showed a more stable timeline when compared to increase in sales throughout the analysis period. Despite the increase in sales, there has been a significant rise in production costs as well. Many studies have clarified the high production costs in healthcare production (Karadeniz and Koşan, 2017; Işıkçelik et al., 2022). Studies from different countries also indicated that medical costs in private hospitals had been high for many years and efforts to reduce them had been insufficient (Ahmed et al., 2017; Bel and Esteve, 2020).

Efficient utilization of assets is crucial for ensuring financial sustainability. In this context, the timeline of asset turnover ratios provides significant insights into the dynamism of businesses. A recent study suggested that asset turnover and return on investment ratios have substantially associated to the bankruptcy or closure risks of hospitals (Liu et al., 2011). The operational ratios of the analyzed hospital chain appeared to be positive through time. This situation is a positive indicator of the business's ability to adapt to market fluctuations.

Consequently it is observed that supporting private hospitals, which show positive operating and profitability ratios, with policies that improve the cash conversion cycle may enhance financial sustainability level in the private health sector. The way providers are reimbursed has important implications for sustainability of hospitals (Thomson et al., 2009). In this regard, the Social Security Institution (SSI-SGK) may determine the price tariffs (known as SUT in Turkish) considering medical costs and may improve reimbursement processes to lead significant positive developments for the sector. It is also crucial for private hospitals to improve their medical billing processes. Additionally, the issue of using debt should be carefully handled due to its potential to disrupt the cash conversion cycle, despite its positive contribution to business progress as leverage effect. In a high-inflation environment, suppliers

providing shorter-term financing and longer collection periods or reduced collection losses from payer institutions pose a significant risk to the financial sustainability of private hospitals.

This study has some significant limitations despite its contributions. The first limitation is the inability of the analysis model to include external factors affecting the sector. Besides the inflation data included as a macroeconomic indicator, other macroeconomic data, financial market data, debt opportunities and costs, legal regulations, and many other factors may determine the financial sustainability. In future research, determining these factors through qualitative interviews specifically aimed at Türkiye's private health sector and identifying new factors relevant to measuring financial sustainability, along with their importance levels, could be feasible. Additionally, including the data of more businesses in the analysis could enhance the generalizability of the data.

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