Designing a Dynamic Model of Brand Value-Creation for Sports Clubs

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Abstract

Purpose: The purpose of the current research is to design a holistic model for brand value-creation in sports clubs in Iran. The system dynamics approach has been chosen for the analysis of brand value creation due to the presence of various factors and complex interactions and feedback in time.

Design: An integrated dynamic model for brand value-creation of volleyball clubs is developed which incorporates brand equity, financial, physical, social, and human capital, competition environment, laws, social responsibility, brand communications, and club stakeholders including the federation, sponsors, shareholders, and fans variables. The system's boundaries, variables, and their interactions were assessed using reviews and expert opinions. The proposed dynamic model was validated by using a set of strategies. Ranking strategies' outcomes are simulated and analyzed using hybrid multi-criteria decision-making.

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Findings: The obtained results indicate that human resources especially star players and active participation in online brand communities have had the most effect on the value-creation of the club’s brand.

Originality: This study is one of the first research that investigated the complex relationships between sports club brand value creation variables by using the system dynamics.

Keywords: Brand Equity, Sports Clubs, Stakeholders, Analysis of System Dynamics, Multi-Criteria Decision-Making

1. Introduction

The main pursuits of business are creating value gaining a competitive advantage and improving the company’s performance [1]. Sports clubs have been able to use opportunities provided by their brand value-creation and earn various business advantages, especially in the sports industry during the past few years [2, 3]. The support of sports clubs by society in terms of financial and final success shows the importance of brand value in the sports industry [4]. A sports club is only respected and supported when it provides appropriate value for its stakeholders [3].

Club branding increases interest and attraction in stakeholders during the first year of an organizational life [5]. It can guarantee the satisfaction and loyalty of stakeholders in the later years of the clubs’ life cycle [6]. Thus, the chain of activities and processes must start with the needs and demands of stakeholders, and it must end with their satisfaction [7]. Some of the important stakeholders of a club include fans, shareholders, sponsors, the club’s employees (office workers, players, etc.), support organizations, and governing bodies (federation and the league) [8]. A club can build strong stakeholder relations through its brand. Thus, it can predict, identify, analyze, and solve probable problems that might arise for its stakeholders [9-10].
Sports clubs’ brand value-creation is vital in terms of attracting more financial supporters and increasing stock value [2]. A club’s brand value-creation is based on the effects of value-based management, and provides for the achievement of final success in terms of professional, financial, and social aspects [11-13]. Therefore, the establishment of the philosophy for clubs is based on value-creation plus the definition of value as related to the stakeholders. Proper strategies must be adopted in new competitive environments to maintain and expand the club’s competitive advantages [14-15].

Brand value impacts an organization’s operations over time as a multi-dimensional problem. The complex relationships between the value-creating variables and feedback with some time delay make a static analysis of brand value-creation highly limited. Thus, developing a dynamic brand value model offers an effective analysis tool. Due to various factors influencing brand value, organizations like sports clubs need tailored models for decision-making environments. This study presents a Comprehensive model for Iran’s volleyball super league clubs, focusing on factors affecting brand value. Identifying the components and finding the relationships between them and their impact on each other, due to the behavior of these effects over time, and using the system dynamics method can increase the efficiency of decisions and ultimately the success of sports clubs.

2. Literature review

In this section, conducted studies are reviewed in aspects of two main streams including general brand value-creation and sports brand value-creation.
2.1. Brand value-creation

Value creation has emerged as a central marketing theme [16]. Various factors such as human capital can affect the brand value-creation. Evaluation of the role of human capital in the value-creation process shows that we need proper material economic development to make proper use of highly proficient human capital which can be deduced from the value of fixed assets plus consumable assets [17]. Value-creation is influenced by human resource management, and moreover, managing the engines of value-creation implies that there is no economy without value-creation [18].

Customers and employees are two important groups that affect value-creation. Value co-creation occurs when the supplier-consumer interaction is the basis for the consumer's positive perception of the value of the marketing offer [19]. Create value by expanding customer values, investing in learning, development, and pursuing control-based work design in human resources management [20]. The ability to provide services that create strong interaction and make up a leeway creates more value than anything else for the customers [21]. Direct or indirect participation of customers can affect an organization’s value-creation [22]. Customer interest has a positive effect on the economic, social, and affection of focal customers (or value-creation for customers by customers) [23]. Moreover, Fostering a secure, empowered, and valued work environment motivates employees to achieve organizational goals. This process will strengthen value-creation in the daily routine work of the employees [24].

Alternatively, the most important assets of any business are intangible; David Acker believes that these assets, i.e. name, brand, associations, symbols and slogans, perceived quality, brand awareness, brand image, brand loyalty, customer base, and so on, which constitute the brand equity, and are the main sources of the company's competitive advantage and future revenue
Jones (2005) considers brand equity as a basis for creating brand value. In addition, the brand equity components have effects on each other that will be important in creating value. Some of the reported research results indicate that brand loyalty relies on brand experience and trust. Brand image and brand loyalty affect customer satisfaction and brand awareness. Online brand communities serve as an introduction to the creation of the brand image in the minds of customers and considerably help proper brand association.

Furthermore, the studies demonstrate that organization activities like social responsibility and stakeholder relationships contribute to value-creation. Observable social responsibility of an organization such as environmental and social participation has a positive effect on the products’ market and products’ quality.

Researchers presented a future-focused model for value-creation. Then, a transition path is designed and the specific actions to be taken including expansion of capabilities through investment in social, natural, mental, financial and production make it possible to obtain its long-term value.

2.2. Sports brand value-creation

The effect of human, physical, financial, and social capital is have great importance in value-creation. The results obtained from studying value-creation and sports management with emphasis on various intrinsic dimensions of sports-related business including historical, economic, and social indicate sports clubs would have economic activities beyond selling seasonal tickets, commercial products, and TV broadcasting rights. On the other hand, if the main duty of jobs is attracting and keeping customers, then the function of sports-related jobs is harder due to the various dimensions of sports. Therefore, the value-creation model design is crucial for a sports club's stability and success. Analysis of relationships between the structure
and functioning of different sports-related organizations with emphasis on value-creation and the concept of the circle of nobilities (implying releasing a chain of positive reactions) shows how structures can make the best use of value-creation. Although both Real Madrid and Barcelona clubs do not have any value-creation models for themselves, they are amongst the clubs with the highest revenues [32].

Other factors identified for the study of value-creation in sports and business activities include brands and financial support as value-creation, the value of social responsibility in sports, and sports as a network [13].

Moreover, a club’s brand equity is crucial in value-creation. Factors such as experience, management, success, head coach, stadium, star players, and logo play important roles in its development. Brand equity is affected by variables of brand loyalty and financial support [33]. Hereby, the team's success, star players, and skilled technical team enhance the brand's attractiveness and image. [34].

Fans and social media can be of high importance in a club brand’s value creation. Fans can serve three roles as attractors, adapters, and acknowledgers in value creation [35]. Social media is an effective channel for implementing value-creation strategies aligned with fan interests [36].

Despite the importance of brand value-creation, there has been very little attention paid to this issue in Iran’s sports clubs. Previous studies had limited stakeholder coverage, primarily emphasizing customers and shareholders. Moreover, even though value-creation in time happens in financial and non-financial ways, previously reported studies mainly considered the financial dimensions. Therefore, there can be a competitive advantage for the clubs if we can identify the factors involved in brand value-creation in sports clubs such as to satisfy all stakeholders in the simplest and most realistic ways. We can align club behavior with stakeholder needs, identifying
and interacting with them to ensure satisfaction. Brand value-creation can have an important effect on the robustness and financial success of the sports club. Finally, the main contribution of this study is to develop a comprehensive hybrid dynamic model with MCDM methods for analyzing brand value-creation incorporating extensive variables such as brand equity, club’s capital, competition environment, federation authority, sponsors, club profit, club stock value, fans’ team identity, number of fans, and social responsibility.

3. The proposed dynamic model: sports club brand’s value-creation

Next, we will describe the developed model for analysis of brand value-creation based on literature review and experts’ opinions. For this purpose, the multi-stage analysis method of system dynamics modeling has been used [37-39] (see Figure 1).

Variables and their relationships were identified based on a literature review. Then, the findings have been confirmed by experts (confirmation of the presence/absence of variables and their relationships, introducing new variables and new relationships in causal loops). As a result, The development of causal loops is based on literature and expert opinions. For this purpose, fifteen experts (including three club CEOs, four club marketing managers, and eight sports brand researchers) were interviewed. Of these fifteen experts, two of them were women and thirteen of them were men. The education of nine of them was doctorate in sports management. Four people were senior experts in marketing management and financial management. Two people were masters in physical education and two people were bachelors in physical education. Brand value-creation of a sports club consists of several key factors including brand equity, club’s capital, and club stakeholders. In this way, the club’s capital includes financial, physical, social, and human, competition environment, club rules, social responsibility, and brand communications, and the
club’s stakeholders include the sports federation, sponsors, shareholders, club’s employees (employees, players, and others) and fans. These factors will be detailed below.

- Brand equity includes factors such as brand loyalty, brand awareness, brand association, and perceived brand quality and it is affected by social responsibility. It also affects the competition environment.

- Club’s capital consists of social capital, financial capital, human capital, and physical capital. This will also affect the competition environment. Moreover, human capital will affect brand communications, brand associations, and costs. It is affected by brand value-creation as one of the stakeholders.

- The competition environment is affected by various factors such as the club’s fame, social responsibility, innovation level, federation, brand equity, brand communications, and the club’s capital. Conversely, brand communication is affected by marketing efforts, human capital, satisfaction, and trust of stakeholders. It can also affect other factors such as the competition environment, and brand equity.

- Federation is a factor that is affected by the club brand’s value-creation while as a group of stakeholders; it affects the competition environment and laws of the club.

- Sponsors are a group of stakeholders who can affect sources of club income.

- The final profit for the club is obtained from the subtraction of costs from income.

- The value of stocks of the club which is an important factor for shareholders affects the financial capital of the club.

- Fans’ team identity is affected by brand associations and the club’s fame, and it can affect brand loyalty and social capital.
The number of fans is affected by the club’s fame, social responsibility, and branding and it affects social capital.

Social responsibility affects the club brand’s value-creation, brand equity, number of fans, club’s fame, and competition environment.

Figure 2 illustrates cause-effect feedback with system dynamics analysis. Diagrams are strong tools to model dynamic assumptions presented in cause-effect diagrams which show how the variables of the system dynamics interact with each other. The formation of cause and effect loops in the model shows the relationships between the variables. For instance, the successive effects of sports club brand value-creation on the support of financial sponsors, financial sponsor support on profit, and the profit on the value-creation of the sports club brand form a reinforcement causal loop in the proposed model. In addition, the sequential effects of sports club brand value creation on the federation, the influence of the federation on club rules, and club rules on the brand value creation of the sports club show another reinforcement causal loop in the brand value-creation model. Further reinforcement causal loop could be defined via potential relationships between the effects of club brand value-creation on the number of fans, the number of fans on social capital, social capital on funds, and finally the effect of funds on the value-creation of the sports club brand.

Diagrams include the set of state variables as well as transition rates. State variables indicate conditions of the system at any specific time. In this study, the variables club brand’s value-creation, brand equity [40], perceived brand quality, brand awareness, brand loyalty, brand associations [27, 33], club reputation, capital, social capital, human capital [17, 31], operations cost and benefit [31] are assumed to be state variables. The rates or flows are time-dependent and may not be defined if time is assumed to be constant. State variables are changed by flow rate
variables. Moreover, in this study, social responsibility [29], marketing mix [41-42], marketing efforts, internal branding [6, 31], trust [26], fans’ team identity, number of fans, number of volunteers, shareholder stock value [43], management experience, players’ experience, coach experience, employees experience [31, 33], satisfaction [6, 7], brand communications [36], club’s laws, competition environment, competition day income, income from commercial activities, donations, and media broadcast charges [31, 44] are assumed to be rate variables.

4. Research findings

Data in this research are analyzed in this section by using hybrid system dynamics and multi-criteria decision-making methods. Figure 3 shows considered relationships between the various parts of a club’s brand value-creation model. Vensim software package was used for the simulation of the described model. The simulation duration is set to 15 years. The duration of this period was considered from 2016 to 2031.

Since all the results were based on a case study (Iran Volleyball Super League), the title of the case study is presented in the findings section.

4.1. Case study profile

Iran Volleyball Super League is a professional league with the highest level of competition among volleyball clubs. This league is organized by the Volleyball Federation of Iran. In 2013, Iran won the quota for participating in the World Volleyball League. Since then, the popularity of volleyball in Iran has multiplied and more fans have been attracted to this sport. Before entering the World League, Super League Volleyball competitions were held in Iran with about 8 to 11 teams. After entering the World League, this number increased to 14 teams. Almost all of
these teams are run by the public sector. About 3 teams are managed by municipalities and 8 teams are managed by companies affiliated with the Ministry of Industry and Mines of Iran. The main cost of the clubs is related to human resources, which has been in the range of 10 to 20 billion Rials for one year. The most important source of income for clubs, according to the approved laws, can be from the place of media broadcasting rights. The share of other sources of income such as sponsors, match day income, donations (government, donors, and fans), and other sources has been limited due to improper branding of clubs over the past years. However, by improving branding and attracting more revenue from these resources, the revenue conditions of the clubs can be significantly improved. For this purpose, a dynamic integrated model including dimensions such as brand equity, club’s capital including financial, physical, social, and human, Competition environment, club rules, social responsibility, brand communications, and club stakeholders including sports federation, sponsors, shareholders, club employees (employee, players, and others) and fans has been developed to analyze the brand value creation of sports clubs in the Iranian Volleyball Super League.

4.2. Model validation results

Model validation is done with the objective of analysis of the reliability and applicability of the results. Structural and behavioral validation is considered for this purpose. At first, the structural validity was approved by experts’ opinion. Then, bounds and parts testing methods were used for behavioral validation. In the bounds test, several variables of the model such as employee experience were set at their bound values (very high and very low) and the sensitivity of the model to these changes was studied. The obtained results indicate a logical behavior of the model at the bounds under study. Then, model parts were tested. The model was broken down
into simpler sub-models and the extreme bounds tests were done on each sub-model (Figure 4). All results obtained indicate the desirable behavioral validity of the model.

4.3. Simulation results

Validation measures for the developed dynamic model were chosen based on experts’ opinions. Therefore, simulations of the present conditions were done for 15 years starting from 2016 (current conditions) as shown in Fig. 5. The key effective variables used were club brand value-creation, brand equity, brand loyalty, perceived brand quality, brand associations, capital, number of fans, support of financial supporters, level of innovations, and federation. The obtained results indicate improvement of key variables in the 15 years of simulations. This growth is due to the present conditions of Iran’s volleyball Super League concerning value-creation via brands that are in inappropriate and underdeveloped conditions. Conversely, after developing the model and analysis of operations for 15 years, we can see that the evaluation measures (i.e., key variables) have a desirable growth (see Figure 6). One of the reasons for this claim is that the feedback from the club’s human capital including star players, experienced executive and technical teams, attention to social responsibility, and the club’s financial capital. Moreover, possible feedback from special attention to incom sources such as TV broadcast rights and financial supporters, internal branding and other factors that affect value-creation will play a role in this growth. In addition, the increases in possible positive roles of feedback loops that exist in the model (such as the club’s brand value-creation, number of fans, social capital, and capital) show the reason for growth. Providing a variety of income sources such as TV broadcast rights, employing star payers, presence of professional technical-office teams, fan loyalty, achieving desirable results in sports competitions arranged by the club, and the pursuing attraction of more financial support. Therefore, we can see that club’s brand value-creation has
considerable growth. In addition, emphasis on invisible capital such as brand equity, brand loyalty, perceived brand quality, brand associations, and innovation level along with legislation that motivates clubs to become more professional can improve this growth in the period of study.

Here we present strategies based on analysis of the environment and experts’ opinions considering the role of policy makers in the management of club brand’s value-creation. Moreover, their effects on systems operation are studied through analysis of simulation results. The considered scenarios based on the experts’ opinions are as follows:

- **Scenario 1 (Concentration of internal branding).** Internal branding can be considered as a strategy for some of the weaknesses of clubs such as insufficient fame of players and the technical team due to the undeniable role of human power in branding. It can provide a positive image of the club for the stakeholders. Therefore, in this scenario, the role of internal branding at its high level along with the moderate value of technical and managerial employees and low value of players on the club brand’s value-creation is studied. The obtained results indicate that effective implementation of internal branding plans in local clubs can have a considerable effect on the improvement of employees about the club’s brand and the improvement of the club’s image in the minds of its stakeholders. On the other hand, special attention to players and employees would increase brand loyalty (reduce players’ quitting the club) which is an important factor in value-creation. We can create value for a club by paying attention to little-known but capable players and having an average technical team even though the presence of star players in a club has a key value in the minds of its stakeholders. This would cause an increase in other key factors of brand value-creation such as brand equity, number of fans, and sponsorship support.
• **Scenario 2 (Star players).** Players and technical teams are the two most important assets of a club. Although players are a brand by themselves, they have a very important role in the club’s branding. Expansion of a club’s social responsibility efforts is another means of branding. Thus, a club’s value-creation through star players, average executives and managers, and a limited level of social responsibility efforts in this scenario. The obtained results from the simulation of this scenario indicate that a club’s brand equity can have a considerable improvement with star players, an acceptable executive, and technical team. Moreover, a club’s perceived brand quality, brand association, fame, value, and image will improve due to the attractiveness of players for the fans. Ultimately, attention to the mentioned points will lead to a considerable improvement in the club’s brand value-creation. Moreover, all clubs must take every possible step in the improvement of their value-creation due to the role that social responsibility and making a desirable image play in society.

• **Scenario 3 (Star players and donations).** Providing sustainable income sources has always been very important for clubs. Since the government has sole ownership of broadcast rights for which no money is given to the clubs, most efforts of volleyball teams in Iran have been focused on receiving government donations. The Club’s brand value-creation in the presence of star players, limited income from TV broadcast rights, and an average amount of donations from the stakeholders is studied in this scenario. The obtained results indicate a reduction in total revenue and financial capital due to limited sources of club revenue and especially not benefitting from TV broadcast rights. Despite this fact, an acceptable amount of brand value-creation is observed in this scenario since star players help attract more fans, increase the trust of fans in the club, and more
satisfaction. Moreover, there has been considerable growth in brand loyalty, perceived brand quality, brand association, brand equity, and support of financial supporters.

- **Scenario 4 (Hybrid scenario).** In this scenario, the club brand’s value-creation is high by focusing on high-quality players, a high-level marketing mix, low levels of internal branding, donations, social responsibility, and executive and technical teams. Marketing mix activities such as improvement of conditions of places where services are provided, improving distribution channels (such as internet purchase of sports event tickets), providing competitive prices, and motivation for stakeholders through effective means. In addition to effective executive processes (such as before and after the games), it is able to improve perceived brand quality for the club’s brand. In contrast, using star players would provide positive associations in the minds of the stakeholders that would be seen in the form of loyalty to the club and an increased number of fans. In these conditions, the overall capital will increase due to increased human and social capital of the club despite the increased costs of employment of star players and constant level of innovations. Overall, employing star players and concentrating on the marketing mix can compensate a lot for other deficiencies. This is a desirable scenario for managers since it includes a series of controllable variables and external factors have very little effect.

- **Scenario 5 (Club is negligent of its social responsibilities).** In this scenario – given the importance of social responsibility activities - we try to study clubs’ brand value-creation in the usual conditions of Iranian clubs given the importance of social responsibility activities. Most of these clubs usually employ star players, obtain high-level donations, and ignore social responsibility. Implementation of this scenario indicates considerable improvement in value-creation that happens with improved fame of the club, number of
fans, brand equity, perceived brand quality, brand association, brand loyalty, sponsors, and capital. Star players can attract the media and repeat the name of the club, the club’s attractiveness, improved performance, and perceived brand quality for the stakeholders. Anyway, paying attention to social responsibility is important for maintaining the growth of the number of fans in the long run. If social responsibility is used as an empowerment tool by the club, it can result in high spiritual improvement like improved social attractiveness which is followed by pursuing activities (such as purchasing the club’s products, watching TV, or attending competitions) leading to increased financial profit.

- **Scenario 6 (Star clubs and modern communications).** In this hybrid scenario, the purpose is to improve value-creation by using valuable human capital, high-level donations, and emphasis on stakeholders through active participation in online brand communities, medium activities in social responsibilities, low-level marketing mix, and internal branding. The results obtained from the simulation of this scenario indicate desirable growth in the club’s brand value-creation. Employment of high-level players and coaches, and obtaining government aid (whether right or wrong) can lead to more successful technical performance and fewer financial problems. Thus, there would be a higher perceived club brand quality. Alternatively, the relationship of clubs with the community in the form of participation in philanthropic affairs, environmental activities, and meeting the economic needs of the community can create positive associations in the community. Active participation in online brand communities can strengthen the links between clubs, fans, and other stakeholders; it would not only increase their number but turn them into loyal persons who even advertise for the club. Overall, the obtained results from this scenario indicate that club investments of a combination of donations, human
capital, social responsibility, and online societies are more effective than other investment activities (such as internal branding, marketing mix, special income sources, physical capital, etc.).

- **Scenario 7 (Least attention paid to internal branding).** Although internal branding has become one of the main recent empowerment factors in branding for organizations, this scenario seeks to study brand value-creation with weak internal branding and strong human capital. The results obtained from the simulation of this scenario indicate very appropriate growth in the club’s brand value-creation. This implies that the presence of high-level human capital makes it unnecessary for the club to invest in internal branding and other acts such as training and development. In other words, this human capital can realize the adaptation and socialization of the club faster and have a high level of performance in the new conditions. With increased media attention, this issue can bring more fame, more fans, and stronger sponsors for the club and meet the expectations of the stakeholders. Thus, the outstanding characteristics of human capital result in effective communication with the customers and club stakeholders create some belief about the characteristics and advantages of the club’s brand in society.

- **Scenario 8 (Ethical club).** In this scenario, brand value-creation is studied given human capital, high level of social responsibility, low-level marketing, and average income. The obtained results from this scenario indicate increased brand value-creation through the proper increase in capital, brand equity, associations, perceived brand quality, support of sponsors, and loyalty. A club is a human, social, and operational organization that can increase cultural issues through active participation and reduce stress. Presence in social affairs and welfare activities, and consideration of benefits of future generations in
utilizing resources can affect public opinion and bring about benefits such as increased brand equity and a considerable increase in value-creation by attracting stakeholders, especially fans. Of course, the sudden drop in the level of loyalty in the few middle years during the period of study can be because of the social responsibility acts along with a high level of human capital cannot yield good results without marketing activities (marketing mix or online social communities) to create trust, and positive opinions and behavior.

4.4. Evaluation and ranking of strategies

The main objective of this study is to rank the considered strategies using managerial measures. This was achieved by applying fuzzy ANP (Analytic Network Process) and fuzzy TOPSIS (Technique for Order Preference by Similarity to Ideal Solution) methods to handle the uncertainty of qualitative criteria assessment based on the experts’ opinions [41]. Buckley’s geometric average of weights was used to do a pairwise comparison to implement the fuzzy ANP method. Next, the weights were placed in the initial ANP supermatrix to calculate the weighted and bounds supermatrices to find the final fuzzy ANP weights. Nine key criteria in this research were selected using library studies and the opinions of 15 experts in the field of sports management and marketing. All of the nine used measures in this study had internal relationships with each other. Thus, a pairwise comparison of the nine measures relative to the goal (Table 1) and computation of fuzzy and non-fuzzy weights of the measures was done at first (Table 2). Finally, the management strategies were obtained based on the expert’s opinion, using the ANP multi-criteria decision-making, and TOPSIS methods. The shown results in Table 3 show that scenario 3 has the highest priority. Next in rank are scenarios 7 and 5. The markings in the following tables are: C1 (Perceived Brand Quality), C2 (Brand Loyalty), C3 (Capitals), C4
(Number of Fans), C5 (Innovation), C6 (Brand Equity), C7 (Sponsorship Support), C8 (Federation), and C9 (Brand Associations).

5. Conclusions and managerial insights

Branding is one of the new approaches for value-creation. Branding can be an important strategy in businesses, and it is an undeniable necessity for the robustness of a club in the minds of its stakeholders. Better brands unconsciously cause value-creation for the stakeholders. Although a lot of studies have been previously done on finding the factors that affect branding and value-creation, this concept has still not been sufficiently investigated due to its dynamic nature. A problem that must be considered is the lack of a comprehensive model that includes all the various factors that affect brand value-creation and all clubs’ stakeholders and can run simulations using present conditions until a long period later. The system dynamics analysis method is used to analyze and evaluate due to the presence of various complicated relationships with time-dependent feedback loops in the brand value-creation system. Therefore, the design of a dynamic model for Iran’s Super League volleyball clubs’ brand value-creation can be a good policy for their policymakers.

Implementation of the ethical club (scenario 8) shows that changes in any of the variables in the model would lead to improvement in the club’s brand value-creation. This indicates that most of the variables identified in the model are in poor condition now. Therefore, improvements in any one can have a positive effect on the results of the model. Thus, it seems that focusing on human capital, especially star players and active participation in online brand communities can create more value than other factors. Star players and donations and the least attention paid to internal branding (scenarios 3 and 7) are clearly shown to be ranked first and second. In other
words, the skills, capabilities, and technical level of players, coaches, and managers can produce a positive view of the club by showing the club’s salient assets. Therefore, human capital is a form of capital that can create a lot of value for the club. Some of these results are also present in the research of Malik et al. [20], Spender [18], and Sajjadi et al. [33]. Instead, easy and public access to the internet and virtual networks as new technologies, has provided the means for clubs to establish effective communications with their stakeholders with very little effort and cost in online communities that will ultimately lead to the club’s brand value-creation. The research of Zhou et al. [28] confirms the importance of activity in online brand communities in brand value-creation.

The club is negligent of its social responsibilities (scenario 5) which was ranked the third highest priority scenario in this research study places very little emphasis on social responsibility. It is expected that social and environmental concerns play an important role in clubs’ brand value-creation given the increased public awareness and sensitivity. The results of research by Bardos et al. [29] indicate the importance of the role of social responsibility in value-creation in organizations. Also, the findings of Jaloneen et al. [13] show the effective position of social responsibility in the value-creation of sports brands. Evaluation of this scenario indicates that despite the low level of social responsibility, clubs’ brand value-creation is desirable. This may be because the presence of star players and access to government donations are the most important factors in branding and value-creation for Iran’s volleyball clubs at present conditions. Government aid is of importance since Iranian clubs are deprived of many trade rights such as broadcasting rights, copyright, presence of female fans in the stadiums, etc. due to government regulations. Therefore, donations are one of their most important income sources. Overall, despite the importance of social responsibility, it is not considered to have any priority in Iran’s
volleyball due to a lack of attention to more important factors in business and sports. In the long term, there will be more attention paid to social responsibility with reduced perceived risks by the stakeholders, improved brand value, and gained financial advantages. High-level players and technical staff, proper use of online brand communities, and access to government donations are the most important three variables that affect Iran’s volleyball clubs’ brand value-creation.

Focusing policy makers and managers of volleyball clubs on sources of income is also important besides the three mentioned factors. TV broadcast rights are among the most important sources of income for sports clubs in the world [45]. This is so important that clubs or the league put the TV broadcasting rights for their competitions on auction and sell these rights at the highest price. However, the TV and internet broadcast rights of sports competitions are solely given to government TV stations which do not pay anything to the clubs. Deprivation from this income source (especially for private clubs) has led to their inability to pay the players and coaches and at times it has resulted in their bankruptcy. Another common method of covering the expenses of sports clubs is getting sponsors to whom the club gives the right to advertise to companies and large businesses. At present, most Iranian clubs rely on financial support, especially from the government, and do not pay much attention to attracting sponsors. Benefitting from various income sources is very important for clubs in a competitive trade. This provides for increased financial capital for the clubs, increased stock value for the shareholders, and ultimately increased value-creation for the clubs.

The present research study has developed a comprehensive model for volleyball clubs’ brand value-creation by considering the various club stakeholders and the various factors that affect them. The model has been simulated for a long period and it predicts changes and is thus considered to be a new research study. However, studying each club individually by considering
its conditions can show its applicability and prepare the grounds for more applied models. On the other hand, the choice of variables for the present model has been made based on the existing Iranian clubs which are mostly public and dependent on the federation. It is suggested that in future studies, the design of system dynamics for clubs’ brand value-creation is done assuming that the clubs are independent of the federation and there are changes in the league’s governance method. In other words, moving towards the commercialization of clubs will require a long process and it would lead to changes in the main stakeholders (such as change of owners), the number of variables in the model, and the type of relationships that exist between the variables which would be interesting to study.

Based on the results of the current research, the direction of future studies could be on creating financial and non-financial value simultaneously in sports clubs and not only shareholders but also other stakeholders of the club. It seems like this should be a topic with a focus on modern social media and online environments. An important part of the results of the current research emphasizes these variables and is being developed

6. References


19. Anker, T. B., Sparks, L., Moutinho, L., and et all. "Consumer dominant value creation: A theoretical response to the recent call for a consumer dominant logic for marketing", 

24


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7. Appendices:

7.1. Biography

Helen Hosseini received her PhD from Shahrood University of Technology in Iran. Her research interests include value creation; sports management, human resource development, and resource management in sports. Her work has appeared in such journals as Sports Physiology and
Management investigation, Research in Sport Management and Motor Behavior, and sport management studies.

Hassan Bahrololoum received his PhD from Tarbiat Moalem University of Tehran (Management and planning in physical education). He is currently an Associate Professor of Physical Education at Shahrood University of Technology, Iran. His current research interests include Sports management and psychology. He has also published several papers in International Journals. He has authored the book Basics of Sports Organization Management.

Reza Andam received his PhD from Gilan University (Management and planning in physical education Human resources orientation). He is currently an Associate Professor of Physical Education at Shahrood University of Technology, Iran. His current research interests include Human resource management with the approach of volunteers. He has also published several papers in International Journals. He has also authored books such as a guide to teaching physical education in schools, advanced management in sports and public sports.

Aliakbar Hasani is currently an Associate Professor of Industrial Engineering at Shahrood University of Technology, Iran. His current research interests include supply chain management, production planning and scheduling, multi-objective optimization problems, meta-heuristics, quality management, and productivity. He has also published several papers in International Journals such as International Journal of Production Research, Transportation Research Part E, Journal of Cleaner Production, Computers & Chemical Engineering, Socio-Economic Planning Sciences, Journal of Manufacturing Systems, Resources Policy, and Safety Science.

Hadi Bagheri received his PhD from Tarbiat Modares University at Tehran (Sport Management). He is currently an Associate Professor of Physical Education at Shahrood University of
Technology, Iran. He has about 15 years of research experience in the fields of sports fan behavior, football management and sports marketing.

7.2. Figures

1. Define and structure the problem
2. Dynamic hypotheses
3. Cause and effect diagram
4. Accumulation and flow model
5. Model validation
6. Policy design and evaluation model

Figure 1. Stages of modeling by using the system dynamics approach
Figure 2. Cause-effect's diagram of brand value-creation of sports clubs
Figure 3. Accumulation and flow diagram of brand value-creation of sports clubs

Figure 4. Results of the validation of the research model
Figure 5. Simulation of present conditions
Figure 6. Simulation results for considered planning period

7.3. Tables

Table 1. pairwise comparison of measures (incompatibility rate: 0.07)
<table>
<thead>
<tr>
<th></th>
<th>Measure</th>
<th>( (\prod_{j=1}^{n} \tilde{p}_{ij})^{1/n} )</th>
<th>Fuzzy weight</th>
<th>Non-fuzzy weight</th>
<th>Normal weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>(1,1)</td>
<td>(4.58,5.6, 1.66)</td>
<td>(2.84,3.4, 6.40)</td>
<td>(1.58,2.2, 2.26)</td>
<td>(0.80,0.9, 4.11)</td>
</tr>
<tr>
<td>C2</td>
<td>(0.15,0.1, 8.02)</td>
<td>(0.39,0.4, 5.05)</td>
<td>(0.78,0.9, 9.19)</td>
<td>(1.06,1.3, 1.15)</td>
<td>(0.21,0.2, 4.02)</td>
</tr>
<tr>
<td>C3</td>
<td>(1.54,1.9, 2.29)</td>
<td>(1.85,2.2, 2.58)</td>
<td>(1,1,1)</td>
<td>(0.66,0.8, 0.98)</td>
<td>(1.32,1.5, 1.88)</td>
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<tr>
<td>C4</td>
<td>(0.24,0.2, 9.035)</td>
<td>(1.01,1.2, 3.15)</td>
<td>(1,1,1)</td>
<td>(1.83,2.2, 2.64)</td>
<td>(0.79,0.9, 6.11)</td>
</tr>
<tr>
<td>C5</td>
<td>(0.38,0.4, 5.053)</td>
<td>(0.53,0.6, 5.045)</td>
<td>(0.38,0.4, 1.11)</td>
<td>(0.33,0.3, 7.44)</td>
<td>(0.22,0.2, 6.03)</td>
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<tr>
<td>C6</td>
<td>(0.90,1.0, 6.125)</td>
<td>(0.54,0.6, 4.125)</td>
<td>(0.86,1.0, 5.303)</td>
<td>(2.28,2.6, 5.303)</td>
<td>(1,1,1)</td>
</tr>
<tr>
<td>C7</td>
<td>(0.27,0.3, 3.042)</td>
<td>(0.38,0.4, 5.055)</td>
<td>(0.46,0.5, 3.062)</td>
<td>(3.27,3.8, 8.45)</td>
<td>(0.36,0.4, 3.051)</td>
</tr>
<tr>
<td>C8</td>
<td>(0.13,0.1, 5.018)</td>
<td>(0.21,0.2, 4.028)</td>
<td>(0.22,0.2, 7.035)</td>
<td>(0.52,0.7, 9.114)</td>
<td>(0.34,0.3, 9.046)</td>
</tr>
<tr>
<td>C9</td>
<td>(0.45,0.5, 4.064)</td>
<td>(0.33,0.4, 0.050)</td>
<td>(0.52,0.6, 1.071)</td>
<td>(1.21,1.3, 7.156)</td>
<td>(0.22,0.2, 6.032)</td>
</tr>
</tbody>
</table>

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<tr>
<th>Measure</th>
<th>((\prod_{j=1}^{n} \tilde{p}_{ij})^{1/n})</th>
<th>Fuzzy weight</th>
<th>Non-fuzzy weight</th>
<th>Normal weight</th>
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<td>(0.78,0.9, 9.19)</td>
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<td>(1,1,1)</td>
<td>(0.66,0.8, 0.98)</td>
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<td>(0.52,0.6, 1.071)</td>
<td>(1.21,1.3, 7.156)</td>
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Table 2. fuzzy and non-fuzzy weights for measure
<table>
<thead>
<tr>
<th>Choice</th>
<th>Geometric average</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1</td>
<td>(1.77, 2.09, 2.44)</td>
<td>(0.15, 0.20, 0.27)</td>
</tr>
<tr>
<td>C2</td>
<td>(0.50, 0.59, 0.7)</td>
<td>(0.04, 0.06, 0.08)</td>
</tr>
<tr>
<td>C3</td>
<td>(1.50, 1.79, 2.09)</td>
<td>(0.12, 0.17, 0.24)</td>
</tr>
<tr>
<td>C4</td>
<td>(1.08, 1.27, 1.49)</td>
<td>(0.09, 0.12, 0.17)</td>
</tr>
<tr>
<td>C5</td>
<td>(0.50, 0.59, 0.71)</td>
<td>(0.04, 0.06, 0.08)</td>
</tr>
<tr>
<td>C6</td>
<td>(1.53, 1.77, 2.04)</td>
<td>(0.12, 0.17, 0.23)</td>
</tr>
<tr>
<td>C7</td>
<td>(0.62, 0.73, 0.86)</td>
<td>(0.05, 0.07, 0.10)</td>
</tr>
<tr>
<td>C8</td>
<td>(0.35, 0.42, 0.50)</td>
<td>(0.03, 0.04, 0.06)</td>
</tr>
<tr>
<td>C9</td>
<td>(0.95, 1.10, 1.28)</td>
<td>(0.08, 0.11, 0.14)</td>
</tr>
</tbody>
</table>

\[
\sum \left( \prod_{j=1}^{n} \bar{P}_j \right)^{1/n} = (8.82, 10.36, 12.13)
\]

Table 3. Grades and ranking of choices
<table>
<thead>
<tr>
<th>Rank</th>
<th>(CL) final grade</th>
<th>(-D) distance to negative ideal</th>
<th>(+D) distance to positive ideal</th>
<th>Scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>0.258</td>
<td>0.238</td>
<td>0.685</td>
<td>scenario 1</td>
</tr>
<tr>
<td>4</td>
<td>0.460</td>
<td>0.497</td>
<td>0.583</td>
<td>scenario 2</td>
</tr>
<tr>
<td>1</td>
<td>0.502</td>
<td>0.561</td>
<td>0.556</td>
<td>scenario 3</td>
</tr>
<tr>
<td>5</td>
<td>0.499</td>
<td>0.483</td>
<td>0.593</td>
<td>scenario 4</td>
</tr>
<tr>
<td>3</td>
<td>0.461</td>
<td>0.499</td>
<td>0.582</td>
<td>scenario 5</td>
</tr>
<tr>
<td>6</td>
<td>0.350</td>
<td>0.370</td>
<td>0.688</td>
<td>scenario 6</td>
</tr>
<tr>
<td>2</td>
<td>0.496</td>
<td>0.550</td>
<td>0.559</td>
<td>scenario 7</td>
</tr>
<tr>
<td>8</td>
<td>0.232</td>
<td>0.212</td>
<td>0.702</td>
<td>scenario 8</td>
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