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Examining the Sustainability Strategies of Knowledge-Based Sports Enterprises Using the Three Branch Paradigm

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Abstract

Sustaining knowledge-based enterprises is a crucial aspect of entrepreneurship. The current research aims to rank the sustainability strategies of knowledge-based sports enterprises in the industry using the three branch theory. The research is a descriptive analysis and field study. The population consisted of experienced managers from leading knowledge-based sports enterprises. 14 individuals were chosen as the research sample via snowball selection. The research questionnaire consisted of a researcher-developed survey. The questionnaire was created as a strategy matrix with three branches and utilized the TOPSIS approach. Sustainability strategies of knowledge-based enterprises in the sports industry were identified by utilizing theoretical underpinnings from research and expert opinions. The researcher identified strategies from articles and finalized them by consulting an expert team. 10 solutions for ensuring the sustainability of knowledge-based sports enterprises were identified and finalized in this research. The TOPSIS technique was utilized to select the optimal strategy for ensuring the

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sustainability of knowledge-based enterprises in the sports industry. The research data analysis method was exclusively conducted utilizing TOPSIS. The research results indicated that the most significant factor, with a coefficient of 0.6736, is the reform of the tender and transaction system and the elimination of complex regulations related to the development of sports-based knowledge enterprises.

Keywords: knowledge-based enterprises, SMEs, business, entrepreneurship

Introduction

Job should be a primary focus of the government at all times, but under the current circumstances, it is especially crucial to prioritize job creation based on expertise and skills. Knowledge-based production and knowledge-based business stem from the connection between employment, economy, and production (Dolińska, 2015, 325). One method to promote the ideas and practical solutions of intellectuals is by creating knowledge-based cooperative enterprises within universities. Knowledge-based cooperative enterprises are positioned higher than fast-yielding enterprises on the employment ladder due to their better added value (Jabari, 2011, 35). Production is the key factor in establishing lasting prosperity. The sector of the economy that heavily depends on knowledge and research is referred to as the production economy (Linton & Solomon, 2016, 197). Universities, particularly the Islamic Azad University, are crucial in developing human resources for society. It is crucial in today's environment for graduates to shift their mindset from seeking employment to pursuing entrepreneurship during and after university. This change will provide them a competitive edge by being proficient in solving practical issues within their area of specialization (Ceptureanu, 2014, 55).

Small and medium-sized enterprises have become the driving force behind entrepreneurship and economic growth in developed nations in recent years. A new method has been developed to transfer technology from academia to industry due to the advancement of academic research in new technologies. Spin-off enterprises, also known as spawning enterprises, have been established from universities and academic institutions (Forte, Hoojaghan & Pool, 2016, p. 168). It is crucial to identify effective strategies and factors in the development of entrepreneurship and supporting the commercialization of knowledge-based enterprises' products to assist capable students, elites, and scientific and technological innovators in creating products and services from their research achievements. This is essential for economic development and job creation in the country.

The global economy is driven by a mix of large, medium, and small enterprises. These enterprises aim to outperform their competitors and meet the demands of their customers in a volatile environment and a fiercely competitive market (Dayan, Heisig & Matos, 2017, p. 309).

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The business environment of organizations and enterprises is significantly impacted by the knowledge-based economy, leading to the rise of enterprises known as knowledge-based enterprises (Jaafari and Ali Beigi, 2015, 32). Enterprises established with a focus on knowledge, technological innovation, commercialization, wealth creation, and entrepreneurship as their primary objectives (Low & Ho, 2016, 643). These enterprises possess unique organizational challenges and deficiencies distinct from other forms of organizations (Asdenjad, Hejazi, Akbari, & Hadizadeh, 2017, p. 49).

Small and medium-sized enterprises have become key drivers of entrepreneurship and economic growth in developed nations in recent years. A new method has been developed to transfer technology from the academic sector to the industrial sector due to the advancement of academic research in new technologies (Haji, Zulfiqari, Guderzi, & Akhundi, 2017, p. 649). Enterprises known as spin-offs or startups have emerged from universities and academic institutions to provide essential support to the country's talented students in order to transform their research into products and services. Recognizing the significance of knowledge-based enterprises in economic growth and employment, it is crucial to identify and prioritize the key factors that enhance the strategic management of these enterprises (Safai, Taleqaninia, and Kiamanesh, 2016, p. 25).

The significance of knowledge-based enterprises in driving the economy was acknowledged. Today, the utilization of knowledge in various economic, political, and social sectors has expanded due to advancements in human sciences. The importance of an economy grounded in science and knowledge, as well as the need for the growth of knowledge-based enterprises in economic realms, has become significant (Yip, 2016, 35). The global shift towards a knowledge-based economy is currently evident in countries worldwide. The knowledge-based economy approach aims to optimize the utilization of resources in scientific institutions like universities and research centers, along with experts and graduates, for the commercialization and professional dissemination of scientific advancements (Boh, De Haan & Strom, 2016, p. 663). To combine science and wealth effectively, a knowledge-based company aims to develop a knowledge-based economy, achieve scientific and economic objectives, expand and implement inventions and innovations, and monetize research and development outcomes through the creation of valuable products and services (Hassanzadeh, Shirani, & Raisi Ardali, 2016, p. 4).

The country's sports sector necessitates the growth and enhancement of high-level job opportunities, making the development of knowledge-based enterprises a crucial and key matter. Knowledge-based sports enterprises have not effectively met the business needs in the sports industry. The underdevelopment of knowledge-based sports enterprises may be attributed to several factors, such as inadequate planning in the industry. Arman and Shafiei (2016)

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discovered that a lack of familiarity with planning and a deficiency in an analytical perspective of knowledge-based enterprises contribute to the failure of these enterprises.

Gorse, Chadwick & Burton (2010) emphasized the need of researching the development strategies of entrepreneurial enterprises in the sports industry. Sports offer unique opportunities for enhancing and advancing industrial and commercial endeavors. By employing strategic planning, the opportunities in this sector can be effectively utilized to enhance and broaden commercial and economic endeavors in sports. The development of economic, commercial, and industrial activity in sports is crucial for addressing job concerns among sports graduates. Utilizing the potential of knowledge-based enterprises in this sector helps expedite the attainment of ambitious objectives in this industry. No research has been done on the growth of knowledge-based enterprises in sports, and there are basic difficulties in the strategies for supporting the improvement of such enterprises in the sports industry. To promote the growth and advancement of sports enterprises, it is essential to devise strategies tailored to the specific conditions of our country, while also evaluating knowledge-based enterprises. The lack of operational solutions for the growth of knowledge-based enterprises in the sports industry has resulted in the absence of established written plans for their development and expansion. The current research was conducted to rank the growth strategies of knowledge-based enterprises in the sports industry using a three branch framework. The current research aims to investigate the growth tactics employed by knowledge-based enterprises in the sports industry. How are these strategies prioritized?

Methodology

The research is a descriptive analytical and field study. The population consisted of experienced managers from leading knowledge-based sports enterprises. 14 individuals were chosen as the research sample via snowball selection. The current study utilized a three branch theory to develop the research's conceptual framework. The three branch model categorizes models into structure, content, and context, providing a logical framework for analyzing concepts, events, and organizational phenomena. Put simply, by using a three branch criterion and analyzing the characteristics of each criterion, we can categorize the successful components and variables involved in the commercialization of research discoveries, and quickly examine its dimensions. The branch of structure encompasses all the elements, factors, and physical and non-human conditions of an organization that define its form, structure, and material appearance in a systematic and regulated manner. This includes the material, financial, and informational resources that interact within the organization in a specific configuration. The behavioral branch focuses on human issues and human relations within the organization, which are associated with specific behavioral norms, relationships, and patterns. These elements constitute the primary and dynamic content of the organization's internal environment. This research examines three

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branches: structural variables such as management system, networking, strategic relationships, and financial and information resources. Behavioral aspects encompass individual goals, human talents, organizational motivations, quality, and flexibility. Contextual considerations encompass software infrastructure, economic, environmental, cultural, legal, and political factors. The research questionnaire consisted of a researcher-developed survey. The questionnaire was created as a strategic matrix with three branches, utilizing the TOPSIS method. The growth strategies of knowledge-based organizations in the sports industry were identified by utilizing theoretical foundations from research and expert opinions. The researcher identified strategies from articles and finalized them by consulting an expert team. Ten growth strategies for knowledge-based enterprises in the sports industry were discovered and confirmed in this research. The TOPSIS method was utilized to select the optimal strategy for the advancement of knowledge-based enterprises in the sports industry. The best solution in the TOPSIS technique optimizes the benefits of criteria/characteristics while minimizing the costs of criteria.characteristics. Below are the steps of the TOPSIS technique.

Creating the decision matrix is the initial stage in this process. The decision matrix for this approach consists of criteria and alternatives arranged in a matrix format. Criteria are placed in columns and options in rows, with each cell representing the evaluation of an option in respect to a criterion. Once the decision matrix is created, it should be finalized with input from specialists. The Likert scale is used for quantitative criteria like cost or production rate, where actual numbers are assigned to each option. For qualitative criteria where a small number is not meaningful, a range from 1 to 9 is used.

Unscaling **the decision matrix** involves normalizing it by dividing each level by the square root of the total of the levels in that criterion column in the TOPSIS approach.

To determine **the weighted unscaled matrix**, multiply the weights of the criteria acquired from earlier approaches in the normal matrix to obtain the weighted matrix.

Identifying the ideal and anti-ideal solutions: The specific criteria type needs to be defined. The criteria are binary, being either positive or negative. Positive criteria are standards that, when enhanced, will have a beneficial impact on the system.

Calculating the distance between the ideal and anti-ideal solutions

Compute similarity index and rank decisions.

The research data analysis was conducted utilizing BT TOPSIS solver.

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Results

This research outlines 10 strategies for the growth of knowledge-based enterprises in the sports industry. Strategies include enhancing the status and facilities of sports equipment and services providers (Strategy No. 1), conducting training courses such as workshops, seminars, and research to foster the development of knowledge-based sports enterprises (Strategy No. 2), and enhancing financial resource acquisition from banks while addressing challenges related to claims from large governmental entities (Strategy No. 3). Assigning land for constructing research facilities for knowledge-based sports enterprises (Strategy No. 4), implementing insurance mechanisms to ensure timely payment of claims for customers of knowledge-based sports enterprises to facilitate financial transactions (Strategy No. 5). The Ministry of Sports and Youth, sports federations, and sports clubs are working on strategies to support knowledge-based enterprises in sports. These strategies involve reforming tender systems, simplifying rules for establishing sports-based knowledge centers, restructuring education for innovative human resources in physical education and sports sciences, establishing a consulting center with qualified managers, lawyers, and financial advisors, and creating investment funds for the growth of knowledge-based sports enterprises. Table 1 displays the average expert opinions on the identified strategies.

Table 1: average expert opinions

matrix	Context	content	structure
Strategy No. 1	6429.3	7143.3	1429.3
Strategy No. 2	5000.4	2143.4	2143.3
Strategy No. 3	7143.4	5714.4	4286.3
Strategy No. 4	5714.4	0714.5	0714.3
Strategy No. 5	3571.4	0714.5	2857.3
Strategy No. 6	7143.4	0000.5	5000.3
Strategy No. 7	6429.4	2143.5	7143.3
Strategy No. 8	2143.4	0000.4	2143.4
Strategy No. 9	4286.4	9286.3	3571.4
Strategy No. 10	1429.5	2857.3	0714.4
type	Positive	positive	Positive
Standard weight	4	3	4

Table 2 shows the results related to the positive ideal and negative ideal solutions.

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Table 2: positive ideal and negative ideal solutions

Optimal solution	context	Content	Structure
+	1.4430	1.1108	1.5195
-	1.0221	0.7000	1.0711

Table 3 shows the distance from the positive and negative ideal solution.

Table 3: the distance from the positive and negative ideal solution

Distance size	-	+
Strategy No. 1	0.0946	0.6772
Strategy No. 2	0.3154	0.4866
Strategy No. 3	0.4253	0.3716
Strategy No. 4	0.4611	0.4772
Strategy No. 5	0.4364	0.4349
Strategy No. 6	0.4961	0.3254
Strategy No. 7	0.5457	0.2645
Strategy No. 8	0.4557	0.3705
Strategy No. 9	0.5181	0.3394
Strategy No. 10	0.5466	0.4228

Table 4 shows the proximity to the positive and negative ideal solution as well as the decision ranking.

Table 4: Ranking of sustainability strategies of knowledge-based enterprises

Outcome	Proximity factor	rank
Revamping the tender and transaction system and eliminating complex regulations related to the formation of knowledge-based sports firms.	0.6736	First
Establishing a specialized consulting center for knowledge-based sports enterprises with skilled managers, attorneys, and financial advisors to provide consultation and address issues.	0.6042	Second
The Ministry of Sports and Youth, sports federations, and sports clubs are working together to establish a political environment that promotes knowledge-based firms in the sports industry.	0.6039	Third
Establishing investment funds to support the growth of knowledge-based sports firms.	0.5639	Fourth
Revise the educational framework to cultivate creative and inventive	0.5516	fifth

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Outcome	Proximity factor	rank
human capital in the realm of physical education and sports sciences.		
Enhancing the conditions for securing financial resources from banks and addressing the issue of collecting debts from prominent, frequently state-owned corporations and institutions.	0.5337	sixth
Activating the insurance system to ensure payment of claims for clients of sports knowledge-based firms to facilitate proper financial flow.	0.5009	seventh
Allocating land for constructing research facilities for sports-focused knowledge-based firms.	0.4914	Eighth
Conducting training sessions through workshops, seminars, and research to establish and enhance knowledge-based sports companies.	0.3932	ninth
Enhancing the status and amenities for the caretakers of sports equipment and services	0.1226	tenth

Chart 1: Sustainability strategy ranking in knowledge-based enterprises

The TOPSIS approach results indicated that modifying the tendering and trading system and eliminating complex rules related to establishing knowledge-based sports enterprises with a coefficient of 0.6736 is deemed suitable.

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Discussion and conclusion

The study found that reforming the tendering and trading system and eliminating complex rules related to establishing knowledge-based sports enterprises are crucial strategies for ensuring the sustainability of knowledge-based enterprises in the sports industry. This matter has been referenced in other research studies. Septriano (2014) found that legal issues are a challenge to the growth of knowledge-based enterprises, and addressing this challenge is a crucial strategy in this sector. Asdanjad et al. (2017) emphasized that facilitating regulations for the creation of knowledge-based enterprises is crucial in the knowledge-based industry. The laws and regulations governing tenders and transactions in knowledge-based enterprises have significantly impacted the activity of these enterprises. This issue has restricted the autonomy of knowledge-based enterprises, hindering the advancement of their operations. Thus, simplifying certain laws and regulations can help promote the development and expansion of knowledge-based enterprises in the sports industry. Sport's broad scope offers significant possibilities in multiple areas. Knowledge-based enterprises in the sports industry are presented with numerous options to enhance their performance due to this issue. It emphasizes the importance of preparing in order to benefit from these chances. Existing laws and regulations often hinder the development of knowledge-based sports enterprises. Reforming the tender and transaction system and eliminating complex laws related to establishing knowledge-based sports enterprises can improve the legal environment for these enterprises, fostering creativity, innovation, and growth. Define the operational boundaries of knowledge-based enterprises specializing in sports.

Successful knowledge-based sports enterprises require suitable initiatives and cohesive activity. This issue has necessitated the establishment of adaptable guidelines to be recognized as a crucial principle. Hence, the custodial and legislative bodies should support activities and initiatives connected to knowledge-based sports enterprises by establishing adaptable legislation. Implementing protective legislation for knowledge-based sports enterprises will enable them to enhance their operations and performance with autonomy. Implementing protective legislation for knowledge-based enterprises will boost individuals' motivation to participate and enhance their operations within this sector, leading to increased dedication and productivity.

The research findings suggest that creating a specialized consulting center for knowledge-based sports enterprises with skilled managers, lawyers, and financial advisors is a crucial strategy for ensuring the sustainability of such enterprises. Safai et al. (2016) suggested that creating specialist consulting centers for knowledge-based enterprises can assist in reaching ambitious objectives for these organizations. Yip (2016) stated that offering expert guidance to knowledge-based enterprises can assist in their expansion. Hassanzadeh et al. (2016) and Gorse et al. (2010) emphasized that knowledge-based enterprises require suitable consultations to enhance their operations. Establishing consulting centers for knowledge-based sports enterprises will facilitate

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the recruitment and organization of skilled professionals to develop and grow these enterprises. Creating a specialized consulting center for knowledge-based sports enterprises will help streamline individual efforts and provide them with valuable counsel, enabling these enterprises to engage in sustainable activities consistently. Knowledge-based sports enterprises require advice due to their innovative nature, highlighting the necessity to develop and build consulting centers specifically for knowledge-based enterprises in the sports industry. The uncertainties surrounding the laws and regulations of knowledge-based sports enterprises necessitate them to seek consultations and guidance to ensure their activities align with their goals and plans. The broad scope of sports and the inherent uncertainties associated with knowledge-based businesses have led to the establishment of consulting centers. Custodian organizations can establish advisory centers staffed with competent managers, lawyers, and financial advisors to provide advice and guidance. They can also create specialized centers specifically for knowledge-based enterprises to offer consulting services.

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