

# Urban Culture Events as Drivers of in-City Expenditure: Evidence From The World Battle Porto

Ana Pinto Borges<sup>1</sup>, António Lopes de Almeida<sup>1</sup>, Elvira Vieira<sup>2</sup> and Sofia Tavares<sup>3</sup>

<sup>1</sup>ISAG - European Business School, Porto, Portugal & Research Center in Business Sciences and Tourism (CICET-FCVC), Porto, Portugal

<sup>2</sup>ISAG – European Business School, Porto, Portugal & Research Center in Business Sciences and Tourism (CICET - FCVC), Porto, Portugal, Applied Management Research Unit (UNIAG), Portugal; IPVC—Polytechnic Institute of Viana do Castelo, Viana do Castelo, Portugal

<sup>3</sup>ISAG - European Business School, Porto, Portugal & Research Center in Business Sciences and Tourism (CICET-FCVC), Porto, Portugal

[anaborges@isag.pt](mailto:anaborges@isag.pt)

[lopes.almeida@isag.pt](mailto:lopes.almeida@isag.pt)

[elvira.vieira@isag.pt](mailto:elvira.vieira@isag.pt)

[sofia.tavares@isag.pt](mailto:sofia.tavares@isag.pt)

**Abstract:** Urban dance events are increasingly used by cities to attract visitors, media attention and spending, yet we still know surprisingly little about which attendees drive in-city expenditure in these contexts. These events have become increasingly important in urban and tourism development strategies contributing to the construction of territorial identities, the promotion of cultural diversity, and measurable revitalization of the local economy. This study examines The World Battle Porto (TWBP) using data from the 2024 and 2025 editions, analyzing the relationship between self-reported in-city expenditure and visitors' levels of urban cultural engagement, event-specific motivations, first-time attendance, and sociodemographic characteristics. We draw on 769 valid questionnaires collected on-site through a structured questionnaire administered via direct, face-to-face interviews to attendees. Given the absence of a defined sampling frame and the dynamic flow of attendees at this open-access event, a non-probabilistic convenience sampling strategy was adopted, consistent with established methodological practice in event-based field research. Attendees were grouped into four profiles reflecting their engagement with urban culture: (1) active practitioners of breaking/urban dance; (2) culturally committed fans who do not practice; (3) newcomers exploring this cultural universe for the first time; and (4) outsiders whose interest does not extend beyond attending. Since expenditure is zero-inflated and strongly right-skewed, we estimate Tobit models to account for censoring while testing the role of engagement, motivations, loyalty and length of stay. Results point to marked heterogeneity. Cultural engagement matters: committed fans exhibit higher in-city expenditure, whereas weakly engaged attendees contribute much less. Motivations tied to the event's cultural core, performances, competitions and learning about urban culture, are positively associated with spending, while generic relaxation motives are not. First-time visitors and longer stays also increase overall expenditure in Porto, suggesting that the event often functions as a reference anchor to broader city trips. Overall, the study shows that destination revenues from contemporary urban culture events depend less on "average impact" and more on who attends and how they engage with the event. For event organizers and destination managers, strengthening cultural authenticity and deepening participant-oriented programming can help attract higher-value segments, especially when paired with actions that extend stays and channel consumption across the city.

**Keywords:** Urban Events; Visitor Expenditure; Cultural Engagement; The World Battle Porto; Tobit Model

---

## 1. Introduction

Urban cultural events are now a key part of how cities compete for visitors, visibility, and revenues. The dissemination of such events across European and global cities reflects a broader shift in tourism demand toward experiential consumption and authentic cultural engagement (Brabu, 2025). For destinations like Porto, these events matter not only because they shape the city's image, but also because they can trigger expenditure across accommodation, food and beverage, mobility, retail, and leisure (Preuss and Solberg, 2007; Richards, 2020; Getz and Page, 2024). Economic impact is rarely uniform: the same event may generate substantially different spending patterns depending on attendee characteristics, underlying motivations, and whether participation is integrated into a broader city visit (Dwyer, Forsyth and Spurr, 2005; Thrane, 2002; Crompton, 2006).

Unlike traditional cultural tourism, which tends to be based on monuments and historical narratives, contemporary urban cultural events emphasize participatory cultural practices, creative expression, and identity formation (Kim, 2025; Wang, 2025). The World Battle Porto (TWBP) offers an interesting setting to explore these mechanisms. In its 19th and 20th editions, the TWBP combined an international dancing contest with other urban sport and culture elements (e.g., skate, 3x3 basketball, graffiti performances), while also expanding its cultural program through workshops, urban fashion, freestyle rap, exhibitions and live concerts. This mixed

format attracts a heterogeneous audience: some visitors are deeply embedded in urban culture, others are “fans” who follow the scene without practicing, and others attend with limited cultural involvement. Despite the rapid proliferation of urban culture events across European cities, empirical knowledge about who drives their economic returns remains surprisingly limited. Expenditure effects are often assumed rather than demonstrated, especially in events rooted in participatory cultural practices such as breaking and urban dance.

From a tourist economic perspective, such events are particularly relevant because they tend to generate diversified patterns of visitor expenditure that extend beyond the event venue into the host city. Event tourism literature consistently shows that cultural and sport events can stimulate spending especially when they attract tourists and encourage longer stays (Dwyer, Forsyth and Spurr, 2005; Thrane, 2002). Events attract heterogeneous visitor segments with distinct expenditure patterns, and aggregate economic impact measures may obscure substantial variation in the extent to which different visitor types contribute to local economic activity (Ramesh, 2024). Meanwhile, little is known about the micro-level determinants of visitor expenditure in urban culture events that blend sport, creativity, and participatory cultural practices.

Recent advances in event studies emphasize the need to move beyond average spending figures and to account for visitor heterogeneity in motivations, engagement, and cultural involvement (Getz and Page, 2024). In particular, the Experience Economy perspective highlights that contemporary visitors increasingly seek immersive, emotionally meaningful, and participatory experiences, in which value is co-created through interaction, identity expression, and cultural learning (Pine and Gilmore, 2019). Urban culture events, such as TWBP, are especially well suited to this logic, as they foster strong emotional and symbolic connections between participants, performers, and the urban environment. Nevertheless, empirical evidence on how different forms of engagement with urban culture translate into differentiated economic contributions remains scarce. This gap is particularly evident when segmentation based on cultural involvement is considered. While literature acknowledges that motivations and thematic interest influence tourist behavior (Thrane, 2002; Richards, 2020), few studies explicitly distinguish between different levels of engagement with urban culture, such as active practitioners, enthusiasts, newcomers, and less-involved attendees, and assess how these profiles shape in-city expenditure. Moreover, although methodological guidelines recommend visitor-based approaches and censored-data models when analyzing event-related spending (Crompton, 2006; Dwyer, Forsyth and Spurr, 2005), their application to urban culture events remains limited.

Accordingly, this study analyses the economic impact of TWBP on the city of Porto using data from the 2024 and 2025 editions. Rather than treating attendance as a homogeneous phenomenon, the analysis focuses on how different ways of engaging with urban culture translate into differentiated patterns of in-city expenditure. By combining an ex-ante engagement typology with a Tobit modelling framework, the paper moves beyond aggregate impact assessments and provides micro-level evidence on who effectively drives in-city expenditure in contemporary urban culture events. In doing so, it responds to recent calls in event tourism research to better account for visitor heterogeneity and experiential depth when assessing economic outcomes (Getz and Page, 2024).

By addressing this underexplored intersection between urban culture, experiential engagement, and visitor expenditure, the paper offers both theoretical and practical insights. It contributes to a more nuanced understanding of urban cultural events as economic catalysts and provides event organizers and destination managers with evidence-based guidance on how engagement-oriented strategies may enhance the sustainable economic performance of contemporary urban events.

## 2. Theoretical Framework and Research Hypotheses

Cultural and urban events are increasingly recognized as strategic instruments for urban development, as they combine symbolic value creation with measurable economic effects, thereby constituting a central component of urban tourism policymaking (Quinn, 2010). The literature highlights their capacity to stimulate tourism demand, strengthen place branding, and generate local expenditure, particularly when events attract non-resident visitors and extend average length of stay (Preuss and Solberg, 2007; Richards, 2020; Getz and Page, 2024). While early studies largely focused on aggregate economic impacts, more recent research emphasizes the importance of analyzing visitor-level spending behavior, acknowledging heterogeneity in motivations, cultural engagement, and experiential involvement (Dwyer, Forsyth and Spurr, 2005; Crompton, 2006; Thrane, 2002; Zhang et al, 2025). In parallel, contemporary event research has increasingly incorporated social sustainability, inclusion, community-related outcomes, social cohesion, and creative industry development, into the assessment of cultural events’ broader value for host destinations (Mair, Wood and Quinn, 2024; Gao, 2024).

Research on event visitor experiences reveals multidimensional constructs influencing spending. Within this framework, engagement—defined as the extent to which attendees are cognitively, emotionally, and behaviorally invested in the event (Mananda, Ariwangsa, and Antara, 2025)—emerges as a key predictor of visitor behavior. Event tourism research consistently shows that higher levels of thematic involvement are associated with stronger emotional attachment, deeper experiential participation, and differentiated consumption patterns (Thrane, 2002; Pine and Gilmore, 2019). Mitrovi (2022) segmented wine event visitors into distinct groups and found significant differences in their motivation, experience, and behavioral intentions, with the most enthusiast group showing the highest engagement and spending propensity. In the context of urban cultural events linked to breaking and urban dance, attendees' relationship with urban culture, ranging from active practice to peripheral interest, may therefore translate into distinct levels of economic contribution at the destination level (Mair and Whitford, 2013; Richards, 2020). Visitors who identify more strongly with urban culture are expected to engage more intensely with the event and the host city, leading to higher expenditure, whereas weakly engaged attendees are likely to exhibit a more limited consumption behavior. Accordingly, it is hypothesized that visitors showing a stronger engagement with urban culture generate higher in-city expenditure than less engaged attendees (H1).

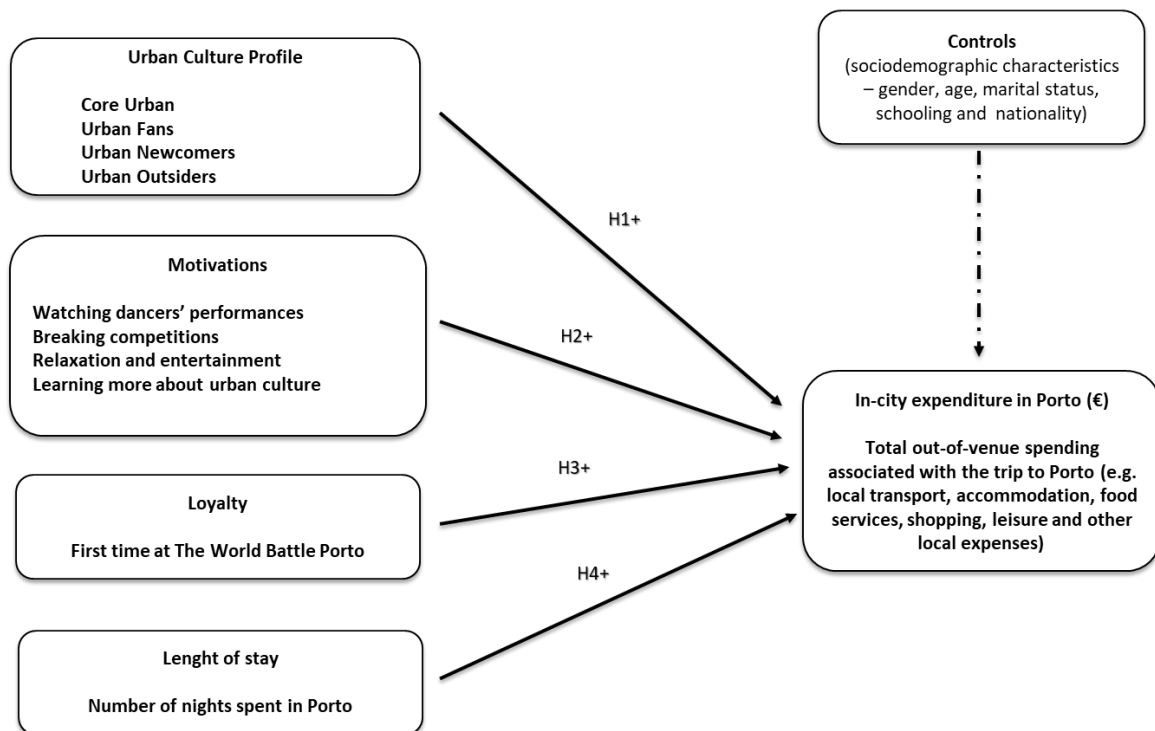
Beyond cultural engagement, visitor motivations play a central role in shaping expenditure patterns (Attanasi et al, 2025). Understanding psychological and motivational dimensions is crucial for predicting event-driven spending. Contemporary tourism demand is increasingly driven by experiential value, authenticity, and emotional engagement (Pine and Gilmore, 2019). Cultural events offer immersive environments in which visitors are not merely spectators but active participants and co-creators of meaning through performance, interaction, and cultural learning. Prior empirical studies demonstrate that motivations directly related to the core content of events, such as artistic performances, competitions, and opportunities for cultural learning, are positively associated with higher levels of visitor expenditure (Thrane, 2002; Richards, 2020). Recent evidence further suggests that participatory cultural experiences enhance psychological immersion, which in turn strengthens spending intentions (Jiang et al, 2024). In contrast, more generic leisure motivations may be less relevant in explaining spending behavior in specialized cultural events. Therefore, it is hypothesized that stronger cultural and event-specific motivations are positively associated with higher in-city expenditure (H2).

Loyalty-related characteristics also represent an important explanatory dimension in event tourism. While repeat visitors may benefit from familiarity and more efficient consumption patterns, first-time visitors tend to exhibit exploratory behavior, engaging more extensively with the destination and, consequently, generating higher levels of expenditure (Getz and Page, 2024; Mair and Whitford, 2013). Events can thus function as gateways to destination discovery, particularly for newcomers, who are more likely to extend their visit beyond the event itself. Ergo, it is hypothesized that loyalty-related characteristics, namely first-time attendance, significantly influence in-city expenditure associated with the event (H3).

Length of stay constitutes another well-established determinant of tourism expenditure. It also represents a critical variable, amplifying the relationship between event attendance and total visitor expenditure. A substantial body of literature identifies length of stay as one of the most robust predictors of total visitor spending, as longer visits increase opportunities for consumption across accommodation, food and beverage, transport, and leisure sectors (Brida, Disegna and Osti, 2013; Dwyer, Forsyth and Spurr, 2005; Thrane, 2002). Events frequently act as anchors for broader destination experiences, encouraging visitors to prolong their stay and amplifying overall economic impact. In line with this evidence, it is hypothesized that length of stay exerts a positive and statistically significant effect on visitors' in-city expenditure (H4).

Finally, sociodemographic characteristics, including gender, age, education, marital status, and nationality, are incorporated in the study as control variables, following established practice in tourism economics (e.g. Reis, Vieira and Borges, 2021). Their inclusion allows baseline heterogeneity in consumption behavior to be accounted for, ensuring that the estimated effects of cultural engagement, motivations, loyalty, and length of stay on expenditure are not confounded by structural individual characteristics (Thrane, 2002; Dwyer, Forsyth and Spurr, 2005).

Given the censored nature of event-related expenditure data, characterized by a substantial proportion of zero observations and a right-skewed distribution, the methodological literature recommends econometric techniques that explicitly account for censoring to obtain consistent estimates of expenditure determinants (Crompton, 2006; Dwyer, Forsyth and Spurr, 2005). Tobit models are therefore widely applied in tourism and event economics, providing an appropriate framework to jointly model participation and spending intensity. Figure 1 presents the conceptual model.



**Figure 1: Conceptual model of determinants of visitor expenditure**

Source: Own elaboration.

### 3. Methodology

This study is based on the analysis of primary data collected during the three days of TWBP, across the 2024 and 2025 editions. Data was collected at the event venue through a structured questionnaire administered via direct, face-to-face interviews. A non-probabilistic convenience sampling approach was adopted because the event does not provide a complete sampling frame and attendee flows are dynamic, making it impossible to pre-identify participants or estimate individual selection probabilities. The final sample comprises 769 valid responses (418 from 2024, and 351 from 2025).

The questionnaire captured information on visitors' urban culture profile, sociodemographic characteristics (gender, age, marital status, education, and nationality), motivations to attend the event, loyalty (first-time vs. repeated attendance), length of stay, and total visit expenditure (transport to Porto and in-city expenditure). Motivations were measured using a five-point Likert scale, while expenditure variables were recorded in euros (€) as continuous non-negative values. Attendees were classified into four theoretically ordered engagement profiles based on self-identification with urban culture, ranging from active practitioners to outsiders. This ex-ante typology enables testing how engagement relates to in-city expenditure using a transparent and replicable procedure.

All statistical analysis was conducted using STATA 14. Given the censored distribution of the expenditure variable, characterized by a substantial proportion of zero observations, a Tobit regression model was employed to analyze the determinants of in-city expenditure. Specifically, a Tobit model with left censoring at zero was estimated using the full sample (N = 769). Of these, 428 observations report positive in-city expenditure (uncensored), while the remaining observations are left-censored at zero.

### 4. Results

Table 1 presents the descriptive statistics of the sample of visitors attending the TWBP in the 2024 and 2025 editions.

**Table 1: Descriptive statistics of the sample of attendees at TWBP (2024–2025)**

Variable - Description	% or Mean
<b>Urban Culture Profile</b> - Categorical nominal variable. Urban Culture Profile (0 = Core Urban; 1 = Urban Fans; 2 = Urban Newcomers; 3 = Urban Outsiders)	
<b>Core Urban</b> – Regular practitioner of breaking or other forms of urban dance	42.8%
<b>Urban Fans</b> – Enthusiast of urban culture, although not an active practitioner	27.3%
<b>Urban Newcomers</b> – Curious individual exploring urban culture for the first time	26.1%
<b>Urban Outsiders</b> – Individual with no interest in urban culture	3.8%
<b>Sociodemographic Characteristics</b>	
<b>Gender</b> - Categorical nominal variable. Gender (0 = Female; 1 = Male; 2 = Other/I'd rather not say)	
Female	47.5%
Male	50.6%
Other/I'd rather not say	1.9%
<b>Age</b> - Continuous variable	30.9
<b>Marital status</b> - Binary variable. Marital status (0 = Single; 1 = Not single [Married, Divorced or Widowed])	
Single	58.9%
Not single (Married, Divorced and Widow)	41.1%
<b>Schooling (complete)</b> - Binary variable. Completed schooling (1 = Degree [Bachelor, Master or PhD]; 0 = Not degree [basic/elementary education])	
No Degree (Basic and Elementary)	37.6%
Degree (Bachelor, Master and PhD)	62.4%
<b>Nationality</b> - Binary variable. Nationality (1 = Portuguese; 0 = Other)	
Portuguese	52.2%
Other	47.8%
<b>Motivation to visit TWBP</b> - Ordinal variables. Five-point Likert scale: 1 = Not at all important; 2 = Slightly important; 3 = Neither important nor unimportant; 4 = Important; 5 = Very important)	
Watching dancers' performances	4.27
Breaking competitions	4.11
Relaxation and entertainment	4.27
Learning more about urban culture	4.19
<b>Loyalty</b> - Binary variable capturing first-time attendance (1 = Yes; 0 = No)	
First time at TWBP	30.2%
Repeated	69.8%
<b>Length of stay</b> - Continuous variable	
Number of days	4.23
<b>Expenditure Category</b> - Self-reported out-of-venue Expenditure Associated With the Trip to Porto (€). Continuous non-negative Variables	
<b>Travel to Porto</b>	286.49
<b>In-city</b>	453.53
Local transportation	31.99
Accommodation	160.46
Restaurants and cafés	69.35
Grocery shopping (supermarkets)	45.69
Shopping/Gifts	57.84
Culture/Leisure	42.17
Other	46.03

Source: Own elaboration

The results indicate a strong connection between attendees and urban culture, with Core Urban participants representing the largest group (42.8%), followed by Urban Fans (27.3%) and Urban Newcomers (26.1%). Only a small proportion of respondents are classified as Urban Outsiders (3.8%), highlighting the cultural specificity of the event's audience. With respect to sociodemographic characteristics, the sample is relatively balanced by gender, with a marginal predominance of male visitors (50.6%). The average age is 30.9 years, indicating a predominantly young adult audience. Most respondents are single (58.9%), and a substantial share holds a higher education degree (62.4%), suggesting a well-educated visitor profile. Regarding nationality, Portuguese visitors represent 52.2% of the sample, while 47.8% are international attendees, underlining the event's international reach.

Visitors report high levels of motivation to attend the event across all dimensions analyzed. Watching dancers' performances, and relaxation/entertainment emerge as the most important motivations (mean = 4.27; 4.27), followed by learning more about urban culture (mean = 4.19) and break dance competitions (mean = 4.11), confirming the centrality of both artistic performance and cultural engagement in driving attendance.

Regarding behavioral aspects, visitors stay in Porto for an average of 4.23 days, indicating that attendance at TWBP is often integrated into a broader city visit. Approximately 56% of respondents reported positive in-city expenditure, reflecting the predominance of visitors in the spending subsample. In this context, average in-city expenditure amounts to €453.53, with accommodation (€160.46) representing the largest component, followed by restaurants and cafés (€69.35), shopping and gifts (€57.84), and culture and leisure (€42.17), among others. We distinguish expenditure incurred during the stay in Porto from travel-to-Porto costs (€286.49), which may not accrue locally.

The Tobit models' findings, which were used to study the variables impacting in-city spending related to attendance at TWBP (2024–2025), are summarized in Table 2. These findings strongly support H1, beginning with participation in urban culture. Urban Fans are the group that makes the most contribution to in-city spending when compared to the Core Urban group. Their deep cultural and emotional ties to urban dance translate into significantly higher levels of in-city expenditure, even though they are not active practitioners. In contrast, Urban Outsiders exhibit significantly lower levels of in-city expenditure, supporting the interpretation that limited interest in urban culture is associated with reduced economic contribution to the destination. Urban Newcomers do not display a statistically distinct expenditure pattern, suggesting a more intermediate level of engagement rather than a clearly differentiated consumption profile. When combined, our findings support previous research on the significance of thematic involvement in cultural and creative events by confirming that greater cultural engagement is linked to increased visitor expenditure (Thrane, 2002; Pine and Gilmore, 2019; Richards, 2020; Mitrovi, 2022).

Motivations further corroborate this view and provide some support for H2. Attendees that come mainly to see performances, keep up with break dance competitions, or discover more about urban culture typically spend more money in the city. On the other hand, people who are primarily driven by relaxation and entertainment spend significantly less, according to the model results. Consistent with the core principles of the Experience Economy (Pine and Gilmore, 2019) and prior research on event-based consumption (Thrane, 2002; Richards, 2020), this distinction indicates that expenditure is more strongly associated with culturally embedded and experience-driven motivations than with generic leisure-oriented incentives.

Loyalty-related effects indicate that first-time attendees exhibit significantly higher total in-city expenditure than repeat visitors, thereby generating stronger destination-level economic outcomes. This finding suggests that newcomers are more likely to engage in lodging, food services, and other urban activities to broaden their experience beyond the event itself. This trend supports H3 because it aligns with the research on event tourism, which emphasizes novelty-seeking and location discovery as important factors influencing tourist behavior (Mair and Whitford, 2013; Getz and Page, 2024).

Length of stay emerges as one of the strongest predictors of in-city expenditure. The assumption that events like TWBP serve as catalysts for longer stays and larger economic spillovers within the city is reinforced by the fact that every extra night spent in Porto is linked to a significant rise in overall spending. This result clearly supports H4 and is consistent with the body of research showing how important the length of stay is in determining travel expenditures (Brida, Disegna and Osti, 2013; Dwyer, Forsyth and Spurr, 2005; Thrane, 2002).

Furthermore, the control variables suggest that, after accounting for engagement, motivations, loyalty and length of stay, sociodemographic characteristics contribute relatively little to the explanation of in-city

expenditure. Gender and marital status are not statistically significant, whereas age and educational attainment display positive and statistically significant associations with spending. Older visitors and those holding a higher education qualification report higher levels of in-city expenditure, consistent with the findings of Brida, Disegna and Osti (2013). Nationality is marginally significant at the 10% level ( $p = 0.060$ ), suggesting that differences between domestic and international visitors are comparatively weaker than the effects associated with cultural engagement and event-specific motivations. Overall, the results suggest that behavioral and experiential factors are more relevant than structural sociodemographic characteristics in explaining in-city spending (Crompton, 2006).

**Table 2: Determinants of in-city expenditure: Tobit regression results TWBP (2024–2025)**

Variable	Coefficient	Std. Error	p-value
<b>Year</b> (ref. 2024)			
2025	98.85	79.31	0.213
<b>Urban Culture Profile</b> (ref. Core Urban)			
Urban Fans	146.05	85.27	0.003***
Urban Newcomers	25.53	115.51	0.825
Urban Outsiders	-44.22	13.92	0.015**
<b>Motivations</b> (binary: Important/Very important = 1)			
Watching dancers' performances	19.53	3.42	0.001***
Break dance competitions	189.83	106.32	0.075*
Relaxation and entertainment	-49.76	106.64	0.641
Learning about urban culture	52.77	19.57	0.012**
<b>First-time attendance</b> (Yes)	20.19	12.73	0.028**
<b>Length of stay</b> (nights)	40.79	11.97	0.001***
<b>Gender</b> (ref. Female)			
Male	-42.05	82.60	0.611
Other / Prefer not to say	-174.54	304.60	0.567
<b>Age</b>	8.65	4.00	0.031**
<b>Marital status</b> (Not single)	-21.90	91.18	0.810
<b>Schooling</b> (Degree)	21.34	6.46	0.014**
<b>Nationality</b> (Portuguese)	-103.65	102.84	0.060*
<b>Constant</b>	84.51	20.62	0.000***

Notes: N = 769. The Tobit model is left-censored at zero; 428 observations are uncensored (in-city expenditure > 0) and 341 are censored at zero. \*\*\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*  $p < 0.1$ .; LR  $\chi^2(16) = 37.84$  ( $p = 0.0016$ ); Pseudo  $R^2 = 0.055$ .

Source: Own elaboration.

## 5. Discussion, Conclusions and Future Research

### 5.1 Discussion

The analysis of the 2024 and 2025 editions of TWBP highlights a key insight that is often obscured in discussions of event-related economic impact: not all attendees contribute equally to the host city's economy. Although urban culture events are often evaluated using aggregate attendance figures, the present findings indicate that destination-level revenues depend primarily on the composition of the audience and on the intensity of visitors' cultural engagement. In the case of TWBP, expenditure is shaped less by sheer presence at the event and more by the ways in which visitors connect the event experience with the city itself.

Cultural engagement emerges as a central explanatory dimension. Urban Fans exhibit significantly higher in-city expenditure, whereas Urban Outsiders contribute markedly less. This pattern suggests that symbolic proximity

and emotional attachment to urban culture shape economic behavior even in the absence of active event participation. Events that resonate with identity-based cultural communities therefore appear particularly effective in attracting visitors whose engagement extends beyond the event space into the wider city. Rather than reflecting simple attendance effects, these findings underline the economic relevance of thematic involvement in contemporary cultural events (Thrane, 2002; Pine and Gilmore, 2019; Richards, 2020).

Motivational patterns further reinforce this interpretation. Visitors motivated by the event's core cultural content, watching performances, following competitions, or learning more about urban culture, tend to spend more in the city, while motivations related to relaxation or generic entertainment do not significantly influence expenditure. This distinction suggests that spending is driven less by undifferentiated leisure and more by the depth of cultural involvement, in line with recent evidence on participatory cultural experiences (Jiang et al, 2024).

Loyalty-related behavior adds nuance to these findings. First-time visitors display higher in-city expenditure than repeat attendees, pointing to a more exploratory orientation that extends beyond the event itself. For these visitors, TWBP appears to function as a gateway to broader destination experiences, a pattern consistent with established event tourism research (Mair and Whitford, 2013; Getz and Page, 2024). Although repeat attendance contributes to event continuity, the results indicate that first-time attendees generate comparatively stronger marginal economic returns for the host city.

Finally, length of stay remains one of the strongest determinants of in-city expenditure. Each additional night spent in Porto significantly increases total visitor spending in-city, confirming one of the most robust regularities in tourism and event economics (Dwyer, Forsyth and Spurr, 2005; Thrane, 2002). This finding reinforces the importance of positioning urban culture events within a broader destination experience that encourages longer stays and deeper economic integration.

## 5.2 Conclusions and Practical Implications

The findings suggest that TWBP generates meaningful destination-level economic value, which is amplified when the event attracts visitors who are culturally engaged, motivated by its core content, visiting for the first time, and staying longer in the city. Methodologically, the Tobit framework strengthens the robustness of expenditure modelling in contexts characterized by censoring and heterogeneity. Substantively, the engagement-based profiling approach adopted in this study contributes to the urban event tourism literature by identifying the visitor segments that drive economic impact and the behavioral mechanisms through which these effects occur (Getz and Page, 2024; Richards, 2020).

From a practical perspective, the results suggest that events anchored in strong cultural narratives and identity-based practices are more likely to attract high-value visitors. Investment in the quality and visibility of core cultural content, performances, competitions and learning-oriented formats, appears more effective than generic entertainment positioning. Encouraging longer stays through partnerships with accommodation providers, mobility services or curated urban experiences can further amplify economic impact. At the same time, the higher spending associated with first-time visitors highlights the importance of targeted acquisition strategies and onboarding experiences that facilitate city-wide consumption.

More broadly, these insights support the view that urban cultural events can contribute not only to short-term economic vitality but also to longer-term urban development goals, particularly when they enhance cultural visibility, foster community participation and attract diverse audiences (Mair, Wood and Quinn, 2024).

## 5.3 Limitations and Future Research

This study has limitations. The use of convenience sampling may constrain generalizability, and expenditure data are self-reported. Future research could improve measurement precision by combining survey data with administrative or transactional sources, such as ticketing or accommodation records. In addition, incorporating experiential constructs - such as perceived authenticity, satisfaction or emotional engagement - would help clarify the mechanisms linking cultural involvement and spending.

Extending the analysis to other urban culture events and destinations, adopting longitudinal designs across multiple editions, and exploring broader legacy effects - such as destination branding and social sustainability outcomes - would further advance research in event and cultural tourism.

## Acknowledgements

This work was supported by FCT - Fundação para a Ciência e Tecnologia, I.P. by project reference CICET-FCVC UID/06354/2025 and DOI identifier <https://doi.org/10.54499/UID/06354/2025>. This work was supported by national funds through FCT - Fundação para a Ciência e Tecnologia, I.P. under the project UNIAG UID/04752/2025 (DOI 10.54499/UID/04752/2025).

## Ethics Declaration

Data were collected under a formal collaboration protocol between ISAG – European Business School, CICET-FCVC, and the organizing entity of The World Battle Porto, which authorizes their use for academic research purposes. All survey responses were collected voluntarily, anonymously, and without any personally identifiable information.

## AI Declaration

AI-based tools were used exclusively to support language editing and stylistic refinement of the manuscript. All theoretical framing, methodological design, data analysis, interpretation of results, and final content decisions remain the sole responsibility of the authors.

## References

- Attanasi, G., Peruzzi, V., Ciccarone, G., Fabrizio, A.D. and Llerena, P. (2025) "The Economic impact of cultural tourism: Exploring tourist spending and motivation", *Tourism Economics*, Vol 0, No. 0, pp 1–35. <https://doi.org/10.1177/13548166251369077>
- Brida, J.G., Disegna, M. and Osti, L. (2013) "Visitors' Expenditure Behavior at Cultural Events: The Case of Christmas Markets", *Tourism Economics*, Vol 19, No. 5, pp 1173-1196. <https://doi.org/https://doi.org/10.5367/te.2013.0237>
- Crompton, J.L. (2006) "Economic impact studies: Instruments for political shenanigans?" *Journal of Travel Research*, Vol 45, No. 1, pp 67–82. <https://doi.org/10.1177/0047287506288870>
- Dwyer, L., Forsyth, P., and Spurr, R. (2005) "Estimating the impacts of special events on an economy", *Journal of Travel Research*, Vol 43, No. 4, pp 351–359. <https://doi.org/10.1177/0047287505274648>
- Gao, X. (2024). Research on the Impact of Cultural Festivals on Urban Regeneration. *Highlights in Art and Design*, Vol 6, No. 3, pp 1-5. <https://doi.org/10.54097/8823wf92>
- Getz, D. and Page, S. J. (2024) *Event studies: Theory, research and policy for planned events, 5th ed.*, Routledge, Abingdon.
- Jiang, Z., Jiang, X., Jin, Y. and Tan, L. (2024) "A study on participatory experiences in cultural and tourism commercial spaces", *Heliyon*, Vol 10, No. 2, p e24632. <https://doi.org/https://doi.org/10.1016/j.heliyon.2024.e24632>
- Kim, S. (2025) "A Study on Performances and Historical Re-enactments at the Busan Joseon Tongsinsa Festival and Their Development into Cultural Tourism Content: Focusing on Changes Since Its Inscription on UNESCO's Memory of the World Register", *History and Convergence*, Vol 29, pp 293-312. <https://doi.org/10.55793/jkhc.2025.29.293>
- Mair, J. and Whitford, M. (2013) "An exploration of events research: Event topics, themes and emerging trends", *Event Management*, Vol 17, No. 4, pp 479–493. <https://doi.org/10.3727/152599513X13769392444520>
- Mair, J., Wood, E. H. and Quinn, B. (2024) "Social sustainability in event management: A critical commentary", *Event Management*, Vol 28, No. 7, pp 1101–1108. <https://doi.org/10.3727/152599524X17096730860692>
- Mananda, I.G.P.B.S., Ariwangsa, I.B. and Antara, I. (2025). Bridging Cultural Heritage and Digital Creativity: Social Media Engagement for Sustainable Event Tourism in Denpasar Bali. *Journal of Cultural Analysis and Social Change*, Vol 10, No. 2, pp 2756–2778. <https://doi.org/10.64753/jcasc.v10i2.1999>
- Mitrovi, S. (2022) "Multivariate statistical analysis of wine festival visitor experience", *Tourism and Hospitality Management*, Vol 28, No. 3, pp 691-709. <https://doi.org/10.20867/thm.28.3.13>
- Pine, B. J. and Gilmore, J. H. (2019). *The experience economy, Updated ed.*, Harvard Business Review Press, Boston.
- Preuss, H. and Solberg, H. A. (2007) "Major sport events and long-term tourism impacts". *Journal of Sport Management*, Vol 21, No. 2, pp 213–234. <https://doi.org/10.1123/jsm.21.2.213>
- Quinn, B. (2010) "Arts festivals, urban tourism and cultural policy", *Journal of Policy Research in Tourism, Leisure and Events*, Vol 2, No. 3, pp 264–279. <https://doi.org/10.1080/19407963.2010.512207>
- Ramesh, S. (2024) "The Economic Impact of Music Festivals: Cultural Events and Local Commerce". *Journal of Humanities, Music and Dance*, Vol 4, No. 45, pp 41-50. <https://doi.org/10.55529/jhmd.45.41.50>
- Reis, A.M., Vieira, E.P. and Borges, A.P. (2021) "Determinants of tourist expenditure: the role of tourists' experiences in the city of Porto", *International Journal of Tourism Policy*, Vol 11, No. 1, pp 73–87. <https://doi.org/10.1504/ijtp.2021.114457>
- Richards, G. (2020) "Designing creative places: The role of creative tourism", *Annals of Tourism Research*, Vol 85, p 102922. <https://doi.org/10.1016/j.annals.2020.102922>
- Thrane, C. (2002) "Jazz festival visitors and their expenditures: Linking spending patterns to musical interest", *Journal of Travel Research*, Vol 40, No. 3, pp 281–286. <https://doi.org/10.1177/004728750204000306>

- Wang, Y. (2025) "A New Paradigm for City Image from "Static Symbols" to "Enterable Narratives" under the Perspective of Cultural and Tourism Integration", *Journal of Education and Educational Research*, Vol 15, No. 1, pp 141-145.  
<https://doi.org/10.54097/qcbzq368>
- Zhang, L., Liu, J., Qiao, X. and Lian, D.K.C. (2025) "Assessing the tourism impacts of urban marathon events in central China's historic cities: a resident's SEM analysis", *Frontiers in Sports and Active Living*, Vol 7, p 1720413.  
<https://doi.org/10.3389/fspor.2025.1720413>