# Golf players as a customer segment: the influence of handicap level and residency in customer satisfaction and expenditure
# Jugador de golf como segmento de clientes: la influencia del nivel de handicap y la residencia en la satisfacción del cliente y el gasto

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**Abstract.** Segmentation has been proven to be one of the best tools to facilitate sports entities' achievement of their goals. The objective of this research was to analyze the influence on customer expenditure and satisfaction for an elite golf event based on segmentation variables such as residence (local vs visitor) and handicap level of the attendees (spectator vs spectator-player). In addition, this research aimed to establish a multivariate model that allows predicting the place of residence and the handicap based on the interaction of the analyzed variables, with the intention to establish a behaviour pattern based on these variables for those attending an elite golf tournament. Results revealed that attendees with a golf handicap exhibited higher satisfaction levels and were more likely to recommend and spend at golf events. On the other hand, non-handicap spectators and those attendees from outside Madrid displayed higher economic expenditure, indicating the importance of meeting their specific needs to achieve positive economic impact results. The decision tree models provided insights into attendee behavior, identifying factors influencing their satisfaction and likelihood to attend again. Factors including future attendance intention, satisfaction with the food court variety, and spending on accommodation and souvenirs were found to be significant predictors of residency and handicap level. In conclusion, this research contributes to the understanding of customer behavior at elite golf events, offering practical implications for event organizers and sport managers.
**Keywords:** consumer expenditure, customer satisfaction, golf, handicap, segmentation, sport events, sport tourism.

**Resumen**. La segmentación se ha demostrado como una de las mejores herramientas para facilitar el logro de objetivos por parte de las entidades deportivas. El objetivo de esta investigación fue analizar la influencia en el gasto y la satisfacción de los clientes en un evento de golf de élite basado en variables de segmentación, como la residencia (local vs. visitante) y el nivel de hándicap de los asistentes (espectador vs. jugador-espectador). Además, esta investigación buscó establecer un modelo multivariado que permitiera predecir el lugar de residencia y el hándicap en función de la interacción de las variables analizadas, con la intención de establecer un patrón de comportamiento basado en estas variables para aquellos que asisten a un torneo de golf de élite. Los resultados revelaron que los asistentes con un hándicap de golf mostraron niveles más altos de satisfacción y eran más propensos a recomendar y gastar en eventos de golf. Por otro lado, los espectadores sin hándicap y aquellos asistentes de fuera de Madrid mostraron un mayor gasto económico, lo que indica la importancia de satisfacer sus necesidades específicas para lograr resultados de impacto económico positivos. Los modelos de árbol de decisión proporcionaron información sobre el comportamiento de los asistentes, identificando factores que influyen en su satisfacción y probabilidad de asistir nuevamente. Factores como la intención de asistir en el futuro, la satisfacción con la variedad de opciones en el área de comidas y el gasto en alojamiento y recuerdos resultaron ser predictores significativos de la residencia y el nivel de hándicap. En conclusión, esta investigación contribuye a la comprensión del comportamiento del cliente en eventos de golf de élite, ofreciendo implicaciones prácticas para organizadores de eventos y gestores deportivos.
**Palabras clave:** gasto de consumidor, satisfacción del consumidor, golf, hándicap, segmentación, eventos deportivos, turismo deportivo.

## Introduction

The golf industry has experienced an immense growth during the last decades reaching broader and more transversal audiences over time. This growth presents an excellent starting point for sport managers, poses a complex challenge in understanding the extensive consumer base, and consequently, in designing efficient marketing campaigns (Benito-Colio & Solanellas-Donato, 2022; Islam, 2022). Segmentation, which involves dividing a market into distinct groups with similar needs or characteristics, is pivotal for tailoring marketing strategies effectively (Frochot & Morrison, 2000). Segmentation has also been proven to be one of the best tools to facilitate sport entities achievement of their goals (Frochot & Morrison, 2000; Islam, 2022), therefore all information used to create a more precise segmentation process, consumer profiles and consumption habits would be in good use. Among all types of information, customer satisfaction is without a doubt one of the most valuable ones since it is directly associated with client loyalty, perceived value, purchase intentions and product/service recommendation (Akinci et al., 2015; Calabuig et al., 2010; Cronin et al., 2000; Theodorakis & Alexandris, 2008; Vila-Lorenzo & Guzmán-Luján, 2023). Customer expenditure is also another interesting variable for event organizers, suppliers, and sponsors, particularly in golf, a sport which has been commonly associated with high socioeconomic standards (Agrusa & Tanner, 2002; Shani et al., 2010). In fact, within the sport industry, golf it is one of the sectors where the public has higher quality service expectations and high demands for excellent customer service standards (Crilley et al., 2002), investing a considerable amount of money in enjoying golf as players or in attending golf sport events.

Customer satisfaction, understood as the extent to which the expectations and needs of a consumer are met or exceeded by a product or service, is a multifaceted concept

central to marketing (Parker & Mathews, 2001). Customer satisfaction, being linked with fan experience, requires a distinct analysis, since referring to a golf spectator is completely different compared to a team sports spectator (McDonald et al., 2002). Fan experience in team sports is more homogeneous since fans will be seated at the arena/stadium enjoying the action in the competition (Hansen & Gauthier, 2021). However, the standard golf competition format involves a few days, a play field spanning approximately four miles and an average of 150 players per tournament with eliminatory rounds which affects the way fans choose to enjoy their experience (Robinson & Carpenter, 2002). Thus, there are three different fans' perspectives noted at golf events: they can stand at one hole and watch the field play through; follow a group of players (e.g., pair, threesome, or foursome); or randomly walk the course, watching different golfers at various holes (Robinson & Carpenter, 2002).

Contextualizing how peculiar golf is as a sport, one of the factors that could affect the event perception of the different types of fans is their previous playing experience or the absence of it, due to the technical nature and complexity of the sport as it happened for example in eSports (Jang et al., 2021). The literature related to golf events focuses mainly on spectator satisfaction and their economic profile, but without using the handicap variable (Lambrecht et al., 2009; Scott & Turco, 2009). For that particular reason, "handicap level" was chosen as one of the key variables of the study, which also represents a new academic contribution. Furthermore, the use of the handicap variable allowing the research team to distinguish "regular spectators" and "spectators-players", to analyze if the fact that a spectator is also an amateur player can influence the way they experience the event, their satisfaction quotes with all the different aspects of the event (i.e. quality of players, event facilities, etc.) and their expenditure.

Previous authors have identified different segments of golf consumers, for example, Schreyer et al. (1984) categorized players based on their experience use history (EUH) considering that past experiences would condition client habits, behavior, and decision-making (Schreyer et al., 1984). On that categorization orientated to understand better golf players they stablished: a) novices (persons making their first ever golf trip), b) beginners (persons with a low amount of experiences on a few golf trips), c) collectors (persons with high experience in golf trips without mastering any of them), d) locals (persons with a high experience at their sample golf course but low experience elsewhere), e) visitors (persons with a large experience on golf trips but low experience at their sample golf course), and veteran (persons with vast experiences at their sample golf course and golf trips). It is a variable of categorization that intrinsically involves connotations about their experience as players and their place of residence/play as well, therefore could be something to consider while analyzing the results of the present investigation.

When referring to golf as an industry, it is important to contextualize the importance of golf tourism as a massive revenue generator (Leal-Londoño et al., 2021), considering the high number of players (60 million golfers worldwide), amount of golf courses (more than 30.000) (Palmer, 2018) and overall economic impact, generating substantial revenues for the different governments (MacDonald et al., 2012). Previous scientific literature has paid big attention to the study of golf tourists and their golf practice expenditures (Shani et al., 2010) concluding that golf tourists expend more than local players (Butler, 2019), that golf vacationers who seek boredom-alleviation are more likely to perceive they have received a good experience for money spent (Petrick, 2002), and that can be great tourist promoters of the destination if they are satisfied with their stay (Ramírez-Hurtado & Berbel-Pineda, 2015). Not only has golf tourism for players been studied. Golf tourism as event spectators in golf has also been a topic of interest to understand their main travel motivations (Lyu & Lee, 2013). The popularization of golf worldwide has led to increased opportunities to watch professional golf events (Hudson & Hudson, 2014). From the perspectives of sport event tourists, there were four different segments identified within the context of leisure benefits, with their engagement manifested in diverse ways: a) escape seekers, those who valued most aspects related to nature appreciation or mental relaxation; b) exercise seekers, for visitors interested in physical health and learning skills; c) interest seekers, travellers focus on practical interests; d) excitement seekers, to describe those spectators that find social enjoyment as their main travel motivation. There is no existing research that studies the relation resident client vs visiting a client on golf event spectators, hence this investigation intends to fill that knowledge gap.

Considering the specificity of golf and spectators attending golf events, the objectives of the present research were: i) to analyze the influence on customer expenditure and satisfaction for an elite golf event based on the place of residence (local vs visitor) and handicap level of the attendees (spectator vs spectator-player); ii) to establish a multivariate model that allows for the prediction of the place of residence and the handicap based on the interaction of the analyzed variables and to establish a pattern of behaviour based on these variables for those attending an elite golf tournament.

## Methods

### Design and participants

This research is based on descriptive and comparative analysis. A total of 765 participants were interviewed in the study. The sampling error was 3.5%, considering a confidence level of 95%, and based on the total number of 40,000 attendees (data provided by the organization). The participants were $42.05 \pm 15.77$ years old. Approximately 7 out of 10 (70.5%; n=539) came from the Madrid metropolitan area and 73.9% (n=565) were handicap players. Of those attending from outside the Madrid metropolitan area,

61.2% expressed that the main reason for their trip was to attend the tournament. Additionally, 69.9% came from other provinces in Spain, and 30.1% from other countries. Finally, 19.7% of attendees went to the tournament alone, 41% as a couple, and the remaining percentage attended with more than two people.

All the participants were interviewed during the 2021 edition of the 'Acciona Open' held in Madrid. An ad hoc survey was designed for the tournament, including 45 questions related to satisfaction with the tournament, satisfaction with Madrid and the attendees' expenses during their stay in the city of Madrid. The questionnaire, which had both Spanish and English versions, was conducted in person with randomly chosen attendees, using an iPad®, equipped with the QUICKSTAPSURVEY® software. Statistical analysis was performed using IBM SPSS Statistics Version 25 ® software (IBM, Armonk, NY).

### Variables

The variables related to satisfaction with different aspects of the tournament were assessed on a Likert scale with values ranging from 1 (completely dissatisfied) to 5 (completely satisfied) (Joshi et al., 2015). On the other hand, spending variables were recorded per person and day with the aim of more accurately estimating the economic impact of attendees. Additionally, variables for handicap players were used as dependent variables (Handicap = Golf player with an official level (0-36); Non_handicap = Player without an official level and Non-player), as well as residency variables (Madrid; Non Madrid). The recoding of the Residency variable into two unique categories was due to the low number of attendees from abroad.

### Data Analysis

Two types of analysis were carried out in this study. First, a descriptive and comparative analysis was carried out. Qualitative variables were analyzed based on the count of absolute and relative frequencies. By means of contingency tables and the calculation of the Pearson Chi-Square statistic, the differences were calculated based on the variables Handicap_player and Residency. Effect size was determined using the contingency coefficient. On the other hand, the quantitative variables were analyzed using mean and standard deviation values. For this type of variable, due to the nature of the data, the non-parametric Mann-Whitney U test was applied. The effect size was calculated from the $Z/\sqrt{n}$ value, where z is the standardized adjusted residual from the Mann-Whitney U test and n is the total sample size. Effect sizes were categorized as small (ES<.10), medium (ES<.30) or large (ES>.30) (Gravetter & Wallnau, 2007).

Finally, in order to address the second objective of the study, two classification decision tree models were conducted using Handicap_player and Residency as dependent variables. The use of this supervised classification technique in this study is justified due to its high classification capability, in addition to being one of the simplest techniques in terms of interpretation and, therefore, practical application. This non-parametric technique, which has demonstrated its predictive power in the field of sports management (Gu & He, 2021; Zhao, 2021) and other sports-related fields (Méndez-Domínguez et al., 2019), allowed the creation of a sequential classification based on the variables introduced by the decision tree algorithm allowing a correct interpretation of the interaction between variables. The tree growth method was CHAID (Chi-Square Automatic Interaction Detection), which allowed to merge the categories of the variables and categories when they were not significant. The minimum number of cases for the nodes was 70 and 35 for the parent node and terminal node respectively. Both models were validated using the cross-validation method, dividing the total sample into 10 subsamples, and calculating the average risk between each of them. The model proposed with the dependent variable Residency presented a risk estimation value of .128 and a reliability of 87.2%. This model classified correctly 59.7% of the residents outside Madrid and 98.7% of the residents in Madrid. On the other hand, the model proposed for the dependent variable Handicap Player correctly classified 79.9% of the cases (.201 risk estimation value). This model presented greater sensitivity when detecting the Handicap category (91.3%) compared to the specificity presented when detecting the non-Handicap category (47.5%).

### Results

Table 1 presents the descriptive and bivariate results on spending and satisfaction during the tournament, categorized by the variables of handicap player status and residency. Likewise, Table 2 displays results from contingency table analyses and chi-square statistic calculations for variables of a qualitative nature.

Table 1.
Descriptive and bivariate results of the satisfaction and expenditure during the tournament based on the variables: i) handicap player and, ii) residency. (N=765)

| | HANDICAP PLAYER | | | RESIDENCY | | |
|---|---|---|---|---|---|---|
| | Satisfaction during tournament | | | | | |
| | Handicap (n=565) | Non-handicap (n=200) | *p* [ES] | Madrid (n=539) | Non-Madrid (n=226) | *p* [ES] |
| Tournament environment | 4.61±0.62 | 4.44±0.85 | .074 | 4.54±0.72 | 4.62±0.64 | .104 |
| Tournament security | 4.66±0.61 | 4.54±0.78 | .166 | 4.62±0.67 | 4.65±0.66 | .294 |
| Comfort on the green | 4.27±0.87 | 4.11±0.95 | .057 | 4.22±0.9 | 4.23±0.89 | .372 |
| Shopping zone | 3.96±1.05 | 3.98±0.99 | .859 | 3.93±1.03 | 4.04±1.03 | .344 |
| Activities within the venue | 3.94±1.1 | 3.95±1.07 | .940 | 3.90±1.10 | 4.04±1.05 | .207 |
| Food court | 3.67±1.12 | 3.75±1.19 | .265 | 3.64±1.18 | 3.83±1.04 | .051 |
| Variety of the food court | 3.62±1.08 | 3.47±1.11 | .067 | 3.56±1.11 | 3.62±1.04 | .586 |
| Price of the food court | 2.97±1.32 | 3.04±1.37 | .641 | 2.96±1.35 | 3.06±1.30 | .183 |

| | Handicap | Non-handicap | p [ES] | Madrid | Non-Madrid | p [ES] |
|---|---|---|---|---|---|---|
| Waiting time food court | 3.78±1.21 | 3.8±1.13 | .543 | 3.75±1.25 | 3.87±1.01 | .955 |
| Tournament sustainability | 4.37±0.88 | 4.2±0.98 | .066 | 4.32±0.93 | 4.33±0.86 | .534 |
| Ticket price | 4.36±0.88 | 4.30±0.92 | .277 | 4.28±0.93 | 4.49±0.76 | <.05[.08] |
| Level of the competition | 4.55±0.68 | 4.45±0.66 | <.05[.077] | 4.54±0.68 | 4.47±0.66 | .441 |
| Level of the players | 4.54±0.73 | 4.60±0.62 | .625 | 4.55±0.72 | 4.56±0.65 | .897 |
| General satisfaction | 4.53±6.68 | 4.46±0.8 | .693 | 4.49±0.74 | 4.53±0.64 | .818 |
| NPS Open España | 9.14±1.25 | 8.42±1.70 | <.001[.179] | 8.96±1.43 | 8.88±1.43 | .759 |
| NPS Madrid | 9.64±0.62 | 9.62±0.89 | .638 | 9.72±0.81 | 9.44±1.08 | <.001[.13] |
| I will attend in a future | 4.77±0.49 | 4.04±1.01 | <.001[.371] | 4.66±0.66 | 4.32±0.9 | <.001[.19] |
| *Expenditure during tournament* | | | | | | |
| | Handicap n=525 | Non-handicap n=200 | p [ES] | Madrid n=539 | Non-Madrid n=226 | p [ES] |
| Accommodation tournament (p/d) | 21.26±96.11 | 23.84±54.09 | <.005[.108] | 0.59±72.83 | 72.83±148.17 | <.001[.68] |
| Restaurants (p/d) | 30.55±34.47 | 41.41±40.47 | <.001[.129] | 22.82±21.90 | 58.61±49.46 | <.001[.47] |
| Tickets (p/d) | 12.13±17.51 | 13.19±14.24 | .213 | 9.95±13.25 | 18.26±21.91 | <.001[.25] |
| Private transport | 12.19±26.12 | 10.93±21.83 | .245 | 6.45±8.20 | 24.76±41.65 | <.005[0.10] |
| Public transport | 3.47±10.14 | 5.53±12.32 | <.05[.096] | 1.95±6.59 | 8.92±16.02 | <.001[.31] |
| Souvenirs | 12.39±22.74 | 13.80±30.15 | .344 | 8.54±18.13 | 22.81±34.21 | <.001[.28] |
| Entertainment | 22.73±70.64 | 27.07±52.26 | .151 | 18.25±65.97 | 37.23±70.46 | <.001[.18] |

*Note.* p/d: person/day. Values expressed by mean and standard deviation. Differences between groups contrasted using the Mann Whitney U non-parametric test. ES calculated as $Z/\sqrt{n}$, where z is the standard adjusted residual from the Mann Whitney U test and n is the total sample size

Table 2.
Results of the qualitative variables based on the variables: i) handicap player and ii) residency.

| | | Non-Handicap (n=200) | Handicap (n=565) | $X^2$ | p [ES][a] |
|---|---|---|---|---|---|
| Residency | Madrid | 120 (22.3%)** | 419 (77.7%)* | 14.227 | <.001 [.135] |
| | Non-Madrid | 80 (35.4%)* | 146 (64.6%)** | | |
| Gender | Men | 128 (22.5%) ** | 441 (77.5%)* | 15.643 | <.001 [.142] |
| | Women | 72 (36.9%)* | 123 (63.1%)** | | |
| Previous attendance Acciona Open | Yes | 43 (11.8%)** | 322 (88.2%)* | 74.581 | <.001 [.298] |
| | No | 157 (39.3%)* | 243 (60.8%)** | | |
| Previous Attendance other tournaments | Yes | 59 (14.0%)** | 362 (86.0%)* | 71.339 | <.001 [.292] |
| | No | 141 (41.0%)* | 243 (59.0%)** | | |
| Golf fanatism | 1[b] | 22 (90.9%)* | 2 (9.1%)** | 285.878 | <.001 [.522] |
| | 2[c] | 60 (90.9%) * | 6 (9.1%)** | | |
| | 3[d] | 84 (35.9%) * | 150 (64.1%)** | | |
| | 4[e] | 34 (7.7%)** | 407 (92.3%)* | | |
| Member golf club | Yes | 21 (14.0%)** | 129 (86.0%)* | 14.251 | <.001 [.135] |
| | No | 179 (29.1%)* | 436 (70.9%)** | | |
| Educational level | Secondary | 21 (25.9%) | 60 (74.1%) | 11.023 | <.001 [.119] |
| | Bac. Degree | 117 (31.3%)* | 257 (68.7%)** | | |
| | Master's Degree | 62 (20.1%)** | 247 (79.9%)* | | |
| Monthly income | <1000 €/m | 8 (19.5%) | 33 (80.5%) | 26.371 | <.001 [.183] |
| | 1000-2499 €/m | 55 (39.9%)* | 86 (61.0%)** | | |
| | 2500-4999 €/m | 79 (29.7%) | 187 (60.3%) | | |
| | >5000 €/m | 40 (16.6%)** | 201 (83.4%)* | | |
| | | Madrid (n=539) | Non-Madrid (n=226) | $X^2$ | p [ES]a |
| Handicap player | No Handicap | 120 (60.0%)** | 80 (40.0%)* | 14.227 | <.001 |
| | Handicap | 419 (74.2%)* | 146 (25.8%)** | | |
| Gender | Men | 397 (69.8%) | 172 (30.2%) | - | .503 |
| | Women | 141 (72.3%) | 54 (27.7%) | | |
| Previous attendance Acciona Open | Yes | 306 (83.8%)* | 59 (16.2%)** | 60.022 | <.001 [270] |
| | No | 233 (58.2%)** | 167 (41.8%)* | | |
| Previous Attendance other tournaments | Yes | 294 (69.8%) | 127 (30.2%) | - | .676 |
| | No | 245 (71.2%) | 99 (28.8%) | | |
| Golf fanatism | 1 | 17 (70.8%) | 7 (29.2%) | - | .145 |
| | 2 | 41 (62.1%) | 25 (37.9%) | | |
| | 3 | 157 (67.1%) | 77 (33.9%) | | |
| | 4 | 324 (73.5%)* | 117 (26.5%)** | | |
| Member golf club | Yes | 147 (98.0%)* | 3 (2.0%)** | 68.000 | <.001 [.286] |
| | No | 392 (63.7%)** | 223 (36.3%)* | | |
| Educational level | Secondary | 63 (77.8%) | 18 (22.2%) | - | .235 |
| | Bac. Degree | 256 (68.4%) | 118 (31.6%) | | |
| | Master's Degree | 220 (71.2%) | 89 (28.8%) | | |
| Monthly income | <1000 | 28 (68.3%) | 13 (31.7%) | - | .300 |
| | 1000-2499 | 92 (65.2%) | 49 (34.8%) | | |
| | 2500-4999 | 183 (68.8%) | 83 (31.2%) | | |
| | >5000 | 178 (73.9%) | 63 (26.1%) | | |

*Note.* Values expressed as absolute and relative frequencies for each of the categories. Comparisons between groups calculated from Pearson's $X^2$ statistic. [a] Effect Size calculated from the contingency coefficient; *More observed than expected values from the adjusted residual standardized; **Fewer observed values than expected from the adjusted residual standardized from the reference value for the Handicap category; [b] I am not Interested in Golf, but sometimes I attend or watch it because my family or friends are interested; [c] I'm not especially interested in Golf, but I might enjoy a game watching it anywhere; [d] I am interested in Golf and I watch it when I can; [e] I am a Golf passionate and I always try to attend matches or watch them on TV.

Regarding the predictive decision tree models, the results obtained using handicap_player as the dependent variable are presented in Figure 1. The decision tree presented a total of 12 nodes, of which 8 were terminal. The most important nodes were: i) node 1 (I will attend again in the future ≤ 3) with 75.4% of the interviewees without a handicap, ii) Node 4 (Degree of agreement I will attend again in the future = 4 & Satisfaction with the variety of food court offerings ≤ 3), in which 51.4% did not have a handicap and, iii) Node 8: (Degree of Agreement I will attend again in the future = 5 & Satisfaction activities in the complex ≤ 3 & Restaurants Expenditure ≤ €37/day) where 95.9% (n = 139) of the responses were from handicap golfers.
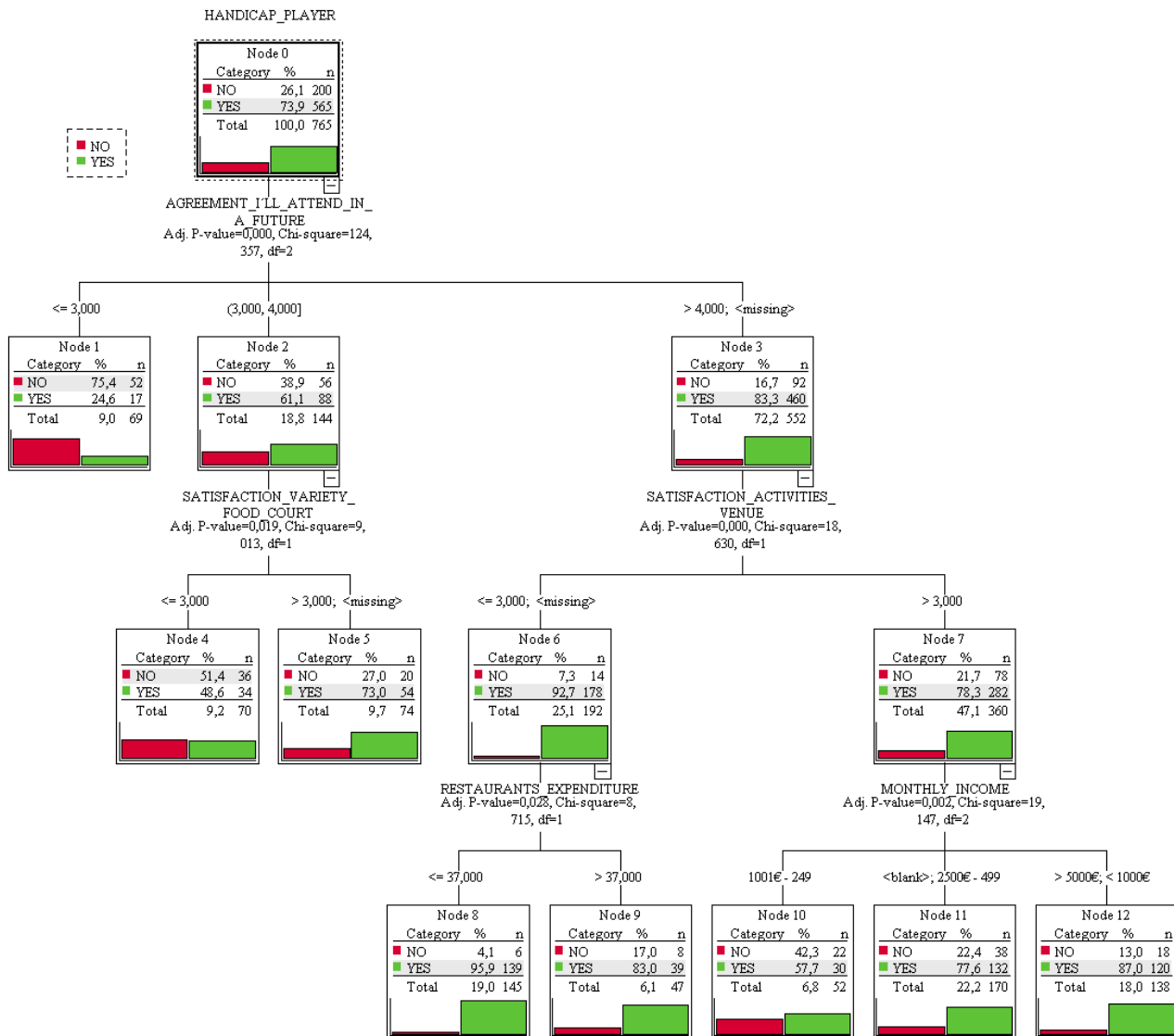


Figure 1. Decision tree model for the dependent variable *handicap player*

Finally, the decision tree using residency as the dependent variable presented 11 nodes of which 7 were terminal (figure 2). The first variable introduced by the algorithm was Expenditure on accommodation. Of the interviewees who spent money on accommodation (> 0€), 95.1% were from outside the Community of Madrid (node 1, n=623). In relation to the objectives of the study, the most interesting results can be observed in nodes 3, 4, 5 and 6, displayed from the variable Restaurant spending per day. Only 3.3% of those who spent ≤ 10 euros/day were from the community of Madrid. Instead, this percentage increased to 35.7% in those who spent <€45/day. In the same way, node 10 (n=53, Madrid 62%, Non-Madrid 37.7%) introduced Spending on Golf souvenirs as a variable, with the majority being visitors from outside Madrid, each spending over €15 on golf souvenirs during their stay at the tournament.
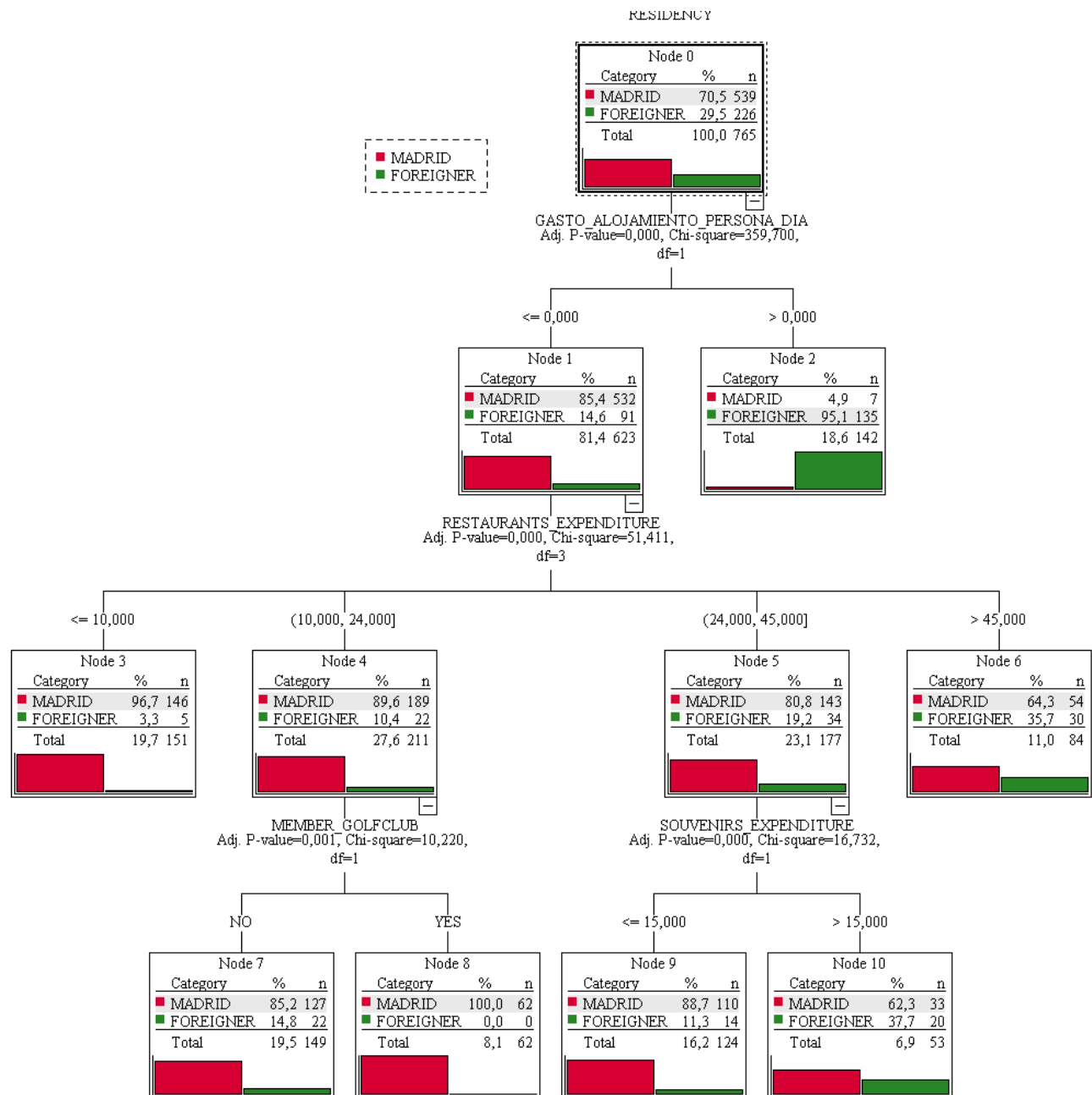
Figure 2. Decision tree model for the dependent variable *residency*

## Discussion

The objectives of the present research were: i) to analyze the influence on customer expenditure and satisfaction for an elite golf event based on the place of residence (local vs visitor) and handicap level of the attendees (spectator vs spectator-player) and, ii) to establish a multivariate model that allows predicting the place of residence and the handicap based on the interaction of the analyzed variables and to establish a pattern of behaviour based on these variables for those attending an elite golf tournament.

The results of the research show that attendees of the event who declared having a golf handicap, namely spectators linked to the sport of golf, reported higher satisfaction. This may be due to the identification factor, as would be the case of spectators with a handicap when identifying with the event of their sport, since this factor positively influences the perceptions of, and satisfaction with, the quality of the event (Jae Ko et al., 2010).

Likewise, along the same lines, the handicap holder recommends the event to a greater extent than the non-handicap attendee to the event. This is closely related to the possibility of attending the event again in the future, an aspect that was also indicated to a greater extent in the case of

attendees with a handicap than that of spectators without a golf handicap. This may be due to emotional factors, such as the connection to the sport of golf itself in the case of handicap spectators, since this emotional connection is a predictor of attendance as indicated by the research focusing on factors influencing attendance at high-level sporting events (Hall et al., 2010).

Equally, the factor related to the possibility of attending the event again in the future indicates a greater measure in the case of attendees with a golf handicap than that of those without a golf handicap. This, together with the high number of spectators with a handicap who turned out to be repeaters in the event, indicates that for this type of spectator, key aspects regarding event attendance are met, such as quality and the creation of positive emotional environments (Biscaia, 2015; Santos, 2012). In the same way, the decision tree obtained using handicap_player as the dependent variable introduced the degree of agreement with the statement "I will attend the event again" as the first predictor variable: 3 out of 4 attendees who answered 3 or less were non-handicap players, while 80% of those who answered 5 (completely agree) were handicap players, showing a clear association between both variables. In some research, especially those based on team sports (Kim et al., 2013; Lee & Kang, 2015), return visit intention is also related to the performance aspect or team performance appears as the most prominent factor in the time of the revisit, however, we can say that individual events, such as golf, this factor is diluted since the options for the favourite team or player increase in number and can also be multiple, in the case of have several players preferably. Therefore, we are inclined to indicate that the intention to revisit in individual events such as the one studied, has a greater basis in emotional aspects and, in turn, in the phenomenon of the unconditional sports fan.

The phenomenon of the unconditional fan of the event is reflected in the percentage of spectators that repeats attendance at the event (which was held in the same place and dates as previous years). In this case, out of the attendees who repeat, 88.2% have a handicap, while, on the opposite side, we obtain that 39.3% of attendees who did not have a handicap was the first time they had attended the event.

At the same time, the intention to return is notably lower among the spectators who declared they had no handicap and did not belong to Madrid. This aligns with the research on event satisfaction and return visit intention (Lee & Kang, 2015), which points out the difference between spectators who justified their satisfaction and return visit intention based on sports performance and the spectators who based it on the peripheral aspects of the event. This would indicate, in the context of this particular event, that the revisit intention of spectators without a handicap and who travelled to the event because they did not live in Madrid, would be reinforced in the case of an improvement in peripheral aspects such as food or souvenirs. In this case, the results obtained from the first decision tree (Figure 1) could be important when discriminating between players with and without a handicap. Thus, out of the 144 attendees who

indicated an agreement level of 4 (on a scale of 1-5) regarding the statement "I will attend in the future," it was observed that the next variable influencing the discrimination of the variable handicap_player was "Satisfaction with the food stalls" (nodes 4 and 5). Meanwhile, for those 552 attendees who answered 5, the next variable introduced by the decision tree algorithm was "Satisfaction with the activities at the event" (nodes 6 and 7).

Among the aspects related to the perceived value and quality of an event (Jin et al., 2013), these respond to aspects declared by the spectator related to whether it is a higher quality event, whether the time spent on the event has made you feel good and, if the prices of the event are fair. This is directly related to the case of the event studied, in which spectators from outside Madrid indicated greater importance to the price of tickets compared to those who lived in Madrid, which could respond to the need for this profile of spectator to manage their economic expenses because of their greater amount of expenses around the event. And, therefore, to a lower perceived value in their attendance at the event. Analyzing some of the terminal nodes of the decision tree (specifically, nodes 2 and 8), we could establish two extremes regarding the profile of attendees to this type of event. However, these should be approached with caution as the sample used is specific to a particular tournament. On one hand, node 2 indicates that the probability of an attendee, who disagrees or has a neutral opinion about returning in the future, being a non-handicap attendee was 75%. On the opposite end, the highest probability in favor of the Handicap category was through the interaction of the variables: "I will attend in the future" = 5, Satisfaction with activities ≤ 3, and Spending on restaurants ≤ 37. In other words, in the second case, we might encounter an attendee who contributes to a lesser extent to the economic impact of the event, is more demanding regarding activities and tournament organization, but is nonetheless loyal to the event, possibly due to a personal connection to the sport, in this case, golf.

On the other hand, based on the Residency variable, in the case of our research, the intention to return to the event is higher in the spectators who belong to Madrid than the spectators who do not belong to the Madrid area. Which, being an event that will repeat the venue and dates in the next edition, ensures that these spectators who indicate a high probability of attendance can fulfill their wishes. At the same time, as indicated in the research by Osti et al. (2012) regarding the intention to revisit a sporting event, the "Loyal Visitor" is considered the spectator who is most likely to attend the following year, indicating that this type of spectator is only interested in the event, regardless of destination. This seems to justify the fact that within the spectators who do not belong to Madrid, there is a prominent group of "Loyal Visitors", especially among the spectators with a handicap. However, the opposite would occur for spectators without a handicap and from outside Madrid, who are the group that indicates less intention to return to the event.

The valuation of an event at the level of its economic impact and the generation of tourism in the town or region that hosts it has been extensively studied in the scientific literature (McCartney et al., 2010). In the case of the event analyzed, the volume of financial expenditure for aspects related to restaurants, accommodation and public transport is more represented in the spectator who does not have a golf handicap, which seems to indicate that this profile of attendee to the event, in addition, to generate a greater economic impact than the handicap spectator, it also seeks to enjoy alternative leisure to the competition itself.

As in the event analyzed, the nature of international sporting events means that attendees who come from outside the town where the event is held declare a higher expense in aspects such as accommodation and travel (Arnegger & Herz, 2016). In the case of the event analyzed, the spectator who comes from outside Madrid and, therefore, has had to travel to attend the event, generates a higher expense than the spectator from Madrid, not only in aspects that influence the impact tourism of the event such as accommodation, travel, or entertainment but also in aspects related to internal spending on the event, such as spending on restaurants and souvenirs. From this, it can be deduced that focusing on the satisfaction of this type of spectators with the event and on their intention to return are of great importance to obtain good economic impact results from the event.

The results obtained reveal that the spectators that have a golf handicap declare to have greater satisfaction with the event than those that do not. In addition, it is a higher recommender of the event and indicates a higher probability of attending the event again. This leads to the conclusion that this viewer profile has a greater relationship with the term Loyalty Visitor. On the other hand, the results show that the proximity to the event and the link with the sport of golf is a determining factor for the satisfaction of the spectator and the intention to return. Finally, it is concluded that the economic expense and, therefore, the economic impact of the event are presented by spectators who do not have a handicap and come from outside Madrid.

## Conclusion

Drawing on the findings of this study, this research sheds light on the factors influencing customer expenditure and satisfaction at an elite golf event based on place of residence and handicap level. Spectators with a golf handicap displayed higher levels of satisfaction, recommendation, and intention to revisit the event, indicating a stronger sense of loyalty compared to non-handicap spectators. The identification factor, emotional connection to the sport, and the phenomenon of the unconditional sports fan played crucial roles in shaping their positive perceptions of the event.

On the other hand, non-handicap spectators from outside Madrid exhibited higher economic expenditure, emphasizing the significance of meeting their needs and satisfaction to ensure positive economic impact results.

Peripheral aspects, such as food and souvenirs, played a role in influencing their intention to return, highlighting the importance of catering to these elements for this spectator group.

While the study provides valuable insights, it has certain limitations. The research focused solely on an elite golf event at a specific location, limiting generalizability. To enhance the understanding of spectator behaviour further, future research should encompass various sports and events. Exploring the impact of marketing strategies and event management on spectator satisfaction and loyalty would offer practical implications for event organizers. Incorporating qualitative methods to delve into underlying motivations and emotions would deepen comprehension of spectator behaviour.

In conclusion, this study contributes valuable knowledge to the field of sport management and offers a foundation for future research endeavours. Understanding the drivers of spectator satisfaction and loyalty is vital for creating successful sporting events and fostering a thriving sports industry. By addressing the limitations and exploring future lines of research, scholars can advance the field and contribute to the success of sporting events worldwide.

## Funding

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