# Winning the Competition in the Hospital Business in Indonesia

Hermanto Priyadi[1], Sawidji Widoatmodjo[2]

{hermanto.127221015@stu.untar.ac.id[1], sawidjiw@pps.untar.ac.id[2]}

Accounting Magister Program, Tarumanagara University, Jakarta, 11470, Indonesia[1]
Post Graduate Program, Tarumanagara University, Jakarta, 11470, Indonesia[2]

**Abstract:** This research stems from the intense competitive conditions in the hospital business in Indonesia. To win the competition in this hospital business, two important factors are believed to play a role: strategic foresight and organizational resilience. Therefore, this research hypothesizes both factors' positive and significant influence on company performance. Additionally, competitive advantage is also believed to have a role in influencing company performance. As a result, competitive advantage is positioned as a mediator of the influence of strategic foresight and organizational resilience on company performance. To validate these hypotheses, this research employs the Structural Equation Modeling (SEM) analysis technique using the SmartPLS 3.2.9 software. The results of the statistical tests indicate that all hypotheses can be confirmed. Thus, strategic foresight and organizational resilience play a crucial role in winning the hospital business competition in Indonesia.

**Keywords:** Competitive, Strategic, Resilience, Hospital, Business.

## 1 Introduction

The competition among hospitals business in Indonesia goes beyond domestic rivalry and also involves hospitals from overseas known for their excellent reputation. According to data from the Commission for the Supervision of Business Competition, in the executive summary of 2020, the growth of hospitals in Indonesia has increased rapidly from 2010 to 2020 [1]. The number of hospitals increased by 80%, from 1,632 hospitals to 2,943 hospitals. Private hospitals grew from 990 to 1,900, and government hospitals grew from 751 to 1,043. This rapid growth has led to intense competition in the hospital business.

From abroad, citing the results of research by Patients Beyond Borders, Malaysia and Singapore have become the leading destinations for medical tourists from Indonesia, with an average expenditure of 11,5 billion US$ per year. The latest data on Indonesian medical visits shows that nearly 1 million people go to Malaysia, 750 thousand to Singapore, and almost 250 thousand to Japan, the United States, and Germany.

The fierce competition in the hospital business industry urges hospital management to promptly take strategic foresight actions and maintain the resilience of hospitals in order to sustain performance. Research within the hospital industry, especially concerning the relationship

IPSC 2023, October 10-11, Bali, Indonesia

DOI 10.4108/eai.10-10-2023.2342190

between organizational resilience, strategic foresight, and financial performance, still needs to be completed. This is the motivation behind this research: to further examine the influence of organizational resilience and strategic foresight on company performance, with competitive advantage as a mediating variable.

## 2 Literature Review

### 2.1 Grand Theory & Conceptual Definition

In 1992, Kaplan and Norton introduced a novel corporate performance measurement system known as the Balanced Scorecard (BSC). The BSC complements a set of historical financial performance metrics [2]. In their book "The Strategy-Focused Organization" (2001), Kaplan & Norton delineated five principles to transform the BSC from a performance measurement tool into a mechanism for strategy formulation [3]. Based on this theory, this research associates strategic foresight with company performance, including within the realm of hospital business.

The term "resilience" was initially coined by (2009) in 1818 to describe the ability of wood to withstand a load without breaking [4, 5]. Forty years later, Mallet (1856) referred to a measurement known as the "modulus of resilience," used to assess a material's capacity to endure extreme conditions [6]. Over time, resilience has evolved into a multidisciplinary concept employed in various fields, including metallurgy [7], ecology [8], individual and organizational psychology [9, 10], strategic management [11], supply chain management [12], and safety engineering [13]. McManus et al. (2008; p.82) expound that organizational resilience entails an organization's comprehensive situational awareness, management of critical vulnerabilities, and adaptive capacity within a complex, dynamic, and interconnected environment [14]. Only flexible, agile, and dynamic organizations are poised to thrive amidst disruptions and evolving market conditions [15]. Koronis & Ponis (2018) posit three approaches to resilience: strategic resilience, functional resilience, and societal resilience [16]. The strategic resilience approach is deemed suitable for gauging and evaluating organizational robustness.

Strategic foresight entails integrating three fundamental elements: a prospective approach (long-term), a planning approach, and a participatory approach [17]. Strategic foresight encompasses a range of methods, processes, and tools that aid decision-makers [18, 19]. However, its utility in crisis management is limited [20]. Miles et al. (2016) state that strategic foresight constitutes a systematic, participatory, and reflective process that transcends short-term considerations [21]. This stimulates decision-makers and policy planners to adopt novel modes of thinking, discussion, and applying strategic plans aligned with the future [22]. Thus, it simplifies complexity and reduces uncertainty [23].

Competitive advantage is a capability derived from a company's attributes and resources, enabling it to achieve superior performance compared to peers within the same industry or market [24]. According to Day & Wensley (1988), competitive advantage consists of two pivotal elements: proficient skills and high-quality resources that are valuable, rare, imperfectly imitable, and non-substitutable [25, 26]. Competitive advantage refers to attributes that set a company apart [27]. More specifically, Ma (2004) posits that competitive advantage is a resource for competitive survival and attaining strategic objectives [28]. Consequently, organizational capabilities must encompass the skillful combination of assets, human resources, and processes [29].

As defined by Gitman & Zutter (2015), company performance reflects a company's ability to enhance profitability [30]. Company performance can be observed through stock price movements. Lin et al. (2008) asserts that company performance results from achieving internal and external objectives [31]. Some companies prefer employing financial indicators to gauge company performance [32, 33]. Others utilize profitability, productivity, growth, stakeholder satisfaction, market share, and competitive position indicators [33, 34]. The Balanced Scorecard (BSC) provides a framework encouraging the utilization of both financial and non-financial performance measures [2, 3, 35].

### 2.2 Theorical Framework & Hypothesis

The research outcomes of Wang et al. (2022), Chen et al. (2021), and Ingram & Bratnicka-Mysliwiec (2019) collectively indicate a positive influence of organizational resilience on sustainable competitive advantage [36–38]. This observation aligns with the assertions made by Webb (2006), positing that resilience can be construed as a source of competitive advantage [39]. Sharma et al. (2020) posit that individual resilience among employees, teams, and organizational systems and processes when aimed at enhancing organizational effectiveness, can engender competitive advantage within astute organizations [40].

In her study, Rosana (2012) unveiled that competitive advantage variables encompassing cost, quality, time, and flexibility simultaneously impact firm performance [41]. This finding is corroborated by the research of Khan (2019) [42]. Majeed (2011) and Rahim & Zainuddin (2019) explored the Malaysian automotive industry, with outcomes indicating that more advanced competitive advantage translates to higher performance levels [43, 44].

Research on the organizational resilience variable's effect on firm performance was initially undertaken by Comfort et al. (2001) [45]. Subsequently, Yang & Hsu (2018) and Suryaningtyas et al. (2019) extended this inquiry, revealing a significant influence of organizational resilience on firm performance [46, 47]. Beuren et al. (2021) found that organizational resilience positively impacts business performance and job satisfaction [48]. Similarly, Fathi et al. (2021) and Suciariani et al. (2022) ascertained that organizational resilience has a significant positive influence on firm performance [49, 50].

Fathi et al. (2021) study revealed that competitive advantage partially mediates the relationship between organizational resilience and firm performance [49]. Conversely, Sabila (2021) concluded that competitive advantage does not mediate the influence of business resilience on firm performance [51].

Fergnani (2022) observed that a company's strategic forsight could impact vital organizational outcomes, encompassing learning, creativity, innovation, and performance, through mechanisms previously unexplored by strategy and scholarship management [52]. This observation is bolstered by Kassar & Al-Saqal's (2022) research, which establishes a positive effect of strategic forsight on competitive advantage [53]. The study conducted by Jafari & Tabataba'i (2017) regarding the impact of strategic forsight variables on firm performance revealed that strategic forsight could play a role in innovation management, strategic decision-making, and organizational performance enhancement [54]. Rohrbeck & Kum (2018) asserted that the maturity of a company's strategic forsight positively impacts firm performance [55]. Arokodare & Asikhia (2020) and Fathi et al. (2021) conveyed that strategic forsight significantly influences firm performance across various industries [49, 56].

Rohrbeck & Kum (2018) posited that the maturity of a company's strategic forsightpositively impacts firm performance [55]. The study by Jafari & Tabataba'i (2017) revealed that strategic forsight can contribute to innovation management, strategic decision-making, and organizational performance enhancement [54]. Arokodare & Asikhia (2020) conveyed that strategic forsight significantly influences firm performance across various industries [56].

Based on the above-mentioned findings, the following hypotheses are formulated:

$H_1$: Organizational Resilience positively influences Competitive Advantage.
$H_2$: Competitive Advantage positively influences Firm Performance.
$H_3$: Organizational Resilience positively influences Firm Performance.
$H_4$: Competitive Advantage partially mediates the relationship between Organizational Resilience and Firm Performance.
$H_5$: Strategic forsightpositively influences Competitive Advantage.
$H_6$: Strategic forsightpositively influences Firm Performance.
$H_7$: Competitive Advantage mediates the relationship between Strategic forsightand Firm Performance.

# 3 Methodology

## 3.1 Data

The population of this study consists of 11 private hospital companies listed on the Indonesia Stock Exchange (idnfinancials, 2023). Given that the research is conducted across all 11 hospitals, the sample for this study coincides with the population, effectively making this research a population study.

The study employs a primary data collection approach. Data is gathered from hospitals listed on the Indonesia Stock Exchange, utilizing an online questionnaire distributed through Google Forms. The Google Form is then disseminated through WhatsApp Groups and the LinkedIn social media platform. The questionnaire comprises inquiries aimed at obtaining respondent profile data, along with questions to measure three independent variables: organizational resilience, competitive advantage, and strategic perspective. Additionally, one dependent variable is assessed, namely, firm performance. Respondents targeted for participation encompass directors, senior managers, and managers.

## 3.2 Operational Definition Variables and Measurement

This research adopts a quantitative approach utilizing descriptive methodology to present causality among variables. Clear operational definitions of variables and accurate measurements are essential to ensure the study yields the intended measurements. Table 1 presents the operational definitions variable and measurements.

## 3.3 Analysis Technique

This study employs Structural Equation Modeling (SEM) to conduct analysis, utilizing SmartPLS software version 3.2.9 [57]. This technique is chosen due to its suitability for statistical analysis with small samples [58]. Causality analysis is more appropriately performed using Partial Least Squares (PLS) Path Modeling [59]. The analysis is carried out in three stages: outer model analysis, inner model analysis, and hypothesis testing [60].

In the outer model analysis, validity and reliability testing are conducted [61]. Validity testing is approached through two methods: convergent validity and discriminant validity. Convergent

validity analysis meets the criteria when the Average Variance Extracted (AVE) value exceeds 0.50, and factor loading exceeds 0.50 [62, 63]. Meanwhile, discriminant validity analysis is deemed satisfactory when the cross-loading values of each indicator are greater than the cross-loadings of other variables. Reliability testing encompasses both Cronbach's alpha and composite reliability. According to Ghozali & Latan (2015), composite reliability is considered satisfactory when exceeding 0.70, and Cronbach's alpha is considered satisfactory when exceeding 0.70, although a value of 0.60 is still acceptable [61, 64].

The inner model analysis involves testing the coefficients of determination ($R^2$), predictive relevance ($Q^2$), and effect sizes ($f^2$). Hair et al. (2011) categorizes $R^2$ values into three levels: substantial (0.75), moderate (0.50), and weak (0.25) [65]. A higher $R^2$ value signifies a better-fitting model for the research. Additionally, Hair et al. (2012) categorize $f^2$ values into three tiers: small effect (0.02), moderate effect (0.15), and large effect (0.35) [66]. For the $Q^2$ value, when $Q^2 > 0$ indicates the predictive relevance of the model, whereas when $Q^2 < 0$ suggests a lack of predictive relevance [66].

Subsequently, hypothesis testing is conducted using estimated path coefficients and t-tests. Path coefficients illustrate the relationships between variables. Negative values indicate negative relationships, while positive values indicate positive relationships. The t-test assesses the partial influence of independent variables on dependent variables. Research hypotheses are accepted when the t-statistic value exceeds 1.96. Conversely, hypotheses are rejected if the t-statistic value is less than 1.96 [67]. The confidence level utilized is 95%.

**Table 1.** Variable Operational Definition and Measurement

| Variable | Operational Definition | Indikator | Kode | Measurement |
|---|---|---|---|---|
| **Firm Performance** | The company's condition shows its capability to enhance corporate profitability [30]. | **1. Financial** | | |
| | | Our company's market share over the past three years has been above the hospital industry average. | Y.1 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | Our company's market share has grown over the past three years over the hospital industry average | Y.2 | |
| | | The profitability of our company over the past three years has been above the hospital industry average. | Y.3 | |
| | | **2. Customer** | | |
| | | Customers are satisfied with the services provided by company | Y.4 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | The company is responsive to customer complaints | Y.5 | |
| | | The company consistently invests in customer needs and demands. | Y.6 | |
| | | **3. Internal Business Process** | | |
| | | The company's internal processes are adjusted to respond to customer needs. | Y.7 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | The company's internal processes have been streamlined to become agile. | Y.8 | |
| | | Future threats have been considered in reforming the company's internal processes. | Y.9 | |
| | | **4. Learning & Growth** | | |
| | | Employees promote their work | Y.10 | Likert Scale |

| | | | | |
|---|---|---|---|---|
| | | environment. | | 1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | The company has job qualifications aligned with employees' education that can support achieving company performance. | Y.11 | |
| | | Employees feel satisfied with the company's environment. | Y.12 | |
| **Organizational Resilience** | The organization can overcome obstacles arising from environmental threats and risks, enhance the likelihood of success, and enable the organization to sustain its performance during normal and crisis conditions [68, 69]. | **1. Leadership & Culture** | | |
| | | **a. Leadership** | | |
| | | Our organization regularly reevaluates what we aim to achieve. | X1.1 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | In our organization, the staff understands that management may need to make decisions with limited consultation in crises. | X1.2 | |
| | | Our management thinks and acts strategically to ensure that we stay ahead. | X1.3 | |
| | | **b. Staff Engagement** | | |
| | | The staff knows what they need to do to respond to unforeseen issues. | X1.4 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | Our organizational culture strongly supports the staff. | X1.5 | |
| | | Individuals in our organization are accountable for the organization's effectiveness. | X1.6 | |
| | | Our organization has high staff morale. | X1.7 | |
| | | Individuals in our organization are committed to addressing issues until they are resolved. | X1.8 | |
| | | **c. Situation Awareness** | | |
| | | Staff interact regularly to understand what is happening within the organization. | X1.9 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | Our managers actively listen to emerging issues. | X1.10 | |
| | | We know how success in one area of our organization depends on the success of other areas. | X1.11 | |
| | | We learn from past lessons and ensure those lessons carry forward into the future. | X1.12 | |
| | | **d. Innovation & Creativity** | | |
| | | Staff are actively encouraged to challenge themselves and develop through their work. | X1.13 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | We are known for our ability to apply knowledge in new ways. | X1.14 | |
| | | Staff are recognized for "thinking outside of the box." | X1.15 | |
| | | **2. Networks** | | |
| | | We establish agreements with medical equipment suppliers to gain technology knowledge transfers. | X1.16 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | We build relationships with insurance providers, insurers, and healthcare service-related companies. | X1.17 | |

| | | | | |
|---|---|---|---|---|
| | | We collaborate with other hospitals for outpatient referrals, inpatient care, and diagnostic examinations. | X1.18 | |
| | | We understand how to form partnerships with specialist/subspecialist doctors and actively manage those relationships. | X1.19 | |
| | | **3. Change Ready** | | |
| | | **a. Rules & Regulation** | | |
| | | We understand the regulations related to hospitals and their changes. | X1.20 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | We know how to address compliance with hospital regulations. | X1.21 | |
| | | We adhere to the obligations set out in hospital regulations. | X1.22 | |
| | | **b. Unity of Purpose** | | |
| | | We are part of hospital associations and recognize the benefits for our organization. (Example: PERSI, ARSSI) | X1.23 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | We convey opinions and input to the government through these associations. | X1.24 | |
| **Strategic Foresight** | The corporate structure and culture capabilities to detect changes, interpret their consequences, and generate effective responses [70]. | **1. Environmental Scanning** | | |
| | | We are familiar with our customers. | X2.1 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | We are knowledgeable about our competitors. | X2.2 | |
| | | We also explore the opportunities in the market that we have not yet entered. | X2.3 | |
| | | We also consider emerging issues, trends, and technologies relevant to our business that we still need to assess. | X2.4 | |
| | | We have medium and long-term planning in place. | X2.5 | |
| | | **2. Strategy Selection** | | |
| | | We employ scenario strategies to depict potential futures. | X2.6 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | We apply visioning methods such as the balanced scorecard, appreciation inquiry, and road mapping. | X2.7 | |
| | | Our company develops action plans that optimize progress toward organizational strategies. | X2.8 | |
| **Competitive Advantage** | An organization's capability to establish a sustainable and distinct position compared to its competitors [24, 71, 72]. | Our company has a competitive advantage in terms of low costs compared to competitors. | X3.1 | Likert Scale<br>1 = Strongly disagree.<br>2 = Disagree<br>3 = neutral<br>4 = Agree<br>5 = Strongly agree |
| | | Our company possesses superior internal market research expertise compared to competitors. | X3.2 | |
| | | Our company's profitability surpasses that of competitors. | X3.3 | |
| | | Our company occupies a significant market position compared to competitors. | X3.4 | |
| | | Our company delivers higher quality | X3.5 | |

| | | | | |
|---|---|---|---|---|
| | | services compared to competitors. | | |
| | | Our brand enjoys highly favorable customer recognition. | X3.6 | |
| | | Our services have unique characteristics and are unmatched by any other but our own company. | X3.7 | |

Sekaran and Bougie (2013) define intervening variables as mediator variables mediating the relationship between independent and dependent variables [73]. According to Baron and Kenny (1986), full mediation is established if an independent variable has no direct influence on the dependent variable after controlling for the mediator variable [74]. On the other hand, if the influence of the independent variable on the dependent variable diminishes but remains significant after controlling for the mediator variable, partial mediation is identified. In SmartPLS, the mediation test employs specific indirect effects to determine the significance of influence, which is assessed through *P*-values.

# 4 Results And Discussion

## 4.1 Results

### 4.1.1 Respondents Characteristic

One hundred twenty-one respondents were gathered from 10 hospital companies out of the 11 publicly listed hospitals. Notably, there was one hospital, Royal Prima Hospital, from which respondent data could not be obtained, as outlined in Table 2. Among the hospitals, the highest number of respondents were affiliated with EMC Hospital, constituting 50.4%, followed by Mayapada Hospital at 10.7% and Grha Kedoya Hospital at 9.1%. Most respondents held managerial positions, accounting for 62% of the sample, followed by senior managerial positions at 23.1%. Conversely, the least represented position was director, comprising merely 14.9% of the respondents, as detailed in Table 3.

Regarding their tenure, the group that reported having served for more than five years constituted the highest proportion at 34.7%, followed by those with 1-3 years of service at 33.9%. In contrast, those with a tenure of 3-5 years constituted the smallest group at 31.4%. Moving on to the educational background of the respondents, a substantial portion of them held undergraduate degrees, making up 49.6% of the total. The next largest group possessed master's degrees, accounting for 46.3% of respondents. A smaller fraction, 3.3%, held diplomas, while an even smaller portion, 0.8%, held doctoral degrees.

**Table 2.** Respondents Distribrution

| No | Name of Hospital and Company | Amount of Respondent (People) | Percentage |
|---|---|---|---|
| 1 | Bunda Hospital (PT Bundamedik Tbk) | 7 | 5,8% |
| 2 | EMC Hospital (PT Sarana Meditama Metropolitan Tbk) | 61 | 50,4% |
| 3 | Grha Kedoya Hospital (PT Kedoya Adyaraya Tbk) | 11 | 9,1% |
| 4 | Hermina Hospital (PT Medikaloka Hermina Tbk) | 5 | 4,1% |
| 5 | Mayapada Hospital (PT Sejahteraraya Anugrahjaya Tbk) | 13 | 10,7% |
| 6 | Metro Hospital (PT Metro Healthcare Indonesia Tbk) | 2 | 1,7% |
| 7 | Mitra Keluarga Hospital (PT Mitra Keluarga Karyasehat Tbk) | 2 | 1,7% |

| | | | |
|---|---|---|---|
| 8 | Murni Teguh Hospital (PT Murni Sadar Tbk) | 2 | 1,7% |
| 9 | Primaya Hospital (PT Famon Awal Bros Sedaya Tbk) | 10 | 8,3% |
| 10 | Royal Prima Hospital (PT Royal Prima Tbk) | 0 | 0,0% |
| 11 | Siloam Hospital (PT Siloam International Hospitals Tbk) | 8 | 6,6% |
| | **Total** | **121** | **100,0%** |

**Table 3.** Respondents Position, Tenure, and Education

| | **Amount of Respondent (People)** | **Percentage** |
|---|---|---|
| **Position** | | |
| Director | 18 | 14,9% |
| Senior Manager | 28 | 23,1% |
| Manager | 75 | 62,0% |
| **Tenure** | | |
| 1-3 years | 41 | 33,9% |
| 3-5 years | 38 | 31,4% |
| > 5 years | 42 | 34,7% |
| **Education** | | |
| Doctoral | 1 | 0,8% |
| Master | 56 | 46,3% |
| Under-Graduate | 60 | 49,6% |
| Diploma | 4 | 3,3% |

### 4.1.2 Statistic Tests

The study commenced with descriptive statistics analysis. Table 4 presents the descriptive statistics for the variables under investigation. For the organizational resilience variable, it is observed that the minimum value is 1, while the maximum value is 5. The mean value for organizational resilience stands at 4.14, with a standard deviation of 0.66. In the case of the strategic foresight variable, the minimum value is 2, and the maximum value is 5. The mean value for strategic foresight is 4.20, with a standard deviation of 0.63. Moving on to the competitive advantage variable, the minimum value obtained is 2, and the maximum is 5. The mean value for competitive advantage is 3.75, with a standard deviation of 0.67. Lastly, the company performance variable exhibits a minimum value of 1 and a maximum value of 5. The mean value for company performance is computed as 4.01, with a corresponding standard deviation of 0.66.

**Table 4.** Descriptive Statistics of Research Variables

| **Variables** | **N** | **Min** | **Max** | **Mean** | **Std Dev** |
|---|---|---|---|---|---|
| Organizational Resilence | 121 | 1 | 5 | 4,14 | 0,66 |
| Strategice Forsight | 121 | 2 | 5 | 4,20 | 0,63 |
| Competitive Advantage | 121 | 2 | 5 | 3,75 | 0,67 |

| | | | | | |
|---|---|---|---|---|---|
| Company Performance | 121 | 1 | 5 | 4,01 | 0,66 |

The statistical testing continues with the assessment of validity. As outlined by Chin (1998) and Henseler et al. (2009), measurement indicators of variables are considered valid if they meet the standard criteria, where both the loading factor and AVE values are greater than 0.50 [62, 63]. The results of the tests indicated that all measurement indicators exhibited loading factor and AVE values exceeding 0.50. Thus, it can be concluded that all measurement indicators for the variables are valid.

For the reliability test, following Ghozali & Latan (2015), both composite reliability and Cronbach's alpha values are deemed satisfactory if they surpass 0.70 [61]. The test outcomes revealed that all variables are reliable. For instance, the composite reliability value for the organizational resilience variable reached 0.96. Similarly, the strategic foresight variable attained a value of 0.94, and the competitive advantage variable received a 0.90. The composite reliability value for the company performance variable was 0.93. Regarding Cronbach's alpha values, the organizational resilience variable scored 0.96, strategic foresight was 0.93, competitive advantage stood at 0.87, and company performance reached 0.92. Therefore, all variables are considered reliable.

Moving on to the inner model, testing involved coefficients of determination, effect sizes, and predictive relevance. The coefficient of determination yielded a value of 0.72. This value indicates that the variables used in this study are sufficiently effective, as the independent variables explain 72% of the variance in the dependent variable. Consequently, only 28% of the variance still needs to be explained. In terms of effect sizes, Hair et al. (2012) categorized small effect as 0.02, moderate effect as 0.15, and large effect as 0.35 [66]. The results revealed the presence of two effect size categories, namely small and moderate. The variable strategic foresight exhibited a small effect size on the company performance variable, with an $f^2$ value of 0.024. Effect sizes for the variables organizational resilience and competitive advantage on the company performance variable fell under the moderate category, with $f^2$ values of 0.214 and 0.163, respectively. Lastly, the predictive relevance test, where $Q^2 > 0$ indicates predictive relevance, and $Q^2 < 0$ indicates a lack of predictive relevance, showed values of 0.26 and 0.39 for the competitive advantage and company performance variables, respectively. Consequently, the research model possesses strong predictive relevance.

The most critical test is hypothesis testing, carried out through t-tests. Hypothesis analysis is conducted by examining the significance values in the coefficients table. Research hypotheses are accepted when the t-statistic value exceeds 1.96, and hypotheses are rejected when the t-statistic value is below 1.96 [67] at a confidence level of 5% ($P$=5%). The test results indicated the acceptance of all hypotheses (refer to Table 5).

The first hypothesis, stating that organizational resilience positively impacts competitive advantage, is accepted due to the $P$-value of 0.00 and a t-statistic of 3.83 (>1.96). The coefficient value of influence or original sample value reached 0.448. Moving on to the second hypothesis, which posits that competitive advantage has a positive effect on company performance, it is also accepted. The t-statistic value was 5.13, with a significance level of 0.00. The original sample value for this hypothesis was 0.29.

The third hypothesis, suggesting that organizational resilience positively impacts company performance, is also accepted. The significance level was 0.00, and the t-statistic value was 5.09.

The original sample value for this hypothesis was 0.487. Hypothesis five predicts the influence of strategic foresight on competitive advantage. The hypothesis test results indicated a t-statistic value of 2.48, with a *P*-value of 0.013. Therefore, the fifth hypothesis is accepted. Lastly, the sixth hypothesis states that strategic foresight has a positive impact on company performance. This hypothesis is substantiated by a t-statistic of 2.12 and a *P*-value of 0.034. The original sample value for this hypothesis was 0.16.

The fourth and seventh hypotheses predict the mediation of competitive advantage on the impact of strategic foresight and organizational resilience on company performance. The fourth hypothesis that competitive advantage mediates the impact of organizational resilience on company performance is supported by a t-statistic of 3.21, a *P*-value of 0.001, and an original sample value of 0.079. Thus, the role of competitive advantage as a mediator is complementary partial mediation. The seventh hypothesis, proposing that competitive advantage mediates the impact of strategic foresight on company performance, is also verified. The hypothesis test yielded a t-statistic of 2.07, a significance level of 0.039, and an original sample value of 0.13. As a result, the seventh hypothesis is confirmed, and the role of competitive advantage as a mediator is complementary partial mediation.

**Table 5.** Hypothesis Test Results

| Variable | Original Sample | t-Statistics | *P* Values | Conclusion |
|---|---|---|---|---|
| RO -> KK | 0.448 | 3.833 | 0.000 | $H_1$ Accepted |
| KK -> KP | 0.290 | 5.131 | 0.000 | $H_2$ Accepted |
| RO -> KP | 0.487 | 5.091 | 0.000 | $H_3$ Accepted |
| PS -> KK | 0.271 | 2.487 | 0.013 | $H_5$ Accepted |
| PS -> KP | 0.159 | 2.125 | 0.034 | $H_6$ Accepted |
| RO -> KK -> KP | 0.130 | 3.209 | 0.001 | $H_4$ Accepted |
| PS -> KK -> KP | 0.079 | 2.071 | 0.039 | $H_7$ Accepted |

### 4.2 Discussion

This study has yielded results indicating that organizational resilience positively and significantly influences competitive advantage in publicly listed hospitals in Indonesia. Given the intense competition within the hospital industry, stemming from increased business participation and the inclination of Indonesian citizens to seek medical treatment abroad, hospital management is compelled to cultivate organizational resilience. This process can initiate by bolstering employee, team, and organizational system resilience, which in turn can impact the organization's competitive advantage [36–40].

The verified hypothesis that competitive advantage positively and significantly influences company performance delivers the message that hospital companies should pay heed to competitive advantage factors if they aspire to achieve favorable company performance. Developing competitive advantage requires a sustained process focusing on internal factors such as human resources (doctors, medical and non-medical personnel), cutting-edge medical technology, adequate facilities, executive services, subspecialties, comprehensive medical equipment and support, centers of excellence, and effective communication. Hospital management needs to recognize the significance of efforts to form and maintain a competitive advantage, encompassing aspects like cost, quality, timeliness, and flexibility when compared to competitors [41–44].

This study has successfully demonstrated organizational resilience's positive and significant influence on company performance in publicly listed hospitals in Indonesia. This finding informs those hospitals possessing organizational resilience, capable of enduring fierce competition and constraints, and transforming challenges into organizational learning, can effectively enhance company performance [46–48, 50]. However, this situation does not align with the findings of Comfort et al. (2001), who asserted that organizational performance often diminishes in increasingly complex environments [45].

Additionally, this study aimed to verify the hypothesis that competitive advantage partially mediates the influence of organizational resilience on company performance. The verified hypothesis provides insight into the reduced impact of organizational resilience on company performance when competitive advantage mediates it. This finding could be attributed to the concentration of hospitals in urban areas, limited private companies in the industry, scarcity of quantitative and qualitative human resources, substantial long-term investment with a small return on investment, and stringent hospital regulations. All those factors contributing to entry barriers. This outcome aligns with the study by Fathi et al. (2021) but contrasts with Sabila (2021), who found that competitive advantage does not mediate the impact of business resilience on company performance [49, 51].

Furthermore, the study has successfully validated the hypothesis that strategic foresight positively and significantly influences competitive advantage. This verification underscores hospital management's need to engage in strategic foresight, involving planning, estimation, exploration, analysis, and feedback to formulate or adapt company plans and actions. This approach ensures organizational agility in responding to PESTEL (Political, Economic, Social, Technological, Environmental, Legal) changes as part of the organizational foresight strategy. Moreover, it enables the company to maintain its best capabilities/competitive advantage [52, 53].

The hypothesis that strategic foresight has a positive and significant influence on company performance has been successfully verified. This validation indicates that organizations conducting PESTEL analysis and implementing work plans, projections, and evaluations (PDCA), instill confidence and a positive impact on sustained company performance [54–56].

The mediating role of competitive advantage in the influence of strategic foresight on company performance has been substantiated by accepting the seventh hypothesis. This mediating role is partial. This finding signifies that strategic foresight aims to predict the future, enabling organizations to swiftly respond to changes and enhance company performance through internal competitive advantage. This result aligns with the study by Fathi et al. (2021) but contrasts with Junquera et al. (2018) and Tan et al. (2022) [49, 75, 76]. Both studies found that an element of strategic foresight, the environment, does not mediate competitive advantage when impacting company performance.

## 5 Conclusions

Indonesian hospital companies are facing fierce competition. To succeed in the hospital business competition, two influential variables are presumed: strategic foresight and organizational resilience. Additionally, another reinforcing factor, competitive advantage, strengthens the roles of these two variables. Thus, this study tested the hypotheses concerning the impact of strategic foresight and organizational resilience on hospital company performance. After a series of statistical tests, the research substantiated all constructed hypotheses. Consequently, strategic

foresight and organizational resilience contribute to winning the competition within the hospital business.

Based on these conclusions, the study recommends that hospital management adopt strategic foresight by developing short-term, medium-term, and long-term strategic plans. Additionally, the recommendation is to implement a PDCA (Plan-Do-Check-Act) cycle. Organizational resilience should also be cultivated by fostering the ability to endure competitive conditions, managing limitations, and transforming obstacles and difficulties into organizational learning. The support of competitive advantage for strategic foresight and organizational resilience underscores the importance of enhancing competitive advantage through improving human resources (doctors, medical and non-medical staff), state-of-the-art medical technology resources, adequate facilities, executive services, subspecialties, comprehensive medical equipment and support, and centers of excellence.

However, the limitations of this study include its exclusive focus on publicly listed hospital companies. The results could potentially differ when involving a broader range of hospitals, including non-public ones, which are more prevalent in Indonesia, including government-owned hospitals. Therefore, for future research, it is recommended to incorporate a more extensive array of hospitals to fulfill the ideal conditions of quantitative research, involving a larger sample size to draw more generalized conclusions.

## References


[1]KPPU. (2021). “Penelitian Pelaku Usaha dan Struktur Pasar pada Sektor Jasa Rumah Sakit.” [Online]. Available: https://kppu.go.id/wpcontent/uploads/ 2021/01/Rumah-Sakit-2020-Ringkasan-Eksekutif.pdf.

[2]Kaplan, R.S., and Norton, D.P. (1996). “Using the balanced scorecard as a strategic management system,” Harvard Business Review, vol. 74, pp. 75–79.

[3]Kaplan, R.S., and Norton, D.P. (2001). The strategy focused organization: How the Balanced Scorecard companies thrive in the new business environment. Boston, Massachusetts: Harvard Business School Press.

[4]Thomas Tredgold. (2009). On the transverse strength and resilience of timber. A Journal of Theoretical Experimental and Applied Physics, 51 (239), 214–216.

[5]McAslan, A.R.R. (2010). The Concept of Resilience: understanding its origins, meaning and utility. Adelaide: Torrens Resilience Institute.

[6]Mallet, M. (1856). On the Physical Conditions involved in the Construction of Artillery: an Investigation of the Relative and Absolute Values of the Materials Principally Employed and of Some Hitherto Unexplained Causes of the Destruction of the Canon in Service. London: Longmans and Roberts.

[7]William Jr. (2000). Materials Science & Engineering: An Introduction. Anti-Corrosion Methods Mater, 1st ed.

[8]Walker B. *et al.* (2002). “Resilience Management in Social-ecological Systems: a Working Hypothesis for a Participatory Approach,” Conserv. Ecol., vol. 6, no. 1, p. art14, doi: 10.5751/ES-00356-060114.

[9]Barnett, CK and Pratt, M. (2000). “From threat-rigidity to flexibility - Toward a learning model of autogenic crisis in organizations,” J. Organ. Chang. Manag., vol. 13, no. 1, pp. 74–88, doi: 10.1108/09534810010310258.

[10]Powley E. (2009). “Reclaiming resilience and safety: Resilience activation in the critical period of crisis,” Hum. Relations, vol. 62, no. 9, pp. 1289–1326, doi: 10.1177/0018726709334881.

[11]Hamel G and Välikangas L. (2003). “The Quest for Resilience,” Harv. Bus. Rev., vol. 81, pp. 52–63, 2003.

[12]Sheffi Y. (2005). “Building a resilient supply chain,” Harv. Bus. Rev., vol. 1, pp. 1–4.

[13]Hollnagel E, Woods D and Leveson N. (2006). Resilience Engineering: Concepts and Precepts. Aldershot, UK: Ashgate Pub Co.

[14]McManus S. (2008). “Organisational resilience in New Zealand,” University of Canterbury, Christchurch, New Zealand.
[15]Lengnick-Hall, Cynthia A., Tammy E. Beck, Mark L. Lengnick-Hall. (2011). “Developing a capacity for organizational resilience through strategic human resource management,” Hum. Resour. Manag. Rev., vol. 21, no. 3, pp. 243–255, doi: 10.1016/j.hrmr.2010.07.001.
[16]Koronis E. and Ponis S. (2018). “Better than before: the resilient organization in crisis mode,” J. Bus. Strategy, vol. 39, no. 1, pp. 32–42, doi: 10.1108/JBS-10-2016-0124.
[17]European Commision. (2009). Mapping Foresight. Luxembourg: Publications Office of the European Union.
[18]Vecchiato R. and Roveda C. (2010). “Strategic foresight in corporate organizations: Handling the effect and response uncertainty of technology and social drivers of change,” Technol. Forecast. Soc. Change, vol. 77, no. 9, pp. 1527–1539, doi: 10.1016/j.techfore.2009.12.003.
[19]Vecchiato R. (2012). “Environmental uncertainty, foresight and strategic decision making: An integrated study,” Technol. Forecast. Soc. Change, vol. 79, no. 3, pp. 436–447, doi: 10.1016/j.techfore.2011.07.010.
[20]Constantinides P. (2013). “The failure of foresight in crisis management: A secondary analysis of the Mari disaster,” Technol. Forecast. Soc. Change, vol. 80, no. 9, pp. 1657–1673, doi: 10.1016/j.techfore.2012.10.017.
[21]Miles I., Saritas O., and Sokolov A. (2016). Foresight for Science, Technology and Innovation. Cham: Springer International Publishing, doi: 10.1007/978-3-319-32574-3.
[22]UNDP. (2018). “Foresight manual: empowered futures for the 2030 agenda.” Global Centre for Public Service Excellence, Singapore.
[23]Bootz J. (2010). “Strategic foresight and organisational learning: A survey and critical analysis,” Technol. Forecast. Soc. Chang., vol. 77, pp. 1588–1594.
[24]Porter E. M. (1985). Competitive Advantage-Creating and Sustaining Superior Performance. New York: Free Press.
[25]Day and Wensley. (1988). “Assessing Advantages: A Framework for Diagnosing Competitive Superiority,” *J. Mark.*, vol. 52, pp. 1–20.
[26]Barney J. (1991). “Firm resources and sustained competitive advantage,” J. Organ. Chang. Manag., vol. 13, pp. 74–88.
[27]Ma, H. (1999). “Anatomy of competitive advantage: a SELECT framework,” Manag. Decis., vol. 37, no. 9, pp. 709–718, doi: 10.1108/00251749910299129.
[28]Ma, H. (2004). “Toward global competitive advantage,” Manag. Decis., vol. 42, no. 7, pp. 907–924, doi: 10.1108/00251740410550961.
[29]Pearce, A., John II., & Richard B. Robinson, Jr. (2008). Manajemen Strategi Formulasi, Implementasi, dan Pengendalian. Jakarta: Salemba Empat.
[30]Gitman, Lawrence J dan Chad J. Zutter (2015). Principles of Managerial Finance, 14th ed. Pearson Education Limited.
[31]Lin, C.- H., Peng, C.- H., & Kao, D. T. (2008). “The innovativeness effect of market orientation and learning orientation on business performance,” Int. J. Manpow., vol. 29, no. 8, pp. 752–772, doi: 10.1108/01437720810919332.
[32]Grant, R. M., Jammine, A. P. & Thomas, H. (1988). “Diversity, Diversification, and Profitability among British Manufacturing Companies 1972–1984,” Acad. Manag. J., vol. 31, pp. 771–801.
[33]Rosli, M. Mohd & Sidek, Syamsuriana. (2013). “The Impact of Innovation on the Performance of Small and Medium Manufacturing Enterprises: Evidence from Malaysia,” J. Innov. Manag. Small Mediu. Enterp., doi: 10.5171/2013.885666.
[34]Garrigos-Simon, F. J., & Marques, D. P. (2004). “Competitive Strategies and Firm Performance: A Study in the Spanish Hospitality Sector,” Manag. Res., vol. 2, no. 3, pp. 251–269.
[35]Kaplan, R.S., and Norton, D.P. (1992). “The balanced scorecard - measures that drive performance,” *Harv. Bus. Rev.*, vol. 70, pp. 71–79.
[36]Wang, J., Chen R., Zhang S. (2002). “The Mediating and Moderating Effect of Organizational Resilience on Competitive Advantage: Evidence from Chinese Companies,” Sustainability, vol. 14, no. 21, p. 13797, doi: 10.3390/su142113797.

[37]Chen, R.; Xie, Y.; Liu, Y. (2021)., "Defining, Conceptualizing, and Measuring Organizational Resilience: A Multiple Case Study," Sustainability, vol. 13, no. 5, p. 2517, doi: 10.3390/su13052517.
[38]Ingram, Tomasz & Katarzyna Bratnicka-Mysliwiec. (2019). "Organizational Resilience of Family Businesses," Probl. Zarz., vol. 2/2019, no. 82, pp. 186–204, doi: 10.7172/1644-9584.82.10.
[39]Webb B. and Schlemmer F. (2006). The Transfer and Diffusion of Information Technology for Organizational Resilience, vol. 206. Boston: Kluwer Academic Publishers, doi: 10.1007/0-387-34410-1.
[40]Sharma, S & Sharma S.K. (2020). "Probing the Links Between Team Resilience, Competitive Advantage, and Organizational Effectiveness: Evidence from Information Technology Industry," Bus. Perspect. Res., vol. 8, no. 2, pp. 289–307, doi: 10.1177/2278533719887458.
[41]Rosana A. (2012). "Pengaruh Keunggulan Bersaing Terhadap Kinerja Perusahaan Berdasarkan Pendekatan Balanced Scorecard Pada Kantor Unit Layanan PT. Bank BNI (Persero) Tbk Wilayah Karesidenan Malang," Universitas Brawijaya.
[42]Khan SZ, Yang Q, Waheed A. (2019). "Investment in intangible resources and capabilities spurs sustainable competitive advantage and firm performance," Corp. Soc. Responsib. Environ. Manag., vol. 26, no. 2, pp. 285–295, doi: 10.1002/csr.1678.
[43]Majeed S. (2011). "The Impact of Competitive Advantage on Organizational Performance," Eur. J. Bus. Manag., vol. 3, pp. 191–196.
[44]Rahim, FBT & Zainuddin Y Bin. (2019). "The impact of technological innovation capabilities on competitive advantage and firm performance in the automotive industry in Malaysia," p. 020030. doi: 10.1063/1.5085973.
[45]Comfort LK, Sungu Y, Johnson D and Dunn M. (2001). "Complex Systems in Crisis: Anticipation and Resilience in Dynamic Environments," J. Contingencies Cris. Manag., vol. 9, no. 3, pp. 144–158, doi: 10.1111/1468-5973.00164.
[46]Yang, Ching-Chiao & Hsu, Wei-Lin. (2018). "Evaluating the impact of security management practices on resilience capability in maritime firms—a relational perspective," Transp. Res. Part A Policy Pract., vol. 110, pp. 220–233, doi: 10.1016/j.tra.2017.06.005.
[47]Suryaningtyas D, Sudiro A, Eka T.A. and Dodi I.W. (2019). "Organizational Resilience: As Mediating Effect of Organizational Culture and Organizational Performance," in Proceedings of the Proceedings of the 1st Sampoerna University-AFBE International Conference, SU-AFBE 2018, 6-7 December 2018, Jakarta Indonesia, EAI, doi: 10.4108/eai.6-12-2018.2286329.
[48]Beuren, I.M, Souza, V.D.S.S.D, Theiss, V. (2021). "Organizational resilience, job satisfaction and business performance," Int. J. Product. Perform. Manag., doi: 10.1108/IJPPM-03-2021-0158.
[49]Fathi, M., Yousefi, N., Vatanpour, H., Peiravian, F. (2021). "The Effect of Organizational Resilience and Strategic Foresight on Firm Performance: Competitive Advantage as Mediating Variable," Iran. J. Pharm. Res., vol. 20, no. 4, pp. 497–510, doi: 10.22037/ijpr.2021.116145.15723.
[50]Suciariani, Anggraeni D.S., Tanuwijaya J. (2022). "Analisis pengaruh organizational resilience, job satisfaction, organizational learning culture, dan turnover intention terhadap business performance pada perusahaan pertamina," J. Ilm. Akunt. dan Keuang., vol. 4, no. 9, pp. 4151–4163.
[51]Sabila M. Q. (2021). "Pengaruh Resiliensi Bisnis dan Strategi Kewirausahaan terhadap Kinerja Perusahaan yang Dimediasi oleh Keunggulan Bersaing (Studi pada Wirausaha Wanita di Yogyakarta)," Universitas Gadjah Mada.
[52]Fergnani A. (2022). "Corporate Foresight: A New Frontier for Strategy and Management," Acad. Manag. Perspect., vol. 36, no. 2, pp. 820–844, doi: 10.5465/amp.2018.0178.
[53]Kassar, H. J. M., & Al-Saqal, A. H. (2022). "The impact of strategic foresight on achieving competitive advantage," Int. J. Health Sci. (Qassim)., pp. 2285–2300, doi: 10.53730/ijhs.v6nS9.12924.
[54]Mahdi Joneidi Jafari, Seyed Akbar NiliPourTabataba'i. (2017). "Corporate foresight and its effect on innovation, strategic decision making and organizational performance (case study: Iranian banking industry)," foresight, vol. 19, no. 6, pp. 559–576, doi: 10.1108/FS-07-2017-0035.
[55]Rohrbeck R. and Kum M. E. (2018). "Corporate foresight and its impact on firm performance: A longitudinal analysis," Technol. Forecast. Soc. Change, vol. 129, pp. 105–116, doi: 10.1016/j.techfore.2017.12.013.
[56]Arokodare M A and Asikhia OU. (2020). "Strategic agility: Achieving superior organizational performance through strategic foresight," Glob. J. Manag. Bus. Res., vol. 20, pp. 7–16.

[57]Raykov T and Marcoulides GA. (2012). A First Course in Structural Equation Modeling. Taylor & Francis.
[58]Hsu SH, Chen W and Hsieh M. (2006). "Robustness testing of PLS, LISREL, EQS and ANN-based SEM for measuring customer satisfaction," Total Qual. Manag. Bus. Excell., vol. 17, no. 3, pp. 355–372, doi: 10.1080/14783360500451465.
[59]Murniati, M. P. W. Y. P. St. V. (2013). Alat-alat Pengujian Hipotesis. UNIKA SOEGIJAPRANATA.
[60]Henseler et al. (2016). "Testing Measurement in Variances of Composites Using Partial Least Squares," Int. Mark. Rev., vol. 33, no. 3, pp. 405–431.
[61]Ghozali, Imam and Hengky Latan. (2015). Partial Least Squares Konsep Teknik dan Aplikasi dengan Program Smart PLS 3.0. Semarang: Universitas Diponegoro Semarang.
[62]Chin, W. W. (1998). "The Partial Least Squares Approach to Structural Equation Modeling," Mod. Methods Bus. Res., vol. 295.
[63]Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). "The Use of Partial Least Squares Path Modeling In International Marketing," New Challenges to Int. Mark. Adv. Int. Mark., vol. 20, pp. 277–319.
[64]Hair, J. F., Hult, G., Ringle, C., & Sarstedt, M. (2014). A Primer On Partial Least Squares Structural Equation Modeling (PLS-SEM). America: SAGE Publication, Inc.
[65]Hair et. al. (2011). Multivariate Data Analysis, 7th ed. New Jersey: Pearson Prentice Hall.
[66]Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). "An assessment of the use of partial least squares structural equation modeling in marketing research," J. Acad. Mark. Sci., vol. 40, no. 3, pp. 414–433.
[67]Ghozali, Imam. (2016). Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23, 8th ed. Semarang: Badan Penerbit Universitas Diponegoro.
[68]Manfield R. (2016). "Organizational resilience: a dynamic capabilities approach," The University of Queensland.
[69]Mitroff II. (2005). "From my perspective: Lessons from 9/11, are companies prepared today," Technol. Forecast. Soc. Chang., vol. 72, pp. 372–376.
[70]Paliokaitė A. and Pačėsa N. (2015). "The relationship between organisational foresight and organisational ambidexterity," Technol. Forecast. Soc. Change, vol. 101, pp. 165–181, doi: 10.1016/j.techfore.2014.03.004.
[71]Tracey, M., Vonderembse, M. A., & Lim, J. S. (1999). "Manufacturing Technology and StrategyFormulation: Keys to Enhancing Competitiveness and Improving Performance," J. Oper. Manag., vol. 17, no. 4, pp. 411–428, doi: 10.1016/S0272-6963(98)00045-X.
[72]McGinnis, M. A., & Vallopra, R. M. (1999). "Purchasing and Supplier Involvement in Process Improvement: A Source of Competitive Advantage," J. Supply Chain Manag., vol. 35, no. 4, pp. 42–50, doi: 10.1111/j.1745-493X.1999.tb00243.x.
[73]Sekaran-Bougie. (2013). Research methods for business: a skill-building approach, 6th ed. West Sussex, UK: John Wiley & Sons Ltd.
[74]Baron, Reuben M., dan Kenny, David A. (1986). "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," J. Pers. Soc. Psychol., vol. 51.
[75]Junquera, B. & Sanchez, V.B. (2018). "Environmental Proactivity and Firms' Performance: Mediation Effect of Competitive Advantages in Spanish Wineries," Sustainability, vol. 10, no. 7, p. 2155, doi: 10.3390/su10072155.
[76]Tan, K., Siddik, A.B., Sobhani, F.A., Hamayun, M., Masukujjaman, M. (2022). "Do Environmental Strategy and Awareness Improve Firms' Environmental and Financial Performance? The Role of Competitive Advantage," Sustainability, vol. 14, no. 17, p. 10600, doi: 10.3390/su141710600.