

Analysis of Sports Manufacturing Industry by Porter's Five Forces Model

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Abstract: Nowadays, competition between companies is not only caused by competitors. Porter believes that the competitive environment of the industry is determined by interaction of five relatively stable forces. These forces include threat of new entrants, bargaining power of buyers, bargaining power of suppliers; threat of substitutes for products and Rivalry among competitors. Porter forces due to economic and technological characteristics of each industry are different. In this study, it was planned to use these forces to deal with the analysis of sports products industry. For this purpose, by reviewing research literature, indicators related to any of forces and a questionnaire survey among 322 producers of sports, the intensity of each of forces were measured. In addition, collected data was analyzed using bar graphs and bar spider. Results showed that the intensity of every five forces were bigger than the average. Also, T tests ($p < 0.05$) indicated that bargaining power of suppliers and threat of substitute products had most weight and there were significant differences with the mean value.

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1. Introduction

Sport and recreation as a lucrative industry, directly and indirectly involved in the economic development of developing countries. The quantity and quality of the industry in different countries depends on the size of the production of sports in the country (Asgarian et al., 2005, p. 26). Due to the growing trend of consumption of goods and services people need to sports, many companies have entered the field of sports and action activities. Our country's sports industry has been no exception and many companies and manufacturers to compete in this industry.

Of course, the profitability of companies has been greatly influenced by the intensity of competition and managers should be competitive environment in the industry is sometimes perceived was considered. The competitive environment includes many factors that customers, competitors and suppliers are the most important factors of competition (Dess et al, 2010).

Porter's model is a strong and effective framework to analyze the attractiveness of the industry. Porter (1980) in his first book as a competitive strategy, this model was introduced for the competition among companies in an industry. Porter's model offered five forces for analyzing various industries as following: threat of new entrants, bargaining power of buyers, bargaining power of suppliers; threat of substitutes for products and Rivalry among competitors (Lee et al., 2012, p.1783).

The advantage of Porter's framework was that two-factor analysis that only suppliers and buyers to consider, another factor also added that the companies in addition to the supplier and the buyer and its competitors were also examined (Karagiannopoulos et al., 2005, p.69).

Porter model and researchers have criteria and different items for each of Porter's forces have introduced. In this study, it was try to set indicators and items to be extracted and the use of the sports industry attractiveness and intensity of competition among companies in the industry study. The study provides two sets of profits:

A) Manufacturers in the sports industry to gain a better understanding of the industry environment and can create barriers to the entry of new competitors and alternative products stop. The companies are also recognizing the location of customers and their suppliers, they will adopt appropriate strategies in response.

B) companies and people who are planning to enter the sports industry through better understanding of the competitive environment may be responsible for setting up their business with greater awareness of their decision.

2. Foundations of theory and research background

One of the new methods of strategic planning, a method developed by Michael Porter of Harvard University, was invented in the early 1980s and by the end of the decade evolved. This organization is

planning to actual and potential competitors or to the special attention it will generate better and therefore competition to design a strategy known method.

According to Porter major elements that enclose and it affects organizations include:

1. The threat of entry by new competitors to the market;
2. The ability of buyers of goods to impose their will to sellers;
3. The power to impose their wishes vendors of raw materials to one or several buyers;
4. Threats from entering or thrive alternative products on the market;
5. The industry's efforts in the domain of companies competing to outshine each other.

Porter believes that the nature of competition in an industry set out above elements (Khatami and Mehdi Zadeh, 2008, p. 45).

By studying the industry, companies will learn how to respond to market signals and correctly predicted the market will force changes (Kim & Oh, 2004, p.66).

The following describes each of the competitive forces were considered:

1. Threat of new entrants: The entry of new competitors into the industry could change the competitive equation and reduce corporate profits. So now companies are trying to create obstacles to prevent the entry of new companies into industry (Gabriel, 2006, p.12). If entry barrier are too tight or new arrivals predict violent reaction from existing companies, the threat is low. Economy of scale and high initial investment are two major barriers to entry (Karagiannopoulos et al., 2005, p.69).

2. Bargaining power of buyers: Customer bargaining power, his ability to cut prices or increase the quality of the goods in question is a deal (Tavitiyaman et al, 2011, p.649). When the bargaining power of buyers is very strong, the industry is in a direction which economists call monopsony (a buyer when there are a large number of suppliers in a market). However, this situation rarely happens, but given the state of the industry and market characteristics, buyers can on the final price of goods have affect (Gabriel, 2006, p.12).

3. Bargaining power of suppliers: Bargaining power of suppliers, bargaining power of customers is the mirror image. By increasing prices or reducing the quality of the company's suppliers are affected, and they put pressure on the day. When power suppliers is that the focus is more towards industry (Swaan Arons & Waalewijn, 1999).

4. Threat of substitutes: Successor products are new products that offer the same functionality former industrial goods. All the companies in an industry, the industries that produce goods and

services that compete successor. A limited return potential successor goods industry and reduce the price ceilings (Dess et al, 2010).

5. Rivalry among competitors: Intensity of competition, Porter is clearer and more tangible than other forces and represents the value created by a competing shoulder to shoulder among industry competitors (Karagiannopoulos et al, 2005, p.69). Competition occurs that competitors will feel enormous pressure to improve their position. Some forms of competition, such as price competition, leading to instability and reduce the level of profitability in an industry (Dess et al, 2010).

In addition to strategic planning, many researchers have used the model of Porter to analyze the attractiveness of the industry. Researchers heavily Porter each of the forces using a variety of factors and indicators have been analyzed. Table 1 shows the factors and criteria related to each of the forces in the next 7 theorist have come. In the fourth column, the effects of each indicator is visible. Direction of the arrow indicates that if the index increases, the intensity of forces will change. For example, the standard rate for goods increases, the threat of entry by new competitors will also increase (arrow upward) or whatever the number of buyers have reduced their bargaining power (down arrow).

As it is obvious, some of the various forces affect the index. Given their importance, we describe how these factors:

- Standardization of products: the standard rate of more products, new competitors to enter the industry will find more interest. Standardization of products also increases the bargaining power of customers and the intensified competition among existing competitors.

- Switching costs for buyers: The cost of moving is for subscribers heavier, they would rather continue to deal with current company. So the high cost as a barrier to entry for new competitors will be (the down arrow to decrease the threat of entry by new competitors in the high cost of moving customer). High relocation costs reduced the bargaining power of buyers and reducing competition between the competitors.

- Quality products of manufacturers: an increased threat of entry of new competitors and reduces the bargaining power to be purchased.

Among collected a set of 29 indicators, three indicators proprietary technology, knowledge and expertise required position right place less emphasis on it has been in previous studies (only one of the studies mentioned), are removed and the rest of the indicators are used to analyze the competitive forces of the sports industry.

Table 1. Indicators related to Porter's Five Forces based on authors

Shafi'i and Jalili	Rahimnia and Alavi	Khodamoradi et al.	Gabriel	Swaan & Waalewijn	Lee et al.	Dess	How effects on	Indicators	No.	Force
✓	✓	✓		✓		✓	↑	standardization of products	1	Threat of new entrants
		✓		✓		✓	↓	Quality products of manufacturers	2	
	✓		✓	✓	✓		↓	Manufacturers strive to lead the industry costs	3	
✓		✓	✓	✓	✓	✓	↓	Economy of scale	4	
✓	✓	✓	✓	✓	✓	✓	↓	Initial investment needed to enter the industry	5	
		✓					↓	Proprietary technology	6	
		✓					↓	Suitable location	7	
		✓					↓	Required knowledge and expertise	8	
✓		✓		✓		✓	↑	number of distribution networks	9	
✓		✓			✓	✓	↓	Government support for producers in the industry	10	
		✓				✓	↓	Access of manufacturers to raw materials	11	
		✓		✓	✓		↓	switching cost	12	
✓	✓		✓		✓	✓	↓	number of buyers	1	Bargaining power of buyers
✓		✓		✓		✓	↑	volume of purchases per buyer	2	
✓	✓		✓	✓			↑	information of Buyers	3	
✓	✓	✓		✓	✓	✓	↓	switching cost	4	
	✓	✓		✓		✓	↑	Customer sensitivity to price	5	
✓		✓		✓	✓	✓	↑	standardization of products	6	
		✓		✓	✓	✓	↓	Product quality of manufacturers	7	
✓	✓	✓	✓	✓	✓	✓	↓	Number of suppliers	1	Bargaining power of suppliers
✓	✓	✓	✓		✓	✓	↑	Quality Products Suppliers	2	
✓	✓	✓		✓		✓	↓	Take advantage of alternative raw materials	3	
✓	✓	✓		✓	✓	✓	↓	importance of the industry for suppliers	4	
		✓		✓	✓	✓	↑	switching cost	5	
✓	✓	✓	✓	✓	✓	✓	↑	arrival of substitute goods	1	Threat of substitutes
✓	✓	✓	✓				↑	Quality and favorable price alternative products	2	
	✓		✓				↑	Customer interest in new products	3	
✓	✓	✓	✓	✓	✓	✓	↓	Industry growth	1	Rivalry among competitors
✓	✓	✓	✓	✓		✓	↑	number of competitors	2	
		✓	✓	✓	✓	✓	↑	Plus any manufacturer's production capacity	3	
✓	✓	✓	✓	✓		✓	↑	Costs out of the industry	4	
✓			✓			✓	↑	Fixed costs (storage, etc.) manufacturers	5	
		✓	✓			✓	↓	switching cost	6	
✓	✓	✓	✓	✓	✓	✓	↑	Standardized Products	7	

As mentioned above, many researchers have used the model of Porter to analyze the attractiveness of various industries which we will refer to some of these studies:

1. Gabriel (2006) reviewed the banks and financial institutions Tanzania, competition among existing competitors, the threat of entry of new competitors and the bargaining power of customers and introduced as adverse market forces. The threat of entry of substitute products as well as the low bargaining power of suppliers as favorable market forces that is named.

2. Grandi (2006) in an article titled Reload Porter, a service industry and examined the intensity of each of the Porter is depicted in the graph (in a desirable range of undesirable). Grundy very low bargaining power of buyers, threat of substitute products entering the low bargaining power of suppliers is relatively low, moderate competition and high threat of entry by new competitors to be evaluated. In total, the service industry due to considerable study into the bargain buyers and entry of alternative products is desirable.

3. Rahimnia et al. (2011) After Porter's five force in a Chinese restaurant, explained the current situation and more restaurants than competitors using the Blue Ocean Strategy, strategies for success in the fast food restaurant China have presented.

4. Khodamoradi et al (2011), lists the industries in Iran and then select the industries that have high competitiveness using Porter's framework to prioritize their top 10 industries. In their study the researchers have used 16 indicators to assess Porter's five forces.

5. In another study, Kazemi et al. (2010), the impact of "barriers to entry" to create a competitive advantage in the tourism industry were studied. They study the Isfahan Cultural Heritage and Tourism Organization of Isfahan tourism agencies, concluded that reduce barriers in the internal environment, near and far to increase the competitive advantage of the country's tourism industry.

6. Shafi'i Nickabadi and Jalili Bolhasani (2010) using 28 questions in the whole 5-point Likert heavily Porter carmaker Iran Khodro's forces. Researchers at 3.345 Average customer bargaining power, bargaining power of suppliers, 2.833; threatening to enter new competitors, 3.139, intensity of competition in the industry, 2.417 and the turnover of goods and services calculated 2.333.

3. Research questions

The main question: What is the appeal of sports industry?

To answer this question must be answered five questions the following sub questions:

- A) Companies in the sports products industry, to what extent the threat of entry by new competitors are faced with?
- B) What is the bargaining power of buyers for sporting goods?
- C) What extent is the bargaining power of suppliers sporting?
- D) To what extent companies in the sports products industry faced the threat of entry of substitute products?
- E) To what extent is the intensity of competition in the sports industry?

4. Research Methodology

The type of survey is a descriptive study. The questionnaire consisted of 26 questions that a 5-point Likert-type range (very low - low - medium - high - very high) to measure the size of each of the indicators deals.

The population of our collection sportswear manufacturer in Tehran was considered. Due to the lack of updated information in relation to sports producer, to calculate the size of the community through interviews with several producers raised, the number of manufacturers active in the sports products industry was estimated close to 2,000. Morgan was calculated with reference to 322. The number of questionnaires distributed and collected from the manufacturer. A total of 270 completed questionnaires answered by researchers, and analysis were conducted on the number of community.

For management to determine the validity of some of the professors as experts were asked to examine the validity of the questionnaire was approved by the faculty. To assess reliability, researchers of 35 questionnaires were distributed among producers (pre-test), from which the 28 questionnaires were returned. Cronbach's alpha values for this sample were 0.81, which shows the reliability of the questionnaire.

5. Data Analysis

After collecting the questionnaires, the average of each of the index and the severity of each country's forces were in the sports industry. In the following table the index related to the threat of entry by new competitors:

Table 2. The average value of the index related to the threat of entry by new competitors

No.	Indicators	Average
1	standardization of products	2.11
2	Quality products of manufacturers (-)	3.08
3	Production costs for use of the industry-led efforts (-)	4.15
4	Economy of scale (-)	3.62
5	Initial investment needed to enter the industry (-)	3.21
6	multiplicity of distribution networks	3.97
7	Government support for manufacturers in the industry (-)	1.06
8	Producers access to raw materials (-)	2.33
9	Customer transfer costs (switching cost) (-)	1.29
Average		3.26

Lack of government support for manufacturers in the sports industry as well as low costs buyers are two important indicator of the increasing threat of entry by new competitors. The average of Porter is 3.26.

As explained above, between some elements of the force is inversely related to the relationship in the table is evident with a sign (-). To obtain the average intensity of each force, the symbols of order. For example, the element economies of scale that measured value is 3.62 (0.62 higher than the average 3), for it considers the amount of 2.38 (0.62 less than the average 3). In calculating the mean other forces as well as the procedure is done. The following table value index of bargaining power buyers' show:

Table 3. The average value index of buyers' bargaining power

No.	Index	value
1	Number of buyer (-)	4.22
2	The volume of purchases per buyer	3.79
3	information of Buyers	3.14
4	(switching cost) (-)	1.29
5	The sensitivity of buyers to price	4.26
6	The standardization of products	2.12
7	Product quality manufacturers (-)	3.08
Average		3.25

The low cost of transporting Buyers and high sensitivity relative to the prices of sporting good are two main indicators that have increased bargaining power buyers.

Table 4, the average value of the index will show the bargaining power of suppliers:

Table 4. The average value of the index on the bargaining power of suppliers

No.	index	value
1	The number of suppliers (-)	1.73
2	Quality Products of Suppliers	3.55
3	Take advantage now of alternative raw materials (-)	1.29
4	The importance of the industry to suppliers (-)	2.07
5	switching cost	3.1
Average		3.91

The low number of suppliers in the impossibility manufacturer in the use of alternative raw materials is factors that increase the bargaining power of suppliers.

In Table 5 the average value of the index related to the arrival of the threat of substitute products:

Table 5. The average value of the index related to the arrival of the threat of substitute products

No.	Index	Average value
1	The arrival of substitute goods	4.16
2	Quality and favorable price alternative products	3.96
3	Customer interest in new products	4.05
Average		4.06

As it's obvious, the arrival of substitute goods and consumer interest in these products, this force has caused the greatest threat to manufacturers in the sports industry. It is worth noting that the utility of

price and quality of goods is also high (3.96). Chinese goods are often alternative product.

In the following table the index related to the intensity of rivalry among existing competitors:

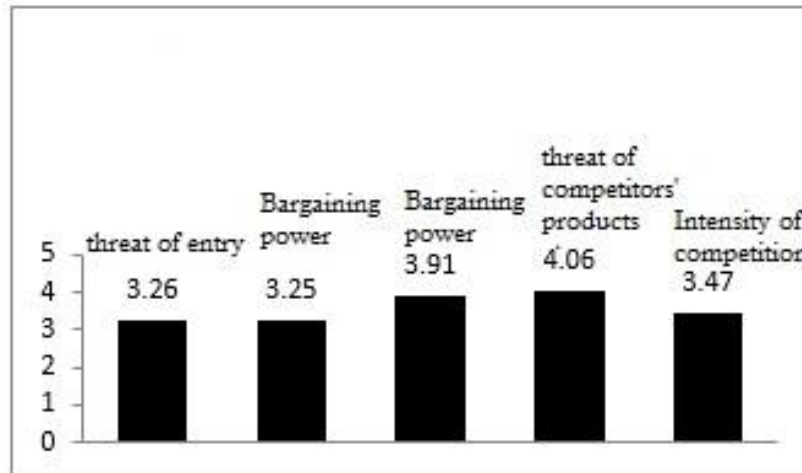
Table 6. The average value of the index related to competition among existing competitors

No.	Index	Average value
1	Industry growth (-)	4.1
2	number of competitors	4.17
3	manufacturer's Plus production capacity	3.25
4	Costs out of the industry	4.24
5	Fixed costs (storage, etc.) of manufacturers	3.89
6	cost of transporting buyers (switching cost) (-)	1.29
7	Standardized Products	2.12
Average		3.47

Three indicators: the number of competitors, the cost of high-output and low costs of the sports industry buyers has been exacerbated by the power sports industry.

Figure 7 shows the country's troops Porter in the sports industry. As you can see, the severity of the threat of substitute products enters the maximum value (4.06) and bargaining power buyers are ranked the lowest (3.26).

Table 7. The intensity of competitive forces for sports industry



The contrast between the areas of the spider diagram below shows a regular pentagon. The relative area of pentagon is created by forces less competitive; manufacturers will be more attractive for the industry. Small because of the low intensity of the abdomen revealed a small force of troops and companies in the industry will realize less threatening. As you can see, the average value of each of the five sports in the manufacturing industry, the average value is greater than the industry's average, not very attractive.

the severity of the forces that are significantly higher than average (3) we used t test. Table 8 shows the output of SPSS software. For all variables (forces) that a significant amount (sig) for less than 0.05, it can be inferred that mean they have significant differences with the number 3 (Momeni and Fa'al Ghayoomi, 2010, p. 230).

Thus it can be concluded that the intensity of the force and the threat of entry of substitute products more bargaining power of suppliers and had significant difference to the amount of average.

Now the question is that forces the intensity of which is higher in the sports industry? To determine

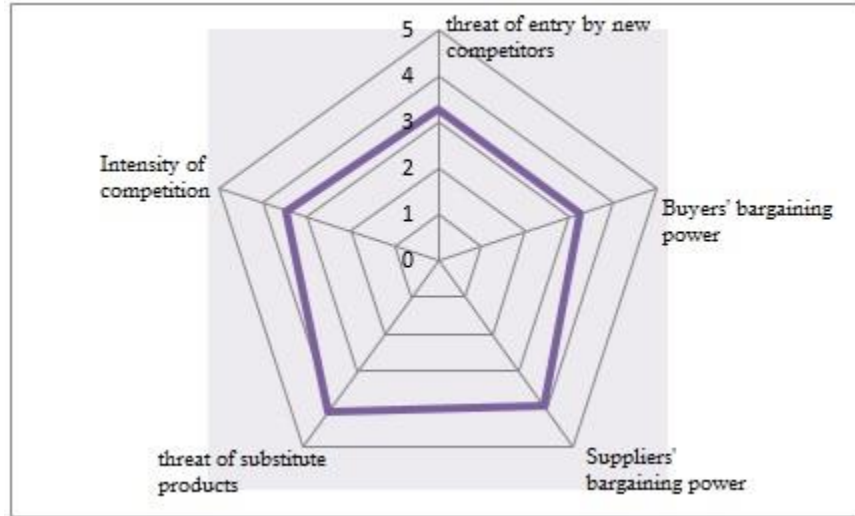


Figure 2. Spider diagram of Porter forces in the sport industry

Table 8. t test

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
VAR00001	.697	8	.506	.26000	-.6002	1.1202
VAR00002	.602	6	.569	.24571	-.7534	1.2448
VAR00003	3.270	4	.031	.91200	.1377	1.6863
VAR00004	18.272	2	.003	1.05667	.8078	1.3055
VAR00005	1.137	6	.299	.46857	-.5398	1.4769

6. Discussion and Conclusion

One of the popular approaches for different industries charm analysis using Porter's framework (Porter's five forces model). Porter's model helps companies analyze competitors, buyers, suppliers as well as products find a comprehensive insight to your industry and use of information obtained from this in-depth analysis, define strategies and plans for its further success.

In this study, a large number of companies in the sports products industry, tried to heavily Porter each of the forces in this industry study. The findings show that a total of heavily Porter forces in Iran are higher than the average value of the sports industry, and the industry is not very attractive. In the meantime, the threat of entry of alternative products is the industry's strongest competitive force. Interviews with producers showed that the entry of smuggled goods which are exacerbated by the force is mostly Chinese. In this regard, government support and oversight agencies concerned can help to manufacturers in the industry.

The second force is a significant difference in intensity with the average value (3) is the bargaining

power of suppliers. The energy intensity of 3.91 was calculated. It is suggested manufacturing companies by obtaining property or enhancing communication with suppliers of raw materials reduced their bargaining power and get rid of the threat.

Another factor to be considered in this study is low transmission cost, which increases the threat of entry of new competitors and buyers bargaining power and has also intensified competition. In this regard manufacturers in the industry can through the provision of ancillary services more customer loyalty and increase costs for them. This helps manufacturing companies to increase profitability in the long term.

Faced with five force introduced, Porter offers three grand strategies for the company including: 1) cost leadership; 2) providing differentiated products and services; 3) Focusing on a group of buyers or specific geographic market (Porter, 2008, 79-85). It is proposed sports companies, and the indicators presented in this research study and then determine the key features of one or a set of these three strategies used.

Suggestions for future research:

- 1) Investigation intensity of Porter forces, one of the producers active in sports and guidelines for company;
- 2) Categories sporting goods and analyze the attractiveness of each of the categories;
- 3) Similar studies to analyze the sports service industry;
- 4) Determine the weight and importance of each of the 26 indices and deeper analysis of the sports industry;
- 5) The attractiveness of other industries using Porter's framework (for implementation and comparison of results).

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