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RESEARCH ARTICLE

Measuring the economic contribution of beer festivals on local economies: The case of York, United Kingdom

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Abstract

This paper investigates the economic contribution of beer festivals on local economies by analysing the Knavesmire Beer Festival at York, United Kingdom. Using information collected via means of a survey questionnaire and applying Type I multipliers, we estimate the total expenditure generated by visitors within and outside festivals' premises, measuring its impact on the local economy in terms of jobs created and GVA contributions. Findings reveal the impact of the festival on the York economy and the wider brewing industry, providing empirical evidence and original results about the economic contribution that beer festivals can generate at a local level.

KEYWORDS

beer festivals, beer tourism, event tourism, local economies, multiplier effects

1 | INTRODUCTION

In recent years, several empirical studies indicated event tourism, the form of tourism associated with specific events such as cultural or gastronomic events (Getz, 2008), as an effective contributor for local economic development due to its potential in terms of creating employment and generating taxation revenues (Balaguer & Cantavella-Jordá, 2002; Laing, 2018; W. Lee, Sung, Suh, & Zhao, 2017; Tohmo, 2005). Increasingly more cities and towns organize festivals and events to enhance their visibility and improve their image and profile, with the aim of creating a surplus value for resident taxpayers (Backman, 2018; Brännäs & Nordström, 2002).

Event tourism often relates to defined market segments and tourism niches associated with specific destinations and attractions (Getz, 2008), with tourism niches addressing consumers' precise "interests and travel desires, making the destination more attractive and marketable" (Francioni Kraftchick, Byrd, Canziani, & Gladwell, 2014, p. 41). Among tourism niches, beverage tourism, thus tourism associated with beverages, has grown significantly in the past decades, in parallel with food and culinary tourism. For instance, wine tourism has been widely researched in literature, and tourism related to spirits and liqueurs has also attracted research attention in recent years, although to a lesser extent. In contrast, research focusing on beer tourism, defined as "when an individual purposefully travels to experience beer culture" (Bradley, Maples, Lewis, & Berend, 2017, p. 153), is still reduced, with existent studies mainly focusing on beer tourists' motivation and consumers' profiling (e.g., Francioni Kraftchick et al., 2014; Harrington, von Freyberg, Ottenbacher, & Schmidt, 2017; Plummer, Telfer, Hashimoto, & Summers, 2005).

In the United Kingdom, the rise of craft breweries has substantially expanded consumers' choice, providing them with a wide range of new beers, tastes, and flavours. The resulting growth in demand for craft beers has pushed industry organizations and local breweries to diversify their marketing strategies (Danson, Galloway, Cabras, & Beatty, 2015); encouraging a surge in the number of beer festivals in the country (Cabras, 2017). Despite this surge, however, no research so far has been conducted into the role and relevance of beer festivals into local economies and tourism.

To fill this gap, we investigate the economic contribution of the Knavesmire Beer Festival (KBF hereafter) on the city of York in the County of North Yorkshire, United Kingdom (population: ca. 20,000). Since the first time it was organized in 1978, with an attendance of about 300, the KBF

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evolved significantly. Its location moved to a number of indoor venues across York until 2008, when organizers found a definitive site in a field relatively close to the famous York Racecourse, known as the Knavesmire, approximately two miles away from the city centre (see Figure 1). Attendance passed from about 4,000 in 2008 (3-day event) to 10,380 in 2017 (4-day event; Cabras & Ellison, 2018). The KBF is run entirely by volunteers, mostly members of the local CAMRA branch. Beers and ciders are purchased by the organizing committee and then sold on premises in different price ranges and three different measures: full pint, half pint, and one-third pint. Sales revenues are used to refund initial purchases and investments. Suppliers operating at the KBF are selected by organizers who tend to prioritize local businesses (Cabras & Ellison, 2018). For instance, of the seven food stalls working at the event examined in this paper, two were from York and three were based in North Yorkshire.

In this study, we examine the economic contribution generated by KBF visitors on the city of York in terms of tourist accommodation and dine out for the duration of the festival, estimating its value also for the beer and brewing sector with regard to gross value added (GVA) and employment. We address the following research questions: *What is the overall expenditure generated by visitors attending the KBF? How do this expenditure and its associated effects affect the local economy? And what is the economic impact of the KBF in terms of GVA contributions and FTE jobs?*

To our knowledge, this is the first empirical analysis addressing the economic effects generated by a beer tourism-related event, which explores these effects in such a deep level of granularity. The methodology we apply to our large sample is based on previous methods (Bracalente et al., 2011; Crompton, Jeong, & Dudensing, 2016; Crompton, Lee, & Shuster, 2001; C. Lee, Lee, & Yoon, 2013) but shows significant potential in terms of stimulating the debate among researchers and in view of creating new venues for future research, particularly with regard to measuring the impact generated by festivals and events on local economies. In addition, our study responds to calls from craft brewing scholars for studies addressing the impact of small and craft breweries within regional and local economies (Danson et al., 2015) and about the strategic role that tourism practices can play in the continued development of the beer brewing sector (Dunn & Wickham, 2014).

Our paper comprises of six sections, including this brief introduction. Section 2 discusses the theoretical background of the study, analysing the literature related to event tourism and focusing on culinary tourism and beer tourism. Section 3 describes the data used and methodology applied. Section 4 illustrates findings gathered from the data analysis, whereas Section 5 explores their implications for the local economy and the beer and brewing industry. Section 6 concludes.

2 | LITERATURE REVIEW

2.1 | Event and beverage tourism

Event tourism associated with food-related festivals and culinary events has significantly increased worldwide (Getz, 2008; Getz & Page, 2016; Robinson, Getz, & Dolincar, 2018). At a local level, these events frequently have a positive impact from an economic and tourism perspective, injecting financial resources into different business channels and networks (Thurnell-Read, 2012). Moreover, food festivals can bring benefits also from a social perspective, involving whole communities in the organization and management, increasing the level of exchanges among residents and unlocking resources and benefits in terms of community cohesion and social capital (Wang & Pfister, 2008). For resident communities, holding such events frequently boost "revenues, community spirit, education/culture, recreation, and tourism" (Mayfield & Crompton, 1995, p. 42), although residents' active participation in such events mostly depend on what they believe they will gain from encouraging tourism in their area (Backman, 2018; Wang & Pfister, 2008). More and new festivals have created a more competitive business environment within the tourism market, increasing the choice of consumers with regard to travel and touring and in terms of choicer and better quality of experience (Getz & Page, 2016). Aside from the positive aspects, however, festivals and similar events can also generate negative externalities such as noise pollution, litter and waste, and anti-social behaviours (Thurnell-Read, 2012).

Specifically to beverage tourism, many studies investigating its economic effects highlight positive relationships between this and other types of tourism, such as cultural and heritage tourism (Bruwer & Johnson, 2010; W. Lee et al., 2017). For instance, research on wine tourism shows how local communities and authorities use wine to promote themselves across different tourism networks and segments, strengthening brand identities related to specific wines and defined geographic areas too (Bruwer & Johnson, 2010; Charters & Ali-Knight, 2002; Velikova, Slevitch, & Mathe-Soulek, 2017). This strategy is also identified by research investigating other types of beverages, for instance, whisky in Scotland (McBoyle & McBoyle, 2008).

Little, however, has been researched within the beer tourism domain. This paucity of studies is surprising in light to the impressive growth registered by craft beers and breweries worldwide since the late 1980s, with number of businesses passing from a few dozen to thousands in countries such as the United States, Italy, Germany, and the United Kingdom in just 30 years (Garavaglia & Swinnen, 2018). These businesses frequently build their success onto consumers' appreciation for products' local provenance, used to create a sense of place (Cabras & Bamforth, 2016). Particularly in the United Kingdom, the emphasis on geographical origins characterizes craft breweries and shapes their business and marketing strategies. For instance, while the Internet has provided new opportunities to expand visibility and custom, British craft breweries still tend to supply the bulk of their production to pubs within a range of a few miles (SIBA, 2018), and to heavily rely on market fairs and beer festivals to promote their beers (Cabras & Bamforth, 2016).

2.2 | The rise of beer festivals worldwide and in the United Kingdom

An example of successful combination of event tourism and economic development within the beer tourism field is represented by the

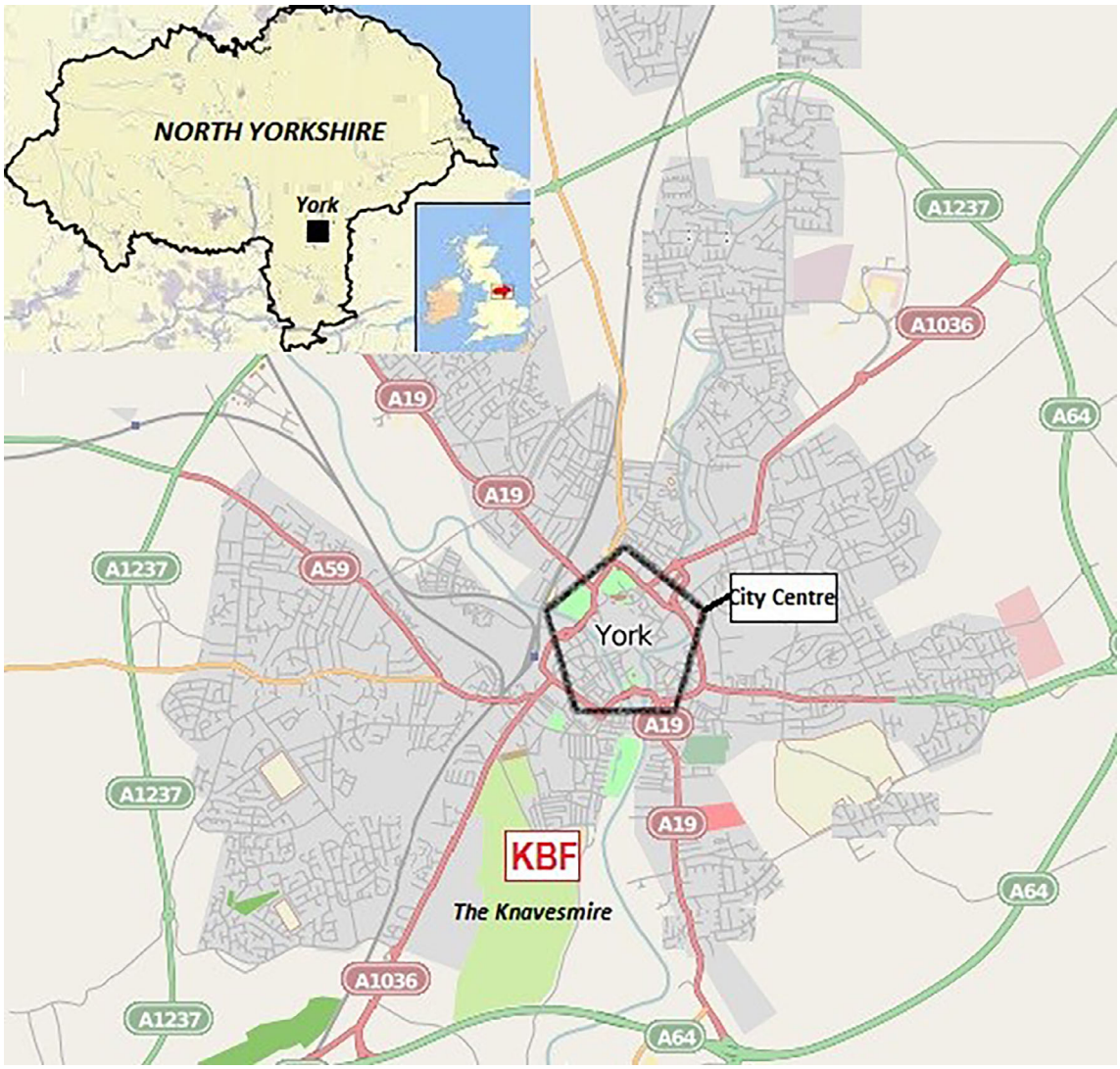

FIGURE 1 Location of York and the KBF [Colour figure can be viewed at wileyonlinelibrary.com]

notorious *Oktoberfest* at Munich in Germany, which promotes the city's image at a global scale (Harrington et al., 2017; Xiao & Smith, 2004). Since its first edition in 1810, the festival has progressively generated multiple significant benefits for the city economy. For instance, about 5.6 million people travelled to attend the 17-day long event in 2016 (Herrmann & Herrmann, 2014), with the flow of visitors into Munich generating a major price increase for local hotels, peaking as high as 850% compared with average prices in the days of the festival (Nicolai, 2012).

The success of the Oktoberfest has resulted in multiple copycat beer festivals springing up globally (Harrington et al., 2017). In Northern and Western Europe, many local administrations and city councils tend to select beer as their drink of choice in the organization of beverage festivals, using beer festivals to market themselves in the tourism market (Richards & Wilson, 2004). This increases competition among cities and towns to attract relevant stakeholders including consumers, investors, and policy-makers (Richards & Wilson, 2004), although beer festivals are commonly associated with negative externalities mainly due to alcohol consumption abuse and anti-social behaviour. Such externalities are among the reasons pushing an increasing number of local councils to impose high taxes to cover costs, such as policing at the event and post-event clean up (Xiao & Smith, 2004).

In the United Kingdom, the organization of beer festivals has been a historical tradition, although the number of these events spiked only in recent years. Cabras (2017) indicates it as a consequence of the rise in the number of craft and micro-breweries occurring since the late 1980s, which passed from 142 to more than 1,700 in 2017. The rise of these businesses has been described in three consecutive, interrelated waves (Bamforth & Cabras, 2016). The first wave (late 1970s and mid-1980s) coincided with the creation of Campaign for Real Ale (CAMRA), a movement who lobbied for the revival of *real ales* (the traditional unfiltered, cask-conditioned British beers) whose campaigns helped to create a customer base for new breweries (Mason & McNally, 1997). The second wave (early 1990s) coincided with the introduction of legislation by Parliament in 1989 (the *Beer*

Orders), which forced larger brewers to either sell or free a large number of their pubs from being tied to them (Pratten, 2004). Finally, the third wave (early 2000s) coincided with a further and sharper increase in the number of businesses sustained by the introduction of a lower tax levy to support small brewers (Wyld, Pugh, & Tyrrall, 2010).

Today, the broad range of variation and styles with regard to beer and ales has widened consumers' choice in the United Kingdom, increasing opportunities for the organization of beer-related events and festivals in different parts of the country. By examining several sources available in the public domain, Cabras (2017) estimates that between 800 and 1,100 beer festivals were organized across the United Kingdom in 2014 alone. Local CAMRA branches alone set up and organized a total of 215 spread across the country in the same year, with all the work done by its members and volunteers (CAMRA, 2015). Frequently, beer festivals are associated with beer contests, mostly organized by the Society of Independent Brewers (SIBA), in which, brewers have the opportunity to showcase their beers and compete to win titles at regional and sub-regional levels. The evolution of these events has been exponential with regard to both numbers and volumes of beers sold as well as registered levels of attendance.

2.3 | Measuring the economic contribution of event and festivals on local economies

Several empirical studies in the tourism literature address the economic contribution and impact of event tourism by quantifying and measuring the total expenditure associated with gated events and festivals. Some of these studies differentiate between impacts generated by expenditure generated by resident and non-resident visitors, or between levels of local and non-local custom for local businesses, to identify "deadweight" expenditure, thus local expenditure generated regardless of the presence of the given event or occurrence (Crompton, Lee, & Shuster, 2001; Crompton, Jeong, & Dudensing, 2016). Usually, deadweight expenditure is considered to be "switched spending, which offers no net economic stimulus to the town (…) Hence, this money should not be included when estimating economic impact" (Crompton et al.,2001, p. 81).

Other studies calculate total expenditure as the sum of *direct* and *indirect* effects: direct effects occur when there is an increase in the final use for a particular industry output, whereas indirect effects address the impact that the induced stimulus has on the industry of reference through its supply chain (Bracalente et al., 2011; C. Lee et al., 2013). Direct and indirect effects associated with expenditure on goods and/or services at a given event can be captured by using Type I multipliers, thus multiplier ratios constructed from input–output tables constructed for each industry (Crompton et al., 2016). Examples of multiplier ratios include GVA effects, which measure the value of a given output minus the value of its intermediate consumption; and employment effects, which consider the number of full-time equivalent (FTE) jobs created for every £1 million of total output produced in a given industry or sector of activities (ONS, 2018).

Crompton et al. (2001) used Type I multipliers to calculate the economic impact of the Springfest on Ocean City, a traditional small resort community (pop. 7,000) on the coast of Maryland (United States). The Springfest is a 4-day gated event held in May and one of the resort's annual attractions. Using a survey questionnaire to capture visitors' expenditure at the festival and focusing on non-local visitors only, the authors estimated the total expenditure made on food and beverage at the Springfest at about $698 K (£550 K), quantifying the economic impact on the city measured by direct expenditures as $1.92 million (£1.53 million). However, an estimated $2.66 million (£2.12 million) on the local economy was found after multipliers were applied, with about 61 FTE jobs created. More recently, a Scottish Government Report (2015) evaluated the effects of all Edinburgh festivals on the city economy by using a similar methodology and by applying multiplier ratios to visitors' expenditures. The report estimated that, in 2015, all Edinburgh festivals held generated a cumulative output of £279.6 million and supported 5,660 new FTE jobs in the city, generating a further £312.6 million and 6,021 FTE jobs in Scotland.

With particular regard to culinary tourism, Çela, Knowles-Lankford, and Lankford (2007) examined the effects of local food festivals within communities in Northeast Iowa (United States). Using an intercept survey to gather information about visitors' spending patterns and applying multiplier ratios to expenditures, the authors estimate that the direct impact of the expenditure generated at the festivals on the local economy was $1.64 million (£1.43 million), with $857 K (£673 K) generated in terms of GVA and 39.6 FTE jobs created. The authors found no significant difference between average expenditures generated by first time and returning visitors and between those attending the festival with a primary purpose or a result of contingency plans.

3 | METHODOLOGY AND DATA ANALYSIS

3.1 | Data collection

Between September 20 and 23, 2017, a survey was conducted inside KBF premises using a visitor-intercept method, with visitors asked to complete and return a questionnaire template on site. The questionnaire aimed at capturing planned expenditure within KBF premises and outside. Questions in the template were based on the templates developed by Crompton et al. (2016) and used different scales depending on the type of information we aimed to collect (e.g., nominal, discrete or continuous), with respondents given the possibility to select among a range of options. Specifically, questions aimed at capturing visitors' expenditure within and outside KBF premises during the duration of the event, differentiating between accommodation expenditure and meal expenditure. To identify these two expenditure components, price-range options in the questions were elaborated upon average prices for different types of accommodations and eateries at York provided by Numbeo.com (2018).

The data collection generated a sample of 1,123 responses, approximately 10.7% of the total recorded attendance of the KBF

(*N* = 10,348) according to figures released by York CAMRA. Further refining identified 1,090 (10.5%) responses as "valid," thus providing adequate information for two defined groups of variables. A first group of variables, considering expenditure generated within KBF premises, number of nights spent in York, accommodation types and costs, number of meals and types of eateries were used as proxies to estimated visitors' expenditure. A second group of variables considering attributes such as age, travelled distance, previous KBF visits, and party size were used to explore relationships between respondents' traits and their estimated expenditure. Details of selected variables are provided in the Table A1.

3.2 | Modelling for expenditure

A four-stage expenditure approach was used to identify the economic impact of the KBF on the local economy. First, we estimated individual total expenditure linked to each survey respondent. Second, we examined correlations between attribute variables, such as age group, and a set of newly created expenditure variables. Third, we applied Type I multipliers based on a range of assumptions to assess the total economic impact generated from the KBF. Finally, we estimated the KBF-stimulated economic impacts in two-scenario analyses by examining levels of expenditure generated by local or non-local visitors. Differently from other studies (e.g., Bracalente et al., 2011; Crompton et al., 2001), we decided to compute effects associated with local visitors in our estimations for two main reasons: first, the KBF takes place about 2 miles away from York's main attractions and second, no taxpayers' money is invested in the festival organization. These two aspects will be further examined later in the paper.

Respondents' postcodes were used to compute the travelled distance (in miles) between postcodes and the KBF location, by applying a 10-mile ray threshold from KBF premises to distinguish between local and non-local respondents and to define the York area. This measure captures the size of the local authority governing the York City Council, including the vast majority of hamlets and small villages located in its immediate geographical proximity, which are served by local buses' routes within max 30-minute journey from festival's premises. As a result, we identified 455 (42%) responses provided by visitors from the York area and 298 (27%) responses provided by visitors not residing in the York area, whereas 337 (31%) responses did not reveal their place of origin.

We then calculated KBF visitors' individual expenditures by using midpoints associated with accommodation and meal ranges provided in the questionnaire. Table 1 provides a summary of descriptive statistics, including the estimated variables for festival, accommodation and meal expenditures, as well as external expenditure and total expenditure. Table 2 provides descriptions of the ordinal variables used in our analysis.

Next, we estimated surveyed visitors' total expenditure at the KBF as the sum of their expenditures within KBF premises, for accommodation and meals during their stay at York, as elicited by Equation (1):

$$\text{Tot_exp}_i = \text{Fest_exp}_i + \text{Acc_exp}_i + \text{Meal_exp}_i, \quad (1)$$

where

Tot_exp_i = Estimated total expenditure, for respondent i.

$Fest_exp_i$ = Estimated expenditure within KBF premises, for respondent i.

Acc_exp_i = Estimated expenditure on accommodation, for respondent i.

$Meal_exp_i$ = Estimated expenditure on meals in the local town, for respondent i.

$Fest_exp_i$ is calculated by multiplying the amount a respondent planned to spend each day inside the beer festival on food and drink (survey question B11) by the number of days the respondent will attend the beer festival (B8), as elicited by Equation (2):

$$\text{Fest_exp}_i = \text{Midfestspend}_i \times \text{Days}_i, \quad (2)$$

where

$Fest_exp_i$ = Estimated expenditure inside the beer festival, for respondent i.

$Midfestspend_i$ = Midpoint of the selected festival spend group, for respondent i.

$Days_i$ = Number of days attending the festival, for respondent i.

Acc_exp_i is calculated by multiplying the amount a respondent declared to spend on rented accommodation (C12.d) by the number

TABLE 1 Statistical summary of variables

Variable	No obs.	Mean	*SD*	Min.	Max.
Distance travelled (miles)	743	32.16958	55.60104	1	381
Previous visits	1,090	1.990689	2.497325	0	10
Party size	1,090	3.699083	2.162222	1	10
Festival expenditure[a]	1,090	39.48853	37.00022	0	270
Acc. expenditure (£)[b]	1,090	20.42661	75.6722	0	1,000
Meal expenditure (£)[b]	1,090	9.654587	18.73185	0	140
External expenditure (£)[b]	1,090	30.08119	84.03217	0	1,010
Total expenditure (£)	1,090	69.56972	97.72464	5	1,212.5

[a]Cumulative expenditure captured on premises during the full 4 days of the event.
[b]Cumulative expenditure captured outside premises during the full 4 days of the event.

TABLE 2 Description of ordinal variables

Spend group	1	2	3	4	5	6	7	8
Expenditure (£)	<10	10–15	15.01–20	20.01–25	25.01–30	30.01–40	40.01–50	>50
Midpoints (£)	5.00	12.50	17.50	22.50	27.50	35.00	45.00	67.50
Age group	1	2	3	4	5	6	—	—
Age bands (years)	18–25	26–35	36–45	46–55	56–65	>65	—	—
Accommodation costs[a]	1	2	3	4	5	—	—	—
Expenditure (£)	<25	25–50	50.01–75	75.01–100	>100	—	—	—
Midpoints (£)	16.50	37.50	67.50	87.50	125	—	—	—
Meal costs[a]	1	2	3	4	—	—	—	—
Type	Take away	Pub	Restaurant	Hotel	—	—	—	—
Expenditure (£)	5	12	25	35	—	—	—	—

[a]Per person.

of nights spent in York (C12.c). We considered midpoints for each selected accommodation cost group, as elicited by Equation (3):

$$\text{Acc_exp}_i = \text{Midaccspend}_i \times \text{Nights}_i, \quad (3)$$

where

Acc_exp$_i$ = Estimated expenditure on rented accommodation, for respondent i.

Midaccspend$_i$ = Midpoint of the selected accommodation spend group, for respondent i.

Nights$_i$ = Number of nights staying in the accommodation, for respondent i.

Meal_exp$_i$ is calculated by multiplying the average of the estimated costs of the meals at the chosen locations (C13.c) by the number of meals the respondent will eat out (C13.b), as elicited by Equation (4):

$$\text{Meal_exp}_i = \text{Midmeal}\bar{\text{s}}\text{pend}_i \times \text{Meals}_i, \quad (4)$$

where

Meal_exp$_i$ = Estimated expenditure on dine out in York, for respondent i.

Midmealspend$_i$ = Average estimated expenditure for a meal at chosen locations, for respondent i.

Meals$_i$ = Number of meals, for respondent i.

Statistical correlations among variables are reported in Table 3. Age group, travelled distance, number of visits, and party size were tested against the estimated values obtained from Equations (1)–(4). As expected, older KBF visitors spent more money outside of the festival compared with younger visitors, with a significant and positive relationship between distance travelled and external and total expenditure. Moreover, returning visitors indicated spending more within KBF premises than first-time visitors, and visitors attending with larger parties spent less inside and outside KBF premises. These findings appear to corroborate those provided by Çela et al. (2007): we found no significant difference in the expenditure generated by first-time visitors and returning visitors, except for expenditure generated at the event.

4 | RESULTS

Total expenditures computed for each surveyed visitor were used to estimate the economic impact generated by the KBF.1 Outcomes from this exercise, shown in Table 4, indicate that surveyed visitors spent about nearly £76 K during the KBF, resulting in an overall expenditure of about £720 K generated by all visitors attending the KBF. Figures in the table indicate expenditures generated by local and non-local visitors, as identified by postcodes they provided in the survey; as well as by visitors who not provided this information and for whom origin and provenance remains unknown.

We selected and applied Type I multipliers collected from the Office for National Statistics (ONS, 2018a, 2018b, 2018c) to estimate the overall economic impact of the KBF on the city of York, making a number of assumptions as reported in Table 5a. Specifically, we selected multipliers for industries most related to the KBF, namely the manufacture of alcoholic and other non-distilled fermented beverages (SIC code 11.01–6); hotels, camping grounds, and trailer parks (SIC code 55); and event catering (SIC code 56). The three multipliers were applied as product operators to estimated aggregate expenditures, in order to identify the KBF economic impact generated in terms of overall output, GVA effects, and FTE jobs.

Due to the presence of breweries and food stalls selling within KBF premises, we estimated visitors' planned expenditure on food and drink to assign the correct multiplier to the expenditure within the festival grounds. Purchases made by a sub-sample of respondents (n = 50), based on midpoints associated with respondents' spend group, were monitored to formulate our assumptions. For instance, using £27.50 to identify an indicated £25–30 expenditure inside the festival per day (Group 5 in Table 5b), we assumed that £21.50 would be spent on drinks, using £6 as an approximation for each item of food sold at the KBF.

Finally, we investigated the levels of total expenditure generated by local and non-local visitors. Since about 32% of survey respondents did not state their postcode, we developed two scenarios: Scenario 1, based on responses provided by visitors whose origins were known and Scenario 2, which included all valid survey responses.

TABLE 3 Correlations

Variable	Total expenditure	Festival expenditure	External expenditure
Age group (*N* = 1,067)	0.089[a] (0.0035)	−0.017 (0.5634)	0.113[a] (0.0002)
Distance travelled (*N* = 743)	0.332[a] (0.0000)	0.060 (0.1020)	0.362[a] (0.0000)
Previous visits (*N* = 1,074)	0.016 (0.5978)	0.146[a] (0.0000)	−0.045 (0.1359)
Party size (*N* = 1,090)	−0.102[a] (0.0008)	−0.071[a] (0.0179)	−0.086[a] (0.0042)

[a]Significant at 95% level.

TABLE 4 Aggregate expenditure (sample and population)

	Aggregate festival expenditure (£)	Aggregate accommodation expenditure (£)	Aggregate meal expenditure (£)	Aggregate KBF expenditure (£)
Survey total (*N* = 1,090)	43,043	22,265	10,525	75,831
Local	18,578	2,663	2,888	24,128
Non-local	10,645	11,951	3,667	26,263
Unknown	13,820	7,652	3,969	25,441
Pop. total (*N* = 10,380)	408,627	211,375	99,906	719,908
Local	176,367	25,277	27,413	229,056
Non-local	101,059	113,453	34,813	249,325
Unknown	131,201	72,645	37,680	241,526

TABLE 5 Multipliers used in the analysis

SIC codes	Industry			Type I output multiplier		GVA effects		Employment effects	
(a)									
11.01–6	Alcoholic beverages & distilled products			1.729		0.778		8.16	
55	Accommodation services			1.554		0.772		19.52	
56	Food & beverage serving services			1.572		0.785		22.11	
Spend groups	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	
(b)									
Midpoints (£)	7.50	12.50	17.50	22.50	27.50	35	45	67.50	
Predicted drink expenditure (£)	7.50	12.50	17.50	16.50	21.50	23	33	49.50	
Predicted food expenditure (£)	0	0	0	6	6	12	12	18	

In Scenario 1, we considered responses indicating postcodes (*N* = 743), assuming as "non-local" those responses not reporting postcodes but indicating paying for accommodation (*N* = 52). This exercise generated a sub-sample of 795 observations, approximately 72.5% of total surveyed visitors. We then applied Type I multipliers to identify the economic contribution of the KBF in terms of total output effects, GVA effects, and FTE jobs created. Similarly, the assumptions made in Table 5 were used to determine the economic impact stimulated by visitors' expenditure. Estimates made within Scenario 1 are reported in the upper prospect of Table 6 and indicate a total effect of £959 K generated by the KBF in terms of economic impact on the city of York, of which nearly £590 K in terms of direct effect. The KBF also contributes for £459 K in GVA effects and generates 14.8 FTE jobs in the industries of reference.

In Scenario 2, we estimated the total expenditure associated with respondents whose origin was unknown. Since the survey identified 455 locals and 298 non-locals (these becoming 350 after adding unknown responses spending for accommodation), we used sample proportions as a proxy for local and non-local expenditure generated by the remaining 285 unclassified respondents. As a result, we associated 57% of the total unclassified expenditure to local visitors, and the remaining 43% to non-local visitors. We then computed figures for Scenario 2 by repeating procedures used in the previous scenario, as shown in the lower prospect of Table 6. Estimates indicate a total effect of £1.18 million economic impact on the city of York, of which about £720 K in terms of direct effect. The KBF also contributes for £560 K in GVA effects and generates 17.6 FTE jobs in the industries of reference.

TABLE 6 Scenario analysis and estimated economic impacts

	Festival expenditure (£)			External expenditure (£)			
SCENARIO 1	**Food**	**Drinks**	**Total**	**Accomm.**	**Meal**	**Total**	**KBF-stimulated Total (£)**
Direct effect	71,999	230,067	302,067	211,375	76,319	287,693	589,760
Local	41,867	134,500	176,367	*25,277*	*27,413*	*52,689*	*229,056*
Non-local	30,133	95,562	125,695	186,098	48,906	235,004	360,699
Total effect	113,183	397,786	510,969	328,476	119,973	448,449	959,419
Local	65,814	232,551	298,365	*39,280*	*43,093*	*82,373*	*380,738*
Non-local	47,368	165,227	212,596	289,196	76,880	366,077	578,672
Total GVA effect	56,519	178,992	235,512	163,181	59,910	223,091	458,603
Local	32,865	104,641	137,507	*19,514*	*21,519*	*41,033*	*178,539*
Non-local	23,654	74,348	98,002	143,668	38,391	182,059	280,061
Total FTE jobs	2.5	3.3	5.8	6.4	2.7	9.1	14.8
Local	1.5	1.9	3.4	*0.8*	*1.0*	*1.7*	*5.1*
Non-local	1.1	1.4	2.4	5.7	1.7	7.3	9.7
	Festival expenditure (£)			**External expenditure (£)**			
SCENARIO 2	**Food**	**Drinks**	**Total**	**Accomm.**	**Meal**	**Total**	**KBF-stimulated Total (£)**
Direct effect	96,436	312,192	408,627	211,375	99,906	311,280	719,908
Local	55,923	181,742	237,666	*25,277*	*40,980*	*66,257*	*303,922*
Non-local	40,513	130,449	170,962	186,098	58,925	245,023	415,985
Total effect	151,597	539,779	691,376	328,476	157,052	485,528	1,176,904
Local	87,911	314,233	402,144	*39,280*	*64,421*	*103,701*	*505,845*
Non-local	63,686	225,546	289,233	289,196	92,631	381,827	671,059
Total GVA effect	75,702	242,885	318,587	163,181	78,426	241,607	560,194
Local	43,900	141,396	185,295	*19,514*	*32,170*	*51,683*	*236,978*
Non-local	31,803	101,489	133,292	143,668	46,256	189,924	323,216
Total FTE jobs	3.4	4.4	7.8	6.4	3.5	9.9	17.6
Local	1.9	2.6	4.5	*0.8*	*1.4*	*2.2*	*6.7*
Non-local	1.4	1.8	3.3	5.7	2.1	7.7	10.9

Figure 2 presents a graphical comparison of aggregate visitor expenditure generated by local and non-local visitors at the KBF in each scenario. Results in terms of total effects associated with Scenarios 1 and 2 are, respectively, 21% and 36% higher than the estimated total expenditure associated with the KBF, reflecting a positive impact of the KBF on tourism associated with multiplier effects. As expected, the impact of non-local visitors is larger than the impact of local visitors; and the local components included within external expenditures (highlighted in italics on Table 6) have a minimal influence on the computation of KBF-stimulated impacts in both scenarios.

However, estimations suggest that local visitors spent more within festival premises compared with non-locals, creating more custom for those businesses operating on site during the event. By focusing on direct effects associated with visitors' expenditures at the seven food stalls operating within KBF premises (£71.9 K and £96.4 K in Scenarios 1 and 2, respectively), it appears that the festival generated between £20.6 K and £27.4 K for York-based businesses and between £31.3 K and £41.3 K for businesses based in North Yorkshire.

5 | DISCUSSION

The analysis developed in the previous section provides a detailed account of the impact of the KBF on the York economy. Non-local visitors are the largest contributors to total expenditures in both scenarios, primarily due to larger costs, they sustain with regard to accommodation and dine out. This finding corroborates those of Ryan and Lockyer (2001), Tohmo (2005), and Bracalente et al. (2011), suggesting that short-term rentals are one of the main transmission channels of event tourism on the local economy. It also corroborates those provided by Brännäs and Nordström (2002) about the economic significance of visitors' overnight stays, since our analysis identified accommodation costs as the largest component of external expenditure in both scenarios.

Results related to GVA contributions and FTE jobs help to understand the positive impact of the KBF on the selected industries, in particular, the beer and brewing industry and the hospitality sector. Findings corroborate those provided by Cabras (2017, 2018) in relation to the importance of beer festivals and similar events with regard to promoting local breweries and

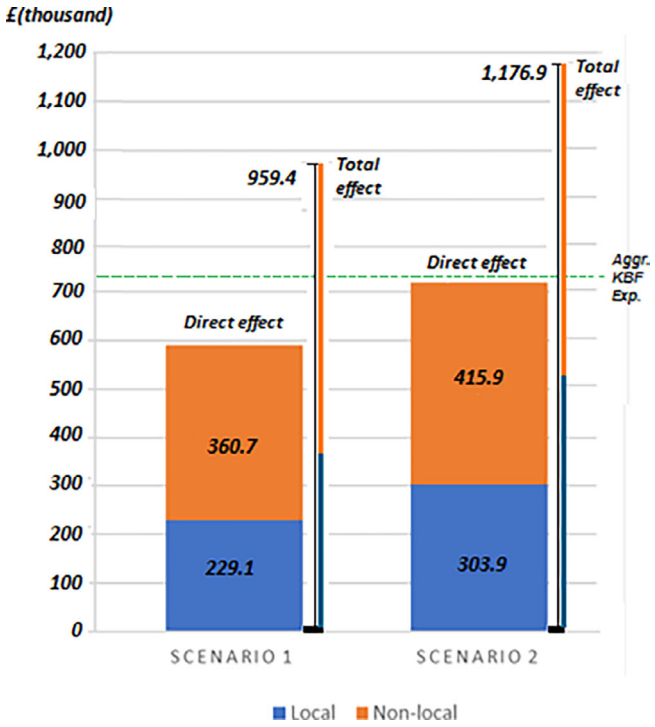

FIGURE 2 Comparison of KBF direct and total effects by scenario [Colour figure can be viewed at wileyonlinelibrary.com]

the positive role of these businesses in view of creating jobs across the wider supply chain network, facilitating the retention of local resources within their spatial proximity.

Our decision to include local expenditure, considered as deadweight, into calculations differs from other studies, which exclude this component when assessing economic contributions (e.g., Crompton et al., 2016; Ryan & Lockyer, 2001). However, given that the KBF premises are located away from York's city centre and its many touristic attractions, local visitors' expenditure within festivals' premises still generate an impact on businesses operating on site. In addition, knowing this expenditure component can provide more comprehensive information about the festival's overall contribution, helping to better understanding its impact in terms of attractiveness and tourism.

Data provided by Make it York (MiY), the York City Council Tourism Office, indicate that the city welcomes 6.9 million visitors per year, injecting about £564 million and supporting circa 19,000 jobs in the local economy (MiY, 2016). More than half of visitors' expenditure in York identified by MiT is accounted for overnight stays (1.3 million, generating an average £289 million per year), although MiT provides no information in relation to costs and investments made by York City Council to support local festivals and events (MiY, 2016). In contrast, the organization of the KBF relies entirely upon volunteers: York City Council only approves the licences to host the event and verifies that premises comply with health and safety procedures before opening to visitors. One of the main KBF organizers, approached by us in relation to this study, states:

> "Usually the morning before we open they [York City Council] will come round and just have a look to make sure everything is in order and we are running a good event (…) we have a full scale event manual (…) and the Council get a copy of that as well so if they want to ask questions they have got that (…) they still have to approve our licence."

Considering that no issues have been recorded in terms of policing and anti-social behaviours at the KBF since its first edition,2 the "cash-injection" for the York economy generated by KBF visitors comes with near-to-zero costs for local taxpayers.

Results provide multiple venues of reflection with regard to the economic contribution of beer tourism and festivals in the United Kingdom. For instance, the significant increase in the number of craft breweries in the country has widened opportunities for beer consumers to try new beers not only through large distribution and supermarkets but also through beer festivals and related events. Craft breweries, almost always actively involved in the organization of such events, get many returns in terms of visibility and appreciation particularly at a local level. These businesses heavily rely on local workforce, and the majority of investments they make tend to fall within spatial proximity from their premises (SIBA, 2018).

Moreover, U.K. craft breweries are likely to remain small mostly to profit from the support available in the form of tax breaks and business rate reliefs (Cabras, 2017) and tend to differentiate their production as a function of the reduced market they serve, mainly to preserve the original niche in which they started (Danson et al., 2015). The increasing number of beer festivals in the country appears to serve as an "appreciation strategy" which makes consumers to identify themselves with their local breweries. Local beers and food, therefore, could be combined and strategically used as drivers to promote tourism at a regional and sub-regional level, involving and expanding the local supply chain. Our analysis seems to corroborate this assumption: KBF organizers tend to select their business partners based on their local provenance, and breweries showcasing their beers at the event generally supply pubs within a range of a few miles as longer distances will result in higher transport costs (Danson et al., 2015). These aspects characterize and strengthen the relationship between craft beers and local custom, profiling brewers and expanding the level of identification and recognition among consumers.

The case of the KBF at York shows also interesting potential for beer tourism and its related culinary features. For instance, expenditure captured from overnight stayers attending the festival could be increased by expanding the offer in terms of beer-related dining, particularly fine dining. The growing U.K. craft beer movement is slowly raising the profile of beers as accompanying beverage of reference in hotels, restaurants, and gastro-pubs, a new form of pubs that combine high-quality cuisine with pub atmosphere. New opportunities could then appear in relation to widening consumers' knowledge about beer and food pairing: the KBF events held in 2017 and 2018 offered a number of cooking sessions and tutorials organized within premises, with attendance levels growing between the two events. In parallel, MiT launched the "York Food and Drink Festival" in 1997 as an

underground, small event (York Press, 2016). The event now runs for 10 days and has seen an increasing participation from local retailers and licenses over the years, for example, pubs offering beer-tailored menus for food pairing.

Using the KBF to strengthen the association between the city of York and local beers could be a challenging task, given the variety of festivals and events already organized in the city every year. Nevertheless, the evidence provided by our study can help developing policies and strategies around beer tourism across the United Kingdom, increasing place branding opportunities for beers. In Scotland, for instance, whisky tourism attracts thousands of visitors every year, reinforcing the association between the beverage and the country and enhancing brand awareness and image across consumers (Francioni Kraftchick et al., 2014; McBoyle & McBoyle, 2008). Since the 1960s, the Scottish whisky industry made an effort to expand visibility of its distilleries, increasing the offer for tourists with tours, schools, connoisseur events, etc. (McBoyle & McBoyle, 2008). The British beer and brewing industry could use beer festivals to promote the wide range of traditional ales and innovative craft beers offered across the country among international networks, creating new opportunities associated with beer tourism and economic development at a local level.

6 | CONCLUSIONS

The study presented in this paper explored and examined the impact of beer festivals on local economies. By focusing on the KBF at York in United Kingdom, we analysed the economic contribution made by local and non-local visitors during the festival, measuring economic effects on the city in terms of tourist accommodation and dine out.

While our study provides fresh empirical evidence and an original contribution about the impact of beer tourism and related events on local economies, we are also aware that our analysis presents some limitations. For instance, although our analysis is empirical in nature, numbers and figures gathered from the two-scenario analyses are based on a number of assumptions, which bear risks of over- and under-estimation associated with these types of analyses (see Crompton et al., 2016). Moreover, since that our analysis focuses on the impact generated the KBF on the economy of York, some information captured by our survey but not central to this purpose might still require further examination (e.g., statistical correlations indicate that visitors attending with larger parties spend less than those attending alone or with smaller parties). Some other information not captured by our survey could also increase the quality of the analysis further; for instance, knowing how much time visitors spend inside KBF premises could represent an important influence factor in view of examining their expenditure within and outside the festival.

In addition, the data used to develop our analysis provide us with a snapshot addressing a specific event without offering the possibility to compare with other events organized locally. As York has a prominent touristic vocation, it would be useful to assess and compare the economic benefits of other events organized in the city. This exercise would provide useful information to the city council in view of deciding and better directing support and investments for festivals and events organized in the city.

Notwithstanding these limitations, our study adds to the literature on beer tourism and event tourism, still characterized by a paucity of empirical research. It provides empirical evidence of the impact of small and craft breweries can have and about the strategic role that beer tourism can play within regional and local economies, answering to calls made by researchers for more research in the field (Danson et al., 2015; Dunn & Wickham, 2014; Garavaglia & Swinnen, 2018).

In conclusion, our paper contributes to the economic literature addressing the beer and brewing industry, which tends to focus more on larger scale production processes and marketing strategies implemented by large breweries, frequently neglecting the touristic aspects associated with beer festival and events that contribute in shaping business trajectories and strategies within the industry. Given the considerable growth registered by craft breweries in the United Kingdom and other countries worldwide, more studies in the field would help to predict future trends in the beer and brewing industry and to better understand the potential of craft beers and breweries in terms of enhancing tourism and local development.

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ENDNOTES

[1] As our sample only includes 10.5% of the total attendees (N = 1,090), sub-sample comparisons were conducted to verify level of representativeness of the population. Specifically, we extracted multiple random subsamples from the population (N = 10,348) to examine levels of variation across them. This exercise identified no significant differences with regard to subsamples' means and standard deviations. As a result, we can consider our sample as representative of the entire KBF attendance.

[2] The only incident we identified while reviewing historical records was associated with an attempt from a member of the public to bypass fences to enter KBF premises.

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APPENDIX

TABLE A1 Description of variables and relevant codes used in equations

Variable name	Type	Code	Description/Ranges
Days visiting	Nominal	B8	Days attending at the KBF **[Wednesday]; [Thursday] [Friday] [Saturday]**
Spend group	Discrete	B11	Amount spent by respondent within KBF premises each day **[<£10]; [£10.00–£15]; [£16.01–£20]; [£20.01–£25]; [£25.01–£30]; [£30.01–£40]; [£40.01–£50]; [>£50]**
Overnight stay	Binary	—	Whether the respondent is going to spend any night in York during the KBF **[Yes/No]**
Accommodation type	Nominal	—	Type of accommodation selected by respondent for his/her overnight stay at York **[A] Private Accommodation (own/guest); [B] Caravan/Camping; [C] Hotel/B&B; [D] Rented apartment**
Nights staying	Discrete	C12.c	Number of nights staying in York, for respondents answering B, C, D **[One]; [Two]; [Three]; [Four]; [More than four]**
Accommodation cost	Discrete	C12.d	Accommodation costs, per night per person, for respondents answering B, C, D **[<£25]; [£25.01–£50]; [£50.01–£75]; [£75.01–£100]; [>£100]**
Eating plans	Discrete	—	Whether the respondent is going to dine out KBF premises during the festival **[Yes/No]**
Eatery types	Discrete	C13.c	Type of eatery selected by respondents while in York **[A] Take-away; [B] Pub; [C] Restaurant; [D] Hotel**
Number of meals	Discrete	C13.b	Number of times the respondent is likely to dine out while in York **[One]; [Two]; [Three]; [More than three]**
Age group	Discrete	A3	Respondent's age group: **[18–25]; [26–35]; [36–45]; [46–55]; [56–65]; [>65]**
Distance	Continuous	B5	Distance between respondent's place of residence and KBF premises, based on postcode s/he provided (miles)
Previous visits	Continuous	B6	Number of previous KBF events visited by respondents (measured in event/year)
Party size	Discrete	B9	Total number of people the respondent is attending the festival with **[A] Alone; [B] with partner; [C] with one friend/relative; [D] with more friends/relatives [n = ___]**