

The Analytic Hierarchy Process Analysis for Sustainable Competitive Advantage of Health Business: A Resource-Based View

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Abstract

This study applies the Resource-Based View (RBV) and the Analytic Hierarchy Process (AHP) to evaluate and prioritize the factors influencing the sustainable competitive advantage (SCA) of health businesses in Upper Northern Thailand. Despite the growing importance of the sector, prior studies have given limited attention to the systematic prioritization of internal resource-based factors in specific regional contexts. To address this gap, data were collected from 20 purposively selected experts, including business owners and managers with at least seven years of experience in health businesses. The findings identify Organization Management ($W = 0.257$) as the most critical factor, followed by Assets ($W = 0.226$), Brand Equity ($W = 0.193$), Partnerships ($W = 0.135$), and Knowledge ($W = 0.118$). Vision and mission emerged as the main drivers of strategic alignment and sustainable operations, while financial resources and human capital contributed to operational efficiency and service quality. Brand Equity strengthened long-term customer loyalty through brand associations and perceived quality, whereas Partnerships supported business stability through supplier and customer relationships. Knowledge was ranked lowest ($W = 0.118$), reflecting the reliance of many health businesses on tacit, experience-based knowledge rather than formalized knowledge management systems. This finding highlights a knowledge management gap that may constrain innovation and long-term competitiveness, underscoring the need for entrepreneurs to strengthen knowledge sharing, staff development, and service innovation.

Keywords: 1) Sustainable competitive advantage 2) Resource-Based View 3) Analytic Hierarchy Process 4) Health business 5) Entrepreneurs

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Introduction

At present, the world is entering an era of heightened health awareness, particularly following the COVID-19 pandemic, which has significantly reshaped lifestyles and consumer behavior. Consumers increasingly prioritize nutritious, chemical-free foods and health-oriented products (Euromonitor International, 2023), while recent evidence shows that 65% of working-age Thais place greater importance on health-promoting ingredients (Bangkokbiznews, 2024). This shift has driven rapid expansion in health-related businesses, including healthy food, fitness, organic products, spas, and health tourism.

In Thailand, this trend is further reinforced by demographic changes, with an aging population and rising demand for health-related products and services. Over 71% of Thai consumers now prioritize health and well-being (Maneesangsakorn, 2025), reflecting sustained growth in the sector. In particular, the Upper Northern region of Thailand has emerged as a prominent hub for health businesses due to its distinctive combination of natural resources, cultural heritage, and tourism appeal. The region's long-standing civilization, preserved traditions, and tranquil landscapes provide favorable conditions for wellness-related services (Kantabutra, et al., 2019, pp. 25–43). As a result, businesses such as restaurants, cafés, tourism and integrated wellness centers have become increasingly important. Recent initiatives, including Lanna-style wellness tourism and the Lanna Health Hub network, further demonstrate the integration of local identity into health-related of-

ferings (Hua Hin Sarn, 2024, n.d.; Lanna Health Hub, n.d.).

Despite this growth, achieving sustainable competitive advantage (SCA) in the health business sector requires more than responding to consumer demand; it requires the effective management of internal resources. In this context, the Resource-Based View (RBV) is widely recognized as a key theoretical framework for explaining how firms achieve sustainable competitive advantage through the effective deployment of valuable, rare, inimitable, and non-substitutable internal resources (Cooper, et al., 2022, p. 156). Firms that can effectively identify, manage, and leverage these resources are better positioned to sustain competitiveness in dynamic and uncertain environments.

Prioritizing resource-based factors is essential for developing strategies that support business sustainability. However, research remains limited in systematically assessing these factors within the health business sector, particularly in the Upper Northern region of Thailand, where health businesses are closely intertwined with local resources, cultural identity, and tourism development (Boonpat, Yolthasart and Utchaya, 2022, pp. 1–12; Pungjitprapai and Sribenyachot, 2023, pp. 142–158). Given these characteristics, the region provides a valuable empirical context for examining how internal resources contribute to sustainable competitive advantage. Nevertheless, despite its strategic importance, it has received limited scholarly attention in the systematic analysis of health business development and competitiveness, highlighting the need for a context-specific investigation beyond broader

national-level studies.

Moreover, prior research has rarely employed systematic quantitative approaches to prioritize and evaluate the relative importance of internal resource-based factors. This limitation is critical in the health business sector, where multiple interrelated factors influence long-term competitiveness. The Analytic Hierarchy Process (AHP) provides a suitable approach for evaluating and prioritizing multiple criteria through pairwise comparisons, even under conditions of uncertainty (Ishizaka and Labib, 2011, pp. 14336–14345). It enables a systematic assessment of resource-based factors by converting abstract criteria into quantitative measures, thereby offering a rigorous understanding of the key drivers of sustainable competitive advantage in health-related businesses.

Accordingly, this study applies the Analytic Hierarchy Process (AHP) to evaluate and prioritize the internal resource-based factors influencing the sustainable competitiveness of health businesses within the Resource-Based View (RBV) framework. Drawing on expert insights from the health business sector, the study aims to provide practical guidance for entrepreneurs in strengthening their competitive capabilities, while also offering useful implications for policymakers seeking to support the sector's long-term growth and sustainability.

Objectives of the Research

1. To study and analyze the resource-based view (RBV) factors affecting the sustainable competitive advantage of health businesses.

2. To evaluate and prioritize the importance and weighting of each RBV factor that affects the sustainable competitive advantage of health businesses by using the Analytic Hierarchy Process (AHP).

Literature Review

The researcher reviewed the relevant literature, concepts and theories by searching for documents, articles and journals to use as a guideline for the research, including the following concepts and theories:

Health Business

Health businesses encompass a wide range of activities, including health restaurants, health tourism, health spas, health promotion services, and organic farms. According to Zhang (2024, pp. 309–312), health businesses are enterprises that respond to consumer demand for treatment, therapy, or rehabilitation through the use of natural and environmental resources, and may take the form of either products or services. Chanchai (2020, p. 6) further describes health service businesses as establishments that provide massage and spa services to promote health and beauty through various therapeutic techniques. In addition, Chuphara and Jitaree (2021, p. 78) defines health food businesses as enterprises that provide nutritious meals based on natural, chemical-free ingredients and build consumer trust through quality standards and reliable communication.

Based on the literature, health businesses can be understood as enterprises that address health, therapy, rehabilitation, and well-being through safe, natural, and standard-



ized products or services, while emphasizing consumer trust and quality assurance.

Sustainable Competitive Advantage

Competitive advantage refers to a firm's ability to generate greater economic value than its competitors, and it may be either temporary or sustainable (Mahdi, Nassar and Almsafir, 2019, pp. 320–344). Barney (1991, p. 102) defines sustainable competitive advantage as the implementation of a value-creating strategy that is not simultaneously pursued by current or potential competitors and whose benefits cannot be readily replicated. This durability is reinforced by uniqueness and effective innovation, which increase the cost of imitation (Asa, Nautwima and Villet, 2024, pp. 201–222). In practice, sustainable competitive advantage is reflected in superior value creation, differentiation, service quality, cost efficiency, and responsiveness to customer needs (Wang, Han and Liu, 2018, pp. 1–13).

Based on the above definitions, sustainable competitive advantage refers to an organization's long-term ability to maintain a superior position through value-creating and differentiated strategies that better satisfy customer needs. Such advantages are difficult for competitors to imitate, replicate, or substitute, allowing the firm to sustain its position in a dynamic competitive environment.

Resource Based View (RBV)

The Resource-Based View (RBV) explains sustainable competitive advantage through the effective management of internal resources. Firms possess bundles of resources that form the basis of competitive advantage (Barney, 1986, pp. 656–657), and

these resources must be valuable, rare, inimitable, and non-substitutable to sustain such advantage (Barney, 1991, p. 102). In MSMEs, resource-based factors enable the efficient use of internal resources, including social capital and skilled personnel, supporting adaptation and growth under uncertain conditions (El Nemar, et al., 2022, pp. 798–821; Efrina, et al., 2024, pp. 495–510). RBV also supports strategic resource management, such as maintaining supplier relationships, utilizing customer data, and enhancing operational efficiency (Mailani, et al., 2024, pp. 1–15), while contributing to value creation in supply chains through the effective use of unique resources and capabilities (Bals, et al., 2022, pp. 106–117). This perspective has further led to the development of extended approaches, including the Relational View and the Natural Resource-Based View.

Based on the definitions above, it can be concluded that the Resource-Based View (RBV) is a strategic framework that attributes sustainable competitive advantage to the effective use of distinctive internal resources, whether tangible or intangible. These may include assets, capabilities, organizational processes, knowledge, information, culture, patents, and reputation. Organizations that can effectively mobilize and develop are better positioned to adapt to dynamic competition and sustain long-term competitive advantage.

Sustainable Competitive Advantage Factors Assets

An asset is any resource owned or controlled by an individual or organization that is expected to provide future economic benefits. They can be tangible or intangible, and essen-

tial for running operations, generating revenue, and creating value (Chanaphai, et al., 2023, pp. 28-42). It is the result of past events, from which the company expects to derive future economic benefits from the resource (Schumacher, 2024, pp. 45-48). In this study, asset is defined as an economic resource owned or controlled by an organization or individual that is expected to provide future economic benefits, including buildings, land, machinery, cash, securities, or computer software.

Knowledge

Knowledge is the most valuable asset of an organization and differs from other assets because it has no inherent limits. The more it is used, the greater the value it generates (Chiamchitrong, Sriwongkl and Nilsook, 2007, pp. 57-69). They are classified into two visible forms. First one is Tacit Knowledge, which resides within individuals, such as work skills or problem-solving processes. Another form is Explicit Knowledge, which is expressed through words or written documents in various media, such as operation manuals, patents, or contracts (Polanyi, 1966, pp. 5-8; Nonaka, 1994, pp. 14-37). In this study, knowledge refers to resources that grow in value through use and can generate new insights, including tacit knowledge within individuals (skills and experience) and explicit knowledge that can be shared via documents or communication.

Brand Equity

Aaker (1996, pp. 102-120) stated that brand equity refers to the value of a brand from the consumer's perspective, comprising four key dimensions: Brand Awareness, the consumer's ability to recognize and recall the

brand within a product category; Perceived Quality, the consumer's perception of the brand's quality or superiority over competitors (Samsiang, 2019, pp. 80-81); Brand Association, the connections and meanings linked to the brand in consumers' memory; and Brand Loyalty, the tendency of consumers to repurchase products from the same brand (Schiffman and Kanuk, 1994, pp. 7-10). In this study, brand equity can be defined as the perceptions, feelings, and experiences that consumers associate with a brand, which influence their loyalty and positive attitudes, help differentiate a business, and enhance its competitive advantage.

Organization Management

Organizational management is the process of organizing, planning, leading, and controlling within an entity to achieve its objectives (Dawuda, 2016, p. 286). Takaew, et al. (2023, pp. 436-451) explain that organizational management involves defining job roles, responsibilities, and authority to support competitiveness and organizational success, while also motivating employees toward shared goals. In this study, Organization Management is defined as a systematic process of planning, leading, and controlling, combined with the coordination of people and organizational resources, to achieve established goals and objectives.

Partnership

Robbins and Finley (1998, p. 11) highlight that collaboration involves mutual support to achieve shared benefits and collective interests. Netsawang (2022, pp. 211-212) similarly defines supplier relationships as long-term partnerships involving information



exchange, technological collaboration, and joint development. Wongpruek, et al. (2021, pp. 23–34) emphasize that customer relationship management focuses on using customer data to enhance loyalty and long-term profit-

ability. In this study, partnership refers to the coordination and collaboration with both suppliers and customers to achieve shared goals, ensure resource quality and timeliness, and support long-term sustainability.



Figure 1 Research Structure of the Conceptual Framework

Methods

Sample and Data Collection

This study focuses on examining the Resource-Based View (RBV) and its influence on sustainable competitive advantage in health businesses. The business type studied is the health business sector, comprising health food restaurants, health cafes, organic farms, spas, and wellness centers in the Upper Northern provinces of Thailand.

The sampling strategy employed in this study was non-probability sampling, combining purposive and quota sampling. This approach is appropriate for AHP research, which emphasizes knowledgeable and experienced experts rather than large randomly selected samples (Zhao, et al., 2021, pp. 3-4; Guillén-Mena, et

al., 2023, pp. 6-7). The sample comprised 20 business owners and managers in the health business sector, each with at least seven years of experience and active involvement in the industry. These criteria ensured sufficient practical knowledge and decision-making experience for reliable pairwise comparisons. The sample size is also consistent with prior studies indicating that 10–30 experts are generally adequate for AHP analysis, particularly when participants have high levels of expertise (Ameen and Mourshed, 2018, pp. 356–366; Jittithaworn, 2018, p. 74; Saaty, 1990, pp. 9-26; Kim, et al., 2025, pp. 7-8).

Among the selected experts, 18 were business owners and 2 were managers. Although this distribution appears uneven, it

reflects the owner-operated SME structure of the health business sector in the study area, where owners are the primary decision-makers in strategic planning, resource allocation, and long-term competitiveness. The inclusion of managers, though limited, adds operational perspectives. This composition is appropriate for AHP, which emphasizes the expertise and relevance of respondents rather than proportional representation (Saaty, 1990, pp. 9-26; Ishizaka and Labib, 2011, pp. 14336-14345). To ensure content validity, the questionnaire was reviewed by two experts specializing in the Analytic Hierarchy Process (AHP) and multi-criteria decision-making methods. The experts evaluated the relevance, clarity, and appropriateness of the criteria and sub-criteria included in the study. Based on their recommendations, minor revisions were made to improve the wording and structure of the questionnaire before it was administered to the respondents.

Measurements

The Analytic Hierarchy Process (AHP) was employed as the primary analytical tool in this study. AHP is a multi-criteria decision-making method suitable for evaluating complex decision problems involving multiple criteria. Although prior studies on this topic have largely relied on conventional statistical approaches, the application of AHP remains limited. This study addresses that gap by using AHP to systematically assess the relative importance of decision criteria. Data were collected through a structured matrix questionnaire, and pairwise comparisons were used to derive criterion weights. The analysis was based on Saaty's (1990, p. 15) fundamental 1–9 scale, which is widely accepted for reflecting human judgment and distinguishing the relative importance of criteria. The interpretation of this scale is presented in Table 1.

Table 1 Saaty's 1-9 scale of pairwise comparisons (Saaty, 1990, p. 15)

Level of importance	Definition	Explanation
1	Equal Importance	Both criteria contribute equally to the objective.
3	Moderately important	One criterion is moderately more important than the other.
5	Strong Importance	One criterion is strongly more important than the other.
7	Very Importance	One criterion is very strongly more important than the other.
9	Extreme Importance	One criterion is extremely more important than the other.
2, 4, 6, 8	Intermediate Values	The importance lies between two levels.



Measurement Validation

After collecting the completed questionnaires from all 20 health business entrepreneurs (at the executive level), the researcher proceeded to analyze the data using the Analytic Hierarchy Process (AHP) as follows: (1) examine the consistency of the pairwise comparisons to determine whether the judgments are logically coherent, and (2) validate the

reliability of the analysis results. If the Consistency Index (CI) and Consistency Ratio (CR) are less than or equal to 0.1, the judgments are considered acceptable. However, if the CR exceeds 0.1, it indicates a lack of consistency in the decision-making process, and the pairwise comparisons must be reviewed and adjusted until the CR reaches an acceptable level.

Table 2 Operational definitions of main factors

Main factor	Operational definition	Source
Asset	Economic resources owned or controlled by an organization that are expected to generate future economic benefits, such as buildings, land, machinery, cash, securities, and software.	Chanaphai, et al. (2023); Schumacher (2024)
Knowledge	Resources that increase in value through use and integration, including tacit knowledge embedded in individuals, such as skills and experience, and explicit knowledge that can be transferred through documents or communication.	Chiamchittrong, Sriwongkl and Nilsook (2007); Polanyi (1966); Nonaka (1994)
Brand Equity	Consumers' perceptions, feelings, and experiences associated with a brand that influence loyalty, positive attitudes, competitiveness, and long-term organizational value.	Aaker (1996); Samsiang (2019); Schiffman and Kanuk (1994)
Organization Management	A systematic process of planning, leading, coordinating, and controlling people and resources to achieve organizational goals effectively.	Dawuda (2016); Takaew et al. (2023)
Partnership	Collaboration between individuals or organizations to achieve mutual benefits through support, coordination, and the development of sustainable long-term relationships.	Robbins and Finley (1998); Netsawang (2022); Wongpruek et al. (2021)

Table 3 Operational definitions of sub-factors

Main factor	Sub-factor	Operational definition	Source
Asset	Physical	Tangible assets with measurable value that are used in business operations and economic activities, such as buildings, land, and machinery, and are subject to depreciation over time and usage.	AP (Thailand) Public Company Limited, (2025);

Main factor	Sub-factor	Operational definition	Source
	Financial	Assets with monetary value that can be converted into cash, including securities and investments, whose value is influenced by expected future cash flows and associated risk.	Peprah and Ayaa (2022)
	Human Resource	Individuals within the organization who possess abilities, knowledge, and potential that can be utilized to operations and contribute to effective and sustainable growth.	Weresa (2014)
	Technology	Assets related to information technology, including systems, software, and hardware, that organizations use to improve operational efficiency and competitiveness.	Weresa (2014)
Knowledge	Human Skill	knowledge, skills, abilities, and experience possessed by individuals that can be applied to create value, improve productivity, and support organizational development.	Polanyi (1966)
	Patent	A legal right that grants exclusive authority to use, produce, or commercialize an invention or technology, thereby preventing unauthorized use by others.	Boonyakit (2004)
	Innovation	The process of applying creativity to develop new ideas or improve existing products, services, or processes in ways that generate practical value for organizations or society.	Nonaka and Takeuchi (1995)
Brand Equity	Brand Awareness	The degree to which consumers can recognize, recall, or become aware of a brand when they encounter its name, symbol, product, or communication.	Aaker (1996); Samsiang (2019);
	Perceived Quality	Consumers' overall assessment of the quality of a product or service based on their perceptions, experiences, expectations, and impressions of the brand.	Aaker (1996); Samsiang (2019);
	Brand Associations	The set of thoughts, feelings, impressions, and experiences that consumers mentally connect with a brand through exposure, usage, or interaction.	Aaker (1996); Samsiang (2019);
	Brand Loyalty	A customer's commitment and attachment to a brand, reflected in repeat purchases, continued preference, and willingness to recommend the brand to others.	Aaker (1996); Samsiang (2019);



Main factor	Sub-factor	Operational definition	Source
Organization Management	Leadership	The ability to influence, motivate, and guide individuals or teams to work collaboratively and effectively toward the achievement of shared goals.	Daft (1999); Zeynullagil (2022)
	Vision/ Mission	The core concepts that define an organization's long-term direction, purpose, and major functions, enabling members to understanding about goals and roles.	Zeynullagil (2022)
	Organization Culture	A shared system of values, beliefs, and behaviors that shapes how members of the organization interact, work together, and develop a distinct organizational identity.	Brown and Moberg (1980)
Partnership	Supplier Relationship	Collaboration and coordination with supplier organizations to obtain quality materials on time while supporting shared organizational goals.	Tariq et al. (2023)
	Customer Relationship	The process of developing, maintaining, and strengthening relationships with customers to enhance satisfaction, loyalty, and long-term organizational success.	Thawanrat et al. (2021)

Results

The researcher received completed questionnaires from respondents who met the specified qualifications, namely experts with at least 7 years of experience working in health businesses and who are currently working in this industry. The qualified respondents consisted of 20 participants, including 18 business owners and 2 managers. This study adopted

SpiceLogic and Excel to calculate AHP weights of influential factors and sub-factors affecting sustainable competitive advantage of health business. The results indicated that both the consistency index (CI) and consistency ratio (CR) values are less than 0.1. Table 4 shows the weights (W) of factors and sub-factors affecting sustainable competitive advantage of health business.

Table 4 The weights of each factor (W) and their priorities (CI = 0.0033, CR = 0.0029)

Major factor	Weights	Priority	Sub-factor	Weights	Priority
Asset (CI=0.0187, CR=0.0207)	0.226	2	Physical	0.285	3
			Financial	0.314*	1
			Human Resource	0.292	2
			Technology	0.108	4
Knowledge (CI=0.0493, CR=0.0851)	0.118	5	Human Skill	0.692*	1
			Patent	0.077	3
			Innovation	0.231	2

Major factor	Weights	Priority	Sub-factor	Weights	Priority
Brand Equity (CI=0.0021, CR=0.0023)	0.193	3	Brand Awareness	0.16	4
			Perceived Quality	0.286	2
			Brand Associations	0.312*	1
			Brand Loyalty	0.242	3
Organization Management (CI=0.0254, CR=0.0438)	0.257*	1	Leadership	0.199	3
			Vision/Mission	0.564*	1
			Organization Culture	0.237	2
Partnership (CI=0, CR=0)	0.135	4	Supplier Relationship	0.319	2
			Customer Relationship	0.681*	1

Note: The symbol “*” indicates the level of statistical significance, highlighting the highest priority weight within each main factor and sub-factor

From Table 4, the priority ranking and weights of the resource-based view (RBV) factors affecting the sustainable competitive advantage (SCA) of health businesses were determined. The factors, ranked from the most to the least influential, include: Organization Management (W=0.257), Asset (W=0.226), Brand Equity (W=0.193), Partnership (W=0.135), and Knowledge (W=0.118). The consistency of the pairwise comparisons was verified, yielding a Consistency Index (CI) of 0.0033 and a Consistency Ratio (CR) of 0.0029, both less than 0.100, which confirms acceptable consistency of judgments.

The most important factor, Organization Management (W=0.257), the sub-factors were prioritized as follows: Vision/Mission (W=0.564), Organizational Culture (W=0.237), and Leadership (W=0.199). The analysis showed CI=0.0254 and CR=0.0438, confirming consistent judgments. The 2nd most important factor, Asset (W=0.226), consists of Financial (W=0.314), Human Resource (W=0.292), Physical (W=0.199), and Technology (W=0.108). The

results indicated CI=0.0187 and CR=0.0207, which are acceptable. The 3rd most important factor, Brand Equity (W=0.193), includes Brand Associations (W=0.312), Perceived Quality (W=0.286), Brand Loyalty (W=0.242), and Brand Awareness (W=0.160). The analysis showed CI=0.0021 and CR=0.0023, which are acceptable. The 4th most important factor, Partnership (W=0.135), comprises Customer Relationship (W=0.681) and Supplier Relationship (W=0.319). The results indicated CI=0 and CR=0, which are acceptable. Finally, the least important factor, Knowledge (W=0.118), consists of Human Skill (W=0.692), Innovation (W=0.231), and Patent (W=0.077). The analysis revealed CI=0.0493 and CR=0.0851, which are acceptable.

Conclusion and Discussion

This study applied the Resource-Based View and the Analytic Hierarchy Process to examine the factors influencing the sustainable competitive advantage of health businesses. The findings revealed that Organization Management (W=0.257) was the most critical



factor, followed by Assets ($W=0.226$), Brand Equity ($W=0.193$), Partnership ($W=0.135$), and Knowledge ($W=0.118$). The Content Validity Index (CI) and Content Validity Ratio (CR) of all factors were within acceptable limits ($CR < 0.10$), demonstrating the reliability of the analysis results.

The results highlight the critical role of the Resource-Based View (RBV) in shaping sustainable competitive advantage (SCA) in health businesses. Organization Management was identified as the most important factor, emphasizing the significance of strategic direction for business sustainability. Vision and mission emerged as the key sub-factor, aligning with Barney (1991, p. 102). Organizational culture and leadership further support effective strategy implementation. In the Upper Northern region of Thailand, this underscores the need for strong managerial capability to manage fluctuating demand and maintain service quality in tourism-driven markets. Assets ranked as the second most important factor, with financial and human resources receiving the highest weight. This indicates the importance of financial investment for sustainable competitive advantage (Peprah and Ayaa, 2022, p. 87) and the role of human resources in strengthening competitiveness (Weresa, 2014, pp. 9-15). In the Upper Northern region, where many businesses are SMEs, limited access to capital and skilled personnel highlights the importance of financial capacity and specialized staff for maintaining service quality and competitiveness. Brand Equity was identified as a key long-term differentiator, emphasizing the role of brand associations and perceived

quality in sustaining competitive advantage. In the Upper Northern context, brand equity is closely linked to local identity and cultural authenticity, particularly through Lanna culture and traditional wellness practices. This finding is consistent with Aaker (1996, pp. 102–120) and Phitayabamrung (2020, pp. 12–14), who highlight its role in enhancing sustainable competitive advantage. Although Partnerships ranked lower, their role in sustaining long-term competitiveness remains important. Strong relationships with customers and suppliers enhance resilience and adaptability. In the regional context, partnerships are crucial for integrating health businesses into the tourism ecosystem, enabling holistic wellness experiences. This aligns with Tariq, et al. (2023, pp. 7–14), who highlight supplier relations in fostering trust, collaboration, and quality, and with Alshura (2018, p. 262), who emphasizes customer relationship management in supporting sustainable competitive advantage. Knowledge was ranked as the least important factor, reflecting the reliance of many health businesses on tacit, experience-based knowledge rather than formalized systems. As knowledge is often embedded in individuals, it is not systematically shared, leading to its lower perceived importance. However, this indicates a developmental gap rather than a lack of value. The prominence of human skill highlights the importance of tacit knowledge for service quality, consistent with Nonaka and Takeuchi (1995, pp. 113–114), who emphasize knowledge as a dynamic resource for innovation and sustained competitive advantage.

These findings reflect the unique char-

acteristics of the health business ecosystem in the Upper Northern region of Thailand, which is closely linked to tourism, local culture, and service activities. The prominence of Organization Management and Assets underscores the importance of strategic planning, financial discipline, and skilled personnel, while Brand Equity highlights the need to leverage local identity for differentiation and customer loyalty. Overall, the results provide practical guidance for resource allocation, prioritizing organizational management, followed by key resources and stakeholder collaboration.

Overall, the findings confirm that sustainable competitive advantage in health businesses arises from the integration of multiple RBV elements rather than any single factor. Organizational management and resource utilization form the foundation of competitiveness, while brand equity, partnerships, and knowledge act as complementary elements that strengthen business resilience and long-term sustainability.

Limitations and Future Research

Despite its contributions, this study has several limitations. AHP relies on expert judgment and may therefore involve some subjectivity, although the consistency ratios indicated

acceptable reliability. In addition, the sample of 20 experts, while appropriate for AHP, may not fully represent the diversity of perspectives within the health business sector. The regional focus on Upper Northern Thailand also limits the generalizability of the findings, while the higher proportion of business owners than managers may have given greater weight to strategic rather than operational perspectives.

Based on these limitations, several directions for future research are suggested. First, the scope could be expanded to include other types of health businesses, such as hospitals and specialized clinics, as well as larger and more diverse samples from other regions or countries to improve generalizability. Second, qualitative methods, such as in-depth interviews, may provide richer insights into how internal resources contribute to SCA. Third, future studies could adopt advanced methods, such as Fuzzy AHP, to strengthen methodological robustness. Finally, further research should incorporate external environmental factors into the RBV framework and pay greater attention to knowledge management and innovation, particularly in transforming tacit knowledge into a sustainable source of competitive advantage.

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