

Construction and Validation of the Questionnaire for the Development of the Sports Capital Goods Market

Received: 2024-01-04

Vol. 5, No.3. Summer .2024, 12-27

Accepted: 2024-04-15

Pari Farajizadeh^{1*}
Abolfazl Farahani²
Ali Mohammad Safania³
Leila Ghorbani⁴

¹Payam Noor University Iran
Tehran

²Professor of Sport
Management, Payame Noor
University, Tehran, Iran

³Department of Sports
Management, Department of
Physical Education, Science
and Research Branch, Islamic
Azad University, Tehran, Iran

⁴Assistant professor in Sports
Management, Payam Noor
University, Iran

***Correspondence:**

Pari Farajizadeh, Payam Noor
University Iran Tehran

Email:

farajizadeh64@yahoo.com

Orcid: 0000-0007-8370-9767

DOI:

[10.22098/RSMM.2024.14370.1306](https://doi.org/10.22098/RSMM.2024.14370.1306)

Abstract

Purpose: The development of the capital market of sports goods is important because it can bring many benefits for developing countries to attract foreign capital to the host country and as a result increase investment, create job opportunities and transfer technology to the host country and play an important role in strengthen their economies and societies. The purpose of this research was to construct and validate the questionnaire for the development of the sports capital goods market.

Method: For this purpose, 150 users of sports capital goods were selected as a purposive sampling and completed the questionnaire made by the researcher for the development of the sports capital goods market. This research is exploratory and is a type of correlational study. The form and content validity of the research tool was confirmed by a group of expert professors and its structural validity was confirmed by factor analysis based on the structural equation model.

Results: Based on exploratory factor analysis with orthogonal rotation, 36 items were placed in eight factors, which accounted for 61.62% of the variance of sustainable social development. The results of confirmatory factor analysis and Cronbach's alpha coefficients supported the eight-factor structure of 36 questions and confirmed its validity and reliability.

Conclusion: The results of this research can be helpful for teachers, managers, officials and experts in this field in the development of the sports capital goods market by specifying the role of each of the mentioned items for more attention.

Keywords: Sports Capital Goods Market, Sports Goods, Investment in Sports, Sports Market Development.

Introduction

Today, the sports goods industry has a multi-sector market and a high volume of demand, and the globalization of markets is considered one of the most important challenges facing today's manufacturers and marketers in the field of sports. Because the sports industry and sports goods trade is one of the important economic issues, the production and development of the sports goods market now constitutes one of the important industrial areas with various branches and its scope is getting wider every day (Mainka et al., 2023). Sports capital goods are mainly used for the purpose of use in training and sports activities, as well as to improve people's performance and sports experience. These products as a part of the capital market and sports are significant in that they have a deep impact on people's sports activities, and from an economic point of view, the capital market can be a great opportunity to invest and earn money for companies and producers. The market of sports goods and capital is placed in different categories of products such as sports equipment, sports clothing, sports technology and even equipment related to sports green spaces, which numbers and figures are extremely effective in this field and can provide useful information about the growth and development of the market. Give (Kaur, 2022). In general, the sports industry is one of the new and very influential industries in recent decades, and it is important to pay attention to the sports goods industry and its impact on the national economy in the country. Considering that the development of non-oil exports is one of the important goals of the government. Therefore, it is very important to know the country's income generation possibilities and potentials. Every country follows several ways to achieve economic growth and development. Iran's economy is in dire need of development in various financial and economic channels in order to avoid a single-product economy. The sports industry and its sub-sectors, especially the sports goods

industry, are among the ways to solve the mentioned problem; Because forecasts have shown that the international trade of sports goods and the export and import of these goods are effective due to the increase in sports participation and the increase in the demand for sports clothing and equipment. Producing sports equipment and providing sports services has contributed to the economic prosperity of sports and improved the development of sports in the country and plays an effective role in the economic system of the society as a commodity or commercial product (Sarlab and Rasekhi, 2020). Therefore, the development of the capital market of sports goods can have many benefits for developing countries and play an important role in strengthening their economies and societies. The development of the capital market of sports goods is important because it can lead to attracting foreign capital to the host country and as a result increase investment, create job opportunities and transfer technology to the host country. Also, the development of the capital market of sports goods with foreign exchange can help develop sports infrastructure and increase the country's sports capabilities and create more opportunities for local athletes. In addition, the capital market of sports goods can help promote the image of a country at the international level. By investing in sports, countries can become known as hosts of international competitions and outstanding athletes, and this in turn leads to the attraction of tourists and the development of the sports tourism industry. Also, the development of the capital market of sports goods can lead to increasing public trust and motivating people for sports activities. This will have a positive and continuous effect on the society through increasing physical and mental health, creating social connections and strengthening people's motivation to exercise (Ren, 2017). This is despite the fact that in most of the third world countries there are programs under the title of development program which practically cannot end in development. Perhaps the main reason is

the lack of process ability of the program, the lack of sufficient and necessary knowledge of the climatic conditions and its potential capabilities, the lack of integration of the programs, and the lack of a process that leads to development. If the development through sports strengthens the connection of sports with other political institutions and also brings the development of sports itself (Girginov, 2008). The development of the capital market of sports goods, as one of the important economic fields, is currently not implemented properly in Iran, and this can be due to various causes and factors. Perhaps the lack of sufficient attention and awareness on the part of the officials and members of the sports field in the country is effective in this regard, or the lack of sufficient recognition of the importance and approaches to the development of the capital market of sports as well as its role in economic development, which can cause the non-implementation of plans and projects related to be this domain. Other factors such as political, economic problems and even security concerns may affect the development of sports capital market in Iran. These matters can reduce the confidence of investors and reduce investment in the field of sports (Farahani et al., 2022). Therefore, trying to raise awareness and provide information about the importance of the development of the sports capital market and its role in economic development can be an important step to bring about change and improvement in this field. This action can show people more deeply the importance of the development of the sports capital market for the economy and society, and on the other hand, attract investors to this field (Mahdavi Khanghah et al., 2023). Therefore, various economic, cultural, political issues and international sanctions can be problems on the development path of the capital market of sports goods in Iran. Sanctions can create obstacles in the way of importing sports goods into the country and this can lead to increased prices, reduced product variety or even more

difficult access for consumers. Issues related to security and political concerns can also hinder the proper development of the sporting goods capital market. Failure to predict security issues can cause uncertainty for investors and delay or decrease investment in this industry. In connection with economic factors, obstacles such as exchange rate fluctuations or inflation can have a negative effect on the prosperity of the sporting goods capital market. These types of obstacles can increase the price of products and thus reduce the purchasing power of consumers. Regarding cultural issues, the lack of sufficient information about the size and capabilities of the capital market of sports goods, the lack of attention to the importance of sports and physical activities in the society, or even the lack of sufficient support from the authorities can be effective. These cases can hinder the creation of demand and the growth of the capital market of sports goods (Salimi et al., 2015 and Askarian et al., 2021).

According to the stated issues, in order to develop the capital market of sports goods, it can be helpful to pay attention to creating suitable platforms for development. For this reason, it seems that the existence of a reliable tool to measure the development of the sports capital goods market in order to keep pace with the growth and development of the sports industry in the world is one of the essential needs and basic needs of the country's sports. On the other hand, the review of the research literature indicated that most of the researches in the country focused on the development of the sports industry (Sedigh et al., 2023: Analysis of the development system of Iran's sports industry; Noormohammad et al., 2022: Institutional factors affecting the development of the sports industry in Iran; Gholamian et al., 2022: Effective drivers in the development of the sports industry) and sports marketing (Izadkhah et al., 2022: Marketing of sports products in social networks; Nazari et al., 2021: Strategic themes of the development of the Iranian handball market; Keshkar et al., 2015:

Explaining the role of the international exhibition of sports products in the development of the market for these products; Najafzadeh et al., 2012: Development of women's sports marketing) and validation of sports marketing (Kirim et al., 2022: Validation and standardization of the sports product advertisement questionnaire; Hossein Farr et al., 2022: Validation of e-commerce model in sports services marketing; Kurdlo et al., 2021: Validation of social media marketing questionnaire in sports; Tari Verdi et al., 2018: Validation of questionnaire of marketing factors influencing customers' decision making in clubs. Sports with a mixed marketing approach and Taheri Kia et al., 2018: Validity and reliability of sports-related marketing questionnaire) And only Farahani et al. (2022) have investigated the role of social capital, knowledge management and innovation on the development of the sports capital goods market. In foreign research as well (Yang and Lin, 2022: econometrics and marketing of sports products; Ziadlav and colleagues, 2022: creating a sports marketing development model; Zhang et al., 2020: Visney Ski, 2020: competitiveness of investment in markets sports; future development prospects of the sports products trade industry; Huang and Wang, 2017: Comprehensive evaluation of the economic development pattern in the Chinese sports market; Burton et al., 2013: The development of sports league marketing).

Therefore, taking into account the background of the research, the validation of the questionnaire for the development of the sports capital goods market in the country is considered an important and useful issue for evaluating the development process of this market. Therefore, according to the above contents and the importance of the subject under study, the present research was conducted with the aim of building and validating the questionnaire for the development of the sports capital goods market.

Materials and Methods

The method of the current research is exploratory and in terms of its purpose, it is one of the applied researches that has been carried out in the field. The 36-item instrument of the present study was extracted from the theoretical foundations and previous studies using a systematic review method. In this research, composite reliability was used for the reliability of the research tool, and the composite reliability is reported in detail in the findings section. In order to advance the current research, the form and content validity of the questionnaire was confirmed by receiving the expert opinion of pundits (6 people from sports management professors, 6 people from experts and pundits). The final questionnaire was prepared with a five-point Likert scale (1: very low, 2: low, 3: medium, 4: high, and 5: very high). Finally, the sports capital goods market development questionnaire was distributed and collected among the research samples in the form of non-random and accessible sampling. The statistical population of the present study was formed by the users of sports capital goods all over the country. There were two considerations for sampling the quantitative part: A: The large number of the statistical population among the users of sports capital goods across the country (10,000 to 15,000 people) B: Covering the adequacy of the sample for structural and credit equations. In variance-based structural equations, the sample size is at least 70 people, and determining a high sample size can have a positive effect on the results, but in covariance-based structural equations, in order to determine the sample size for each question, between 5 and 10 people as They select a sample and the minimum sample size is 140 people. Therefore, a statistical sample of 170 people was selected and 150 questionnaires were collected and provided to the researcher for analysis, which was more than the desired range of 140 to 240 questionnaires (5 to 10 times the number of items). The raw data obtained from the

questionnaire items were evaluated using descriptive statistics methods such as frequency and frequency percentage, and to analyze the relationships between the indicators and identify the indicators related to each factor, as well as to validate the tool using the exploratory factor analysis method. (SPSS 25) and confirmatory factor analysis (SmartPLS software version 3) were used.

Results

By using the exploratory factor analysis method with Obimin rotation, the explanatory variables of the development of the sports capital goods market were identified. The statistics of the

Kaiser and Bartlett tests show the adequacy of the sample and the appropriateness of factor analysis for the research variables. It is worth mentioning that the Kaiser test statistic is between zero and one variable and values greater than 0.7 are known as an acceptable level and indicate the appropriateness of the data to perform exploratory factor analysis, which in this research, the value Kaiser's statistic was equal to 0.85 and the significance of Bartlett's test at the level of 0.05 is another indication of the appropriateness of the data in conducting exploratory factor analysis (Table 1).

Table 1. Bartlett and Kaiser test results

Bartlett test statistic (x2)	Sig	KMO
5373.836	0.001	0.85

Examining the results of the exploratory factor analysis shows that 36 research items regarding the measuring tool for the development of the sports capital goods market have been classified into eight factors in terms of having a factor load equal to or greater than 0.4 (base criterion). The factor load of these areas varies from (0.50 to 0.77). The number of factors obtained in this research was determined by

combining the following criteria: a) preliminary knowledge of the number of factors based on the review of articles; b) Selection of factors based on eigenvalues greater than one. It should be noted that the eight known factors in this research represented 61.62% of the variance and the naming of these factors was based on the descriptive items of each factor (Table 2).

Table 2. Factor analysis of the main components

Agents and questions	Factor loading	Special amount	The amount of explained variance
Ways of informing			
radio and TV	0.50	9.34	12.87
Interpersonal contacts (acquaintances and neighbors)	0.52		
Posters, and advertising leaflets	0.70		
Educational workshops and written media (books, magazines and journals)	0.63		
Exhibitions and festivals	0.69		
Virtual media and social networks on the Internet and virtual space	0.74		
Appropriate methods of supply			
Supplied in a suitable and attractive packaging	0.66	2.57	8.71
Supply in bulk and open	0.60		
Supply in large supply stores (such as chain stores, etc.)	0.67		
Supply in specific stores or online supply of products	0.72		
Limits to market development			
Inflation and high prices of products	0.69	1.70	8.21
The absence of guarantee labels or guarantees and warranties of these products	0.59		

Lack of easy access to the seller and after-sales service	0.75		
Lack of appropriate environmental advertising and the presence of domestic and foreign competitors	0.74		
Uncertainty about market advertising	0.52		
Advantages of market development			
Variety of products and production according to customer needs and needs assessment of future customers	0.53	1.48	6.96
Easy access to products with special cash and installment terms	0.58		
Having the apparent health of the products	0.69		
Product quality (adaptation of products to target market standards)	0.71		
Supervisory solutions			
Government supervision of the product market (easy access and reduction of marketing costs)	0.68	1.40	6.69
Developing new laws to protect products	0.52		
Organizing how to supply products and holding online presentation and sales exhibitions	0.73		
Creating a database of exporters and importers of products	0.68		
Social and cultural solutions			
Symbolic gestures, such as dedicating a day of the year to products	0.73	1.26	6.49
Informing everyone about the features and importance of using products	0.75		
Adaptation of products to the cultural characteristics of the country	0.74		
Launching campaigns and special hashtags for these products in real and virtual spaces	0.72		
Economic solutions			
Removal of dealers of these types of products	0.55	1.14	6.48
Reduce shipping and tax costs	0.72		
Improving warehousing to reduce waste	0.65		
Using the private sector to provide products	0.66		
Attention to tariffs and stability in foreign exchange policies	0.77		
Diplomatic (political) solutions			
Development of regional agreements	0.67	1.06	5.21
Sending and receiving business delegations	0.69		
Holding joint economic commissions	0.75		
Creation of preferential duties (reduction of duties on the export of sports capital goods)	0.76		

In the following, using confirmatory factor analysis, the construct validity of the sports capital goods market development questionnaire was investigated. In order to determine the reliability of the factors, the composite reliability index was used. This index expresses how generalizable the factors

are, in other words, if these factors are used in another model, is the weight close to the implemented model or not? According to Table 3, the coefficients of all factors are higher than 0.7, so the questionnaire has good reliability (Table 3).

Table 3. Combined reliability results

Variable	Coefficient
Ways of informing	0.81
Appropriate methods of supply	0.85
Limits to market development	0.87
Advantages of market development	0.86
Supervisory solutions	0.81

Social and cultural solutions	0.84
Economic solutions	0.86
Diplomatic (political) solutions	0.89

In order to check the validity of the construct, a measurement model with 38 indicators was drawn using Smart PLS software, and all the

indicators had appropriate conditions and the validity of the construct was confirmed.

Table 4. The results of the confirmatory factor analysis of the development factors of the sports capital goods market

Agents and questions	Factor weight	Sig
Ways of informing		
radio and TV	0.40	0.001
Interpersonal contacts (acquaintances and neighbors)	0.70	0.001
Posters, and advertising leaflets	0.68	0.001
Educational workshops and written media (books, magazines and journals)	0.60	0.001
Exhibitions and festivals	0.69	0.001
Virtual media and social networks on the Internet and virtual space	0.67	0.001
Appropriate methods of supply		
Supplied in a suitable and attractive packaging	0.51	0.001
Supply in bulk and open	0.78	0.001
Supply in large supply stores (such as chain stores, etc.)	0.67	0.001
Supply in specific stores or online supply of products	0.77	0.001
Limits to market development		
Inflation and high prices of products	0.68	0.001
The absence of guarantee labels or guarantees and warranties of these products	0.74	0.001
Lack of easy access to the seller and after-sales service	0.75	0.001
Lack of appropriate environmental advertising and the presence of domestic and foreign competitors	0.69	0.001
Uncertainty about market advertising	0.65	0.001
Advantages of market development		
Variety of products and production according to customer needs and needs assessment of future customers	0.78	0.001
Easy access to products with special cash and installment terms	0.84	0.001
Having the apparent health of the products	0.75	0.001
Product quality (adaptation of products to target market standards)	0.74	0.001
Supervisory solutions		
Government supervision of the product market (easy access and reduction of marketing costs)	0.78	0.001
Developing new laws to protect products	0.80	0.001
Organizing how to supply products and holding online presentation and sales exhibitions	0.81	0.001
Creating a database of exporters and importers of products	0.73	0.001
Social and cultural solutions		
Symbolic gestures, such as dedicating a day of the year to products	0.80	0.001
Informing everyone about the features and importance of using products	0.81	0.001
Adaptation of products to the cultural characteristics of the country	0.81	0.001
Launching campaigns and special hashtags for these products in real and virtual spaces	0.76	0.001
Economic solutions		
Removal of dealers of these types of products	0.77	0.001
Reduce shipping and tax costs	0.77	0.001
Improving warehousing to reduce waste	0.83	0.001
Using the private sector to provide products	0.80	0.001
Attention to tariffs and stability in foreign exchange policies	0.75	0.001
Diplomatic (political) solutions		
Development of regional agreements	0.69	0.001
Sending and receiving business delegations	0.84	0.001

Holding joint economic commissions	0.80	0.001
Creation of preferential duties (reduction of duties on the export of sports capital goods)	0.53	0.001

The values in Table 4 extracted from Figure 2 show that the significance coefficient of all

questions was in the range of 1.96 to -1.96; Therefore, the validity condition has been met.

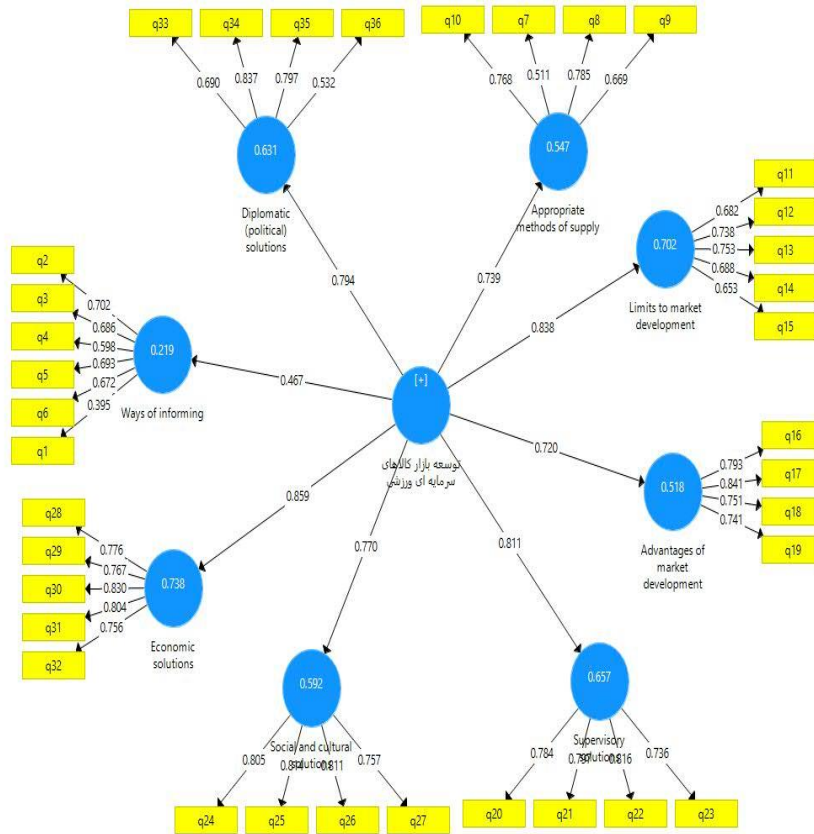


Figure 1. Measurement model in standard coefficient mode

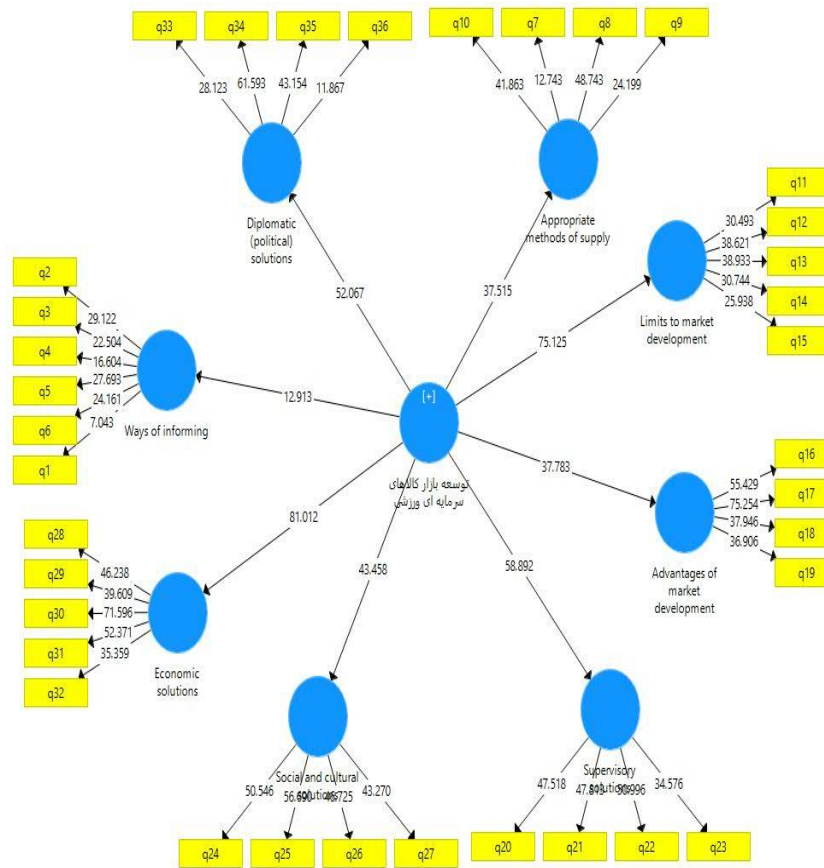


Figure 2. Measurement model in meaningful mode

Table 5 shows the coefficient of the path between the development of the sports capital goods market and the components of information channels, suitable supply methods, limitations of market development, advantages of market development, regulatory solutions, social and cultural solutions, economic solutions and diplomatic solutions. which is

equal to 0.47, 0.74, 0.84, 0.72, 0.81, 0.77, 0.86 and 0.79 respectively. The statistical value of t (significant coefficient) of these eight components is more than ±1.96; Therefore, it can be said with 0.95 confidence that the above eight components have the ability to predict the variable of the sports capital goods market.

Table 5. The effect of components on the development of the sports capital goods market

Research hypotheses	Effect coefficient	T-Value	R ²
Development of sports market Ways of informing	0.47	13/04	0.22
Development of sports market Appropriate methods of supply	0.74	35/23	0.55
Development of sports market Limits to market development	0.84	73/50	0.70
Development of sports market Advantages of market development	0.72	38/05	0.52
Development of sports market Supervisory solutions	0.81	56/07	0.66
Development of sports market Social and cultural solutions	0.77	45/37	0.59
Development of sports market Economic solutions	0.86	83/46	0.74
Development of sports market Diplomatic solutions	0.79	50/14	0.63

SRMR criterion was used to check the overall fit of the model. According to the obtained value (SRMR = 0.07), the measurement model

has a good fit, that is, overall, the measurement model has a good quality in explaining the endogenous variable of the research.

Discussion

This research sought to identify the components of the development of the sports capital goods market in order to build and develop a tool to measure the development of the sports capital goods market, during which 36 research items regarding the measurement tool for the development of the sports capital goods market in eight factors of information ways, suitable methods of supply, limitations of market development, advantages of market development, regulatory solutions, social and cultural solutions, economic solutions and diplomatic solutions were extracted, categorized and verified through factor analysis.

The first factor was the ways of informing, which explains 12.87 percent of the variance of the development of the sports capital goods market with a specific value (9.34). The six items of this factor, in the order of the factor load, include 1. Virtual media and social networks on the Internet and virtual space 2. Posters and advertising tracts 3. Exhibitions and festivals 4. Educational workshops and written media (books, magazines and journals) 5. Interpersonal contacts (acquaintances and neighbors). 6. Radio and television reflect the development of the sports capital goods market. This shows the importance of virtual space in today's modern life and sports goods market. Virtual media makes it possible for brands and teams to communicate directly with customers and promote their products and services. This includes promotional posts, reviews, online contests, etc. Also, due to the high effectiveness of virtual media, the contents and information provided by these media can influence customers' decisions regarding the purchase of sports products and services and help develop the sports capital goods market. This finding was somewhat consistent with the results of Ramadan Ghorbani and Farzam (1400) and Holland (2015).

The second factor was the appropriate methods

of supply, which with a specific value (2.57), explains 8.71 percent of the variance of the development of the sports capital goods market. The four items of this factor, in order of factor load, include 1. supply in specific and specific stores or online supply of products 2. supply in large supply stores (such as chain stores, etc.) 3. supply in suitable and attractive packaging and 4. Supply to The bulk and open face reflect the development of the sports capital goods market. In the interpretation, it can be said that the appropriate methods of supplying sports goods can have a direct effect on sales, brand awareness and customer satisfaction, and play a very vital role in the development of the sports capital goods market. When a sports product is available in specific stores, it can increase the value of the brand and make the product a special place. The online supply of sports products can help in better marketing and distribution because it allows to export to faraway parts of the world and attract new customers. Access to sports goods through online stores can help companies better reach their target groups and increase sales and thus market development. In addition to online supply and special stores, other supply methods such as large stores, suitable categories and bulk supply can be effective, but according to the needs and characteristics of the target market, the appropriate strategy should be chosen or the appropriate combination of strategies. To be used for the development of the sports capital goods market. Because each of these methods can effectively strengthen the ability of sports businesses in the market. This finding was somewhat consistent with the results of Zhang et al. (2020) and Ren (2016).

The third factor was the limitations of market development, which explains 21.8% of the variance of the development of the sports capital goods market with a specific value (1.70). The five items of this factor, in the order of factor load, include 1. Lack of easy access to the seller and after-sales services 2. Lack of appropriate environmental advertising and the

presence of domestic and foreign competitors 3. Inflation and high prices of products 4. Lack of guarantee or warranty labels and the warranty of these products and 5. The lack of confidence in market advertisements reflect the development of the sports capital goods market. This group of limitations shows that for the development of the sports capital goods market, there is a need for a proper access and distribution process that includes close interaction with customers, market analysis and providing detailed solutions to meet customer needs. The lack of easy access has been identified as the most important limitation that can reduce the value of goods and limit the development process. Because this issue is directly related to the experience of customers and the communication between the seller and the customer, which plays a significant role in influencing the choice and loyalty of customers. Uncertainty about post-purchase support can deter customers from future purchases, thereby limiting market development. Therefore, among the solutions that can be useful to overcome this limitation are: providing stronger after-sales services, improving customer relations and using new technologies for effective communication with customers. These measures can help to satisfy customers, increase their loyalty and increase sales, and finally help to develop the market of sports capital goods. This finding was somewhat consistent with the results of Wei et al. (2023) and Ning (2022).

The fourth factor was the advantages of market development, which explains 96.6% of the variance of the development of the sports capital goods market with a specific value (1.48). The four items of this factor, in the order of the factor load, include 1. Product quality, 2. Having the appearance of healthy products, 3. Easy access to products with special conditions for cash and installments, and 4. Variety of products and production according to customer needs and assessing the needs of future customers, reflecting the

development of the market. Capital goods are sports. This finding shows that the quality of the products, that is, the matching of the products with the standards of the target market, is more important and interesting from the point of view of the consumers. This means that when the customers of sports products are sure of the high quality of a product, they will have more trust in the product and the company that produces that product. This trust encourages customers to use the same products more often and may even recommend them to others. In other cases, the need and satisfaction of the customer has been taken into consideration in various ways, the healthy and attractive appearance of the product, the terms of payment, the costs and the variety of the products, which shows the immense importance of customer orientation in the development of the sports capital goods market. This finding was somewhat consistent with the results of Dong (2022).

The fifth factor was regulatory strategies, which with a specific value of (1.40), explains 69.6% of the variance of the development of the sports capital goods market. The four items of this factor, in the order of the factor load, include 1. Organizing how to supply products and holding online sales and presentation exhibitions 2 and 3. Creation of a database of product exporters and importers and government supervision of the product market (easy access and reduction of marketing costs) and 4. Development of new laws to support products reflect the development of the sports capital goods market. In explanation, it can be said that monitoring the development process of the sports capital goods market is very important and this importance is from various aspects of maintaining the standards and quality of products, strengthening healthy competition, protecting the rights of consumers to ensure the authenticity and quality of products, fair price and information. It is transparent to consumers and dealing with fraud and deception by preventing opportunism, frauds and frauds to

influence the market and manufacturers of sports products and ultimately leads to the sustainable development of the market and the balance between needs and resources. Based on the obtained result, monitoring the supply of products and holding exhibitions for presenting and selling online has the most important role in the development of the market. Monitoring the supply of products through standards, inventory management, and protection of consumer rights leads to maintaining the quality and credibility of products. This plays a fundamental role in building consumer confidence and market development. Also, effective monitoring can help identify and deal with counterfeit and smuggled goods and thus keep the market free of distortions and misinformation. On the other hand, holding online sales and presentation exhibitions, reaching new customers, improving the awareness of consumers in familiarizing them with new products and advanced technologies, and the possibility of promoting and strengthening effective advertising and marketing, all of which play a significant role in the growth and development of the goods market. They have a sports capital. This finding was somewhat consistent with the results of Zhou (2015).

The sixth factor was social and cultural solutions, which with a specific value (1.26) explains 6.49 percent of the variance of the development of the sports capital goods market. The four items of this factor, in order of factor load, include 1. Informing everyone about the characteristics and importance of using products 2. Adapting products to the cultural characteristics of the country 3. Symbolic movements, such as dedicating one day of the year to products and 4. Launching campaigns and the special hashtags of these products in real and virtual spaces reflect the development of the sports capital goods market. It is clear that the prosperity of the sports capital goods market depends on the societies and their consumption culture. For this reason, social and

cultural methods can play a very important role in the development of this market. Informing as the most prominent factor causes wider coverage and deeper understanding of the characteristics and benefits of sports products, which further transforms this understanding into demand and active consumption of products. Public information can have a great emphasis on the positive effects of exercises and sports on health and physical improvement, and convey the benefits of sports on the mind and spirit of people, which will increase the demand for related products. Public information is able to convey sports values such as cooperation, healthy competition, perseverance and self-confidence to the communities. Awareness of these values can help strengthen the desire to buy sports products. In general, public information can establish a connection between sports benefits and the use of sports products and capital goods and help develop their market. This finding was somewhat consistent with the results of Lianjo et al. (2023).

The seventh factor was economic strategies, which with a specific value (1.14) explains 6.48 percent of the variance of the development of the sports capital goods market. The five items of this factor, in order of factor load, include 1. attention to tariffs and stability in foreign exchange policies, 2. reduction of transportation and tax costs, 3. use of the private sector to provide products, 4. improvement of warehousing to reduce waste, and 5. elimination of these brokers. The types of products reflect the development of the sports capital goods market. The economic situation can directly and indirectly affect the development of the sports capital goods market. These effects can be of different aspects. In describing the most important factor, it should be said that tariffs and currency policies can have a great impact on the export and import of sports goods. Changes in these policies can affect prices and affect the development of the market by affecting the demand and supply of

products. Creating a stable and predictable environment for tariffs and currency can help stabilize prices and control inflation, which in turn can prevent unsustainable price increases and boost purchasing. Foreign exchange policies can affect local and global economic growth and this issue can play an important role in the demand for sports products. Changes in foreign exchange policies can affect the value of currencies and thus play an important role in international trade and product pricing. In sum, tariffs and stability in foreign exchange policies can play an important role in the development of the sports capital goods market by affecting prices, demand, inflation and sensitivity to economic changes. This finding was somewhat consistent with the results of Fatahi Milasi et al. (2022) and Chi et al. (2015).

The eighth factor was diplomatic (political) solutions, which explains 5.21 percent of the variance of the development of the sports capital goods market with a special value (1.06). The four items of this factor, in the order of the factor load, include 1. Creation of preferential duties (reduction of sports capital goods export duties), 2. Selection of joint economic commissions, 3. Dispatch and reception of trade delegations, and 4. Development of regional agreements reflecting the development of the capital goods market. They are sports. Since the sports goods market is affected by various policies, some of these effects can be direct and others indirect. According to this finding, the reduction of sports capital goods export duties is the most prominent effective factor in the development of the sports capital goods market. This is important in two ways: one is that the reduction of duties leads to an increase in the cost of exports and the products become less attractive to foreign buyers, and the other is that by reducing duties, companies and manufacturers of sports products can make their product prices more competitive. Also, the reduction of export duties can expand the target markets. If the cost of exporting decreases, firms may be able to

enter new markets that they were previously unable to compete with. In general, to ensure that the benefits of reducing export duties are relevant to the economy and the target market, the target markets and how they behave should be examined. This finding was somewhat consistent with the results of Zintez and Peresh (2019).

Conclusion

In the factor analysis section, the dimensions identified for the development of the sports capital goods market are economic solutions (0.86), market development limitations (0.84), regulatory solutions (0.81), diplomatic solutions (0.79), solutions Social and cultural (0.77), suitable methods of supply (0.74), advantages of market development (0.72) and ways of informing (0.47), respectively, have the greatest impact in confirming the means of developing the sports capital goods market. They said that these results show the importance of economic solutions as the most effective factor in confirming the development of the sports capital goods market. In general, the purpose of this research was to build and validate a tool for the development of the sports capital goods market. This tool helps to know the factors affecting the development of the market of sports capital goods. Also, the results of this research can open the way for managers, officials and specialists in this field in the development of the sports capital goods market by specifying the role of each of the mentioned items for more attention.

Acknowledgement

This article is taken from the PhD thesis of the second author. We are grateful to all the people who have helped us in doing this research better.

Conflict of Interest

No conflicts of interest are declared by the authors

References

- [1] Askarian, F., Rahbar, M., Raghofer, H & Safari, M. (2021). Identification of obstacles to the development of Iran's sports industry. *Journal of Sport Management and Movement Behavior*, 17(34), 81-98. [Persian].
- [2] Burton, R., Hall, K., & Paul, R. (2013). The historical development and marketing of fantasy sports leagues. *The Journal of Sport*, 2(2), 185-215.
- [3] Chi, X., Zhao, Y., & Yu, Y. (2015). Research on the Status of Sports Economy in the National Economy Development in Multi-objective Fuzzy Decision Model. *International Journal of Simulation--Systems, Science & Technology*, 16.
- [4] Dong, B. (2022). Dynamic Modeling of High-Quality Development of Sports Industry Driven by Big Data Digital Economy. *Mobile Information Systems*, 2022.
- [5] Fatahi Milasi, S., Honary, Habib & Kashkar, S. (2022). The economic and sports effects of the development of sports diplomacy in the Islamic Republic of Iran. *Sports Marketing Studies*, 3(2), 1-29. [Persian].
- [6] Girginov, V. (Ed.). (2008). *Management of sports development*. Routledge.
- [7] Holland, C. P. (2015, May). Internet and Social Media Strategy in Sports Marketing. In ECIS.
- [8] Hossein Far M.H, Azadfada Sh, Safania A.M, Heydarian E (2022). Identifying and validating the e-commerce model in sports services marketing with a mixed research approach. *New approaches in sports management*, 10 (39): 63-82. [Persian].
- [9] Huang, T., & Wang, W. (2017). Analysis of the comprehensive evaluation model of economic development pattern in China's sports market. *Rev. Facul. Ingen*, 32, 520-527.
- [10] Javad G, Darabi, M., Mahmoudi A & Azizi B (2022). Analysis of effective drivers in the development of the sports industry using a future research approach, 7 (1), 20-33. [Persian].
- [11] Karimi, A., Bahrami, Sh & Rasakh, N. (2021). Validation and standardization of sports product advertising questionnaire using social media. *Sports Management Studies*, 14(71), 185-216. [Persian].
- [12] Kashkar, S., Henry, H., & Faraji, Reza. (2014). The role of the international exhibition of sports goods and equipment in the development of the market of these products with an emphasis on the sports marketing mix (5), *Sports Management Journal*, 7(2), 221-235. [Persian].
- [13] Kaur, N. (2022). Impact of globalization on sports goods industries.
- [14] Kurdlo, H., Ali Mohammadi, H., Naghizadeh Baghi, A., & Azizian Kohn, N (2021). Validation of social media marketing questionnaire in sports. *Educational Measurement Quarterly*, 12(45), 39-63. [Persian].
- [15] Lianju, L., Haiying, Z., Xinfu, F., Han, W., & Yihang, C. (2023). Research and Analysis of AHP on the Factors Affecting the Development of Dalian Sports Culture Industry. *American Journal of Management Science and Engineering*, 8(1), 13-18.
- [16] Mahdavi Khangah, A., Razavi, S.M.H & Amirnejad, Saeed. (2023). Identifying and analyzing the effective factors of investment in Iran's sports industry. *Physiology and management research in sports*. [Persian].
- [17] Mainka, M. K., Melnichenko, O., Tsybrovskyi, A., Sidielnikov, D., Nitsenko, V., & Zakharin, S. (2023). STRATEGIES OF SOCIALLY RESPONSIBLE MARKETING OF COMPANIES IN THE SPHERE OF SPORTS. *Financial & Credit Activity: Problems of Theory & Practice*, 2(49).
- [18] Najafzadeh, M.R., Najafzadeh, F.L.,

- Rostami, M., & Mursali, Z. (2012). Investigating and identifying some effective factors on the development of women's sports marketing in West Azarbaijan province. *Productivity Management*, 1 (20), 127-144. [Persian].
- [19] Nazari, R., Davari, A., & Naderian, M. (2021). Presenting strategies for the development of Iran's handball market. *Sports Marketing Studies*, 2(4), 98-119. [Persian].
- [20] Ning, W. (2022). Problems and Countermeasures of High-Quality Development of Chinese Sports under Supply-Side Structural Reform. *Academic Journal of Humanities & Social Sciences*, 5(5), 120-125.
- [21] NoorMohammad, S., Afshari, M & Peyman, Z. (2022). Identifying institutional factors affecting the development of Iran's sports industry. *Contemporary researches in sports management*. [Persian].
- [22] Ramazan Ghorbani, J & Farzam, P (2021). Investigating the impact of social networks on sports marketing in sports equipment stores with a website and virtual space and sports equipment buyers. [Persian].
- [23] Ren, Y. (2016). Cooperation Performance between E-Commerce and Sports Commodity based on Online Marketing Strategy. *International Journal of Multimedia and Ubiquitous Engineering*, 11(1), 281-292.
- [24] Ren, Y. (2017, June). Research on Sports Industry Capital Market Innovative Development Strategy in Our country. In *2017 2nd International Conference on Education, Sports, Arts and Management Engineering (ICESAME 2017)* (pp. 1390-1393). Atlantis Press.
- [25] Salimi, Soltan Hosseini, M, & Naderian Jahormi, M. (2015). Evaluating the obstacles to the development of sports marketing in Iran. *Sports Management Studies*, 7(29), 13-36. [Persian].
- [26] Sarlab, R & Rasakhi, S (2020). Iran sports goods competition and selected companies. *Applied research in sports management*, 3 (35), 83-97. [Persian].
- [27] Sedigh, S, Hamtinezhad, M.A & Shafiei, Sh. (2023). Presenting a model for analyzing the development system of Iran's sports industry, *Sports Management and Development*, 12 (2), 120-121. [Persian].
- [28] Taheri Kia, M, Elahi, A & Akbari Yazdi, H. (2018). Determining the validity and reliability of the relational marketing questionnaire for sports spectators. *Sports Management Studies*, 10(48), 177-194. [Persian].
- [29] Tari Vardi, A, Poursultan Zarandi, H & Kordalo, H (2018). Validation of the questionnaire of factors influencing the decision-making of sports customers with a mixed marketing approach. *Scientific quarterly of applied research in sports management*, 6 (4), 105-112. [Persian].
- [30] Wei, X., Zhang, J., Lyulyov, O., & Pimonenko, T. (2023). The Role of Digital Economy in Enhancing the Sports Industry to Attain Sustainable Development. *Sustainability*, 15(15), 12009.
- [31] Wiśniewski, A. (2020). Competitiveness of sports market enterprises: determinants, classification, challenges. *Ekonomia i Prawo. Economics and Law*, 19(2), 367-377.
- [32] Yang, Z., & Lin, Y. (2022). Sports Product Marketing and Economic Growth Econometric Dynamic Analysis Model Based on Random Matrix Theory. *Mathematical Problems in Engineering*, 2022.
- [33] Zhang, H. L., Zhang, H. J., & Guo, X. T. (2020). Research on the future development prospects of sports products industry under the mode of e-commerce and internet of things. *Information Systems and e-Business Management*, 18, 511-525
- [34] Zhang, H. L., Zhang, H. J., & Guo, X. T.

- (2020). Research on the future development prospects of sports products industry under the mode of e-commerce and internet of things. *Information Systems and e-Business Management*, 18, 511-525.
- [35] Zhou, C. (2015). Impact of electronic commerce on the sporting goods market. *The Open Cybernetics & Systemics Journal*, 9(1).
- [36] Zintz, T., & Parrish, R. (2019). Promoting a strategic approach to EU sports diplomacy. Background Paper). Edgehill University.
- [37] Ziyadullaev, K. S., Raximov, V. S., Arzibaev, Q. O., & Muxametov, A. M. (2022). Creation of a model of development of sports marketing in modernization of sports management system in Uzbekistan. *Journal of Physical Education and Sport*, 22(1), 19-25.