Social Perception and Attitude Towards International Sporting Events of Local Residents

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Abstract
Sporting events are central to the world of professional sports, making the acceptance and support of these events critical to their success. Our study aimed to analyse the relationship between opinion formation (support or opposition) and general attitudes toward sporting events in Hungary. And also to explore how attitudes towards sporting events differ from those who do not. To determine the connection and effects of the model, we use Covariance-based Structural Equation Modelling (CB-SEM), while in order to analyse the differences of supporter types we concluded a Cluster analysis. The latent variables of the developed SEM model had high internal consistency and good reliability, while the model had good psychometric properties. The results indicate that attitude has a significantly positive effect on perceived positive impacts of sports events (=0.93), explaining 87% of its variance, while it also has a significantly negative effect on perceptions of negative impacts of sporting events (>=-0.42). In addition, there is a strong direct effect between positive attitudes towards sports events and their positive perception. Through cluster analysis, we identified four significantly distinct groups: "Opponents" (13.5%), "Indifferent" (28.6%), "Rational Supporters" (29.4%), and "Enthusiastic Supporters" (28.6%). Most of the respondents agreed that international sporting events can enhance the image of the host city, promote economic development, and stimulate the local economy. However, perceived negative effects were driven by political reasons, such as government support for sports and lack of information. Therefore, our findings suggest that education and the provision of accurate information can help increase support for similar sporting events.

Key Words: sporting event, social support, local residents, attitudes, clustering, Structural Equation Modeling.

JEL Classification: C38, D91, L83, Z20, Z30


1. Introduction

Sports events are central to professional sports and have a significant impact on all markets within the sports economy. These events are embedded in a social context and their effects are not confined to the sports field; they have a multiplicative effect that extends far beyond (Máté, 2019). For international mega-events, a lack of social support can affect their success, as well as the perception of non-mega-sporting events.
Many factors influence people's opinions on international sporting events, including education and culture, which play a significant role in shaping the attitudes of individuals and societies toward sports (Chalip et al., 2017; Pozeriene et al., 2021). These factors can be directly and indirectly influenced by state and national governments. In Hungary, sports have been considered a key strategic sector from 1998 to 2002 and again since 2010. As part of the triple objective of sports governance in Hungary, the country aims to host as many international sporting events as possible. This has led to a wave of development, not only in the field of sports but also in related sectors. In 2010, the Hungarian government defined three sets of goals for sports development: hosting as many sports events as possible, encouraging all children to participate in sports, and building sports facilities to meet these goals (Szabó & Stöcker, 2017, p. 58). In 2017, Hungary wanted to bid for the 2024 Summer Olympics, but the bid became a political issue, and the government eventually withdrew it.

The relationship between sports and politics has become increasingly significant in the organisation of international sporting events. In recent years, seven cities (Boston, Hamburg, Krakow, Munich, Oslo, Rome, and Budapest) have withdrawn from hosting the Olympics, whereas the NOlimpics movements have gained strength. As a result, gaining and maintaining public support for hosting such events has become increasingly difficult. Using Budapest as an example, an Ipsos survey conducted in 2016 showed that 58% of Hungary would be happy and 62% would be proud if Budapest hosted the 2024 Olympics (Ipsos, 2016). However, the Olympic campaign eventually turned the tide.

Duan et al. (2021) applied the basic assumption of social exchange theory to international sporting events. According to this theory, individuals (in this case, the inhabitants of the organising city) are influenced by the extent to which the costs they have to bear can be used to benefit themselves and improve their quality of life. An international experience with mega-events is the lack of social support, which can impact the perception of non-mega-events as well.

Therefore, the current study builds on the basics of social exchange theory to understand the local residents’ attitudes towards sporting events and explore how these attitudes can be classified into distinct groups. Furthermore, the study aims to examine the behavioural and sociodemographic differences between these identified clusters. Additionally, the research seeks to determine the extent to which individuals belonging to different groups hold varying perceptions of the positive and negative impacts of sporting events. Through this research, a comprehensive understanding of attitudes, differences, and perceptions related to sporting events will be gained, providing valuable insights for event organizers and policymakers in effectively catering to the needs and preferences of diverse audience segments.

In our current paper section 2 a comprehensive review of the relevant literature is conducted. The literature review encompasses three key sub-sections: Local residents and stakeholders and their support for sporting events; Social Exchange Theory, and the impact of experience. These sub-sections provide a theoretical framework and contextual background for understanding the dynamics between international sporting events, local communities, and the psychological and sociological factors at play. The methodology section (Section 3) outlines the research design and data collection procedures employed in the study including data collection methods utilized to gather information from local residents, while subsection 2 explores the participant profile, shedding light on the demographic characteristics of the respondents and their involvement in the event. The results and discussion section (Section 4) presents the findings of the study based on the collected data. We employed factor analysis techniques to identify and analyse the key factors influencing local residents' and stakeholders' support for sporting events, which is followed by a cluster analysis to group respondents based on shared characteristics and attitudes. Lastly sub-section 4.3 introduces the structural model that examines the relationships between various variables and constructs identified in the study. The concluding section (Section 5) summarizes the main findings, discusses their implications and limitations.
2. Literature review

2.1 Local residents as stakeholders and their support for sporting events

Cities serve as the backdrop for numerous high-value experiential events, including sporting events. According to Florek and Insch's model “that cities are ‘produced’ and ‘consumed’ by people who are involved in a more or less absorbing experience; they enjoy the city-bound activities and resources from which experiences come from, such as: particular objects (e.g. historical buildings, museums), events (e.g. concerts, sport events), services (e.g. restaurants, galleries), and diverse social spaces, which let visitors or/and residents interact to enjoy its atmosphere and sociability” (Florek & Insch, 2020, p. 171.). Stakeholder analysis is often used to understand the social context of sporting events. Freeman (2004:229) defines a stakeholder as ‘any group or individual who can affect or is affected by the achievement of organisational objectives’.

Local residents are considered key stakeholders in sporting events as they are directly impacted by the event's effects and its legacy in the long run (Moital et al., 2013). However, identifying and measuring societal impacts can be challenging, leading to the need for predictability, estimation, and analysis of impacts.

The decision to apply for a sporting event is made by politicians and local/national sport governing bodies, while the host cities (nations) are selected by international sport governing bodies. Country's business environment is undeniably an influential factor that affects the motivation to initiate a new business (Civelek & Krajčík, 2022), or in our context, to organize a sport event. The international business environment consists of eight elements: legal systems, tax regimes, restrictions, income level, political risk, economic geography and demography, culture, and exchange rates (Vasanicova, 2021), legal systems, tax regimes, restrictions, and culture (Ključnikov et al., 2022). The stability and competitiveness of these elements play a crucial role in determining government decisions.

Local and national residents play an important role in this process, as their opinion influences the political system's support for the bid and willingness to fund the event (Preuss & Solberg, 2006, p. 391). In addition, local residents contribute to the positive atmosphere of the event by participating as spectators, making the event even more enjoyable. The better the atmosphere of the event, the better the atmosphere for the members of the sports governing body and politicians, who can take advantage of the opportunity to "bask in the reflected glory" of a successfully staged event (Snyder et al., 1986).

Research on factors that influence resident support has been the subject of numerous international publications, mainly focused on megasporting events (Coates & Wicker, 2015; Gursoy et al., 2017; Scheu & Preuss 2018). Although the success of any sporting event depends largely on the support of local residents (Gursoy et al., 2017), understanding their attitudes towards event development and its determinants is crucial to gain positive community support. For instance, Vetitnev and Bobina (2015) found that local residents who are more familiar with the Olympic Games have more positive perceptions of the event.

According to Gursoy et al. (2017), the factors that influence residents' support for local events include community attachment, community concerns, ecocentric attitudes (such as tax revenues for the government, business opportunities, increased employment, improved quality of life for local residents, improved public services, and regeneration of urban areas and infrastructure), and trust in organising institutions. Bazzanella et al. (2019) found that for small-scale event success, the involvement of local stakeholders in the decision-making process is key. Furthermore, stakeholder involvement makes the decision-making processes when staging an event more effective across all organizational phases. When analysing the local residents of the Commonwealth Games Johnston et al. (2023) concluded that positive impacts (pride) were perceived to have the greatest effect on event support, whereas each of the negative impact perceptions (opportunity cost, justice) were linked to decreased event support. The results provide important insights on community member perceptions of major sport events and
suggest that targeted communication strategies could counteract the tendency of community members to focus on negatives.

Máté (2019) demonstrated a correlation between quality of life and support for sporting events. She found that "higher satisfaction with the quality of life is associated with higher levels of support for international sporting events. Satisfaction with life is associated with satisfaction with the city, and those who are satisfied with their life are satisfied with the city" (Máté, 2019).

Ma and Kaplanidou (2016) investigated the mediating effect of quality of life and found that it significantly influences the support of events. Consequently, nurturing a legacy that improves quality of life is crucial.

Del Chiappa et al. (2016) aimed to profile residents based on their perceptions and attitude toward a motorsport event, namely the FIA World Rally Championship. The cluster analysis applied to the scores of the seven factors identified through the exploratory factor analysis ("positive sociocultural impacts," "positive economic impacts," "support for local projects and quality of life," "positive environmental impacts," "negative environmental impacts," "negative socio-cultural impacts," "cost-benefit balance") showed that residents' perceptions and attitudes are not homogeneous. Specifically, four groups were identified: supporters, neutrals, enthusiasts but culturally and environmentally concerned, and ‘critics’, among which supporters were the largest segment (Del Chiappa et al., 2016, p.44).

In terms of tourism development, which can be stimulated by sport events, Uslu et al. (2020) conclude that "the local community must accept this change and continue their lives, but they can be both optimistic and pessimistic in this process" (p.2). Understanding the local community’s perspective on tourism development is essential to mitigate the negative impacts and maximize the benefits associated with it (Thetsane, 2019). The satisfaction of the local community with tourism development contributes positively to their overall attitude towards it (Uslu et al., 2020; Gavurova et al. 2023).

2.2 Social Exchange Theory

Duan et al. (2021) conducted research based on the basic assumption of the social exchange theory that an individual's behaviour is influenced by the extent to which the costs they have to pay can be translated into benefits for themselves. In China, exchanges are particularly important due to its large population, economic growth, and high degree of social competition. The theory suggests that people are supportive of events if the benefits they bring exceed their costs.

They investigated the public's attitudes toward sporting events based on four effects: economic, psychological, environmental, and social. Quality of life was assessed separately. The research findings are consistent with the ideas of social exchange theory, with residents support a local event if they perceive it to improve their quality of life. The perceived psychological impact had a direct positive effect on the support for the event and also positively impacted quality of life.

The economic impact perceived by the residents did not have a positive effect on quality of life or a direct positive effect on the support for the event. Regarding the perception of environmental impact, no direct significant impact affected support for the event, but it directly improved the quality of life of residents. Finally, the perception of social impact was similar to the psychological impact, having a positive impact on support for the event both directly and through quality of life, and was found to be the most significant of all.

The aim of developing sports infrastructure is to improve the health of the country's residents. As a priority “supported the projects (for example: sport events) leading to the creation and improving the quality of the existing facilities for sporting and recreational which are available for the building and updating the sports facilities provide the conditions for increased physical activity which improving the health of the residents, especially in the areas where there was no possibility to spending actively of the leisure time” (Niesyto & Lovasova, 2015, p.106.).
Studies related to this theory investigate whether residents would be willing to pay a special contribution to support the sport. Funuhashi and Mano's (2014) research aimed to assess the annual willingness to pay (WTP) of Japanese society to improve the Japanese state's sports policy for better performance. The results showed that on average, the Japanese are willing to pay 513 yen (~1450 Hungarian forints or 3.6 euros) per year to the state to increase sports success. The truncated average (excluding the top and bottom 10%) is much higher at 1802 yen (~5015 Hungarian forints or 12.71 euros).

In Germany, Wicker et al.'s (2017) results showed that around a quarter of respondents would be willing to pay extra taxes to host the Olympics, with the highest willingness to pay in the Cologne area, perhaps because sport plays a more significant role in the lives of residents there than in other regions.

To understand the reasons for the local failure of the referendum on the location of the 2024 Olympic Games in Hamburg, Wicker and Coates (2018) analysed individual voting behavior and willingness to pay (WTP). The results suggested that the presentation of information on costs was critical in the context of individual support, such as communication of projected costs to the intended audience and trust in financial forecasting, the mental cost to the audience (here mainly related to security), public perception of the trustworthiness of the body managing the capital (here government), and environmental aspects. The study concluded that for future tenders, it is worth reconsidering the formal documentation of local public support through a (nonbinding) referendum. Moreover, it is essential to ensure a good flow of information and increase trust in public officials. An individual's decision to vote positively and present a high WTP is more influenced by their perception of the costs than the benefits.

In light of these studies, our research questions are the following:

RQ1: How can people be classified in terms of attitudes towards sporting events?

RQ2: What behavioural and sociodemographic differences can be identified between the different clusters?

RQ3: To what extent do people belonging to different groups have different perceptions of the negative and positive impacts of sporting events?

2.3 The impact of experience

Ex-ante and ex-post research show that experience shapes perceptions of sporting events. Kim and Petrick (2005) found that as the 2002 World Cup fever subsided, earlier responses to the heightened mood were somewhat negatively skewed. Two positive aspects, interest in foreign countries and cultures, and enhancement of country image and consolidation, as well as two negative aspects, underutilization of stadiums and underachievement of expected spectators, shifted towards negative perceptions. The shift was mainly due to the fear of under-utilisation of stadiums built and underachievement of the expected number of spectators (230,000 instead of 40 million).

The third pillar of the social impacts of sporting events is social cohesion, which is the development of a community based on shared values, common challenges, and equal opportunities, founded on trust, hope, and mutuality. Although the impact of sport itself in promoting unity and nation building is a subject of debate in the literature, the potential of sport as a nation builder is limited (Labuschagne, 2008). Labuschagne believes that sport is "no more than ninety minutes of patriotism" (Labuschagne, 2008, p.3). The question arises as to how this sense of unity can be sustained in the long term and how this experience can lead to positive perceptions. Labuschagne is optimistic, concluding that careful planning and conscious efforts to ensure that the benefits of sport are felt as widely as possible can make its positive effects more lasting (Labuschagne, 2008, p.13). Therefore, the potential of sport to create a sense of unity and motivate people can only be realised if there is a "comprehensive, structured plan" to achieve this (Labuschagne, 2008, p.13).
Part of this plan is the marketing strategy for the event, which is centered around an event-based experience package and aimed at encouraging on-site participation. The marketing communication strategy plays a crucial role in influencing the intention to visit (Foster et al., 2020).

Previous research (Oshimi et al., 2021) has shown that when the benefits of a sporting event outweigh its costs based on experience, people have a positive attitude towards the event. Similarly, if the costs exceed the benefits, they have a negative attitude towards the event. Current research aims to reverse this and investigate whether an a priori positive attitude towards sporting events in general leads to a higher valuation of their positive effects and a lower valuation of their negative consequences. On the contrary, a negative attitude leads to a stronger perception of negative effects and a lower perception of positive effects.

Therefore, we assume that...

H1: there is a significant positive relationship between general attitudes towards sports events and the perceived positive effects of locally organised sports events.

H2: there is a significant negative relationship between the attitude towards sports events and subjective perceptions of the negative impacts of locally organised sports events.

Figure 1. The Proposed model

3. Methods

Since our dimensions were not constructed from existing items, both exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were required to validate the construct (Bryant & Yarnold, 1995). We randomly split the original data set into two separate subsamples (n1=364 and n2=364) following the suggestion of a one-time sampling. After the split, the two subsamples exhibited similar sociodemographic and sport-related behavioural characteristics and were therefore suitable for investigation.

To test the construct or conceptual validity of the model and its components, both EFA and CFA were needed. An important condition for factor analysis is the use of metric variables, and in our case, each indicator was measured on a 5-point Likert scale, satisfying this requirement (Malhotra & Simon, 2009). The number of sample elements needed for the final factor structure exceeded the rule of "n / q > 5", proposed by Bentler and Chou (1987) for factor analysis, where "n" is the number of elements and "q" is the number of parameters estimated in the model. The number of parameters in the final model was 11, so the sample size of the two subsamples was adequate.

For internal reliability, we used two indicators: composite reliability (CR), which is a conceptual reliability index for the indicator, and average explained variance (AVE). The expected threshold for
the first two indicators is 0.70, and for the latter is 0.50 (Bagozzi & Yi, 1988; Fornell & Larcker, 1981; Hair et al., 2010).

To assess the fit of the model, we used the Chi-square test and its standardized version, the CMIN/df (χ2/degree of freedom) absolute fit index, which relates the goodness of fit of a model to the situation where there is "no model" (Byrne, 2016). We also used "RMSEA" (Root Mean Square Error of Approximation), which is based on the analysis of residuals and allows us to test the hypothesis on the differences between the observed correlation/covariance and the reproduced values. Among the fit indices, the NFI (Normal Fit Index), the TLI (Tucker-Lewis Index), the GFI (Goodness-of-fit index), AGFI (Adjusted Goodness-of-fit index), and the CFI (Comparative Fit Index) are incremental or comparative indices that are relative to a baseline model specified in the analysis (Neumann-Bödi, 2012). The standard root mean square residual (SRMR) is the standardised form of the square root of the difference between the sample and the covariance matrix of the hypothesised model (Hooper et al., 2008).

The analysis of the indicators was based on criteria proposed in the literature. For the CMIN/df indicator, Marsh and Hocevar (1985) and Carmines and McIver (1981) suggest a ratio below 5, which is considered to be the most lenient, while Ullmann and Bentler (2012) suggests a more stringent ratio below 3. For the RMSEA, Byrne (2016) considered a ratio below 0.06 to be good, but a model with a result below 0.08 was also acceptable.

To evaluate the goodness-of-fit, we followed the guidelines of Ullmann and Bentler (2012), considering a value above 0.9 to indicate a good fit for all indicators of NFI, TLI, GFI, AGFI and CFI, and a value above 0.95 to indicate an excellent fit. For the SRMR, a value less than 0.08 was defined as a good fit.

To perform the cluster analysis, we selected one of the factors, the general attitude towards sporting events, and used the K-means clustering. With K-means cluster analysis, the researcher can choose a fixed number of clusters, allowing visualization of the clustering process with different numbers of clusters. The objective of K-means clustering is to make the intercluster data points as similar as possible while keeping the clusters as different as possible. We chose to use four clusters, as this allowed for clear distinctions between each cluster, and facilitated interpretation.

3.1 Data collection and instrument

To answer our research questions and collect extensive data, an online survey was conducted in Hungary and was available on the largest domestic social media platform (Facebook) from August 1 to September 15, 2020. After data cleaning, 728 valid responses from the initial 1,199 responses were used for the final sample. Using the dimensions created by Taks (2013) and Máté (2017) to measure the perceived impact of a sporting event, we created single-item questions for each dimension (as seen in the table below), measuring them on a 7-point Likert scale. We also wanted to categorise the dimensions and explore the relationship among them. Therefore, we performed an exploratory factor analysis (EFA) to obtain a satisfactory factor structure. We used principal component analysis (PCA) on the first half of the oblique rotation (PROMAX) to arrive at an interpretable factor structure. Compared to orthogonal (VARIMAX) rotation, the oblique method maximises the variance on the new axes, resulting in a satisfactory pattern of loadings on each factor while allowing factors to be correlated with each other (Fabrigar et al., 1999).

3.2 Data collection and instrument

As mentioned above, a total of 728 surveys were collected, with 255 men and 473 women included in the study, and an average age of 34.41 years (standard deviation 14.14). The sample shows significant asynchronicity in terms of educational attainment, with 50.6% of respondents having a
tertiary education, compared to only 17.1% of the total Hungarian population. The proportion of respondents with at least a high school degree but no tertiary education is the same as in the Hungarian population (36.3% vs 32.3%). However, the proportion of people without a high school degree is much lower in our sample than in the general population (13.2% vs. 50.6%). In terms of place of residence, the sample is overrepresented in Budapest (39.1% vs. 17.8%) and in county capitals (24.6% vs. 18.2%), while underrepresented in other urban areas (20.6% vs. 32.5%) and in villages and communes (12.4% vs. 31.3%). Additionally, our sample is over-represented among single people and under-represented among married, divorced, and widowed people.

In our research, we were interested in the sport-related behaviour of the respondents. Most of the respondents reported doing sports 2-3 times a week (30.5%), followed by 4-5 times a week (21.7%). Almost 16% of the sample reported doing sports daily. However, the combined response rates of 1-2 times a month and rarely or never (22.4%) exceeded the second ranked 4-5 times a week.

Among men, the proportion of people who do sports every day is 7.3% higher than for women, while the difference is 11.7% for those who do sports at least 2-3 times a week. In contrast, the proportion of women who do sport at most once or twice a month is 13% higher than that of men.

The respondents also highly valued the contribution of leisure sports to the maintenance and development of physical and mental health. On a seven-point scale, these responses averaged 6.35 and 6.29, respectively.

The sample used in this study does not meet the representativeness criteria due to the overrepresentation of certain demographic groups and underrepresentation of others. However, despite this limitation, the distribution provides valuable information about the population with a higher affinity for sports. Additionally, comparing the data from this sporty sample with those of the general population allows general conclusions to be drawn.

4. Results and Discussion

4.1 Factor analysis

During the EFA, the KMO (Kaiser-Meyer-Olkin) index was 0.883, which is considered good according to Sajtos and Mitev (2007). Additionally, the Barlet test for sphericity was also significant. In general, the six factors explained 71.51% of the variance, which is considered good.

After the exploratory analysis, a CFA was performed to verify the proposed three-factor model. All internal consistency scores were strong and all item-to-total scores were above the 0.50 cutoff. CFA supported the three-dimensional construct, revealing a good fit [χ²(df) = 4.58, RMSEA = .069, SRMR = .048, GFI = .95, AGFI = .93, NFI = .95, CFI= .96].

<table>
<thead>
<tr>
<th>General attitude towards sporting events</th>
<th>Mean</th>
<th>SD</th>
<th>CR</th>
<th>Item to total score (EFA)</th>
<th>Item to total score (CFA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>The benefits of international sporting events outweigh their disadvantages</td>
<td>3.62</td>
<td>1.07</td>
<td>0.88</td>
<td>0.73</td>
<td></td>
</tr>
<tr>
<td>International sporting events contribute to long-term positive changes in the host city</td>
<td>3.63</td>
<td>1.12</td>
<td>0.82</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>My country should host international</td>
<td>3.84</td>
<td>1.17</td>
<td>0.77</td>
<td>0.76</td>
<td></td>
</tr>
</tbody>
</table>
sporting events in the future.

Hosting international sporting events in the future that are appropriate for my home city.  

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std Dev</th>
<th>N</th>
<th>CI 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Perceived direct positive effects of sporting events</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>They raise the awareness of the organising city.</td>
<td>4.25</td>
<td>0.98</td>
<td>0.99</td>
<td>0.73</td>
</tr>
<tr>
<td>They give a new boost to urban development and strengthen the local economy.</td>
<td>3.81</td>
<td>1.09</td>
<td>0.79</td>
<td>0.75</td>
</tr>
<tr>
<td>They stimulate social life and strengthen community cohesion in the host city.</td>
<td>3.62</td>
<td>1.10</td>
<td>0.70</td>
<td>0.63</td>
</tr>
<tr>
<td>They have the effect of improving sports culture and sports awareness.</td>
<td>3.68</td>
<td>1.19</td>
<td>0.52</td>
<td>0.64</td>
</tr>
<tr>
<td><strong>Perceived direct negative effects of sporting events</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sporting events damage the natural environment.</td>
<td>2.97</td>
<td>1.14</td>
<td>0.81</td>
<td>0.69</td>
</tr>
<tr>
<td>They cause route changes and have a negative impact on traffic flows.</td>
<td>3.19</td>
<td>1.13</td>
<td>0.80</td>
<td>0.73</td>
</tr>
<tr>
<td>The new facilities and investments will remain unused.</td>
<td>3.53</td>
<td>1.11</td>
<td>0.77</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Source: own

Based on the results (Table 1), the general attitude towards sporting events can be interpreted as a positive attitude toward international sporting events. A person with a positive attitude supports the organisation of such events and believes that their positive effects outweigh the negative ones, resulting in an overall positive impact on the future of the host city. Therefore, they also support their city in organising international sporting events.

The perceived direct positive effects of sporting events refer to the direct positive impact of an individual event hosted by the city on the city's image, visibility, and social and sporting life. This means that organizing domestically hosted international sporting events helps the local economy and stimulates new development. The strongest positive effect identified was the increase in city image (4.25), while the stimulation of social life was the least strong (3.62).

Perceived direct negative effects of sporting events mean that people perceive that organising a sporting event causes harm to the local natural environment and has a negative impact on the daily life of the city, including traffic. It also means that the infrastructure built for such an event remains underutilised. The overall negative impact rating is 0.61 lower than the positive ones. The main negative impact is the fear that the facilities and investments built for the event will not be used (3.53).

4.2 Clusters

During the cluster analysis, we used the general attitude toward sporting event factor items to classify the respondents. Cluster analysis allowed the creation of four significantly different groups. For the group of "Opponents" (13.5%), the mean of the responses to the questions on the 5-point Likert scale related to attitudes toward sporting events was 2.14, while the group of "Indifferents" (26.6%) had a mean of 3.15, while "Rational supporters" (23.4%) had a mean of 4.06, and "Enthusiastic supporters" (28.6%) had a mean of 4.54. Rational supporters rated the positive impacts typically lower and the negative impacts typically higher than enthusiastic supporters. The average difference between the two
categories was only 0.3 for rational supporters and 2.18 for enthusiasts. A more detailed examination of Table 2 reveals that the biggest differences are in the perception of positive impacts. Members of the enthusiastic supporter group gave a very high average score of 4.59 for these effects, and the rational supporter group rated it 4.17, while the opponents gave a very low average of 2.47, which is almost one point below even the average of the ‘Indifferent’ group of 3.40. Meanwhile, opponents rated the negative effects of events at 4.04, while enthusiastic supporters gave an average of only 2.41.

Interestingly, ‘Rational Supporters’ rated the negative effects 0.8 points higher than ‘Indifferent’ ones. We can conclude that among the groups, the only ones who rate the negative effects stronger than the positive ones are the ‘Opponents’. Although the Indifferent group rates both the positive and negative effects lower than the ‘Rational Supporters’ group, behind the middle rating lies a possible inability to make decisions or evaluate the effects.

Table 2. Average scores for each factor by cluster

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Members (n)</th>
<th>Average of General attitude towards sport events</th>
<th>Average of Perceived direct positive effects of sport events</th>
<th>Average of Perceived direct positive effects of sport events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opponents</td>
<td>98</td>
<td>2.14</td>
<td>2.47</td>
<td>4.04</td>
</tr>
<tr>
<td>Indifferents</td>
<td>208</td>
<td>3.15</td>
<td>3.40</td>
<td>3.02</td>
</tr>
<tr>
<td>Rational supporter</td>
<td>214</td>
<td>4.06</td>
<td>4.17</td>
<td>3.85</td>
</tr>
<tr>
<td>Enthusiastic supporter</td>
<td>208</td>
<td>4.54</td>
<td>4.59</td>
<td>2.41</td>
</tr>
<tr>
<td>Overall</td>
<td>728</td>
<td>3.67</td>
<td>3.84</td>
<td>3.23</td>
</tr>
<tr>
<td>sig</td>
<td>***</td>
<td>***</td>
<td>***</td>
<td>***</td>
</tr>
</tbody>
</table>

Source: own

Since the clusters were formed based on psychographic and behavioural factors rather than sociodemographic characteristics, there are only two areas where the clusters differ significantly in sociocultural and demographic terms. A higher proportion of Opponents live in the capital, particularly people who do not or very rarely attend sporting events as spectators. Additionally, the group of Rational Supporters includes the largest number of young people and respondents with student status. Among enthusiastic supporters, more people live in county capital cities (typically with a population of 50 to 100 thousand) and have a higher degree. Supporters are more likely to search for sports-related information from multiple sources (TV, online portals, social networks) and watch sports events more often.

Table 3. Average scores for each factor by cluster

<table>
<thead>
<tr>
<th></th>
<th>Opponent (n=98)</th>
<th>Indifferent (n=208)</th>
<th>Rational supporter (n=214)</th>
<th>Enthusiastic supporter (n=208)</th>
<th>sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>63.3% male</td>
<td>65.4% male</td>
<td>68.7% male</td>
<td>61.5% male</td>
<td></td>
<td>.472</td>
</tr>
<tr>
<td>36.7% female</td>
<td>34.6% female</td>
<td>31.3% female</td>
<td>38.5% female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average age</td>
<td>39.05</td>
<td>37.27</td>
<td>33.73</td>
<td>37.86</td>
<td>.003*</td>
</tr>
<tr>
<td>Age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.4% 14-24</td>
<td>24.5% 14-23</td>
<td>23.5% 35-44</td>
<td>20.7% 45-54</td>
<td></td>
<td>.188</td>
</tr>
<tr>
<td>20.4% 24-34</td>
<td>18.3% 24-34</td>
<td>24.0% 35-44</td>
<td>15.4% 45-54</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.5% 35-44</td>
<td>18.7% 24-34</td>
<td>20.1% 35-44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.3% 45-54</td>
<td>17.8% 45-54</td>
<td>15.4% 45-54</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The opponents of international sporting events are mainly men and older than those of other groups. They live in the capital, which could mean that they attend sporting events more often and thus face the negative effects more frequently than other clusters. The share of students is the lowest in this group, and members of this cluster rarely attend sporting events as spectators. 59% of them have not attended any sporting events in the last 3 years, and only 12% of them have seen a national team match. Accordingly, they are much less likely to be interested in sports news or coverage.

Table 4. Frequency of participatory sport consumption in each cluster

<table>
<thead>
<tr>
<th></th>
<th>6-7 per week</th>
<th>4-5 per week</th>
<th>2-3 per week</th>
<th>weekly</th>
<th>1-2 per month</th>
<th>monthly</th>
<th>never</th>
<th>overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>12</td>
<td>16</td>
<td>34</td>
<td>7</td>
<td>7</td>
<td>12</td>
<td>10</td>
<td>98</td>
</tr>
<tr>
<td>%</td>
<td>12.2%</td>
<td>16.3%</td>
<td>34.7%</td>
<td>7.1%</td>
<td>7.1%</td>
<td>12.2%</td>
<td>10.2%</td>
<td>100.0%</td>
</tr>
<tr>
<td><strong>Opponents</strong></td>
<td><strong>Count</strong></td>
<td><strong>%</strong></td>
<td><strong>Count</strong></td>
<td><strong>%</strong></td>
<td><strong>Count</strong></td>
<td><strong>%</strong></td>
<td><strong>Count</strong></td>
<td><strong>%</strong></td>
</tr>
<tr>
<td>Count</td>
<td>34</td>
<td>42</td>
<td>60</td>
<td>23</td>
<td>14</td>
<td>16</td>
<td>19</td>
<td>208</td>
</tr>
<tr>
<td>%</td>
<td>16.3%</td>
<td>20.2%</td>
<td>28.8%</td>
<td>11.1%</td>
<td>6.7%</td>
<td>7.7%</td>
<td>9.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Count</td>
<td>32</td>
<td>50</td>
<td>71</td>
<td>15</td>
<td>21</td>
<td>20</td>
<td>5</td>
<td>214</td>
</tr>
<tr>
<td>%</td>
<td>15.0%</td>
<td>23.4%</td>
<td>33.2%</td>
<td>7.0%</td>
<td>9.8%</td>
<td>9.3%</td>
<td>2.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Count</td>
<td>36</td>
<td>50</td>
<td>57</td>
<td>25</td>
<td>18</td>
<td>12</td>
<td>10</td>
<td>208</td>
</tr>
<tr>
<td>%</td>
<td>17.3%</td>
<td>24.0%</td>
<td>27.4%</td>
<td>12.0%</td>
<td>8.7%</td>
<td>5.8%</td>
<td>4.8%</td>
<td>100.0%</td>
</tr>
<tr>
<td>( \chi^2 ) (sig)</td>
<td>92.812 (&lt;.001)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: own

We were interested in how each group differed in other aspects of sports consumption. Our most interesting finding is that although there are more people who do not or very rarely participate in sport among Opponents, there is no significant relationship between participatory sports consumption and overall attitudes toward sporting events. Furthermore, we find that our current sample does not support the findings of Máté (2019) and Ma and Kaplanidou (2016) that there is a relationship between satisfaction with quality of life and support for sports events. No differences were found between the groups in terms of satisfaction with the material situation (\( \chi^2=5.625; df=12; sig.=0.934 \)) or the standard of living (\( \chi^2=18.794; df=12; sig.=0.094 \)). This could be because, unlike previous research, the sample
was overrepresented among those with a greater interest in sport, so the strength of other sociodemographic effects may have been weaker (as seen in Table 4).

On the contrary, positive perception is significantly related to the degree to which individuals participated as spectators in domestic recreational sporting events and national team matches, or as fans in professional events and games ($\chi^2=92.812; df=12; sig.<0.001$), or watched sports broadcasts on television ($\chi^2=75.283; df=12; sig.<0.001$) or on smartphones or tablets ($\chi^2=43.583; df=12; sig.<0.001$). This supports the idea that prior attendance at sporting events can influence how we perceive them in general, making the positive effects of the event stronger, while the negative effects are perceived as less powerful (see Table 5).

Table 5. Sport activity frequency in each cluster

<table>
<thead>
<tr>
<th></th>
<th>Attending domestic recreational sports event as participant</th>
<th>Attending Hungarian national team matches as a spectator</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$Y_e$</td>
<td>$N_0$</td>
</tr>
<tr>
<td>Opponent</td>
<td>27</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>27.6%</td>
<td>72.4%</td>
</tr>
<tr>
<td>Indifferent</td>
<td>70</td>
<td>138</td>
</tr>
<tr>
<td></td>
<td>33.7%</td>
<td>66.3%</td>
</tr>
<tr>
<td>Rational supporter</td>
<td>105</td>
<td>109</td>
</tr>
<tr>
<td></td>
<td>49.1%</td>
<td>50.9%</td>
</tr>
<tr>
<td>Enthusiastic supporter</td>
<td>96</td>
<td>112</td>
</tr>
<tr>
<td></td>
<td>46.2%</td>
<td>53.8%</td>
</tr>
<tr>
<td>$\chi^2$ (sig)</td>
<td>20.015 (&lt;.001)</td>
<td>47.560 (&lt;.001)</td>
</tr>
</tbody>
</table>

Source: own

At the same time, it is evident that those with positive attitudes towards sporting events are more likely to read sports-related news in newspapers ($\chi^2=79.025; df=12; sig.<0.001$), on news platforms, television or radio ($\chi^2=49.885; df=12; sig.<0.001$), on the internet ($\chi^2=59.835; df=12; sig.<0.001$), or on social media ($\chi^2=26.613; df=12; sig.=0.009$).

4.3 The Structural Model

The latent variables (attitude towards sports events, perceived positive impacts of domestic sports events and perceived negative impacts of domestic sports events) of the developed SEM model had high internal consistency, good reliability and good psychometric properties [$\chi^2$(df) = 4.47, RMSEA = .070, SRMR = .048, GFI = .95, AGFI = .93, NFI = .95, CFI= .96] (see Table 6). SEM results indicate that attitude has a significantly positive effect on perceived positive impacts of sports events ($\beta=0.93$), explaining 87% of its variance, while also having a significantly negative effect on the perceived negative impacts of sports events ($\beta=-0.42$), explaining 17% of its variance.

We examine whether the effect could be reversed, that is, whether a positive opinion leads to a positive attitude. The two most important goodness-of-fit indicators, which relate the goodness of the model to the situation when there is "no model" (Byrne, 2016), namely RMSEA (based on the analysis of residuals and used to perform hypothesis testing on the differences between the observed correlation/covariance and the reproduced values) and SRMR (which is a standardised form of the square root of the difference between the sample and the covariance matrix of the hypothesised model (Bagozzi & Yi, 1988), did not meet the criteria.
Table 5. Summary of the results of the structural model

<table>
<thead>
<tr>
<th>Latent variable effect</th>
<th>Latent variable</th>
<th>standardized regression weight</th>
<th>S.E.</th>
<th>C.R.</th>
<th>p value (&lt;0.05)</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude towards sport events</td>
<td>Perceived positive effects</td>
<td>0.934</td>
<td>0.062</td>
<td>16.360</td>
<td>***</td>
<td>87.3%</td>
</tr>
<tr>
<td>Attitude towards sport events</td>
<td>Perceived positive effects</td>
<td>-0.418</td>
<td>0.042</td>
<td>-7.138</td>
<td>***</td>
<td>17.5%</td>
</tr>
</tbody>
</table>

Source: own

In summary, our analysis shows that while general attitudes towards sporting events have a significant impact on the perception of positive effects, they only account for 17.5% of the variance in the perception of negative effects. This suggests that other factors are also important in shaping how people perceive the negative impacts of sporting events. We anticipate that attitudes toward sport and political perspectives may play a role in the negative perception of sports events in Hungary due to the over politicization of sports. However, further research is needed to investigate this hypothesis.

5. Conclusion

Our study reveals that people's perceptions of positive and negative effects of sporting events are closely related to their general attitudes toward sports. As emphasised by Preuss and Solberg (2006), the opinions of local and national residents are crucial in determining the success of sporting events. Therefore, one of the goals of our research was to explore how people with positive attitudes toward sports differ from those with negative attitudes.

The cluster analysis based on general attitudes toward sporting events revealed the formation of four distinct groups: Opponents (13.5%), Indifferents (26.6%), Rational Supporters (23.4%), and Enthusiastic Supporters (28.6%). Our analysis revealed that the perception of positive impacts displayed the most significant differences among the groups. Regarding sociocultural and demographic characteristics, only two significant differences emerged among the clusters. A higher proportion of Opponents resided in the capital and were infrequent attendees of sporting events. In contrast, the Rational Supporters consisted of a larger number of young individuals and students living in urban areas. Enthusiastic Supporters primarily lived in county capital cities, held higher degrees, sought sports-related information from multiple sources, and watched sports events more frequently.

Moreover, the study explored variations in sports consumption across the groups. Intriguingly, while the Opponents group had more individuals who did not or rarely engaged in sports, no significant relationship was found between participatory sports consumption and overall attitudes toward sporting events. Furthermore, the sample did not support previous findings of Ma and Kaplanaidu (2016), who linked satisfaction with quality of life and support for sports events, as no differences were observed between the groups regarding satisfaction with material situation or standard of living. This discrepancy may be attributed to the overrepresentation of individuals with a greater interest in sports within the sample, potentially weakening the influence of other sociodemographic factors. Furthermore, our study also reveals that the negative impacts of sporting events are perceived to be stronger than the positive impacts among opponents. Among rational supporters, negative impacts are also rated relatively high but still outweigh positive impacts. In contrast, indifferent individuals tend to be less informed about sports events, resulting in their inability to estimate the
impact. Therefore, providing more information could positively influence their perceptions, which is align with the findings of Vetitinev and Bobina (2015).

The results of the structural equation modeling (SEM) analysis support our hypotheses and provide insights into the relationships between general attitudes towards sports events and the perceived positive and negative impacts of locally organized sports events. The developed SEM model demonstrated high internal consistency, good reliability, and favorable psychometric properties, indicating its validity.

Additionally, we found that positive attitudes towards sporting events are related to reading sports-related news through various media outlets, including newspapers, news programmes, television, radio, the internet, and social networks. Our analysis also indicates a strong direct effect between positive attitudes and positive perceptions of sporting events. The SEM results revealed that attitude towards sports events had a significantly positive effect on perceived positive impacts of sports events, explaining 87.3% of its variance. However, only 17.5% of the variance in negative perceptions can be explained by attitudes, indicating that other factors play a significant role in shaping negative perceptions. This suggests that other factors beyond general attitudes play a significant role in shaping how individuals perceive the negative impacts of sports events. We investigated the possibility of a reversed effect, where a positive opinion leads to a positive attitude. However, the goodness-of-fit indicators, including RMSEA and SRMR, did not meet the criteria, suggesting that this reversed effect was not supported. In general, our study provides insights into the attitudes and perceptions of various groups towards sporting events. Our findings suggest that improving the perception of negative impacts could increase overall support for sporting events. Further research is needed to better understand the other factors that influence perceptions of negative impacts as the support of local residents is needed for the success of any sporting event (Gursoy et al., 2017).

Overall, we can conclude that respondents make an ex-post judgment based on data and, in general, events that have already taken place. Therefore, we believe that education, training, and culture (in our case, sports culture) can be the most helpful. As we have mentioned before, support is often a political issue, especially in a country like Hungary. In all groups, except for the rational supporter group, respondents take into account the costs and benefits of the events. This cost-benefit assessment covers not only the financial aspects, but also other economic, tourism, and social aspects. For all these reasons, as already stressed, the most important task is to educate the public, provide them with appropriate and credible information, and improve the participation experience, which will enable organizers and other stakeholders to engage residents more and make them accept and support the event. This aligns with the findings of Johnston et al. (2023) who suggest that targeted communication strategies could counteract the tendency of community members to focus on negatives.

Like all research, ours has limitations. The sample and sampling method could be biased since individuals within a specific culture do not necessarily share similar values. Furthermore, this poses a constraint, primarily with regard to the methodology employed for sampling, as well as the inherent non-representative nature of the approach. Therefore, our results cannot be generalised to attitudes and behaviours toward sports events. We should broaden the range and scope of the study. As for further research, an important next step is to fit the framework to other samples of data to validate the model (Bond & Smith, 1996) and identify the sources of attitudes and their behavioural consequences, e.g., in the case of participation or support for an event. Qualitative research with selected participants would produce more individualistic responses and result in more in-depth responses.

References


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