ARTÍCULOS

Effect of Sports Lottery Consumers on Sports Attitude and Behavior

Efecto de los consumidores de la lotería deportiva sobre la actitud y el comportamiento deportivo

CHIN-CHENG, YANG
https://orcid.org/0000-0002-6784-9549
yccheng@cyut.edu.tw
Chaoyang University of Technology. Taiwan

JEN-JEN, YANG
https://orcid.org/0000-0001-9015-596X
jjyang@cyut.edu.tw
Chaoyang University of Technology. Taiwan

CHING-TE, LIN
https://orcid.org/0000-0003-2765-2327
CTLin@cyut.edu.tw
National Yunlin University of Science and Technology. Taiwan

PEI-HAN, WU
https://orcid.org/0000-0001-6506-0328
han0933693062@gmail.com
Chaoyang University of Technology. Taiwan

ABSTRACT

The purpose of this study is to explore the effect of sports lottery consumer's sports watching behaviors on attitudes and behaviors on this field. Using the self-edited sports watching behavior scale, sports attitude scale and sports behavior scale as research tools. While enhancing sports attitudes, they will also increase their participation behaviors. Sports lottery tickets can increase government taxes and promote sports development; they also can promote the sport lottery consumers to improve their own sports attitudes and their sports behavior after watching sports games, and then achieve the popularization of whole people that pratice sports.

Keywords: Confirmatory factor analysis, partial least squares, PLS, structural equation models.

RESUMEN

El propósito de este estudio es explorar el efecto de los comportamientos de observación de deportes de los consumidores de loterías deportivas sobre las actitudes y los comportamientos en ese campo. Utilizando la escala de comportamiento de observación de deportes autoeditada, además de la escala de actitud deportiva y la escala de comportamiento deportivo como herramientas de investigación. Mientras mejoran las actitudes deportivas, también aumentarán sus comportamientos de participación. Los boletos de lotería deportiva pueden aumentar los impuestos del gobierno y promover el desarrollo en esa área; también pueden promover a los consumidores de lotería deportiva para mejorar sus propias actitudes y comportamientos deportivos después de ver juegos deportivos, y luego lograr la popularización de personas enteras que practican deportes.

Palabras clave: Análisis factorial confirmatorio, Mínimos cuadrados parciales, Modelos de ecuaciones estructurales, PLS.

INTRODUCTION

The gains from sports lotteries have great effects on the country in absorbing social hot money, increasing government taxation, supplementing sports funding, and developing public construction (Deng & Chen: 2006, pp.116-122). Most people's motivation for buying lottery tickets is that they are interesting, they have gambling or good luck, high jackpot bonuses, and the distribution of lottery coupons for the purpose of promoting public welfare and sports development is the biggest driving force (Liu et al.: 2002, pp.217-230; Liu & Hsieh: 2007, pp.105-121; Yang et al.: 2015, pp.373-385).

Consumers purchase sports lottery tickets based on observing the sports competition process to analyze and collect relevant event statistics and make decisions about consumer behaviour. If consumers are not familiar with this campaign, the possibility of betting on winning will be reduced, and the relative consumption motivation will also be reduced. Therefore, sports watching may become the focus of sports lottery ticket consumers' high demand and attention and become more involved (Ramírez et al.: 2019; Ramírez et al.: 2020; Chang et al.: 2010).

The more people buy sports lottery tickets, for sports lottery companies, it can increase turnover and increase treasury tax; for the sports broadcasting industry, it may increase the ratings of sports broadcasting. According to the research by Yang et al. (2020), watching movies made by sports celebrities can positively affect the sports attitude and behaviour of viewers. Yang et al. (2013) research on sports viewing experience and sports attitude also found that there is a positive relationship between sports viewing experience and sports attitude. Attitude is a psychological factor of behaviour, which is a stable value for something, which affects individual behaviour and activities (Ahmad & Ahmad: 2019, pp. 746-778; Chen & Chung: 2009, pp.81-90). Therefore, the degree of involvement in sports watching may affect the purchase intention of lottery tickets, but also affect the individual's sports attitude, and having a good sports attitude will also affect the individual's sports behaviour (Yang et al.: 2018, pp.187-190; Ahmad & Ahmad: 2018, pp. 44-49). The generation of good sports behaviour requires a positive attitude to maintain personal thoughts and behaviours about sports (Yang et al.: 2013, pp.111-134).

Based on the above discussion, people will buy sports coupons for various reasons, and they are more likely to watch the event while buying. Many scholars also discuss the relationship between sports watching and sports attitude and sports behaviour. Therefore, if sports watching can effectively affect the sports attitude and sports behaviour of sports lottery ticket consumers, then sports lottery tickets are more necessary to promote. This study intends to take sports lottery ticket consumers as the research object to understand whether the sports lottery ticket consumers' watching behaviour will affect their sports attitude and sports behaviour.

Research purpose

Based on the above background and motivation, this research is to understand the impact of sports lottery consumers' sports watching behaviour on sports attitude and sports behaviour. Use the structural equation model (SEM) causal path analysis to clarify the relationship between each other. The research results can be provided to the government and relevant units as a reference for policy modification and sports promotion (Yulanda & Sepdanius: 2019, pp.40-49; Ahmad & Sahar: 2019, pp. 1540-1543)

METHODS

Research object

This research object of this study is the purchasers of sports lottery tickets. The sampling method was used to conduct sample testing. A total of 400 questionnaires were issued. After excluding 23 invalid questionnaires, 377 valid questionnaires were obtained, and the questionnaire recovery rate was 94.25%.

Utopía y Praxis Latinoamericana; ISSN 1316-5216; ISSN-e 2477-9555
Año 25, n° extra 10, 2020, pp. 297-304
299

Research tool

Sports watching behaviour scale

This scale uses the questions of the watching sports and purchasing sports lottery consumption behaviour scale proposed by Gau (2009), which includes three items: Browsing the Internet, watching from TV, reading newspapers and magazines. And use a single question ruler to score, from "none", "1 minute-1 hour", "1-2 hours", "2-3 hours", "3-4 hours", "more than 4 hours" Scores of 1, 2, 3, 4, 5, 6 points. The higher the score of the subject, the longer the time spent watching sports, and the shorter it is (Martinez: 2017).

Sports attitude scale

This scale is revised with reference to the sports attitude scale questions proposed by Yang et al. (2018) and Lin et al. (2019) and includes three facets: cognition, affection, and behaviour. The scale uses a Likert five-point scale. Scores of 1, 2, 3, 4 and 5 are given from "Strongly Disagree", "Disagree", "Normal", "Agree" and "Strongly Agree". The higher the score of the subject, the higher the feeling of sports attitude, and the lower it is. After formal analysis, exploratory factor analysis and reliability analysis, the three facet factors were obtained, a total of 10 questions, Cronbach's α value was .898, and the cumulative explanatory variance was 78.052%, indicating that the scale has Accepted reliability and validity.

Sports behaviour scale

This scale adopts the sports behaviour scale question proposed by Yang et al. (2019) and includes three aspects: exercise frequency, exercise duration, and exercise intensity.

It is described as follows:

1. Exercise frequency: the number of participation in sports every week, scored in five points, from "1 time per week", "2 to 3 times per week", "4 to 5 times per week", "6 to 7 per week "7 times" and "more than seven times a week" are given 1, 2, 3, 4, and 5 points respectively. The higher the score, the higher the degree of regular exercise.

2. Exercise duration: Each time you participate in the exercise, it is scored in five points, from "1~15 minutes", "16~30 minutes", "31~45 minutes", "46~60 minutes" and " "61 minutes or more", given 1, 2, 3, 4, and 5 points respectively, the higher the score, the longer the time for each exercise (Alcazar et al.: 2018, pp.914–924).

3. Exercise intensity: Each time you participate in the exercise, you will get a five-point scoring method. From "easy", "relaxed", "okay", "a little tired", "very tired", give 1, respectively 2, 3, 4, 5 points, the score is higher, the higher the degree of physical feeling (Cholewa et al.:2019, pp.136–146).

Data analysis

In this study, the PLS2.0 statistical software package was used to analyze the results of the formal questionnaire, including confirmatory factor analysis and structural equation model.

RESULTS

Confirmatory factor analysis

Before conducting model path analysis, test the reliability and effectiveness of various aspects through confirmatory factor analysis. Measurement methods include evaluating the measurement model and verifying the effectiveness of the differences.

1. Reliability

In terms of nominal project reliability, this study uses the composition reliability (CR) and Colognebach's α (CA) coefficient to detect the internal consistency index. It was found table 1 that the CR value of this study

ranged from .834 to .925; Cronbach's α value ranged from .642 to .883, indicating that the measurement indicators of this study have good internal consistency.

	Composite Reliability (CR)	Cronbach`s α (CA)
Sports watching behaviour	.834	.642
Sports attitude	.925	.883
Sports behaviour	.863	.696

Table 1. Summary table of a load of each potential variable

Convergent validity

This study examines the aggregation validity of potential variables by measuring the factor loading of the variables to their convergent validity. According to the research recommendations of Hair, Black, Babin and Anderson (2010), the factor load must be greater than .5. From Table 2, the factor load of a potential variable can be obtained, except for newspapers and magazines and strength facets that have not reached the test the standard is deleted, and the remaining facets are in compliance with the standard, with good convergent validity.

	Sports watching	Sports attitude	Sports behaviour
Internet	.743		
Television	.941		
Cognition		.832	
Affection		.946	
Behaviour		.910	
Frequency			.818
Time			.923

Table 2. Test result table of polymerization validity of each convergent variable

Discriminant validity

Chin's research suggested that the square root of the average variances extracted (AVE) of individual latent variables should be greater than the correlation coefficient between this latent variable and other latent variables in the model. According to the research recommendations of Venkatesh, Thong and Xu (2012), the detection standard of the square root of AVE should be at least greater than .5. From Table 3, the square root of the potential variable of this study is between .847~.897, and the AVE of each potential variable is greater than all correlation coefficient values in the same column and row. Therefore, the measurement model in this study has good discriminant validity.

	AVE	Sports watching	Sports attitude	Sports behaviour
Sports watching behaviour	.719	.847		
Sports attitude	.805	.141	.897	
Sports behaviour	.761	.269	.387	.872

Table 3. AVE square root and the correlation coefficient of each potential variable

Linear structure model analysis

According to Table 4, in terms of measurement mode, sports watching behaviour can be reflected in the

Utopía y Praxis Latinoamericana; ISSN 1316-5216; ISSN-e 2477-9555
Año 25, n° extra 10, 2020, pp. 297-304
301

internet and TV in the use of media and the average weekly viewing and viewing time, and the estimated load of the factor depends on The order is .743, .941; sports attitude variable can be reflected in the three aspects of cognition, affection, and behaviour, and the estimated value of the factor load is .832, .946, .910 in order; sports behaviour variable can be reflected in the two facets of frequency and time, the estimated values of factor load are .818 and .923 in order. In terms of structural models, this study uses the significance test of the causality value between potential variables to determine whether the causality between the potential variables is established. The estimated value of the causal relationship between potential variables is shown in Table 5. Sports watching behaviour will significantly affect sports attitude and sports behaviour. The estimated values are .140, .269 in order; sports attitude will significantly positively affect sports behaviour, with an estimated value of .357. Based on the above statistical results, this study can learn the relationship between the potential variables by using the overall model path diagram in Figure 1.

Facet	Original Sample	Standard Error	T-Value	AVE	CR
Internet<-Sports watching behaviour	**.743**	.096	7.71***	.719	.834
TV<-Sports watching behaviour	**.941**	.032	29.61***		
Cognition<-Sports attitude	**.832**	.033	25.16***	.805	.925
Affection<-Sports attitude	**.946**	.014	66.19***		
Behaviour <-Sports attitude	**.910**	.008	119.76***		
Frequency<-Sports behaviour	**.818**	.013	67.76***	.761	.863
Times<-Sports behaviour	**.923**	.024	34.12***		

Table 4. Path Coefficients of Variables to Facets

*p<.05；**p<.01；***p<.001

Variables path	Original Sample	Standard Error	T-Value
Sports attitude->Sports behavior	.357	.041	8.69***
Sports watching behaviour>Sports attitude	.140	.057	2.43*
Sports watching behaviour ->Sports behaviour	.269	.047	5.69***

Table 5. Path coefficient table of each facet
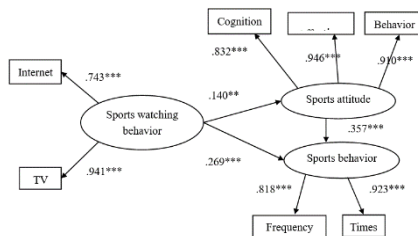
*p<.05；**p<.01；***p<.001

Figure 1. Model coefficient path diagram

Model fit

PLS-SEM uses the GoF value as a measure of the overall model fit. According to Wetzels, Odekerken-Schroder, and van Oppen (2009), when the Gof value is above .1, the degree of adaptation is weak, the adaptation degree above .25 is medium, if the Gof value is above .36, and it indicates that the overall model is well adapted. According to the results of Table 6, the GoF value of this study model is .287, indicating that the degree of adaptation of this study model is moderate.

	AVE	CR	R^2	CA	Communality	Redundancy	GoF
Sports watching	.719	.834		.642	.719		
Sports attitude	.805	.925	.019	.883	.805	.016	**.287**
Sports behaviour	.761	.863	.197	.696	.760	.112	

Table 6. Overall model fit

DISCUSSION

After analyzing the linear structure model of this study, we found that sports lottery consumers' sports watching behaviours will positively affect sports attitudes and behaviours, sports attitude will positively affect sports behaviour, sports watching behaviour can also indirectly affect sports behaviour through sports attitude.

Sports lottery consumers will continue to watch sports-related events after purchasing lottery tickets. While continuing to watch sports events, it will also enhance its own sports attitudes and behaviours, and at the same time enhance its sports attitudes, it will also increase its sports participation behaviours.

Therefore, sports lottery tickets can not only increase government taxation and promote sports development but also promote consumers to influence their own attitudes and actual sports behaviours after watching sports events, so as to achieve the vision of universal sports popularization.

CONCLUSION

Lottery ticket issuing units can add relevant sports rules and sports operation billboards on the spot. In this way, lottery ticket consumers can also have a better understanding of sports-related knowledge while experiencing the fun of watching sports events, thereby enhancing their sports participation behaviour.

The sports broadcasting unit adds a short analysis of the program before the competition for various events, so that the betting public can understand the game situation more, which will not only increase the broadcast ratings but also increase the public's awareness of sports and affect the sports lottery consumers Sports behaviour.

The sports lottery issuing unit can also cooperate with the sports teams to launch the purchase of sports lottery to get discounts on the purchase of sports games tickets, so as to promote the sports-watching behaviour of sports lottery consumers.

Sports lottery issuing units or sports game organizers can also cooperate with sports centres to launch sports coupons and sports event ticket stubs. Sports centre tickets can be discounted or experienced free sports centre courses, so that sports lottery consumers can promote sports watching behaviour, then further improve their own sports attitude and behaviour. So that sports lottery consumers are more willing to do sports, identify with sports-related industries, and also make sports-related industry links stronger.

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Año 25, n° extra 10, 2020, pp. 297-304
303

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BIODATA

C.H YANG: Chin-Cheng, Yang was born in 1975. He graduates from University of the Incarnate Word. His qualification is sports physiology, sports management. His position is Professor at department of Leisure Service Management, Chaoyang University of Technology, Taiwan. He also is dean of student affairs.

J.J YANG: Jen-Jen, Yang is graduate from Asia University for business administration. His research religion is sport management, sport marketing. His work at department of business administration, Chaoyang University of Technology, Taiwan. He also is director of physical education.

C.T LIN: Ching-Te, Lin is a lecturer at General Education Center, Chaoyang University of Technology, Taiwan. He also is a Doctoral student for department of business administration at National Yunlin University of Science and Technology, Taiwan. His research religion is sport management, Sports psychology, fitness. He also is director at Office of International and Cross-Strait Cooperation, Chaoyang University of Technology, Taiwan.

P.H WU: Pei-Han, Wu is a master, graduate from department of Leisure Service Management, Chaoyang University of Technology, Taiwan.