

A Study on the Characteristics of Events in the Aviation, Leisure and Tourism Industry -The Case of Sacheon Air Show in Gyeongnam

 Kwi-Baek Kim^{1,*} and  Hwa-Yeol Choi^{2*}

¹Professor, Department of Marine Leisure Tourism, Youngsan University, South Korea

²Professor, Department of Aviation Service Management, Jeju International University, South Korea

*Corresponding author. Email: hwayeol@hanmail.net

Abstract

The research on aviation leisure sports reviewed ways to boost aviation sports, the movement and growth of aviation sports, and plans to develop sports tourism programs using aviation sports. However, empirical case studies are relatively insufficient compared to other leisure sports areas. This paper studies the characteristics of tourism events, visitor satisfaction, and willingness to revisit aviation leisure sports as an example of the 2019 Sacheon Air Show held as a leading leisure aviation event in Korea. The results of the study showed that contactability, accessibility, human service, information, etc. had significant positive effects on satisfaction, and satisfaction had positive effects on recommendation.

Keywords: Aviation, Leisure, Tourism, Events, Air Shows

1. Introduction

1.1 Research Introduction

Compared to the rapid growth and rapid development of the domestic aviation industry, the awareness of the aerospace industry such as comparative evaluation and exchange of technology and information about the aviation industry is relatively insufficient. "Gyeongnam Sacheon Aerospace Expo", which combines industry, tourism, and aerospace in the new South Coast era, is becoming the representative aerospace festival in Korea, and people's expectations are rising year after year. 'Festival' was originally a ceremonial event, and in the modern era, the concept of a commercialized festival was defined as a comprehensive concept of a regional cultural resource that successfully attracts visitors'. The Gyeongnam Sacheon Aerospace Expo is a combination of technical science and commercial festivals, and has established itself as a representative festival of the region. [1] In addition to the Korea Aerospace Industries (KAI) and aviation-related companies, Sacheon City, Gyeongnam, is using the Air Force 3rd Training Flight Group, Sacheon Airport, Korea Polytechnic Aviation University, and the Aerospace Museum to explore internationalization rather than local festivals.) And wants to develop into an international event.

EXPO means an exhibition held with an international scale and system, and in a dictionary sense, it means an exhibition in the word taken from the previous section of EXPOSITION.

The expo is largely divided into 'official expo' and 'unauthorized expo' depending on whether it is certified by BIE (Bureau of International Exposition). [2]. In the case of an accredited expo, it can be held only after applying to the BIE and obtaining approval under the name of the host country's government, and attracting participating countries through the national official diplomatic channel. In the case of unauthorized expo, according to the BIE agreement, member countries are restricted from participating in unauthorized expo with national qualifications, so the level or scale of exhibition is considerably lower than

that of accredited expo, so it is usually held at the level of domestic events. Daejeon Expo (1993) is the only case in Korea to host an officially recognized expo.

Aerospace Expo, which has grown into a major festival in the region, is taking up a large portion of aerobatics and air shows that cannot be found in other aviation exhibitions, as well as various experiential events and exhibitions. It has reached the level of development as an expo that goes beyond the concept of an exhibition by holding them, but there is a limit to developing it into an international event.

Compared to such public interest and expectations, there is a lack of systematic development plans, and it is necessary to host an air show differentiated from other air shows such as the Seoul Air Show and Gyeonggi International Aviation Show currently being held. It is necessary to find a systematic development plan that can further revitalize the potential of the "Gyeongnam Sacheon Aerospace Expo" to enhance the value of Korea's aviation brand and realize an advanced aviation country. This can be a business model that can solve the limitations of local festivals in Korea.

In this study, in order to find a way to revitalize local festivals, which have recently emerged as a problem of national fiscal waste, we have analyzed and evaluated the air show festival and studied content development for air show activation.

1.2 Research Background And Purpose

Aviation leisure and sports refer to leisure and sports performed in the sky, and it is a futuristic leisure sports that applies fluid mechanics to adjust the speed and direction using wind and air pressure to enjoy the high thrill [3]. In many forms of sports tourism, the attractiveness of air sports, which is not affected by the season and creates high added value, has a greater tourism resource value than any other sport [4].

Korea is a member of the Korea Aviation Promotion Association and the Korea Aviation Association, the Korea Gliding Association, the Korea Skydiving Association, the Korea Airline Association, the Korea Air Transport Association, the Korea Power Parity Association, the Korea Sourcing Association, and the Korea Women's Airline Association. Each type of air sports also belong to a professional association e.g. the Korea Model Aviation Association. Recently, air sports competitions hosted by Donghoin clubs and leisure sports events sponsored by local governments have been held. In particular, the air show called "Gyeongnam Sacheon Aerospace Expo" held in Sacheon, Gyeongnam from 2005 to 2018 has been renamed as "Sacheon Air Show" from 2019. This event checks the current status of the domestic and foreign leisure aviation industry at a glance, and has prepared various events and programs such as cultural events, leisure aviation industry exhibition, experience program, education / camp, and air show. With the success of the aviation leisure sports event in Gyeongnam, Sacheon will also be held in 2020 and plans to invest more to revitalize the aviation leisure and aviation related industries.

The purpose of this study is to analyze the characteristics of tourist events and the satisfaction of visitors by air leisure sports with the case of the 2019 Sichuan Air Show, which was held as a transcendent leisure air event in Korea. It aims to explore the possibility of tourism resources.

In order to achieve the purpose of this study, literature reviews and empirical studies were conducted. The theoretical background of the research subject was set by collecting and organizing data on aviation leisure sports through literature research related to the subject, and by conducting the Sichuan Air Show customer survey from October 24 to 27, 2019. The collected data were analyzed using statistical programs.

1.3 Research Trend

Sports tourism is a trip based on leisure activities, in which an individual is temporarily attracted to a physical activity, participating in sports, or watching sports and engaging in exercising [5]. In addition, it is defined as tourism activities that move away from home in order to participate in all competitive and non-competitive sports tourism activities by participating in or watching sports [6]. Leisure and sports events created by integrating sports and tourism provide participants with motivation to participate in movement, and the venue for the event is a natural environment, established facilities, transportation, services, and hospitality [7]. In addition, holding leisure and sports events is an important concern among countries in terms of tourism activation, it contributes to creating synergies not only in the region's tourism, but also across the society such as politics, economy, and culture [8].

Various researches on leisure and sports tourism have been conducted. The effect of tourism activation by attracting sporting events [9] and the satisfaction factors of visitors for revitalizing local sports tourism [10]. With the popularization of sports participation tourism, which was exclusive to certain classes, the need for research on attracting sports tourism events, the characteristics of tourism resources and the influence of leisure activities, and sustainable tourism development in the tourism sector is increasing [11].

However, it can be seen that empirical case studies are relatively insufficient in the aviation leisure field compared to other leisure sports fields. This paper will study the tourism characteristics, visitor satisfaction and revisit and word of mouth effects for aviation leisure events that are emerging as new leisure sports events in the 2019 Sacheon Air Show.

2. Types and Status of Aviation Leisure Sports

2.1 Ultralight Airplane

In leisure sports, the ultra-light aircraft for a single passenger in the Article 14 of the Enforcement Regulations of the Aeronautics Act of the Power System, which is 60-80 horsepower vehicle with limited flight performance, has its own weight and fuel capacity of 150kg and 19ℓ and two seats limited to 225kg and 38ℓ.

In January 2004, the Ministry of Land, Transport and Maritime Affairs (formerly Ministry of Construction and Transportation) designated the airspace for flying aircraft and required the said aircrafts to obtain permission from the Airspace Commission before engaging in airspace activities [3]. There are about 20 airfields for ultra-light aircraft, including the Eomseom airfield in Hwaseong-si, Gyeonggi-do, Incheon Songdo airfield, and the Jecheon airfield.

2.2 Skydiving

Skydiving is an air sports that uses a parachute to jump after climbing to a high sky using an aircraft or a device to perform a planned movement while freely descending, and when a specified altitude is reached, unfolds the parachute and lands safely on the ground. The skydiving speed maintains an average speed of 180km/h in the basic attitude when freely descending. The maximum speed can be up to 300km/h depending on the posture, the parachute type, adjustment method, wind direction, and wind speed.

2.3 Hang Gliding

Hang gliding is a gliding sport that uses only human arm and leg strength and lands without using artificial power. It started in Korea in the mid-1970s. The hang gliders consist of a frame made of a special aluminum

alloy pipe and a triangular frame attached to a body made of a nylon cloth called Dacron on top, weighing 20-30 kg. It is a weight that can be carried.

2.4 Paragliding

Paragliding refers to a vehicle assembled with a parachute and hang-gliding. The aircraft is laid out on a hill in advance, and it is connected to the aircraft by wearing a harness, a device that connects the body to the device and then take off by running about 10m downhill while receiving the wind. Power paragliding refers to paragliding that can take off even on the flat surface by attaching a small engine with a diameter of about 1m to the paragliding. It is conducted in 10 active factories including Nakdong Riverside in Andong-si, Gyeongbuk and Namhan Riverside in Yeosu.

2.5 Sports Kite

Sports kite is a leisure sport that blows objects made from triangles, squares, and various animal shapes in the sky. It is linked to water leisure and sports such as Kite Buggy using a carriage wagon in the form of a wagon, Kite Ski running on snow or water, Kite Boat, and Kite Surf. It is a new and developing sport.

2.6 Model Aircraft

Model aircraft is generally meant to be a non-human aircraft. It is defined as a model aircraft if its own weight, which is less than 25,000g and engine volume less than 250km [4]. The history of domestic model aircraft began before the liberation and has the longest history compared to other aerospace sports fields. The continuously active population is estimated to be around 10,000 nationwide [5].

2.7 Hot Air Balloon

Hot air balloon has no propulsion device, such as a propeller or jet. It is among the mechanisms that obtain buoyancy using a gas lighter than air. This was invented by the brothers Joseph Michel Montgolfier (1740-1810) and Jacques Etienne Montgolfier (1745-1799) in France in 1783. The Daejeon International Hot Air Balloon Festival held since 2005 with the theme of "Toward the Sky, to the World, to the Future" during the international hot air balloon competition, was first attended by 19 countries at Isidol Ranch in Jeju Island in April 1999.

2.8 Drone

As defined in the dictionary, drones are collectively referred to as 'aircraft in the form of airplanes or helicopters in which humans fly through the induction of radio waves without riding.' The drone is an unmanned aerial vehicle and its historical departure worldwide was for the military industry. The early drones were developed for the military industry and

operated primarily for reconnaissance and intelligence gathering. During this period, government agencies and large corporations mainly led drones to use them for military purposes. Early drones were huge in size, and their appearance was made like a miniature plane. However, drones have recently come into contact with various sizes and shapes and ideas, and are gradually expanding the scope of their applications to the civil and commercial fields [12].

3. Sichuan Air Show

3.1 Background and Significance of the Sichuan Air Show

Figure 1. History of Sacheon Airshow Poster



The aviation leisure event from 2005 to 2018 was called “Gyeongnam Sacheon Space Aviation Expo”, with various programs annually. In 2019, it was renamed as “2019 Sichuan Air Show” (<http://airshow.sacheon.go.kr>). The regional festival is aimed at revitalizing the local economy by marketing new images of regions created through festival events [13]. The 2019 Sichuan Air Show is also included in one

area of regional festivals in a wide range, so it can revitalize the surrounding local economy including Gyeongnam Sacheon. This event contributed to presenting the growth vision of the aviation leisure industry, which has been spotlighted as a high value-added knowledge-based industry, and to foster it as a mecca for aviation, leisure, and tourism. During the event, many visitors gathered, and there were various production-inducing effects, income-inducing effects, and added-value inducing effects.

3.2 Airshow and Ground Display of Aircraft and Equipment

The experience flights include HH-47 (1 vehicle), C-130 (1 vehicle), university aircraft (10 vehicles), light aircraft (10 vehicles), and KT-1 simulator (2 vehicles) / 1,062 pilot flights.

The ground exhibition includes F-15K, KF-16, F-4E, F-5E, KA-1, T-50, KT-1, C-130, CN-235, HH-32, armored vehicles, etc. It also features riding experiences.

Figure 2. 2019 Sacheon Air Show Web



3.3 Public Relations Experience Hall

The Public Relations Experience Hall supports the operation of various promotional programs related to Sacheon-si general public relations, Air Force PR, aerospace-related school, institution, company public relations, and aerospace.

Figure 3. Public Relation Experience Hall from 2019 Sacheon Airshow Website



4. Method

The questionnaire used in this study was based on previous researches on satisfaction and behavioral intentions in the field of aviation leisure, sports and event tourism (Heung-Ryeol Kim, Seol-Min Yoon, 2006; Jae-Hyung Lee, 2003; Gye-Sung Ko and Ki-Yoon Kim, 2009). It contains 31 items, including 20 items on satisfaction factors such as diversity of programs, prices, events, and expected effects, 2 items on intention to ask for revisit and recommendation, and 9 items on general questions including demographic characteristics of respondents. As for the question format, the general characteristics of the respondents used the nominal scale, and the questions related to the satisfaction factor and behavioral intention of the viewers were based on a five-point Likert scale (1=not at all, 2=no, 3=just yes, 4=yes, 5=Very so). The subjects of the study were the general public who participated in the 2019 International Leisure Aviation Fair. A total of 430 self-answered copies were collected but only 414 copies were used for empirical analysis, excluding 16 copies that could not be used as data due to unfaithful and incomplete.

As a result of the analysis, it was found that 'the expected effect' factors such as contributing to revitalization of the aviation leisure tourism industry, contributing to tourism promotion in Gyeonggi Province, contributing to interest in leisure aviation, and contributing to the promotion of related companies have the greatest influence on the behavior intention of visitors. This confirms that aviation leisure and sports events can greatly contribute to vitalization of related industries and regions. In addition, factors such as 'facilities and viewing convenience' indicating the safety and comfort of facilities (e.g. toilets and rest areas), and 'information and price appropriateness' factors such as appropriate admission fees and ease of information consultation were also found to have an effect on the intention of visitor behavior. As a

result, it can be interpreted that the higher the satisfaction level of the aviation leisure event visitors' "expected effect," "facilities and viewing convenience," and "appropriate information and price," the more positive the audience's behavioral intentions are.

5. Activation Plan

As a result of researching domestic and overseas air show cases and analyzing economic and operational performance, it was found that the introduction of specialized air show content such as air racing is necessary to differentiate it from domestic air shows and to grow into international events. This is necessary for reconsidering Korea's aviation image because Korea is not well known in relation to aviation worldwide, and it is a field that is highly related to the growth of domestic general aviation. In particular, as a field of aviation sports, air racing was analyzed to be of great help in revitalizing local airports [14].

Sacheon Aerospace Expo is an appropriate city for introducing air show contents such as air racing, and was analyzed as an airport, considering the event operation of the air show, geographical location, and surrounding conditions. Sacheon Airport is the first in Asia to maintain a world air racing competition comparable to the World F1 Grand Prix, the largest sports car competition among the world's sports, to promote Gyeongnam as a mecca city for aviation. Gyeongnam is a place where aircraft manufacturing and related industries are more developed than other regions, and through racing, an aviation sport, can play a role in the field of technology that needs to improve the functions and performance of general aviation, which is consistent with the direction of the development of the Gyeongnam aviation industry [15].

In the meantime, numerous studies on the horror of local airports have also analyzed that air sports and general aviation will play a role in revitalizing local airports [16]. In particular, when the development and development of local airports is presented as a major business model through the revitalization of general aviation, the revitalization of the air show is a good opportunity for the rapid development of such general aviation. In the future, it is expected that the number of aviation sports enthusiasts will gradually increase in Korea, and the introduction of racing in air shows where not only enthusiasts but also the general public can participate will be of great help in revitalizing the stagnant air show.

In particular, Sacheon Airport can host an internationally proven aviation event called World Air Racing to inform the world of the natural scenery of the South Sea, and at the same time present a new model for revitalizing the local economy and developing the Gyeongnam Airlines industry.

To do this, it is necessary to divide it into domestic/international/world competitions and approach them step by step, and increase the publicity effect by introducing aviation events, inducing participation of aviators and continuous exposure of the media. After that, after establishing the basis for air racing competitions in domestic competitions, it will be promoted to international competitions and held as a world competition after attracting scale and professional athletes to establish itself as a world-class festival.[17]

6. Conclusions

First, the Gyeongnam Sacheon Air Show contributed to presenting the growth vision of the aviation leisure industry, and brought about significant production, income and added value induction effects. The International Leisure Aviation Fair consisted of various events including air shows, exhibitions and experience events, providing many tourist events for visitors.

Second, the factors that satisfy visitors of aviation leisure and sports are 'expected effect' factors, such as convenience facilities, safety of facilities, venue comfort, and convenience of viewing facilities, and viewing convenience, contributing to industrial revitalization and tourism promotion in Gyeonggi-do, etc. Four factors were derived, including 'theme program' factors such as food plaza and exhibition hall, and 'appropriate information and price' factors such as appropriate admission fee, ease of information consultation, and provision of various events and programs. In particular, the 'expected effect' factor, which can greatly contribute to the vitalization of industry and regional tourism, was highlighted, and this result practically helped in establishing Gyeongsangnam-do's plan to foster Gyeongsangnam-do as a mecca for aviation and leisure tourism through the Gyeongnam Sacheon Air Show.

Third, as a result of examining the effect of viewers' satisfaction factors on behavioral intentions such as revisiting and recommendation intention, the factors 'expected effect', 'facilities and viewing convenience', and 'appropriate information and price' have a significant effect on behavioral intention. Particularly, the 'expected effect', a part that can contribute to related industries in aviation leisure tourism events, has the greatest influence, suggesting that it is necessary to actively reflect these characteristics in establishing strategies at the marketing level.

Forth, compared to the capabilities of Korea's air transport and aerospace industries, domestic air shows are limited to small-scale exhibition events of local governments, so it is the time for a professional air show event that fits the aviation phase. Airshows held in the region are planned with various contents and special events, drawing viewers' awareness and interest in aviation. However, although it is said to plan and operate a differentiated air show, it has been analyzed that there are various constraints on the growth of an international air show beyond the domestic regional festival form.

Limited budget issues, non-differentiated content, and low connectivity with the tourism industry are limited to local events as air shows that provide only attractions. As shown in the analysis of overseas cases, differentiated content from other air shows should be emphasized, and local culture should be combined so that it can be differentiated as a fun and exciting air show with added leisure and tourism, rather than a fixed and formal image. do.

As a result of this study, the development and introduction of new contents is what must be done in advance for growth and success as a global air show. It was found that there is a need to develop new contents that can meet the two events of air show and tourism by holding international air show events by professional organizations. In particular, since the introduction of air racing, a new content, is an international event, it will be possible to hold a world-class competition comparable to the F1 international competition.

A world-class competition similar to the F1 international competition could be held. As a result of analyzing various air shows in Korea, it was analyzed that the suitable place for air racing is the area where the sea, large lakes, and rivers are located, and the Gyeongnam Aerospace Expo, which has an environment suitable for flight and a space for viewing, is suitable. However, in Sacheon-si, Gyeongsangnam-do, appropriate budget should be invested so as not to be limited to regional air events, and planning of events at the central government level rather than the local government level is necessary to develop into an international air show, and a long-term and detailed development plan must be established .

REFERENCES

- Cho Hye-won (2008). Festival categorization and activation strategy, Ewha Womans University master's thesis.
- Shin Baek-soo (2003). The ripple effect of the expo's regional development, Myeong-ji University's master's thesis.
- Choi, Hyu-jong (2009). Current Status and Development Plan of Korea's Aviation Leisure Sports Industry, Korean Society of Aviation Management Autumn Conference, 2009, 345-360.
- Choi Jong-in and Kang Hoon (2003). Plan to develop sports tourism program using air sports (focused on Seosan and Taeon areas), Korea Sports Research 14(5), 1238-1252.
- Green, B. C. and Chalip, L. (1998). Sport tourism as the celebration of subculture, Annals of Tourism Research, 25, 275-91.
- Lisa D (1998). An overview of sport tourism: Building towards a dimensional framework, Journal of Vacation Marketing, 4(1), 23-38.
- Higham, J. E. S. and Hinch, T. D. (2002). Tourism, sport and seasons: the challenges and potential of overcoming seasonality in the sport and tourism sectors, Tourism Management, 23(2), 175-185.
- Getz, D (1998). Trend, Strategies and Issue in Sport in Sport-event Tourism, Sport Marketing Quarterly, 7(2), 8-13.
- Kim, Kyung-Hoon and Shin, Seung-Ho (2020). The Analysis on Decision Factors and Priority for Sport Event Attraction of Local Governments, The Korean Journal of Sports, 18(1), 199-213.
- Kim Min-Soo, Seo Won-Jae and Han Seung-Jin (2018). Suggestions for Promoting the Regional Sport Tourism Industry based on a SWOT Analysis and Case Studies, Korean Society of Policy, 16(4), 149-164.
- ChoJae-Gi, ShinYoung-Kyun and SonMyeong-Jun (2004). Cooperation Model between Universities and Local Governments for Marine Leisure Sports Tourism Products (II), Korean Journal of Physical Education, 43(2), 351-372.
- ParkChan-min (2016). A study of critical issues of recreational drone use words, The Korean Association of Sports Law, 19(1), 39-58.
- LeeHyuk-jin and ChoiHwa-yeol (2007). Understanding of the Hampyeong Butterfly Festival Tourism Event, Journal of the Korean Society of Photography Geography 17(2), 53-65.
- Park Byeong-cheol(2008). A Study on the Strategic System for Activating Local Airports through Aviation Sports, Korea Aerospace University Ph.D. Thesis.
- Gyeongnam Aviation Industry Promotion Plan, Gyeongnam Development Institute(2009).
- Kim Seung-myeong (2005). A Study on Activation Plan for Local Airports in Korea: Focusing on Sacheon Airport, Gyeongsang National University Master's Thesis.
- Gwi-Baek Kim, Hwa- Yeol Choi, "Study on the characteristics of events in the aviation, leisure and tourism industry - Gyeongnam Sacheon Air Show," International Journal of IT-based Business Strategy Management, vol.6, no.1, (2020)