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Business strategies and organizational performance: Unveiling the mediating role of competitive advantage

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Abstract

The purpose of the study is to investigate how competitive advantage influences the relationship between business strategies and organizational performance in higher education institutions. The data were gathered from 309 academic and administrative leaders via a structured survey using a quantitative research methodology. SmartPLS 4 was used for data analysis in the study. The cost leadership, differentiation, and focus strategies are business strategies that have a positive impact on organizational performance both directly and indirectly through competitive advantage, according to the findings. To improve university performance, strategic decision-making is essential. By combining market-based and resource-based views with Porter's generic strategies model and the Balanced Scorecard framework, the study adds to the body of knowledge on strategic management. In practice, the results provide insight to legislators and university administrators on how to improve competitive positioning, enhance strategic planning, and enhance organizational performance in a changing educational environment.

Keywords: Business strategies, Competitive advantage, Higher education, Organizational performance, Strategic management.

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1. Introduction

Every organization strives to remain relevant in its sector or environment. As the number of higher education institutions in Yemen continues to grow, organizational performance is indeed a crucial indicator of their success and relevance. The performance of any organization is influenced by the strategies the organization has chosen [1]. According to Karnowati et al. [2], an organization achieves organizational performance when this performance is compared to the planned target with

the achievement of the results the organizational unit has gained within a certain period [2]. Hence, the organizational entities are required to achieve the best performance at both the external and internal levels to enhance their overall success and achieve their strategic objectives. To address this, the organizational entities need to establish a good business strategy to gain a competitive advantage in the market where they must survive and compete with rivals, as competitive advantage is vital for organizations to exist in a market where the ultimate objective is to succeed in organizational performance.

Business strategy plays an essential role in creating a competitive advantage and improving organizational performance. Organizations need to decide why they want a competitive advantage and for which part of their strategy [3]. According to Porter [4], competitive business strategy refers to the pursuit of a strong and advantageous position within an industry, which is the primary area where competition takes place. The three general strategies that a business might employ to gain a competitive edge in the market are the focus strategy, differentiation strategy, and cost leadership strategy, according to Porter [4]. These strategies guide companies in making choices regarding their value proposition, target market, cost structure, and activities that will differentiate them from competitors and create a competitive advantage. By adopting and implementing these strategies effectively, higher education institutions can achieve a competitive advantage and enhance organizational performance.

Due to rapid technological advancement, organizations today are coping with a highly competitive, unstable, and unpredictable market. Thus, executives concentrate on gaining a competitive edge by devising a fresh, suitable approach to strategic development that allows them to effectively adjust to those technical and industrial shifts. For each organization, a strategy is required to achieve its goals and objectives. Organizational performance is significantly influenced by the competitive business strategy, which is regarded as an internal factor [5].

Gaining a competitive advantage is one of a business strategy's main objectives. The distinctive qualities, assets, or capabilities that set a particular business apart from its rivals and enable it to surpass them in the marketplace are referred to as a competitive advantage. A strong business strategy allows a company to distinguish itself from competitors and obtain a competitive advantage. The effective business strategies often involve targeting specific market segments. Developing a strong business strategy involves understanding the market needs and preferences. By considering a particular segment of clients with specific characteristics, preferences, or behaviors, a company can tailor its offerings and marketing efforts to better meet their needs. This creates a perception of value and allows for more effective differentiation and customization, leading to a competitive advantage within that specific market segment and enhancing organizational performance.

By using Porter's generic strategies, the focus strategy, differentiation strategy, and cost leadership strategy, organizations can obtain a competitive edge in the marketplace. Porter’s strategies are highly important for businesses in Yemen as they provide a framework for achieving and sustaining a competitive advantage in a challenging business environment, which enhances organizational performance.

A gap in the literature was identified by the current study: no prior research had established the relationship between the business strategies (cost leadership, differentiation, and focus strategies) as independent variables, organizational performance as dependent variables, and competitive advantage as a mediating variable. Consequently, the current study aims to answer the four main questions.

RQ1: Do business strategies impact organizational performance in higher education institutions?
RQ2: Do business strategies impact the competitive advantage in higher education institutions?
RQ3: Does competitive advantage impact the organizational performance in higher education institutions?
RQ4: Does competitive advantage have a mediating role in the relationship between business strategies and organizational performance in higher education institutions?

2. Review of Literature

The resource-based view (RBV), market-based view (MBV), Porter's generic strategies model, and balanced scorecard model can all be used to describe the relationship among the variables in the current study.

2.1. Resource-Based View

The RBV can be used to explain the relationship between organizational performance and business strategies. The RBV was introduced by Barney [6] and indicated that the success of an organization is mainly determined by its own resources. According to the RBV, a firm’s resources and capabilities are the primary drivers of its performance. In addition to intangible assets like human capital, brand reputation, and knowledge, these resources and skills can also comprise real assets like physical infrastructure Barney [6]. Barney [6] also suggests that a company’s business strategy must match its unique resources and capabilities to achieve superior performance. He contends that a company's resources and capabilities ought to serve as the foundation for its strategic decisions and that a firm's strategy ought to be created to capitalize on its distinct assets and talents.

Additionally, according to the RBV, a company's competitive advantage is mostly driven by its resources and capabilities [6, 7]. Thus, a company needs to create a business plan that makes use of its special and priceless assets and skills to gain and maintain a competitive edge. A firm’s business strategy should be based on an analysis of its internal strengths and weaknesses and should aim to maximize the value of its resources and capabilities [6]. All things considered, the RBV recommends that for a company to maintain a competitive edge over its rivals, its business plan should be founded on its special and valued resources and competencies. Additionally, according to Alhosseiny [8], a company can attain a sustained competitive edge by implementing a suitable competitive business plan.

Furthermore, the relationship between organizational performance and competitive advantage can be explained by the RBV. The RBV holds that organizational performance is primarily driven by resources, and that a unique set of resources

creates the firm's long-term competitive advantages [6, 9]. According to the RBV, firms can gain a competitive edge by creating resources that are unusual and widely dispersed [6]. All assets, capabilities, organizational procedures, firm characteristics, information, and knowledge within a company's control that are valuable, uncommon, unique, and non-replaceable are referred to as resources. With the use of these resources, the company can create and maintain a sustainable competitive advantage that boosts productivity and effectiveness, which over time may result in improved organizational performance.

2.2. Market-Based View

The MBV can be used to illustrate the relationship between business strategies and organizational performance as well as the relationship between business strategies and competitive advantage. Porter [10] served as an important driver for MBV, which acknowledged that an organization's capacity to compete is mainly determined by how appealing the industry and external environment are. Porter [5] asserts that market competition has an impact on the tactics employed by businesses to sustain and enhance their performance. The primary factor, market competition, has an impact on maintaining and enhancing business performance as well as reaching companies' objectives. According to this perspective, businesses should strategically position themselves in the market to get a competitive edge.

Porter [10] model of the five competitive forces can be used to assess the strategic process of an organization's industrial structure. This model's main idea is that the organization's strategy should be informed by the evaluation of the opportunities and risks it faces. Businesses must create a business plan that considers the dynamics at play and aims to position the organization to outperform its rivals to gain a lasting competitive advantage.

Organizations can use Porter [10] model to evaluate their own competitive advantage while developing a strategy, taking the external environment into account. Additionally, it can assist us in comprehending the environment and creating successful commercial plans to boost output [11]. The threat of substitute goods or services, the threat of new rivals (barriers to entry), the negotiating power of suppliers, the bargaining power of consumers, and the competition among competitors are the five factors [10]. According to this viewpoint, a company's relative success can be explained by its sources of market power. All things considered, Porter's five forces model indicates that creating successful business plans and gaining a long-lasting competitive edge—both of which eventually result in improved organizational performance—require a thorough grasp of the competitive landscape.

2.3. Porter's Generic Strategies Model

The relationship between the business strategies and the competitive advantage can be explained considering the [4] generic strategies model. Porter's generic strategies model provides a useful framework for companies to understand the different ways they can achieve a competitive advantage in their industry and develop effective business strategies [4, 12, 13]. Companies can gain a competitive advantage in a competitive industry by adopting the three generic strategies suggested by Porter [4], which are the differentiation strategy, the overall cost leadership strategy, and the focus strategy (broad scope and narrow scope). These strategies are an essential component of the plans that businesses create to establish a competitive position in the market. Additionally, any generic strategy has the potential to produce a long-term competitive advantage, which forms the cornerstone of average performance over time [4].

2.4. Balanced Scorecard Model

The balanced scorecard (BSC) model can be used to describe the connection between organizational performance and company strategies. Kaplan and Norton [14] created it in 1992. It is a management method that enables businesses to implement their strategy and vision. This system informs both internal business processes and external outputs, leading to ongoing improvements in organizational performance and outcomes. A formal management method for creating, carrying out, and overseeing company strategy is the BSC model [15]. The balanced scorecard model is a management tool that assists businesses in defining, developing, and putting their vision and strategy into a set target and a collection of distinct fiscal and non-fiscal performance metrics, according to Suprihono et al. [16].

The BSC model assists firms in monitoring and assessing their performance over time, as well as in connecting their business objectives to certain performance indicators and targets [14]. The model illustrates organizational performance from four points of view. This idea states that a company's business plan should be transformed into a set of strategic goals from four primary perspectives: internal processes, customers, innovation and learning, and finances. These perspectives reflect the different aspects of an organization's performance and are connected to one another. These objectives should be measured using a set of performance indicators that align with the business's strategy [17, 18].

2.5. Business Strategies and Organizational Performance

Some previous studies (e.g., Gatimu and Amuhaya [19] and Islami et al. [20]) have indicated that a significant effect on organizational performance can be achieved by the three business strategies, which are the differentiation strategy, the cost leadership strategy, and the focus. Khuong et al. [21] found that there is a positive association between the differentiation strategy and the firm's financial performance.

Moreover, studies by Kubai et al. [22], Njuguna and Waithaka [23], Kimiti et al. [24], and Lidasan [25] have found that the cost leadership strategy has a positive impact on organizational performance. Furthermore, Hariyati et al. [26] found that there is a positive relationship between the differentiation strategy and business performance. These studies emphasize the crucial role of the business strategies (differentiation strategy, cost leadership strategy, and focus strategy) in improving organizational performance.

H_1: There is a positive and significant impact of the business strategies on organizational performance.

2.6. Business Strategies and Competitive Advantage

Some of the previous studies have concluded that the business strategies, which are the differentiation strategy, the cost leadership strategy, and the focus strategy, have a significant impact on the competitive advantage [3, 27]. Studies by Ahmed [28] and Haque et al. [29] have found that the cost leadership strategy and the differentiation strategy have a positive and significant effect on the competitive advantage. Also, Peter and Sasaka [30] found that the cost leadership strategy affects the competitive advantage.

Moreover, studies by Alhosseiny [8] and Miano and Wamalwa [31] found that the differentiation strategy affects the competitive advantage. These studies underscore the importance of the business strategies (differentiation strategy, cost leadership strategy, and focus strategy) in developing competitive advantage.

H_2: There is a Positive and Significant Impact of Business Strategies on Competitive Advantage

2.7. Competitive Advantage and Organizational Performance

Some of the previous studies have concluded that the competitive advantage has a significant effect on organizational performance [32-35]. Moreover, the studies by Marolt et al. [36], Inrawan et al. [37], Indah et al. [38], and Kimiti et al. [24] found that the competitive advantage has a significant influence on organizational performance. These studies underscore the significance of the competitive advantage in enhancing organizational performance.

H_3: There is a positive and significant impact of the competitive advantage on organizational performance.

2.8. Business Strategies, Organizational Performance, and Competitive Advantage

Alharafsheh [27] reported that there is a strong significant relationship between business strategy and vision and objectives and certain factors: i) core values; ii) SWOT analysis; iii) and resource allocation plans. In addition to that, the study also indicated a positive relationship between sustained competitive advantage and improved performance.

Moreover, the studies by Sari et al. [34] and Kubai et al. [22] found that the adaptation of the differentiation strategy enhances competitive advantage and performance.

Furthermore, Kimiti et al. [24] found that the cost leadership strategy had a positive and significant impact on the performance of companies of dairy products in Kenya, with a competitive advantage partially mediating the relationship.

H_4: There is a positive and significant mediating role of competitive advantage on the relationship between business strategies and organizational performance.

The research framework presented in Figure 1 was structured based on a scientific foundation.

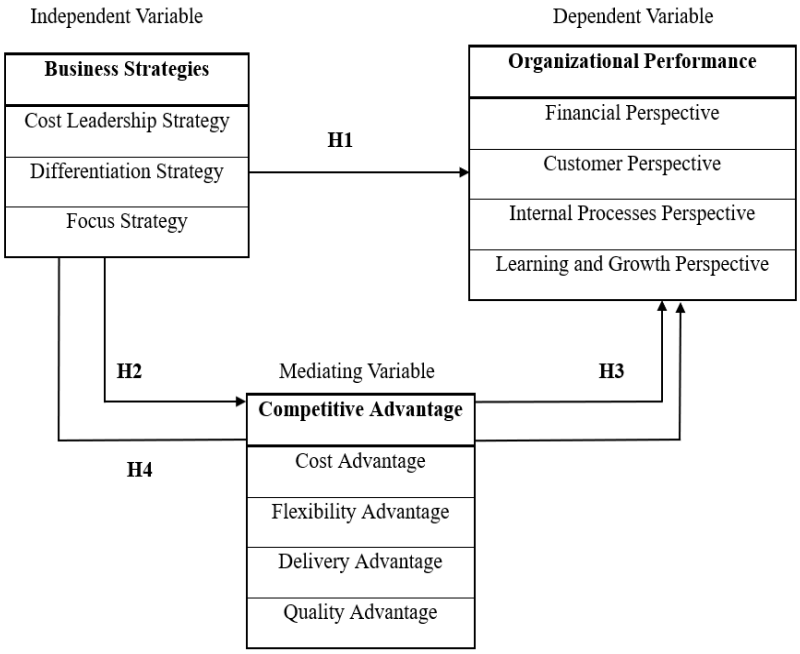

Figure 1.
Research Framework.

3. Research Methodology

To achieve the research objectives and verify the research hypotheses, the causal research method was used in the current research. According to Cooper and Schindler [39], the causal research method is a systematic and scientific approach used in research to investigate cause-and-effect relationships between variables. The main purpose is to determine the causal relationships between variables, examine the direct and indirect effects, and understand how the independent variable, which is the business strategies, influences the dependent variable, which is the organizational performance, through the mediating variable, which is the competitive advantage.

This study was adopted as the most suitable method used in causal research. This method is the survey method. The researchers decided to answer the questions of the present study by using a quantitative research approach to guide the design of data collection and analysis. The quantitative method is good when the objective of the research is to identify and measure the causal or mutual relationship between two and more quantitative research variables and determine the factors that affect the result or understand the best predictor factors of an outcome [40].

In this study, the hypothesis testing method was utilized to examine the validity of the process of developing detailed predictions. The time frame of the present study was cross-sectional in the sense that the data were collected only once and was not re-collected at different times [41]. The appropriate unit of analysis for the current study is the organization level, which was covered the higher education institutions in Yemen, where the academic and administrative leaders in the higher education institutions were the sample. The unit of analysis was adopted based on the objectives and the questions of this study.

The current research targets the higher education institutions located in Sana'a city, the capital of Yemen. According to the Yemen Center for Information Technology in Higher Education [42], there are 15 public universities and 45 private universities in Yemen. In Sana'a city, the capital of Yemen, there are 2 public universities and 33 private universities. Therefore, the population of the current study are the academic and administrative leaders in the public and private universities located in Sana'a city, the capital of Yemen. The total population of the current study is 1,310.

According to the Krejcie and Morgan [43] guidelines for determining sample size by the formula shown below, the required sample size for the current study is 298 academic and administrative leaders in the public and private universities. Under the given conditions, the sample size is 298 academic and administrative leaders in the public and private universities. To solve the non-response issue and to reduce error, the initial sample size was increased to be (384) according to the researchers' potentials and based on the theoretical notion that "at least 384 sampling units need to be included in most studies to have a sampling error of 5%" [44].

For the sampling technique, based on the research problem and objectives, the researchers used the probability sampling design by applying the stratified random sampling technique. According to Sekaran and Bougie [41] the stratified random sampling is defined as "a probability sampling design that first divides the population into meaningful, non-overlapping subsets, and then randomly chooses the subjects from each subset." Hence, in the current study, a stratified random sampling method was employed to choose the academic and administrative leaders in the public and private universities that were invited to complete the survey questionnaire.

As shown in Table 1, the population was divided into different subgroups or strata (President, Vice President, Faculty Dean, Vice Faculty Dean, Head of Academic Department, Dean of Student Affairs, Dean of Graduate Studies and Scientific Research, Dean of Center of Academic Development and Quality Assurance, Secretary General, Finance Manager, Human Resources Manager). Then, by using the following stratified sampling formula, the sample size for each stratum was calculated.

*3.1. Stratified Sampling Formula = (Total Sample Size / Entire Population) * Population of Subgroups*

Table 1.
Research Population.

Strata	Population in each Stratum
President	35
Vice President	35
Faculty Dean	160
Vice Faculty Dean	160
Head of Academic Department	735
Dean of Student Affairs	35
Dean of Graduate Studies and Scientific Research	10
Dean of Center of Academic Development and Quality Assurance	35
Secretary General	35
Finance Manager	35
Human Resources Manager	35
Total	**1,310**

Source: Yemen Center for Information Technology in Higher Education (YCIT-HE) [42].

The current study relied on both primary and secondary sources of data to collect information related to business strategies, competitive advantage, and organizational performance. For the primary data sources, based on the research

methodology of this study and according to the objectives and questions of the current study, the primary type of data was found to be a good choice for collecting the data of this study by using the survey method (survey-based questionnaire).

For the secondary data sources, the data were collected from the published data from various sources, such as articles, academic and technical journal sources, and different online and offline libraries. In addition, the government publications, such as the reports and publications from the Yemen Center for Information Technology in Higher Education (YCIT-HE), reports and publications related to the variables of this study and the public and private universities in Yemen, where the information is historical and has already been collected, and does not need participation from the respondents.

The instruments in the research are useful to describe the variables and examine the statistical significance of the variables. The questionnaire is the primary instrument used in survey research, and it was also used in the current study. The instruments of this study were adapted from previous studies to measure the variables of the current research.

For testing the developed hypotheses of the current research, the questionnaire covers all the variables in the research framework, as shown in Table 2. The organizational performance factor is measured using (24) closed-ended questions; the business strategies are measured using (12) closed-ended questions; and the competitive advantage factor is measured using (24) closed-ended questions.

Table 2.
Research Instrumentation.

Variable	Dimensions	Items
Organizational Performance	Financial Perspective	6
	Customer Perspective	6
	Internal Processes Perspective	6
	Learning and Growth Perspective	6
Business Strategies	Cost Leadership Strategy	4
	Differentiation Strategy	4
	Focus Strategy	4
Competitive Advantage	Cost Advantage	6
	Flexibility Advantage	6
	Delivery Advantage	6
	Quality Advantage	6
Total		60

The questionnaire for the current study was developed in two languages, English and Arabic. The questionnaire statements were designed based on closed-ended questions using a seven-point Likert scale, which consisted of five items: “strongly disagree” = “1”; “disagree” = “2”; “somewhat disagree” = “3”; “neither agree nor disagree” = “4”; “somewhat agree” = “5”; “agree” = “6”; and “strongly agree” = “7”. The questionnaire was constructed and classified into four parts, as follows:

- Part 1: General information, which refers to the respondents’ demographic information. There are six general information questions. The general information is about university, gender, age, education level, position, and experience.
- Part 2: The dependent variable, which is the organizational performance, and its dimensions are the financial perspective, customer perspective, internal processes perspective, and learning and growth perspective. The measurement of the dimensions of the organizational performance provides 24 questions related to measuring the organizational performance factor.
- Part 3: The independent variable, which is the business strategies, and its dimensions are the cost leadership strategy, differentiation strategy, and focus strategy. The measurement of the dimensions of the business strategies provides 12 questions related to measuring the business strategies factor.
- Part 4: The mediating variable, which is the competitive advantage, and its dimensions are the cost advantage, flexibility advantage, delivery advantage, and quality advantage. The measurement of the dimensions of the competitive advantage provides 24 questions related to measuring the competitive advantage factor.

A survey questionnaire of 384 copies were distributed to the academic and administrative leaders in the higher education institutions in Sana’a city, the capital of Yemen to get the required sample size. 326 questionnaires were received, and 309 questionnaires were complete with no invalid data. Based on 309 samples, and using SmartPLS, version 4, the data was analyzed by using many proven statistical methods.

The data for this study were collected with the explicit consent of the participants who voluntarily agreed to participate. The ethical approval for this study was obtained from the Ethics Committee of the Center of Business Administration for Graduate Studies at Sana’a University with the reference number (2023) on 04/12/2023. Informed consent was obtained verbally from all participants before their involvement in the study. This process involved providing each participant with comprehensive information about the research.

4. Data Analysis and Results

4.1. Data Screening

The data screening process ensured the quality and reliability of the dataset by checking for missing values, normality, and outliers. No missing values were found, confirming the completeness of the data. Additionally, the normality assumption was met, indicating that the data distribution aligns with statistical requirements for further analysis. Furthermore, no univariate outliers were detected in the study variables, ensuring that extreme values did not influence the results. These checks confirm that the dataset is clean, well-structured, and suitable for robust statistical analysis.

4.2. Common Variance Method

To ensure the accuracy and validity of the findings, the study applied the common variance method, particularly given its cross-sectional nature. The Full Collinearity Test was conducted to assess the presence of common method bias. The results indicated that all Variance Inflation Factor (VIF) values were below the threshold of 3.3, suggesting that multicollinearity and common method variance were not significant concerns in this study. This confirms that the relationships between variables were not distorted by shared variance, enhancing the reliability of the results.

Table 3.
Sample General Information.

Characteristic	Category	N	%
Gender	Female	64	20.7
	Male	245	79.3
Age	Less than 30 years	1	0.3
	30-40 years	33	10.7
	41-50 years	151	48.9
	More than 50 years	124	40.1
Education	Bachelor	3	1.0
	Master	23	7.4
	Doctorate	283	91.6
Position	Secretary General	9	2.90
	President	10	3.20
	Finance Manager	10	3.20
	Head of Academic Department	148	47.90
	Dean of Graduate Studies and Scientific Research	3	1.00
	Faculty Dean	46	14.90
	Dean of Student Affairs	9	2.90
	Dean of Center of Academic Development and Quality Assurance	10	3.20
	Human Resources Manager	10	3.20
	Vice President	10	3.20
	Vice Dean	44	14.20
Experience	Less than 1 year	0	0.0
	1-5 years	26	8.4
	6-10 years	102	33.0
	More than 10 years	175	56.6

Table 3 shows the sample general information. The sample for this study consisted of 309 participants, with most male participants (79.3%, N = 245) compared to female participants (20.7%, N = 64). The age distribution indicates that most respondents were between 41 and 50 years old (48.9%, N = 151), followed by those aged more than 50 years (40.1%, N = 124). A small proportion of the sample was under 30 years old (0.3%, N = 1), and those between 30 and 40 years accounted for 10.7% (N = 33). Regarding education, most participants held a Doctorate degree (91.6%, N = 283), with smaller percentages holding a master's degree (7.4%, N = 23) and a bachelor's degree (1.0%, N = 3). The positions held by participants demonstrate a diverse range of academic and administrative roles. The majority are Heads of Academic Departments (47.9%), followed by Faculty Deans (14.9%) and Vice Deans (14.2%). Other roles, such as Presidents, Finance Managers, Human Resources Managers, and Vice Presidents, Dean of Center of Academic Development and Quality Assurance are evenly distributed at 3.2% each, with fewer participants occupying positions such as Secretary General and Dean of Graduate Studies and Scientific Research (2.9% and 1.0%, respectively). In terms of professional experience, the participants were highly experienced, with 56.6% (N = 175) having more than 10 years of experience, followed by those with 6-10 years of experience (33.0%, N = 102). A smaller portion of the participants had 1-5 years of experience (8.4%, N = 26), and there were no participants with less than a year of experience. This distribution highlights a highly experienced and well-educated sample, predominantly male, and mostly in mid to late career stages.

4.3. Descriptive Statistics

The descriptive statistics of the study reveal high to very high levels of perception across all constructs, as shown in Table 4. For Organizational Performance, the Customer Perspective (mean = 6.164, RII = 88.1%) and both the Internal

Processes and Learning and Growth Perspectives (mean = 6.141, RII = 87.7%) were rated very high, while the Financial Perspective scored high (mean = 5.703, RII = 81.5%). The overall Organizational Performance had a mean of 6.037 and an RII of 86.2%. Regarding Business Strategies, the Differentiation Strategy stood out with a mean of 6.228 and RII of 89.0%, followed by the Cost Leadership Strategy (mean = 6.121, RII = 87.4%) and Focus Strategy (mean = 5.981, RII = 85.4%), with the overall Business Strategies scoring 6.110 and an RII of 87.3%. Lastly, Competitive Advantage showed strong perceptions, with Delivery Advantage leading (mean = 6.203, RII = 88.6%), followed by Flexibility Advantage (mean = 6.131, RII = 87.6%), Cost Advantage (mean = 6.083, RII = 86.9%), and Quality Advantage (mean = 6.124, RII = 87.5%), and an overall Competitive Advantage mean of 6.135 and RII of 87.6%. These results indicate high to very high levels of effectiveness in all the dimensions, with the Customer Perspective and Differentiation Strategy being the most positively perceived.

Table 4.
Descriptive Statistics of Overall Study Variables.

Variable	Mean	SD	RII
Organizational Performance			
Financial Perspective	5.703	0.757	81.5%
Customer Perspective	6.164	0.743	88.1%
Internal Processes Perspective	6.141	0.608	87.7%
Learning and Growth Perspective	6.141	0.586	87.7%
Overall Organizational Performance	6.037	0.405	86.2%
Business Strategies			
Cost Leadership Strategy	6.121	0.674	87.4%
Differentiation Strategy	6.228	0.572	89.0%
Focus Strategy	5.981	0.760	85.4%
Overall Business Strategies	6.11	0.434	87.3%
Competitive Advantage			
Cost Advantage	6.083	0.745	86.9%
Flexibility Advantage	6.131	0.579	87.6%
Delivery Advantage	6.203	0.616	88.6%
Quality Advantage	6.124	0.55	87.5%
Overall Competitive Advantage	6.135	0.400	87.6%

4.4. Measurement Model Assessment

The results indicate that the constructs used in the study show adequate reliability and validity, as shown in Table 5. The Organizational Performance construct, with its four perspectives (Financial, Customer, Internal Processes, and Learning and Growth), has outer loadings ranging from 0.613 to 0.748, with Cronbach's Alpha values ranging from 0.686 to 0.823, indicating good internal consistency. The Business Strategies construct, encompassing Cost Leadership, Differentiation, and Focus Strategies, also exhibits strong reliability, with outer loadings ranging from 0.691 to 0.838 and Cronbach's Alpha values between 0.600 and 0.804. Similarly, the Competitive Advantage construct, which includes Cost, Flexibility, Delivery, and Quality Advantages, shows good performance with outer loadings between 0.646 and 0.878, and Cronbach's Alpha values ranging from 0.757 to 0.911. The Composite Reliability (CR) values for all constructs exceed the threshold of 0.7, ranging from 0.785 to 0.911, and the Average Variance Extracted (AVE) values range from 0.508 to 0.63, indicating that the constructs capture a substantial amount of variance. Overall, the results demonstrate that the model exhibits acceptable psychometric properties for further analysis.

Table 5.
Reliability, Internal Consistency, and Convergent Validity.

Construct	Indicator	Outer Loading	Cronbach's Alpha (σ)	Composite Reliability (CR)	Average Variance Extracted (AVE)
Organizational Performance					
Financial	DV1.1	0.697	0.686	0.809	0.515
	DV1.3	0.701			
	DV1.4	0.722			
	DV1.5	0.748			
Customer	DV2.1	0.755	0.823	0.869	0.527
	DV2.2	0.699			
	DV2.3	0.613			
	DV2.4	0.754			
	DV2.5	0.737			
	DV2.6	0.786			
Internal Processes	DV3.1	0.695	0.778	0.849	0.53
	DV3.2	0.791			
	DV3.4	0.653			
	DV3.5	0.791			
	DV3.6	0.7			
Learning and Growth	DV4.1	0.797	0.762	0.84	0.515
	DV4.2	0.627			
	DV4.3	0.756			
	DV4.4	0.699			
	DV4.5	0.697			
Business Strategies					
Cost Leadership Strategy	IV1.1	0.749	0.738	0.836	0.56
	IV1.2	0.721			
	IV1.3	0.745			
	IV1.4	0.777			
Differentiation Strategy	IV2.1	0.691	0.6	0.785	0.55
	IV2.2	0.814			
	IV2.4	0.715			
Focus Strategy	IV3.1	0.772	0.804	0.872	0.63
	IV3.2	0.803			
	IV3.3	0.838			
	IV3.4	0.759			
Competitive Advantage					
Cost	MV1.1	0.772	0.882	0.911	0.63
	MV1.2	0.718			
	MV1.3	0.846			
	MV1.4	0.878			
	MV1.5	0.766			
	MV1.6	0.773			
Flexibility	MV2.1	0.686	0.828	0.875	0.539
	MV2.2	0.712			
	MV2.3	0.817			
	MV2.4	0.773			
	MV2.5	0.759			
	MV2.6	0.646			
Delivery	MV3.2	0.714	0.772	0.845	0.524
	MV3.3	0.796			
	MV3.4	0.748			
	MV3.5	0.624			
	MV3.6	0.725			
Quality	MV4.1	0.706	0.757	0.837	0.508

	MV4.2	0.708			
	MV4.3	0.753			
	MV4.4	0.655			
	MV4.6	0.735			

Table 6.
Discriminant Validity Using Heterotrait-Monotrait (HTMT).

	DV1.	DV2.	DV3.	DV4.	IV1.	IV2.	IV3.	MV1.	MV2.	MV3.	MV4.
DV1.											
DV2.	0.270										
DV3.	0.357	0.329									
DV4.	0.487	0.416	0.532								
IV1.	0.394	0.419	0.456	0.494							
IV2.	0.432	0.386	0.698	0.698	0.449						
IV3.	0.413	0.244	0.565	0.371	0.397	0.414					
MV1.	0.432	0.238	0.593	0.439	0.368	0.438	0.524				
MV2.	0.426	0.333	0.635	0.566	0.512	0.660	0.525	0.525			
MV3.	0.280	0.318	0.481	0.502	0.364	0.552	0.476	0.303	0.552		
MV4.	0.331	0.270	0.377	0.423	0.289	0.509	0.496	0.403	0.365	0.578	

Henseler et al. [45] recommend different HTMT thresholds based on construct similarity: 0.90 for closely related constructs (e.g., cognitive satisfaction, affective satisfaction, and loyalty) and 0.85 for more distinct ones. If HTMT exceeds these values, discriminant validity is lacking. Bootstrapping is advised to test deviations from 1.00 or the set threshold [46]. The HTMT matrix confirms acceptable discriminant validity, with all values below 0.85 [47, 48]. As shown in Table 6, the highest HTMT ratio is 0.698 between IV2 (Differentiation Strategy) and both DV3 (Internal Processes) and DV4 (Learning and Growth). MV2 (Flexibility) shows strong links with DV3 (0.635) and IV2 (0.660), underscoring its mediating role.

4.5. Measurement Model Assessment of Higher Order Constructs (HOCs) Formatively Measured

The measurement model assessment of higher-order constructs (HOCs) for formative indicators in Table 7 shows acceptable outer weights and low multicollinearity, with all VIF values below the threshold of 5. For Organizational Performance (OP), DV3 (Internal Processes) has the highest outer weight (0.605), indicating its substantial contribution, followed by DV4 (Learning and Growth) at 0.374. For Business Strategies (BSs), IV2 (Differentiation Strategy) has the strongest weight (0.557), reflecting its significant role, with IV3 (Focus Strategy) and IV1 (Cost Leadership) contributing moderately. Regarding Competitive Advantage (CA), MV2 (Flexibility) has the highest weight (0.514), highlighting its critical importance, followed by MV1 (Cost) at 0.372. These results confirm the robustness of the measurement model.

Table 7.
Measurement Model Assessment of Higher Order Constructs (HOCs) Formatively Measured.

HOCs	LOCs	Outer weight	VIF
OP	DV1.	0.232	1.179
	DV2.	0.133	1.181
	DV3.	0.605	1.263
	DV4.	0.374	1.404
BSs	IV1.	0.308	1.172
	IV2.	0.557	1.172
	IV3.	0.481	1.172
CA	MV1.	0.372	1.332
	MV2.	0.514	1.492
	MV3.	0.252	1.457
	MV4.	0.200	1.331

3.6. Structural Model Analysis

As presented in Table 8, the combined results of the R^2, f^2, and Q^2 analyses provide a comprehensive understanding of the model's explanatory power, effect sizes, and predictive relevance. The R^2 values indicate that the model explains 49.6% of the variance in Competitive Advantage (CA) and 57.1% of the variance in Organizational Performance (OP), demonstrating moderate explanatory power. The effect size (f^2) results further highlight the significance of the predictor variables, where Business Strategies (BSs) and Competitive Advantage (CA) both have a moderate effect on Organizational Performance, with f^2 values of 0.195 and 0.198, respectively. This suggests that both constructs contribute meaningfully to variations in OP. Additionally, the Q^2 values confirm the model's predictive relevance, with CA showing a Q^2 of 0.245 and OP a Q^2 of 0.247, indicating moderate predictive accuracy.

Table 8.
Structural Model Analysis.

Instruct	R^2	f^2 (Effect Size)	Q^2 (Predictive Relevance)
CA (Competitive Advantage)	0.496	-	0.245
OP (Organizational Performance)	0.571	-	0.247
BSs → OP	-	0.195 (Moderate)	-
CA → OP	-	0.198 (Moderate)	-

4.7. Hypotheses Testing (Bootstrapping)

Table 9 and Figure 2 show the Main Hypotheses results. The hypotheses testing results provide strong evidence supporting the proposed relationships within the model.

H1 examines the direct effect of BSs (Business Strategies) on OP (Organizational Performance). The path coefficient (B) of 0.697, with a standard error (SE) of 0.056, a T-statistic of 12.477, and a p-value of 0.000, indicates a strong, statistically significant positive relationship. This result suggests that an effective business strategy plays a critical role in enhancing organizational performance.

H2 evaluates the effect of BSs (Business Strategies) on CA (Competitive Advantage). The path coefficient (B) is 0.704, with an SE of 0.057, a T-statistic of 12.303, and a p-value of 0.000, confirming a significant positive impact. This finding highlights that business strategies significantly contribute to building competitive advantages, which can further influence organizational outcomes.

H3 explores the relationship between CA (Competitive Advantage) and OP (Organizational Performance). The path coefficient (B) of 0.411, with an SE of 0.066, a T-statistic of 6.195, and a p-value of 0.000, confirms a positive and statistically significant effect. This indicates that achieving competitive advantages directly translates into improved organizational performance, emphasizing the importance of maintaining a competitive edge in dynamic markets.

H4 focuses on the indirect effect of BSs (Business Strategies) on OP (Organizational Performance) through CA (Competitive Advantage). The mediating effect is supported by an indirect path coefficient of 0.289, with an SE of 0.061, a T-statistic of 4.775, and a p-value of 0.000. These results confirm the significant role of CA as a mediator, demonstrating that business strategies positively influence organizational performance both directly and indirectly through competitive advantage.

Table 9.
Testing Main Hypotheses.

		Path	B	(STDEV)	T statistics	P values
H1	Pc	BSs -> OP	0.697	0.056	12.477	0.000
H2	Pa	BSs -> CA	0.704	0.057	12.303	0.000
H3	Pb	CA -> OP	0.411	0.066	6.195	0.000
H4	Indirect effect (Pa*Pb)	BSs -> CA -> OP	0.289	0.061	4.775	0.000
	Direct effect (Pc')	BSs -> OP	0.408	0.065	6.314	0.000

Note: CA= Competitive Advantage; BSs= Business Strategies; OP= Organizational Performance.

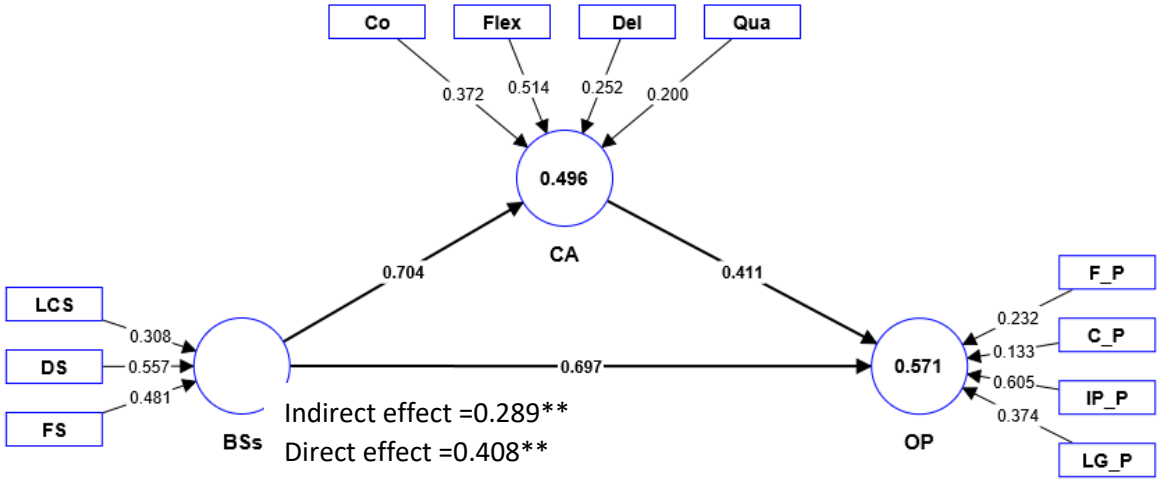

Figure 2.
Testing Main Hypotheses.

5. Theoretical Implications

The study closes the gap between strategic management theories and their implementation in higher education institutions by integrating Porter's generic strategies cost leadership, differentiation, and focus with the RBV and MBV. Additionally, Porter's [5] generic strategies and Balanced Scorecard (BSC) models apply to the field of higher education, which has received little attention in the literature.

The study empirically supports a multidimensional model that links business strategies, competitive advantage, and organizational performance by establishing the mediating role of competitive advantage. A fresh perspective on strategic management in higher education institutions is offered by this paradigm.

6. Managerial Implications

The study offers academic and administrative officials in higher education institutions useful insights. To get a competitive edge and enhance organizational performance, it emphasizes how crucial it is to implement successful business strategies (cost leadership, differentiation, and focus). According to the findings, university leaders should concentrate on matching their strategies to their own resources and capabilities (as determined by the RBV) while also taking the external market environment (as determined by the MBV) into account.

To keep corporate plans in line with shifting market conditions, the study highlights the necessity of ongoing assessment and improvement. This is particularly relevant in the context of Yemen, where universities operate in a challenging and unstable environment. The Balanced Scorecard (BSC) is a tool that the study suggests using to measure and enhance organizational performance. By regularly reviewing performance metrics across financial, customer, internal processes, and learning/growth perspectives, universities can identify areas for improvement and track the impact of their strategies.

Universities can, for instance, concentrate on uniqueness by providing distinctive academic programs, cost leadership by maximizing operational efficiency, or emphasis by focusing on student groups. Policymakers should also back programs that encourage industry-university cooperation, which can boost competitive advantage by encouraging innovation and knowledge sharing.

7. Conclusion

The current study aimed to unveil the mediating role of competitive advantage in the relationship between business strategies and organizational performance in higher education institutions. The results of the study revealed the significant role of competitive advantage as a mediator, demonstrating that business strategies positively influence organizational performance both directly and indirectly through competitive advantage.

The current research shows significant contributions in both practical and theoretical perspectives. In terms of the practical aspects, it is anticipated that the findings of this research will help the academic and administrative leaders of higher education institutions to better understand business strategies, competitive advantage, and organizational performance. Subsequently, this study motivates leaders and decision-makers in higher education institutions to review and update their existing practices and strategies to ensure competitive advantage and improve organizational performance. Moreover, understanding the importance of organizational performance can help shed light on how different strategies can influence the overall effectiveness and success of higher education institutions. By understanding the importance of organizational performance for universities, leaders can make informed decisions and implement strategies that enhance the overall effectiveness and impact of these institutions in serving their students, faculty, and communities, with competitive advantage acting as a mediating factor between business strategies and organizational performance. Therefore, the results of the present paper support decision-makers in making proper strategic decisions regarding business strategies, competitive advantage, and organizational performance.

Furthermore, this study makes valuable theoretical contributions to the body of knowledge in different ways. It provides the knowledge base by developing a model for the business strategies, the competitive advantage, and the organizational performance in higher education institutions. Moreover, this study is filling the existing gaps in understanding and opens a broader field of research. The literature review presented in this study adds scientific value to the existing understanding of business strategies, competitive advantage, organizational performance, and higher education institutions, especially those that operate in the Yemeni context.

It is recommended that higher education institutions should continue evaluating and refining their existing business strategies. Despite the high level of application, continuous assessment and refinement are essential to ensure alignment with changing market dynamics to ensure competitive advantage and improve organizational performance. Also, it is recommended that higher education institutions should invest in training programs for faculty and staff to augment their comprehension of the university's strategy and the methods of its implementation within the university setting, thereby leveraging their competitive advantage for improved performance outcomes. Furthermore, higher education institutions should implement regular performance reviews and evaluation processes based on the Balanced Scorecard indicators to assess the impact of their business strategies on organizational performance through the competitive advantage and to identify areas for enhancement and successes.

Although the current study has both theoretical and practical contributions, and like any other study, it has some limitations. Although Yemen is the primary emphasis of the study, the conclusions can be applied to other developing nations with comparable educational and economic environments. The suggested framework can be utilized by other Middle Eastern and international universities to improve their strategic management procedures. More studies are required to cover areas and variables that were beyond the scope of the present study. Furthermore, there is still a need for future research to determine the other variables that impact organizational performance through competitive advantage or knowledge management as mediating variables.

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