ABSTRACT

The aim of this study is to understand how the "real-time quota-controlled ticketing system" (RQTS) works, which is a ticketing module that can be used in martial arts games around the world, and its advantages and disadvantages in terms of the management of martial art games, and to make a managerial assessment. Case studies such as how to attract more spectators to the stands and how to market tickets, have been assessed, discussing sports organizations in which this ticketing system was applied and evaluating different application modes of ticketing systems with case analysis and simulation techniques. The result is that the real-time quota-controlled ticketing system (RQTS) is an appropriate ticketing module for martial art games and similar events.

Keywords: martial art games, ticketing system, sport marketing

INTRODUCTION

International martial arts organizations are important events that have to be taken seriously in all aspects, and show the prestige of host countries in terms of both cost and level of participation. There are hundreds of thousands of people who watch these events actively and millions of audiences watching them passively through mass media. Audiences are the target masses of enterprises that are interested in advertising and sponsorship. In this respect, the concept of the
audience and the ticketing system become important in the sports organizations. The real-time
quota-controlled ticketing system is one of the rationally planned ticketing systems as well as the
classic ticketing methods applied to sports organizations. According to data taken from the sport
organizations, besides positive sides, it has a few negative sides too.

The Real-Time Quota-Controlled Ticketing System is a ticketing method that can be used in
multiple competitions (wrestling, karate, taekwondo, table tennis, fencing, athletics and etc.)
which are held in a single facility, or in sports events whose competition schedule take more than
a day and that different disciplines are performed simultaneously in different facilities, or in art
festivals with similar characteristics. Especially in large sports organizations, it is possible to
have many competitions in the same day and in the same facility according to the competition
schedule. Martial art games are one of them. The system basically aims to increase the number of
people who participate the events as spectator. This is an important factor particularly to attract
audience to the branches that do not have much spectator and make sure of audience attendance
in events performed in a region with low socio-economic level. A gap exists on fanbase and
identity formation of fans with regards to sports in the current literature (Jacobson 2003). On the
other hand, the increasing number of spectators will increase the ticket income of the
organization. This system offers the flexibility to the management to sell more than one ticket for
the same seat in the same event. This system is not suitable for a single competition. In the
sporting competitions held one after another, the end of the first competition and the beginning
of the second one follow each other. In this case, taking the spectators out of the first
competition, carrying out necessary safety procedures and cleaning works, and then taking the
audience of the next competition are difficult in terms of crowd management and these may
prevent the start of the second competition healthfully. Because the audience of the next game do
not exactly take their places and they cannot watch the warm-up periods, an important phase for
pleasure in watching. For this reason, real-time quota-controlled ticketing system is applied and
it enables more audience watch the contests during the day and contributes the organization
economically with more ticket by programming the entrance and exit of audience
simultaneously.

In this system, the ticket contains digital ID number, 2d-code and barcode as well as the
pictogram of the competition, the date, the name of the facility and the required warnings. Sports
facilities need to be linked online and managed from a single point in order to be able to follow
events held in more than one venue at the same time. Therefore, a computer and a network
system is established between the central management office of the organization, the ticketing
operation office and the facilities. “Access control systems” and RFID systems are installed on
the entrance and exit doors of the facilities and these systems are integrated into the existing
computer and network. With the aid of the digital ID numbers, bar codes or 2d-codes on the
tickets, the number of people who enter and exit the facility is observed in the system control center real-timely. The occupancy rates of the facilities are assessed in real time and ticket sales can be started again according to occupancy rates. Thus, new audiences can be taken to the venue instead of those who buy tickets but do not come to the competition or leave early. By this means, it is ensured that more spectators watch the competition and take advantage of other opportunities. The use of other opportunities (buffets, souvenirs, museums, etc.) by audiences at the facilities contributes to the organization economically. Briefly, the main purpose of this ticketing system is to make more people benefit from the facilities. Some references already think that filling sport fields with spectators for the profit is outdated and short-term solution (Chadwick and Arthur 2008). This is a perception existed in the early periods when advertising and sponsorship joined the sport economy as a revenue item.

MATERIAL AND METHODS

In the study, by the help of case study and simulation method, some conclusion have been made about whether the ticketing systems used in some sports organizations could be applied in the martial arts competitions. Since ticketing systems have an important place in sports marketing, classic and new marginal ticketing systems have been compared and analyzed. A real-time quota-controlled ticketing system was analyzed in the study, and a sample case analysis was conducted by evaluating the ticketing systems of the 25th World University Winter Games and 17th Mediterranean Games, Mersin. The identified advantages and disadvantages have been simulated in terms of their applicability in martial arts sports organizations and it has been determined whether the RQTS is appropriate or not.

Thus, we have emphasized on the results of the analysis of what benefits would be gained in the implementation of this ticketing system and what disadvantages could be faced in organizations of martial arts sports held worldwide or on a smaller scale.

RESULTS

RQTS is carried out in two phases, preparation and operation. This ticketing module was used in 25th World University Winter Games and 17th Mediterranean Games. (EWU Archive, HoD Bulletin 2010, MG Management Book 2013). This system was began to be used with ticket sales months before these games and continued with real-time quota-controlled ticketing system, and finally it was completed by reporting the statistical information.

A. Preparation Period

Determination of spectator capacity of facilities: The capacity of the sports facilities are determined primarily by the architectural projects and then by the actual number of grandstand
seats. The seats, which will be canceled due to safety reasons or installation of camera platforms, are identified. Seat blocks and layout plans are processed in the ticketing software.

**Configuring the Ticketing System:** While configuring the ticketing system in sport organizations, it is absolutely necessary to examine the sports organizations that have been made in different parts of the world in previous years and ticketing systems. Particularly, if there are traditions that are inherent in martial art sports or can be regarded as organizational culture, an appropriate adaptation should be made. It is determined how many of the tickets will be sold on the internet, how many of them will be sold in call center or box offices.

**Starting Ticket Sales:** After the determination of the spectator capacity of the facilities, the configuration of the ticketing system and the determination of the ticket sales strategies in the preparation period, ticket should be offered for sale at box offices, on the web page and at call center.

### B. Operation Period

The information coming to the operation office is simultaneously transferred into the central management office and the ticketing operation center by means of both the equipment and the human resources that will run the system in the facilities. General and specific solutions can be produced on the basis of competition, facility and branch by making instant evaluations. The operating principles of a real-time quota-controlled ticketing system are as follows:

- The seats in the grandstands of the facilities that will be occupied by spectators, disabled spectators, athletes, referees and press members are classified. After this classification, the number of seats for spectators is determined and entered into the system. The ticket printing and sales system is also informed accordingly. Thus, the printing and sale of tickets will be started.
- A ticket consisting of pictures of cultural factors can be designed.
- A standard ticket is designed for all branches. These tickets are separated from each other by branch pictograms (taekwondo, judo, karate, etc.) placed on them in multi-disciplinary (multidisciplinary) sports organizations. Creating a standard single ticket for many branches reduces ticket printing costs. Otherwise, printing a separate ticket for each branch will increase the ticket costs. Here, it should not be forgotten that sports organizations have a purpose of providing financial gain. On the other hand, it should be taken into consideration that sports organizations are a business, and businesses are aimed at achieving maximum efficiency with scarce resources (Sabuncuoğlu and Tokol 2010).
The tickets are sold from the internet, call center and box offices. Required information (pictogram of the competition, date, facility name, digital ID number, 2d-code or barcode) are processed over the standard tickets with the help of special ticket printers while delivering the tickets to the spectators.

Tickets are prepared on a daily basis so that the events in a single facility within a day can be watched without interruption (For example; SS Arena – Judo – dd/mm/year). In other words, a ticket taken for an event will only cover competitions of a single branch in a single facility. The tickets will have pictogram of the event, date, name of the facility, digital ID number, 2-d code or barcode and necessary warnings.

Audiences can come to the facility anytime they want. The spectator can enter the facility whenever he/she wishes, since it is a daily ticket. Especially, if there is a particular competition he/she wants to follow, he/she can choose the time of that competition.

While spectators enter the facility, they swipe the barcode on the ticket to the “Access control system” (turnstile system, hand reader system, etc.) in the gates. People must keep and protect their tickets as long as they are inside the facility (EWU Archive, Spectator Guide, 2011).

The spectator, who wants to leave the facility, swipe its ticket again to the “Access control system” (EWU Archive, Spectator Guide, 2011).

The spectator who goes out the facility cannot enter the same facility or different facilities with the same ticket. He/she needs to get another ticket to enter again. (EWU Archive, Spectator Guide, 2011).

Therefore, it is possible to monitor the free seats in the automation system and those seats can be sold again. In this way, both the seat will not be empty and the audience circulation will be increased.

The system can run without applying the seat numbers as well. If there is no seat number on the tickets, there must be a "no number" warning on the tickets. In this system, the spectator can sit anywhere he/she wants and that is allocated for spectators. By this means, there is less need for baffle plates and auxiliary staff.

DISCUSSION AND CONCLUSIONS

In sports organizations, both host country and participating countries aim to present the successes that they achieved to the spectators. Therefore, it becomes clear that how an important factor the spectator concept is. It can be said that the mission has been successfully accomplished by shaping its plan and strategies to keep spectators’ demand at the highest level, thanks to ticketing system used in 25th World University Winter Games and 17th Mediterranean Games.
All international sports organizations are spectator-focused events. Practices used in Olympic level events should be examined, analyzed and applied in the planning of all the services offered to the spectators, especially the ticketing service. When the ticket sales targets of the major sports organizations in the world are examined, the following points are highlighted. The London 2012 organizing committee stated that they have a target to sell 6.6 million tickets and 500 million pounds income from this sale (21.05.2011 DHA). Whereas 66 million Euro income was generated by 896,481 ticket sales at Torino 2006 Winter Olympics (IOC, Marketing Report Torino 2006), only approximately 500,000 Euros income was generated by 168,907 ticket sales in 2011 Erzurum Winter Universiade(EWU Archive, Ticketing Result Report 2011). Here, the ticket prices are an important factor. Therefore, even so the number of tickets sold and the revenue generated are low, it is ensured that spectator participation was maximized. Again in Torino 2006, while the price range of the competition and event tickets were between 20 and 370 euros, in Universiade 2011 and Mediterranean Games 2013, ticket prices were between 1.5 and 2.5 Euros. Whereas ceremony tickets varied between 250 and 850 euros in Torino, in Universiade 2011 and Mediterranean Games 2013, ticket prices were between 5 and 10 euros. In the Winter Universiade Harbin 2009 which is a similar organization to Universiade 2011 and Mediterranean Games 2013, competition and event tickets were sold at prices between 7.5 and 23 dollars and ceremony tickets were sold at prices between 77 and 586 dollars (Harbin 2009 Ticketing Guide). From this point of view, originality and non-profit oriented structure of Erzurum 2011's ticketing policy can be seen. On the other hand, while the average ticket price in Vancouver 2010 was around 100 euros (IOC Marketing Report Vancouver 2010), in Universiade 2011 and Mediterranean Games 2013, it was around 3.5 euros.

As a result of the case studies, advantages and disadvantages of the real time quota-controlled ticketing system for martial arts competitions are as follows:

Advantages:

- The RQTS is suitable for use in competitions held on different martial arts disciplines at different facilities simultaneously.
- It has some advantages to attract spectators not only for the martial art sports branches which have their own followers, but also for those which are trying to create a new audience. In addition, RQTS is a system that can be used to increase spectator participation in activities to be performed in areas with low socio-economic level. Since more spectators are reached thanks to this system, promotion of new sports to the public becomes faster and easier.
With RQTS, the circulation of the spectators is maximized and it is possible to sell tickets for a single seat to more than one person on a rotating basis. This also contributes to the economy of the organization.

The increase in spectator circulation at a sports facility means that the advertising or sponsorship materials at the facility can reach more people. This result allows increase on the advertising and sponsorship revenues of the organization management, and the brand awareness and brand image on the target group.

A standard ticket is printed for the entire organization. However, the tickets for different events or competitions are differentiated by the branch pictograms on them. Preparing a single standard ticket in multi-branch martial arts organizations decreases the ticket printing costs. Otherwise, if a separate ticket is printed for each branch, it will increase the ticketing costs and therefore distribution of tickets and making sales plan gets harder.

Rating of competitions held before and after high competitive martial arts events also increases.

Tickets are not run out for any activity in the RQTS. Tickets are sold to a new visitor to let them watch the competitions from the box offices after a spectator inside departs the facility. This allows a maximum number of spectators to benefit from a competition and facility services. Thus, marginal economic benefit is provided in martial art sports organizations.

In traditional ticketing systems, ticket are prepared before the competition according to event calendar and in any case of postponed events, it is needed to print new tickets. However, RQTS does not have this problem because the tickets are printed daily.

Since tickets are daily basis, spectators can enter to facility anytime they prefer and they can select the time of particular competition if there is a competition or athlete they want to spectate.

Disadvantages:

The most serious disadvantage is the necessity of uninterrupted and redundant network connection.

An online network connection is a necessary for successful operation of the system. It brings an additional cost for this system. However, fiber-optic cables have already been laid in all facilities for live broadcasting and information published on the internet of martial arts. The RQTS system can also use this available fiber cable connection. Any factor blocks the data traffic slows down the system.

Ticket check is also required at the exit doors for a complete system operation. Thus, it can be checked the number of visitors left the facility. Accordingly, this also necessitates the installation of one access control system at exit doors.
• Audiences are asked to keep their event tickets since the ticket check is done on the exit doors. However, the visitors don’t keep their tickets cannot complete the exit procedure from the system while they are leaving the facility. In this case, it is needed to complete this procedure manually. However, if the national or international identity numbers of the spectators are recorded to the tickets and the system during the ticket sales, this problem will be considerably solved.

Consequently; the real-time quota-controlled ticketing system, unlike traditional ticketing methods, is a marketing model that will especially increase the number of spectators. Additionally, it is also a system that can be implemented in martial arts organizations which has no potential spectator or newly formed spectators. According to scientific studies, spectators’ admiration for sports focuses on amateur branches as opposed to professional branches (Wann & Dolan, 1994a, 1994b, 1994c; Branscombe & Wann, 1991a; Hirt at al., 1992; Wann, Royalty & Roberts, 2000; Wann and Branscombe, 1990; Hocking, 1982; Madrigal, 1995; Deegan & Stein, 1978). Therefore, it would be more advantageous to use "real time quota-controlled ticketing system" to increase the rate to reach the target audience in martial art sports organizations. The use of this ticketing module in the Asian Indoor and Martial Art Games to be held in Turkmenistan in 2017 will increase the number of expected audiences, and advertising and sponsorship activities will be delivered to the more spectators.

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