ISSN 1611-1699 / eISSN 2029-4433

VILNIUS TECH
Vilnius Gediminas Technical University

JOURNAL of BUSINESS ECONOMICS & MANAGEMENT

2024
Volume 25
Issue 4
Pages 828–848

https://doi.org/10.3846/jbem.2024.22066

ANATOMY OF THE ECONOMIC VALUE GENERATED BY A CULTURAL EVENT

Luis F. AGUADO [1]✉, Jesús HEREDIA-CARROZA [2], Aaron ESPINOSA-ESPINOSA [3], Paola A. GARIZADO-ROMÁN [4], Henry DUQUE-SANDOVAL [5]

[1,5]*Economics Department and Full Wealth, Center for Applied Research, Pontificia Universidad Javeriana Cali, Colombia*
[2]*Economics and Economic History Department, Universidad de Sevilla, Sevilla, Spain*
[3]*Institute for Development, Economics and Sustainability Studies – IDEEAS, Universidad Tecnológica de Bolívar, Cartagena, Colombia*
[4]*School of Business, Universidad Autónoma de Occidente, Cali, Colombia*

Article History:
- received 21 September 2023
- accepted 27 June 2024

Abstract. The article measures the economic effects of decisions made by two agents in the cultural and creative sector. Managers of a cultural event decide to produce it: it mobilizes a flow of artists and creatives who materialize their creations. Individuals decide to visit it: it mobilizes a flow of individuals who produce experiences by attending the event. The result is revealed by the economic dimension of the value generated by a cultural event: new income and jobs for the host territory of the event and unique and authentic cultural experiences for those attending the event. The empirical literature has drawn attention to the need for more precise measures of economic value, in particular that do not overestimate. A combination of instruments is used: interviews (n = 6) with event managers/organizers; a face-to-face survey (n = 173) with representatives of commercial stalls; a face-to-face survey of attendees (n = 1,030); and, an input–output model is adapted to the area of impact. The article provides a methodologically useful framework for identifying and estimating more reliable measures of the material (economic) value created by a cultural event, which can be replicated in a variety of events around the world.

Keywords: cultural events, cultural sector, cultural value, economic value, input–output analysis, Petronio Álvarez Pacific Music Festival.

JEL Classification: Z11, R11, R58.

✉Corresponding author. E-mail: ***lfaguado@javerianacali.edu.co***

1. Introduction

The value of the original and authentic. A live cultural event (e.g., a festival) is a planned activity, in time and place, through which attendees generate unique and authentic cultural experiences (Getz & Page, 2019, Chapter 2; Cudny, 2016). In short, it represents the essence of a community and its identity with a territory. The value generated by cultural events is multidimensional (Snowball, 2020). The dimensions that integrate it make its empirical estimation complex (Klamer et al., 2022; Devesa & Roitvan, 2022): e.g., aesthetic aspects, spiritual significance, symbolic or historical importance. Indeed, the constituent elements of this value are not easily estimable and apprehensible from an economic point of view (van der Hoeven et al., 2021; Hutter & Frey, 2010). However, the activities derived from the production and

consumption of cultural events contribute to and stimulate the achievement of economic results (Rodrigues-Ferreira et al., 2023; Cerisola & Panzera, 2021).

The article presents methodological elements to measure the economic value attributable to the celebration of a live cultural event on the territory where it takes place (Seaman, 2020). By live cultural event we refer to a feast, fair, festival or carnival that expresses aesthetic, spiritual, symbolic or historical aspects of people, groups or societies (Cudny, 2016). And, by territory, to the city or region where the event takes place (UNESCO & World Bank, 2021). The economic value is measured from the market transactions derived from the decisions of two agents of the cultural and creative sector (Organization for Economic Co-operation and Development [OECD], 2023a; Pereira et al., 2023). On the supply side, the managers of the cultural event decide to produce it, which means mobilizing a flow of artists and creatives who materialize their creations. On the demand side, individuals decide to attend it, which means mobilizing a flow of people who produce their experiences by attending the event. The result is expressed in new income and jobs for the economy of the host territory and in unique and authentic cultural experiences for the attendees.

The measurement of economic value is based on the cultural cycle, proposed by UNESCO (2009), which shows the stages through which the cultural event adds value to society and the economy. To measure the stages of the cultural cycle, a combination of instruments must be designed and applied: interviews with event managers/organizers; a survey of representatives of commercial stalls that are part of the event's activities (e.g. stalls selling handicrafts, typical costumes, traditional food); a survey of attendees (locals and tourists). The effects of transactions, associated with each stage of the cycle, are estimated through an input–output model, adapted to the economy of the host territory, which transforms the sources of demand (expenditure/investment in the organization/production of the cultural event + participation/consumption expenditures) into effects on production, income and employment in the territory (Miller & Blair, 2022; SACO, 2019).

The article contributes three findings to the empirical literature on the measurement of the economic value that cultural events generate in the territory that hosts them. First, it refines the empirical tools to capture the economic value, with reliable and not overestimated measures that reflect the economic dynamics that the cultural event impacts on the territory. Secondly, it provides the different agents of the cultural and creative sector with empirical evidence and objective measures on the contribution of cultural events to local development: what is the contribution of a cultural event to the economy of the territory; how many attendees, locals and tourists, generate a unique and authentic cultural experience; how many local artists and creatives does the event mobilize? Third, the methodology developed can be replicated in similar cultural events around the world.

As a case study we took the XII edition of the Petronio Álvarez Pacific Music Festival (hereafter, El Petronio) that took place in the city of Cali (Colombia) from August 15 to 20, 2018. El Petronio is the principal and most prestigious cultural event of marimba music, and Afro-Colombian Pacific traditional songs and dances. The Petronio (Aguado et al., 2021) stands out for: i. its local and idiosyncratic character linked to the territory; ii. Its high international recognition; iii. That it represents a perfect synthesis of the complexity of cultural events as it is a combination of activities, forms and contents that give meaning to the festival: music, dance, gastronomy, handicrafts, and typical costumes. The credentials of El Petronio show that it is part of the Intangible Cultural Heritage of the Nation and, in addition, the Afro-Colombian music of the Pacific such as the marimba and traditional songs were included in 2015 in the Representative List of the Intangible Cultural Heritage of Humanity by UNESCO.

The article is organized in the following sections. After this introduction, the literature review on the economic dimension of cultural value and its measurement is presented. The data and the empirical model for estimating the economic value of the cultural event are then presented. Finally, conclusions and references are included.

2. Literature review. The economic dimension of cultural value and its measurement

2.1. Economic dimension of cultural value

The value generated by cultural goods is multidimensional, unstable, controversial, lacks a common unit of account and may contain elements that are not expressed on a quantitative or qualitative scale (Petrova et al., 2022; van der Hoeven et al., 2021; Angelini & Castellani, 2019; Throsby, 2003). However, it is necessary to measure it because cultural value is a fundamental concept of both political and economic debates on the arts and creative industries when allocating resources to different cultural manifestations and practices by governments, businesses and the community in specific social contexts (Dimitrovski et al., 2023; Pereira et al., 2021; Belfiore, 2020).

The management of the symbolic dimension of a territory is a key element that determines its competitiveness (Santamarina, 2023; Cerisola & Panzera, 2021; Boyd, 2020; Kulenovic & Cech, 2015; Garcia & Judd, 2012; OECD, 2005). The cultural sector currently constitutes the main bet to generate income and jobs focused on innovation, social inclusion and environmental care (UNESCO, 2022). This shows how cultural goods play a dual role in society. On the one hand, they are producers of meanings (Šagovnović et al., 2022; Meeprom & Fakfare, 2021; De-Miguel-Molina & Boix-Doménech, 2021; Alonso-Vazquez et al., 2019). On the other hand, they are sources of development and wealth through their production and consumption (OECD, 2023b). This second dimension reflects their economic value, the capacity to generate income and jobs, which boosts the economy of the territories (Rodrigues-Ferreira, et al., 2023).

Cultural goods/events are exceptional, different from others (Greffe, 2010). Keynes (1936, as cited in Moggridge, 1982, p. 344) stated that their consumption contributed to the achievement of a "finer, more gifted, more splendid, more carefree" civilization. The exceptional character is linked to the fact that: (i) they are prototypical, unique, copiable, but not reproducible (e.g., a painting); (ii) they are services, their consumption is not cumulative (e.g., attend a theater performance), (iii) the basis of their value is that they are repositories of messages and stimuli that must be interpreted through images, sounds and signs, this capacity for interpretation is called cultural consumption capital (McCain, 1979); (iv) they are inputs to produce a cultural and creative experience for those who consume/demand them (Stigler & Becker, 1977).

The consumption of cultural goods/events implies for individuals to use a part of their time that competes for other uses, paid work in the market vs. domestic work, e.g. cleaning the kitchen; buying goods in the market, e.g. buying a bus ticket to travel to the festival, and the investment made by the individual himself to develop and refine his tastes (Brito & Barros, 2005). Thus, empirically, the process of cultural consumption/participation is modeled as a process of rational addiction generated by previous consumption experiences and the accumulation of cultural consumption capital (Stigler & Becker, 1977; Lévy-Garboua & Montmarquette, 2011).

2.2. Empirical measurement of the economic value of cultural goods. The cultural cycle and the flow of expenditure

The cultural cycle shows the process, activities and actors through which the sector generates value to society and the economy of a territory (Throsby, 2020; UNESCO, 2009; Sung, 2014). This interaction between activities and actors in the sector generates multiple and varied benefits, both individual and social (Devesa & Roitvan, 2022; Matarasso, 1997; McCarthy et al., 2004). Individual benefits are reflected in emotions and feelings invoked by those who participate in the consumption of cultural goods and are positively correlated with their personal well-being, e.g. joy, escape from routine, having a moment to free oneself from the stress of everyday life and the transmission of cultural values. Similarly, in the improvement of new artists' skills, e.g. innovation in styles. Socially, the benefits are reflected in the preservation, transfer and protection of cultural heritage, employment opportunities for artists, creatives and workers in support sectors for the cultural sector (e.g. transportation, equipment rental) and attraction of tourists to the territory.

The cultural cycle makes it possible to analyze the activities and interrelationships involved in the value chain of the cultural good (Figure 1). The cycle starts with a creative idea [initial/original] that then goes through a series of interrelated stages before reaching the final consumer, in this case the individual/citizen who generates his/her experience from consumption/participation. For the case study in this article, a cultural festival, is a way of expressing the intangible cultural heritage associated with the idiosyncrasy and past of the territory, reflected in practices, customs, traditions and assets (tangible and intangible) that over time acquire a symbolic meaning and constitute the essence of the community (Aguado et al., 2021; UNESCO, 2015; Palma et al., 2013).

The value of cultural events, from an economic perspective, is externalized and materialized through the new income and jobs they contribute to create in a specific territory (Snowball, 2008). This perspective of the creation of economic value generated by cultural

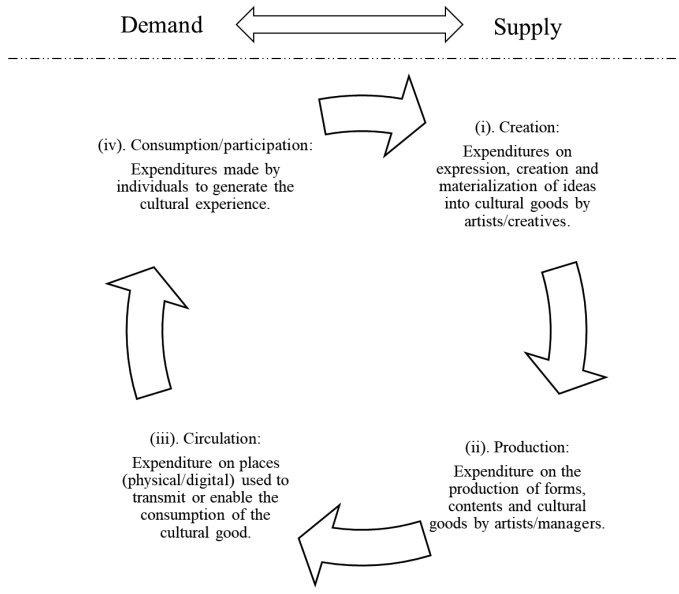


Figure 1. Cultural cycle and expenditure flow of a cultural event. (source: authors' own elaboration)

goods can be measured through the cultural cycle as proposed by UNESCO and the flow of spending and mobilization of resources associated with each stage of the cycle. The expenditure cycle shows the connection and interaction between different stages and actors. The latter can be classified into actors in the cultural sector – artists and creatives – and those actors who carry out humdrum activities (Caves, 2000). Likewise, the stages are not necessarily linear and feedback on each other (European Commission et al., 2017).

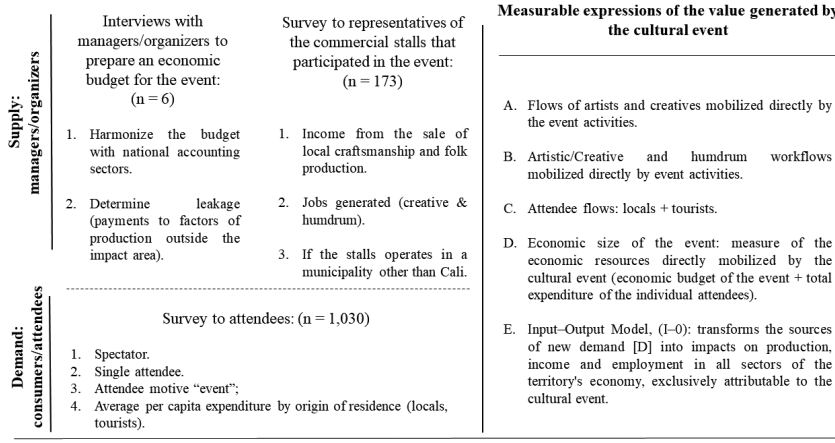
At each stage of the cycle, it is possible to provide a measure of the economic value created. This measure can be approximated through the transactions carried out by the various actors deriving from the production and consumption relations they establish in the market. Finally, these transactions translate into income and employment, which constitute a market measure of the economic value created by the cultural event.

3. Data and empirical model

3.1. Data

To provide an empirical measure of the economic value generated by a cultural event, we assess the market transactions associated with stages (ii) Production and (iv) Consumption/ Participation of the cultural cycle (Figure 2). A mix of instruments is used: interviews (n = 6) with event managers/organizers; a face-to-face survey (n = 173) with representatives of the commercial stalls that participated in the event; a face-to-face survey of attendees (n = 1,030) to the cultural event and, an input–output model is adapted to the economy of the city of Cali. In addition, methodological innovations are presented that offer greater accuracy in estimating the expressions of economic value.

I. *Production budget of the cultural event and its harmonization with the national accounts sectors*: The agency in charge of designing and producing the festival each year is the Mayor's Office of Cali, through the Secretariat of Culture. The latter provided the detailed production budget for the festival. The next step consisted in translating the accounting information, on which the budget is based, into economic information. In other words, the criteria for



Note: The results of the interviews, the instruments and microdata of the surveys, and the outputs of the input–output model are available upon request.

Figure 2. Sources of information for measuring the economic value of a cultural event. (source: authors' own elaboration)

classifying expenses and products used in private or public accounting do not coincide with the criteria used in national accounting: International Standard Industrial Classification of All Economic Activities (ISIC) and Central Product Classification (CPC). Budget harmonization is a key activity for accurately measuring the economic value associated with cultural events. The initial investment constitutes the direct effect on economic activity attributable to the event, so it must be an accurate measure to identify activities and the appropriate multiplier, net of leakage and local resources. Six interviews were conducted with the festival management to establish a detailed description of: a. the value chain of the event, b. the network of suppliers and whether they are located in the city or region where the event is held (impact area), c. the budget structure and expenditure items that allow its homologation with the sectors of the national accounts, d. identify expenditure leakage.

II. *Survey of commercial stalls*: A face-to-face survey instrument was applied to representatives of each of the 173 commercial stalls that participated in the sample of Afro-Colombian Pacific traditional expressions (49 of handicrafts, instruments and design; 48 of traditional and native beverages; 59 of traditional cuisines; 7 of sweets, snacks and soft drinks; and 10 of hairstyles and cosmetics). The survey made it possible to describe the types of services/products sold at the stall, as well as whether the business currently operates in a municipality other than Cali, whether it purchases inputs in a municipality in the Pacific region, how many people work by type of employment (creative, humdrum), among other relevant information.

III. *Attendee survey*[1]: Expenditure/consumption of attendees was obtained from a questionnaire applied by face-to-face survey to people over 18 years of age during the festival. August 15–20, 2018. Respondents were selected using systematic sampling techniques by geographic place of residence (Bethlehem, 2009). In total, 1,030 attendee surveys were administered (636 local residents and 394 tourists). The attendee surveys provide a 95% confidence level and a 3.0% margin of error for all attendees. To arrive at this sample, 1,376 survey attempts were made, 346 of which failed the filter question: Is attending the Petronio Álvarez Festival the main reason you are in Cali today? This question is fundamental to estimate the economic value, in the sense that it implies the reason without which the trip would not have been made, in the case of non-local attendees (from the rest of Colombia and abroad). In the case of local residents, it is understood as the reason that keeps them in the city during the specific season (see United Nations, 2000). Spending by attendees depends on various factors, including: place of residence; days of stay in the city; type of accommodation; means of transportation used to get around the city; purchase of souvenirs, gifts; among others. In this article, they are classified as accommodation; craft fair (e.g. handicrafts, musical instruments, cosmetics); traditional cuisine (e.g. food, drinks and refreshments); local transportation; others outside the festival citadel. Moreover, they are homologated with national accounting.

To obtain an adequate estimate of the economic value generated by these two sources of demand (production/organization + attendees), some adjustments are required. First, the investment of the Mayor's Office of Cali should be reduced by the leakage, which represents the payment to productive factors or purchases of inputs outside the city (Crompton, 2006). Second, the total number of unique attendees should include only those whose main reason for being in the city is to attend the festival. Therefore, it is necessary to subtract from the total number of unique attendees what in the literature of economic impact studies is known as "time–switchers" and "occasional" attendees (Crompton et al., 2001). In the same sense, we must include local attendees who might leave the city (expenditure leakage) during a

[1] The questionnaire and the database from the surveys are available upon request.

vacation period, but stay as a result of a rational choice to attend the festival; in the article we call them intralocal tourists.

3.2. Empirical model: Input–output model (I–O)

To estimate the economic value of stages (ii) and (iv), an input–output model, hereafter I–O, is constructed (Miller & Blair, 2022)[2]. I–O models are extensively used to estimate the economic effects derived from the realization of cultural events (Pereira et al., 2023; Seaman, 2020; Miernyk, 2020; Mahajan, 2018; Llop & Arauzo-Carod, 2012). In essence, an (I–O) quantifies the effects of an increase in the production of a sector or industry (e.g., the realization of a cultural event) on the demand associated with its value chain (e.g., creatives, musicians, lighting equipment, local transportation, hotel accommodations, advertising, food). The effects are measured in new income, production and employment under the assumption that prices do not change.

An (I–O) is a double-entry table describing the functioning of an economy (local, regional, national) through the structural interdependencies between different sectors and activities. The latter are represented by the flows (purchases/sales) of goods and services expressed in monetary values. In an (I–O) the flows of transactions $z_{ij} \geq 0,\ i = 1,\ldots,n,\ j = 1,\ldots,n,$ among the n productive sectors of an economy, are summarized in the purchases/sales that a sector (i) makes to other sectors (j), including the same sector, to reach a given level of production (x_i). The latter is captured by the technical coefficients $a_{ij} = z_{ij} / x_j,$ which indicate the quantity of inputs of sector *i* needed to produce one unit of final demand of sector *j*. Households, government and foreign trade, as economic agents, also make transactions with the productive sectors, only that the purchases made by these agents are destined for the final consumption of goods and not to be used as inputs for the production of other goods. This flow of transactions is called final demand (f_i). Thus, the total production of each n sector is constituted by the sales it makes to the other sectors (z_{ij}) and the final demand (f_i). This is $x_i = \sum_{j=1}^{n} z_{ij} + f_i.$

The fundamental equation of an (I–O) is given by:

$$X = \left[I - A\right]^{-1} D, \tag{1}$$

where X is a vector $(j \times 1)$ showing the gross value of production of the *j* sectors of the economy, *I* represents the identity matrix $(j \times j)$, *A* represents the matrix of technical coefficients (a_{ij}). The latter represents the intersectorial purchase flows per unit of production that reflect the direct relations of the productive structure of an economy; *D* is the vector $(j \times 1)$ of the demand for production by agents (household, government, foreign trade). $\left[I - A\right]^{-1}$ is the Leontieff inverse matrix and provides the multipliers that measure the effects derived from an exogenous change in the demand of some sector of the economy on the levels of production, employment and input demand of the other sectors of the economy.

The output multipliers ($\propto_{ij}$) measure the gross value of the output of sector *i* needed to produce one unit of final demand of sector *j*. The sum of column *j* of the Leontieff inverse matrix ($\propto_j$), is interpreted as the amount of output of all sectors (the economy as a whole) needed to generate one unit of final demand of sector *j*. The sum of the *i* rows, ($\propto_i$), is

[2] The structure and results of the input–output model are available upon request.

interpreted as the amount of output of sector *i* needed to generate a unit vector of final demand (of the economy as a whole). Type I multipliers include inter-sectoral linkages. That is, the direct effects of the change in final demand in sector *j* and the indirect effects on other sectors. The effects that arise when workers receive additional income and spend it, the induced effect, are included in Type II multipliers, these multipliers endogenize the new household expenditures and wages, also called total multipliers.

Employment multipliers measure the employment required to generate one unit of output of (x_i). This measure is called the technical coefficient of employment or direct coefficient of employment. The increase in total employment (E) is estimated in a similar way, as the product between the vector of direct employment by sectors of the economy of the impact area (L) and the matrix of multipliers:

$$E = L \times \left[I - A \right]^{-1} D = M \times D. \tag{2}$$

M is the matrix of total employment multipliers. The components of this matrix (m_{ij}) show the total employment required in sector *i* for sector *j* to produce one unit of output for final demand. Thus, row *i* shows how employment is generated in sector *i* by the activity required in all other sectors, and its sum (m_i) is the total increase in employment in sector *i* derived from unit increases in final demand in all sectors (economy as a whole). The columns show the ways in which the activity generated by sector *j* creates employment in all sectors of the economy. Thus, the column sum of the employment multipliers (m_j) indicates the total employment generated in the economy in the face of unit increases in the final demand of sector *j*. Type II employment multipliers are used to estimate employment, i.e. the effect of household spending and wages is incorporated.

In order to obtain an input–output matrix that reflects the productive structure of the economy of the city of Cali, the following process was carried out (Hewings, 2020; SACO, 2019; Mahajan, 2018). First, the 2010 Colombian symmetric matrix of 61 product groups was taken, initially adding 37 groups and then 13 groups. The employment vector was obtained from the employment matrices for Colombia and the departmental and municipal results of the Gran Encuesta Integrada de Hogares, and the vector was disaggregated into 37 and 13 groups. Second, using indirect methods, based on the economic accounts and production indicators prepared by the Planning Office of the Department of Valle del Cauca, a production vector was constructed to adapt the 13–group matrix of the national economy (Colombia) to the economic structure of Valle del Cauca[3]. For the adjustment of the matrix, we use the RAS synthetic proportional adjustment method, which is based on biproportional adjustment, to perform a double correction: both in row and column aggregates (Holý & Šafr, 2023; Hewings & Fernández, 2019; ten Raa, 2009; Fernandez et al., 2015). Third, we calibrate the matrix output and employment multipliers for Valle del Cauca according to the economic structure of the city of Cali.

Figure 3 presents the four strategic activities proposed to accurately estimate the economic dimension of the value generated by a cultural event. The methodology and information sources used make it possible to provide accurate measures of the economic value generated by a cultural event and, in turn, provide a more complete picture of the economic value in terms of supply and demand.

[3] Politically and administratively, Colombia is divided into departments, districts, municipalities and indigenous territories. The municipalities constitute the second level of the administrative structure; grouped together, they form the departments (DANE, 2013). The municipality of Cali is the capital of the department of Valle del Cauca and accounts for approximately 65% of the department's GDP.

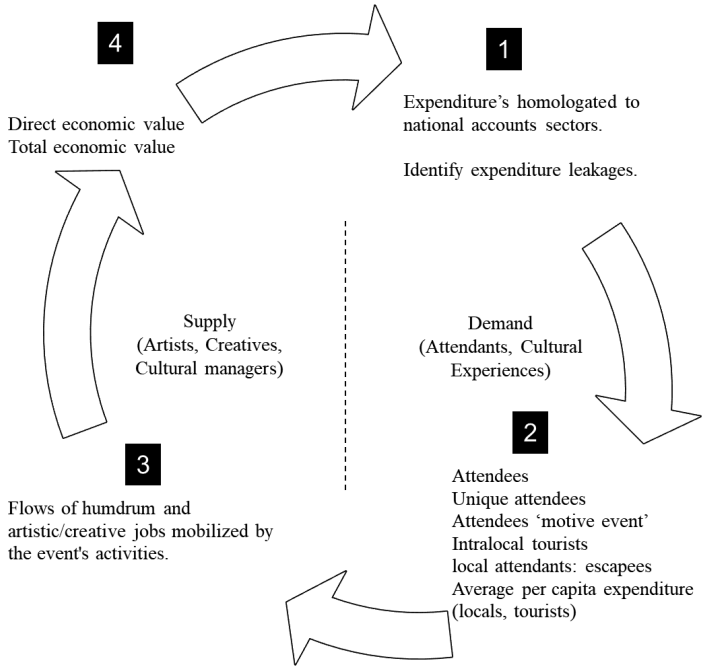


Figure 3. Strategic activities to estimate the economic dimension of the value generated by a cultural event (source: authors' own elaboration)

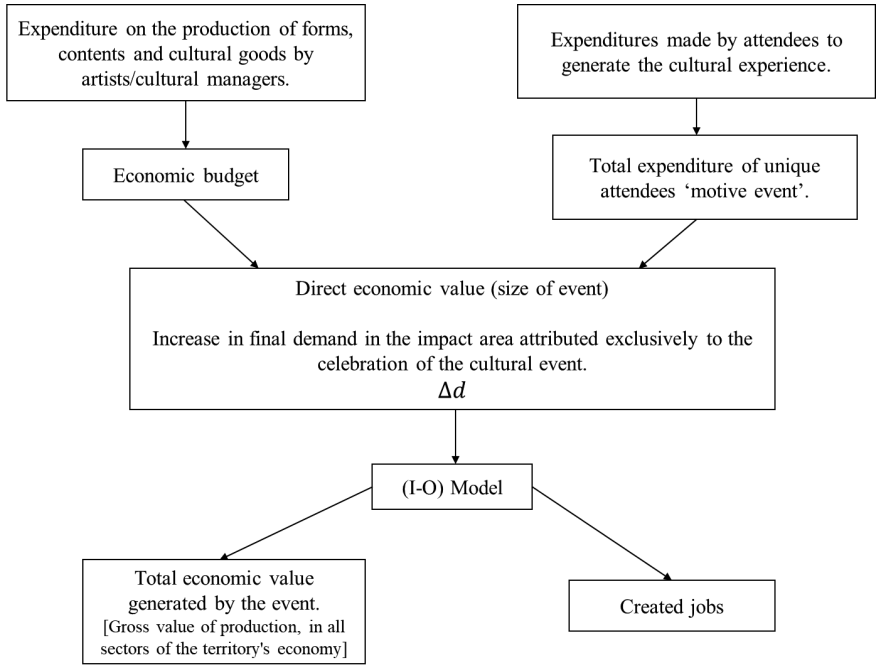


Figure 4. Methodological contribution to improve the accuracy in estimating the economic value generated by a cultural event. (source: authors' own elaboration)

Figure 4 highlights the methodological contribution of the article. First, the respective adjustments are made to the organization and production budget of the cultural event in order to elaborate an economic budget for the event. Second, the spectators are converted into unique "event motive" attendees. Third, an attempt is made to construct an input–output model that reflects the local economy and provides accurate production and employment multipliers.

4. Results

Table 1 presents a summary of the direct economic value generated by the festival for the city of Cali. Stage (ii), organization and production of the festival, had a final executed budget of US$1.746 million. In interviews with the organizers and suppliers of the festival, the structure of the budget was analyzed; this exercise made it possible to precisely identify the sectors of the input–output matrix that mobilizes each expenditure item and, in addition, to identify expenditure leakage. Thus, it was determined that 95.5% of the organization and production budget remains in the impact area; $1.67 million dollars. The remaining budget, $79.3 thousand dollars, constitutes an expense leakage represented by the payment of licenses, royalties and some travel expenses for guest artists. This means that $1.67 million dollars circulate in the economy of the city of Cali attributable to the organization and production of the festival.

Table 1. Direct economic value. Stage (ii) – production

<table>
<tr><td colspan="6">Expenditure on the production of forms, contents and cultural goods by artists/managers.</td></tr>
<tr><td colspan="3">Budget (thousands of U.S. dollars)</td><td colspan="3">Employment created in the production of artistic and cultural forms and content</td></tr>
<tr><td>Budget homologated to national accounts sectors</td><td>Leaks</td><td>Economic budget</td><td>Musical contest</td><td colspan="2">Traditional crafts exhibition (173 stalls)</td></tr>
<tr><td rowspan="3">$ 1.746</td><td rowspan="3">$ 79,3</td><td rowspan="3">$ 1.667</td><td colspan="3">Employment</td></tr>
<tr><td>Musicians</td><td>Creative/artistic jobs [ancestral arts and crafts]</td><td>Humdrum jobs</td></tr>
<tr><td>604</td><td>503</td><td>426</td></tr>
</table>

The organization of the festival, in addition to the flow of spending, also mobilizes a flow of artists and creative people (musicians, dancers, cooks, artisans). Table one shows that the festival mobilizes 604 artists in the Afro-Colombian Pacific musical airs contest and 503 creatives in the sample of ancestral arts and crafts. It also shows that the festival also mobilizes non-cultural employment, 426 support staff in the craft show (e.g., assistants, waiters, vendors).

Stage (iv), cultural consumption or participation, also mobilizes a double flow: on the one hand, the flow of spending by festival–goers. That is, the expenditure in participation derived from the decision of individuals to produce a cultural experience from attending the festival (Ateca-Amestoy, 2020). Individuals, through their own production function that involves the purchase of goods, produce the cultural experience and services in the market, e.g. transportation to travel to the festival citadel, hotel accommodation, the time spent in the festival citadel and the investment they make to accumulate cultural consumption capital

(Seaman, 2006). On the other hand, there is the flow of festival attendees, which implies not only the attendance of the local population, but also the visit of tourists from other cities in Colombia and the world.

Table 2 shows that $92.4 is the average total expenditure of a unique attendee, who enjoyed an average of 2.69 days over the 6 days of the event. Spending by attendees operates as a turbine that drives the city's economy. On the one hand, part of the spending is concentrated inside the festival's citadel, made up of spending on the gastronomic showcase plus spending on the handicrafts showcase. On the other hand, a part of the expenditure is made outside the festival's citadel, represented by spending on lodging, local transportation and others (Table 2). This taxonomy offers an approximation to the ecosystem linked to the celebration of the festival, which integrates from the creative work (e.g. artists, musicians, cooks, designers, artisans) to the non-cultural work associated with the logistic and supply chain of the event (local transporters, hotels, equipment rental companies, etc.).

Table 2. Direct economic value. Stage (iv) – consumption/participation

Expenditures made by individuals to generate the cultural experience								
Average per capita expenditure (U.S. dollars)						Cultural Experience (attendants)		
Total	Accommodation	Craft fair (handicrafts, musical instruments, cosmetics)	Traditional cuisine (food, drinks and refreshments)	Local transportation	Others outside the Festival Citadel	Attendees	Unique attendees	Attendees "motive event"
$92.4	$17.3	$15.1	$35.2	$10.8	$13.9	368.650	137.045	74.349

Table 2 also shows the direct beneficiaries who produce their cultural experience through attendance at the festival. Estimating these beneficiaries is complex given the characteristics of the festival:

- It is multi–day: six days long.
- Multi–events: five events:
  i. Afro-Colombian Pacific airs and musical groups contest;
  ii. El Petronito with children musicians between 6 and 14 years old;
  iii. academic meetings;
  iv. pedagogical quilombo, a space that promotes integration, coexistence and respect for the Pacific culture; v. commercial exhibition of traditional cultural expressions of the Afro-Colombian Pacific.
- It uses the urban public infrastructure of the city as a stage: a temporary citadel is built where the festival takes place.
- Access is free of charge.

These characteristics may imply that the same person attends different events in the citadel during the same day (e.g., having lunch at the gastronomic show at noon and attending the music contest in the evening). Alternatively, attending the music contest on several days. In this context, it is important to differentiate between the total number of attendees (spectators) and the number of unique attendees. A spectator is a person who can be counted several times over the duration of the festival. A unique attendee is a person who is counted only once for the duration of the festival. This differentiation is key to determining spending

and avoiding overestimation. To this end, a couple of questions were included in the attendee survey that ask about how many days and how many events are attended during the festival.

Additionally, in the case of tourists, it is important that the visit to the city of Cali is explained exclusively by the motivation to attend the festival. In the case of local attendees, it is important to count only those residents in the city who could leave the city on the date of the festival, but stayed in the city because of the festival. The first case means that the festival is a generator of attraction of tourists to the city. The second case means that the festival avoids the leakage of spending from the city, especially when the date of the festival coincides with the local vacation season. To capture these specificities, the survey of attendees included the filter question discussed in section 2.1. Studies of the economic impact of cultural events tend to overestimate the number of people attending the events, due to the complexity of estimating this type of participants. Table 2 shows that during the six days of the festival it is visited by 368,650 spectators, corresponding to 137,045 unique attendees. Finally, the festival attracts and retains 74,349 attendees in the city during its celebration.

With the estimates made so far, it is possible to offer a measure of the resources mobilized by a cultural event in the territory as an approximation of its economic size: the resources mobilized (gross and net). The gross mobilized resources incorporate expenditure leakage and the total number of unique attendees. Figure 5 shows that the Petronio mobilizes 14.4 million dollars in the city of Cali, represented in its organization and production budget ($1.75), plus the expenditure of the total unique attendees who visit the festival ($12.7).

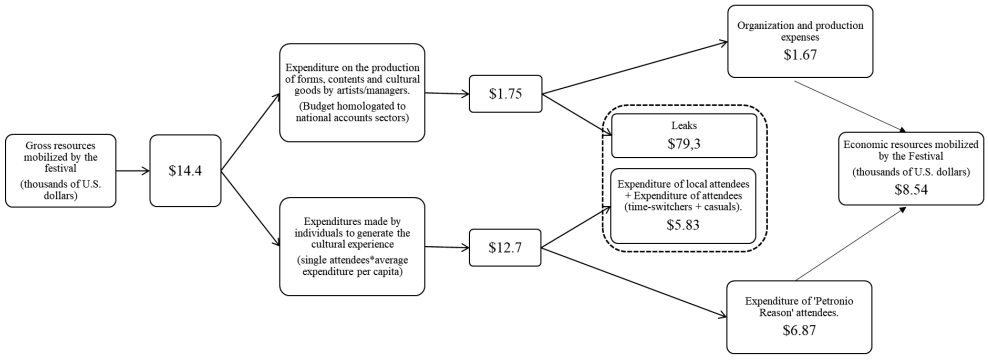


Figure 5. Economic dimension of a cultural event: gross and net resources mobilized

Net resources mobilized are a measure of the economic resources generated by the festival. This measure reflects the injection of new resources to the economy of the territory, attributed exclusively to the celebration of the festival. Figure 5 shows that the Petronio means to the city an injection of new demand to its economy for 8.54 million dollars, represented in the part of the organization and production budget that stays in the territory plus the expenditure of the unique attendees whose main reason for attending the festival. This $8.54 million represents the direct economic valuation attributable to the festival. In turn, the income of these resources to the city's economy generates a multiplier effect for all sectors involved in the production of the event and the spending of attendees (Figure 6).

Total economic value (TEV)		Sources of demand | Supply chain		Employment: Total employment	Employment: Employment multipliers	Example of new demand in the impact area
Direct economic value (DEV) [expenditure in the area of impact directly attributable to the event]	=	(PH_i) Budget homologated to the *i* sectors of national accounting minus local financing and expenditure leaks.	+ (GA_i) Expenditure on attendees homologated to the *i* sectors of national accounting (attendees 'motive event' * average expenditure per capita)	**Direct employment**	(PH_i + GA_i) * θ_i	A tourist stays in a hotel in the impact area [**spending on accommodation**].
+				+		
Indirect economic value [Additional expenditure in the supply chain -inputs- generated by companies to respond to the increase in demand associated with the production expenses of the event and attendees.]	=	Cross-sectoral relationships, purchase of inputs in each sector's supply chain to meet additional demand (PH + GA). Type I multipliers apply [ai]. (PH_i) * a_i	+ (GA_i) * a_i	**Indirect employment** [Type I multipliers apply (ωi)].	(PH_i + GA_i) * ω_i	The hotel buys soaps from a local cosmetics laboratory for the rooms, which in turn buys the soap packaging from another local company [**purchase of inputs; cross-sectoral relationships**].
+				+		
Induced economic value [additional expenditure generated by the increase in the income of residents in the impact area].	=	Increase in household spending associated with new income generated by intersectoral and consumption relationships. Type II multipliers apply [φi]. (PH_i) * φ_i	+ (GA_i) * φ_i	**Induced employment** [Type II multipliers apply (vi)].	(PH_i + GA_i) * v_i	An employee of the soap packaging company buys with his salary a shirt for personal use produced by a local company [**consumer relations**].

Figure 6. Total economic value generated by a cultural festival

The result generated in the simulation of the input–output model, when introducing the change in final demand for $8.54 million dollars. Derived from the two sources of new demand identified: $1.67 [festival organization and production expenditure] plus $6.87 [expenditure of "Petronio motive" attendees], generated a total economic value of $39.4 million on the economy of the city of Cali, measured through the gross value of production and using type II production multipliers, disaggregated to 13 product groups, from agriculture to services. The impact on employment shows that 3,551 jobs were generated. Figure 7 summarizes the anatomy of the economic value generated by the cultural event.

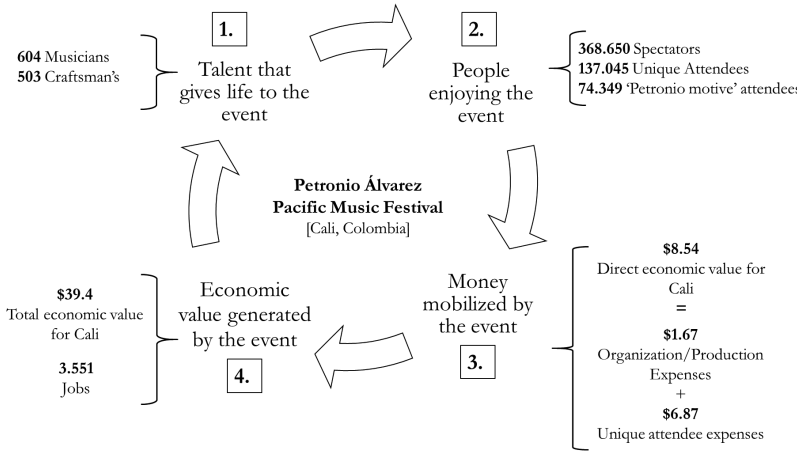


Figure 7. Anatomy of the economic value generated by a cultural event

The five sectors with the greatest impact on production are:

- *Food and beverage service activities* [11.5%] which is reflected in the production of food for consumption by attendees, artists and logistics equipment, processed foods used as inputs to provide food in restaurants, hotels and food stands.
- *Other manufacturing* [10.1%] which produces manufactured items and articles such as fabrics for dresses, shoes, minor spare parts, e.g. for lights, stage set–up and bleachers.
- *Retail trade, except of motor vehicles and motorcycles* [9.3%] which captures attendees' purchases of Festival gifts and souvenirs, from hats, T–shirts, musical instruments, and also includes repairs and preventive or corrective maintenance of devices and equipment used during the Festival.
- *Land transport and transport via pipelines* [8.2%] that includes travel agencies, temporary storage of cargo, mobilization in local transportation of attendees, jurors of the music contest and musicians.
- *Human health activities* [5.6%] affiliation to health care services for artists, logistical, security and promotion personnel, as well as social security paid by all providers to their collaborators.

The sectors with the highest concentration of employment are those linked to the logistics chain or creative ecosystem that supports the implementation and operation of the festival throughout its cycle each year: during the days before, during the days of celebration and after its completion. At this point it is important to keep in mind that the cultural and creative sector is an impulse to support activities not strictly cultural that irrigate a broad spectrum of sectors of economic activity, as just shown in the impact on production, (see, SACO, 2016; Higgs et al., 2007).

The most immediate is to observe employment in the cultural sector itself through: singers, musicians – artists who play a musical instrument, composer, arrangers, dancers, choreographers, cooks, producers of ancestral drinks, sweets, hairdressers, clothing designers, producers of musical instruments. However, the interrelationship with non-cultural sectors is very broad: e.g., in the construction of the citadel [repairs and adaptations to the site, hydraulic, sanitary and electrical installations, equipment rental – assembly and disassembly of stages/tents, stands, public services – water, energy, communications, gas, internet service], travel agencies, hotels, local transportation, media, security services, cleaning and orientation of attendees. Specifically, the employment generated by the festival is concentrated in five sectors:

- Retail trade, except of motor vehicles and motorcycles [22.7%], 808 employed.
- Land transport and transport via pipelines [15.0%], 533 employed.
- Crop and animal production, hunting and related service activities [14.1%], 499 employed.
- Other professional, scientific and technical activities [12.1%], 430 employed.
- Accommodation + food and beverage service activities [11.2%], 397 employed.

In summary, the economic value generated by a cultural event implies, in economic and material terms, a double flow of resources, which evidences the creation of value in the territory. On the one hand, the flow of expenses that generates new demands driven by the intersectorial and consumption relations derived from the event's value chain. This new demand also translates into jobs, both in the cultural and creative sector and in the support sectors. On the other hand, it mobilizes a flow of artists and creatives who materialize their creations, and a flow of cultural consumers who produce their unique and authentic cultural experience by attending the event. The economic dimension, of the value generated by cultural events, is a key variable to consider in cultural and creative sector policy and planning,

especially in discussions about the contribution made by the cultural sector to the economy and society (Partal & Dunphy, 2016).

5. Discussion

A first issue of discussion of the results found is to recognize that the measures of economic value are complementary with other measures of the multiple dimensions in which the value generated by cultural events is expressed (Petrova et al., 2022; Devesa & Roitvan, 2022). Therefore, the measures presented in the article only reflect one of the multiple dimensions in which the value of a cultural event is expressed: the economic value. Likewise, the objectives of organizers and attendees may go beyond the economic and the short term. The celebration of the event may mean more than generating employment and attracting tourists: for example, safeguarding traditions and customs that reflect the idiosyncrasies of the population of a territory, or legacy traditions and customs to future generations.

A second issue concerns the widespread criticism of the overestimation of economic value in empirical studies (Crompton, 2020). In fact, the main debate of these results focuses on whether the activities in which economic value is expressed/materialized are well identified and measured (Dimitrovski et al., 2023). Indeed, the empirical literature has drawn attention to the need for more precise measures of monetary – material – value (Pereira et al., 2021) and to incorporate the effect of cultural events on local crafts and folk production (Deepanjan & Sen, 2023). The proposed methodology allows us to obtain results for economic value – material, in terms of attendees, income and employment, are not overestimated.

Local attendees, time–switchers, and casuals are excluded from the attendee spending (Crompton, 2006). The survey of attendees using the filter question and the incidences provided the parameters to carry out this procedure. Incidences are the number of survey attempts made to obtain a complete survey according to the respondent's residence of origin (local, tourists). This parameter is used to accurately determine the number of: (i) tourists visiting the city exclusively motivated to participate in the cultural event, (ii) local attendees who, in the absence of the event, would have temporarily moved from the city to other locations to enjoy their leisure time but decide to stay in the city to participate in the cultural event (intralocal tourists). This innovation is in line with what Dimitrovski et al. (2023) raised about the need to improve survey instruments to capture reliable data in economic impact studies of events.

The building of the input–output model, the interviews with the organizers/producers and with the representatives of the commercial stalls of traditional cultural expressions make it possible to avoid three sources of bias and overestimation of the economic value attributed to a cultural event (Seaman, 2020; Davies et al., 2013; Crompton, 2006):

- An I–O table is created for the area of impact of the event, so that the multipliers accurately represent its economic structure.
- Appropriate and specific multipliers are used that correspond to the sector/activity on which the direct expenses of organization and production and the expenses of the individual attendees "motive event" have an impact; we call this process budget harmonization.
- A real economic budget of the event is used: organizational expenditures exclude local financial resources and leakage represented by purchases in other regions and imports.
- The flow of jobs mobilized by the event is also measured and, following Caves (2000), a distinction is made between creative work and humdrum work. The number of jobs

generated in the commercial stalls is used as a control variable to verify consistency in the estimation of direct jobs derived from the input–output model.

Finally, the available information made it possible to robustly measure two stages of the cultural cycle. The stages of creation and circulation present additional difficulties. In the case of creation, the difficulty is centered on estimating the costs of expressing artistic and cultural creation, which is not reflected in the budgets. In the case of circulation, the budgets reflect a small part that does not consider dissemination in networks and the media, which requires additional efforts to measure.

6. Implications and limitations for future research

6.1. Implications

The economic value of a cultural event is expressed through a set of positive externalities internalized by the territory that hosts it and can be the driving force to strengthen its economy and promote its image. Therefore, the success of a good estimate is centered on properly estimating three flows:

Economic budget [PH]: measure of the flow of expenditure in the impact area attributed exclusively to the organization/production of the event. PH = Event budget in homologated to national accounts – (local funding + expenditure leakage).

Number of attendees "event motive" [AME]: measure of the flow of attendees visiting the impact area attributed exclusively to the event [unique and authentic cultural experiences]. AME = Total unique attendees – (local attendees + "escapees" – "local intra–tourists") – ("time–switchers" + "casuals").

"Event motive" attendee expenditure [GA]: measure of the flow of expenditure in the impact area attributed exclusively to event attendees. To estimate it requires identifying at least two population samples: local intra–tourists and tourists (national, international). And, to avoid biases that may under/overestimate it: [i] ensure that each population sample is separated and distributed among the different activities that make up the event throughout its duration [ii] ensure that the capture of information is not concentrated in the same sample, this risk is linked to the nature of participation in this type of event: high social interaction and attendance in groups of people – families/friends. Systematic sampling[4], by geographic place of residence, at the entrance/exit sites and around the venues of the different activities, during the event, is a good alternative that allows minimizing the identified biases. GA = expenditure homologated to national accounting sectors * average per capita "event motive" expenditure.

6.2. Limitations and future research

The methodology and results focus on local live cultural events with wide international recognition. The idiosyncratic component is linked to the cultural heritage accumulated in the territory hosting the event. All these elements together imply an interrelation, in time and space, between artists, creatives, cultural managers and attendees, to create value through the event. Therefore, empirical and quantitative measures do not fully capture the complexity and multidimensionality of the value generated by cultural events.

[4] Systematic sampling randomly selects the first respondent for the sample (e.g. at the entrance/exit or around each event a surveyor stands and selects an attendant), and then selects subsequent respondents using fixed time intervals. (e.g. every 3 or 5 minutes) until the desired sample size is reached (see, Bethlehem, 2009).

In practice, the estimation of the number of people attending the event limits the availability of good approximations of the economic value generated by a cultural event. Generally, efforts are focused on measuring the flow of tourists and their spending. However, it is difficult to adequately measure the locals for whom the event retains them in the area of impact [local intra–tourists]. And, the locals who leave the impact area precisely because of the event [escapees] remains a methodological challenge.

The dynamics of a living cultural event are maintained over time, although its greatest expression in economic terms is manifested in each period (year) during its realization. Efforts should be made to measure what happens, in economic terms, outside the moment when the event takes place: for example, training to maintain and improve the skills of artists and creatives. In addition, explore how through digital technologies and platforms can coexist: live cultural participation at the event venue and live cultural participation at a distance, to broaden cultural participation and improve the economic sustainability of these types of events.

7. Conclusions

The results show that a cultural event does indeed contribute to the competitiveness of the territory. In fact, it generates new expenditure flows that materialize in new jobs and a brand for the territory that allows locals and tourists to generate unique and authentic experiences based on intangible heritage.

In practice, four sources were identified that limit the measurement of the economic value of a cultural event: i. the organization's budget, ii. the leakage of expenses, iii. the estimation of attendees and iv. the availability of input–output matrices that reflect the reality of the economic structure of cities and regions. The article's contributions to the empirical literature on measuring the value of cultural events include the homologation of expenditures with national accounting sectors, the development of an economic budget and the identification of types of attendees. However, the availability of local input–output matrices remains a challenge to measure the economic value of cultural events.

The economic value generated by a cultural event is not limited to the sector itself, but extends to non-cultural sectors, extending its effect to almost all sectors of economic activity. Therefore, from an economic point of view, the celebration of the festival affects an entire ecosystem that integrates the logistics and supply chain that sustains it.

An adequate measurement of the economic dimension of the cultural value provides cultural policy makers with elements to position the sector as key to the development of the territory. In particular in two main aspects:

Cultural events are a source of competitiveness for the territory. Today, competitiveness is understood as the ability to create an attractive environment; for a family to live and prosper; to work and attract creative talent; to invest and do business; to care for the environment; to respect diversity.

Cultural events generate employment and are inclusive. The cultural sector acts as a turbine to generate income and jobs in the territory. The basic input to create these jobs are the customs and traditions of the community (accumulated intangible heritage) and the natural talent of the people. The repositories of these skills and talents associated with the intangible heritage are ethnic and socially and economically vulnerable groups.

Acknowledgements

The authors thank the Inclusion for Peace Program (IPA) of the International Organization for Migration (mission in Colombia), and the Office of Research and Development of the Pontificia Universidad Javeriana Cali, Colombia.

The second author (J.H.C.) gratefully acknowledges the financial support of the Ayudas para la Recualificación del Sistema Universitario Español in its Margarita Salas Grant Modality by Ministerio de la Universidad de España by Resolution of November 29, 2021 of the Universidad de Sevilla, funded by the European Union – NextGenerationEU.

Author contributions

Luis F. Aguado (LFA), Jesús Heredia-Carroza (JHC) and Aaron Espinosa-Espinosa (AEE): conceptualization, formal analysis, methodology, writing original draft.

Paula Garizado (PG) and Henry Duque (HD): data curation, validation, reviewing the original draft.

Disclosure statement

The authors declare that they have no relevant financial or material interests related to the research described in this article.

References

Aguado, L., Arbona., A., Palma, L. & Heredia-Carroza, J. (2021). How to value a cultural festival? The case of Petronio Álvarez Pacific Music Festival in Colombia. *Development Studies Research*, *8*(1), 309–316. https://doi.org/10.1080/21665095.2021.1979417

Alonso-Vazquez, M., Packer, J., Fairley, S. & Hughes, K. (2019). The role of place attachment and festival attachment in influencing attendees' environmentally responsible behaviours at music festivals. *Tourism Recreation Research*, *44*(1), 91–102. https://doi.org/10.1080/02508281.2018.1545393

Angelini, F., & Castellani, M. (2019). Cultural and economic value: A critical review. *Journal of Cultural Economics*, *43*, 173–188. https://doi.org/10.1007/s10824-018-9334-4

Ateca-Amestoy, V. (2020). Participation, in R. Towse & T. Navarrete Hernández (Eds.), *A handbook of cultural economics* (pp. 399–407). Edward Elgar Publishing. https://doi.org/10.4337/9781788975803.00050

Belfiore, E. (2020), Whose cultural value? Representation, power and creative industries. *International Journal of Cultural Policy*, *26*(3), 383–397. https://doi.org/10.1080/10286632.2018.1495713

Bethlehem, J. (2009). *Applied survey methods: A statistical perspective* (chapter 4). Wiley. https://doi.org/10.1002/9780470494998

Boyd, S. (2020). Cultural and heritage tourism in contemporary cities. In A. M. Morrison & J. A. Coca-Stefaniak (Eds.), *Routledge handbook of tourism cities.* Routledge. https://doi.org/10.4324/9780429244605-18

Brito, P. & Barros, C. (2005). Learning-by-consuming and the dynamics of the demand and prices of cultural goods. *Journal of Cultural Economics*, *29*, 83–106. https://doi.org/10.1007/s10824-005-1748-0

Caves, R. (2000), *Creative industries. Contracts between art and commerce*. Harvard University Press.

Cerisola, S., & Panzera, E. (2021) Cultural and creative cities and regional economic efficiency: Context conditions as catalyzers of cultural vibrancy and creative economy. *Sustainability*, *13*, Article 7150. https://doi.org/10.3390/su13137150

Crompton, J. (2020). Uses and abuses of IMPLAN in economic impact studies of tourism events and facilities in the United States: A perspective article. *Tourism Review*, *75*(1), 187–190. https://doi.org/10.1108/TR-05-2019-0159

Crompton, J. (2006). Economic impact studies: Instruments for political shenanigans? *Journal of Travel Research*, *45*(1), 67–82. https://doi.org/10.1177/0047287506288870

Crompton, J., Lee, S., & Shuster, T. (2001), A guide for undertaking economic impact studies: The Springfest example. *Journal of Travel Research*, *40*(1), 79–87. https://doi.org/10.1177/004728750104000110

Cudny, W. (2016). The concept, origins and types of festivals. In *Festivalisation of urban spaces* (pp. 11–42). Springer. https://doi.org/10.1007/978-3-319-31997-1_6

Davies, L., Coleman, R., & Ramchandani, G. (2013). Evaluating event economic impact: Rigour versus reality? *International Journal of Event and Festival Management*, *4*(1), 31–42. https://doi.org/10.1108/17582951311307494

De-Miguel-Molina, B., & Boix-Doménech, R. (2021), Introduction: Music, from intangible cultural heritage to the music industry. In B. De-Miguel-Molina, V. Santamarina-Campos, M. De-Miguel-Molina, & R. Boix-Doménech (Eds.), *Music as intangible cultural heritage. Economic, Cultural and Social Identity. Springer Briefs in Economics* (pp. 3–8). Springer. https://doi.org/10.1007/978-3-030-76882-9_1

Deepanjan, S., & Sen, J. (2023). Characterizing the geography of artisanal production: Case of handloom industry in Varanasi, India. *Creative Industries Journal*.

Devesa, M., & Roitvan, A. (2022). Beyond economic impact. The cultural and social effects of arts festivals. In E. Salvador & J. Strandgaard Pedersen (Eds.), *Managing cultural festivals: Tradition and innovation in Europe* (pp. 189–209). Routledge. https://doi.org/10.4324/9781003127185-14

Dimitrovski, D., Leković, M., & Đurađević, M. (2023). The issue of methodological rigour within the data collection process in tourism and sports studies investigating the economic impact of sporting events. *Current Issues in Tourism*, *26*(14), 2389–2404. https://doi.org/10.1080/13683500.2022.2086452

European Commission, Directorate-General for Education, Youth, Sport and Culture, Hoelck, K., Engin, E., & Airaghi, E. (2017). *Mapping the creative value chains. A study on the economy of culture in the digital age: Final report*. Publications Office. https://data.europa.eu/doi/10.2766/868748

Fernandez, E., Hewings, G., & Ramos, C. (2015). Adjustment of input–output tables from two initial matrices. *Economic Systems Research*, *27*(3), 345–361. https://doi.org/10.1080/09535314.2015.1007839

Garcia, M., & Judd, D. (2012). Competitive cities. In P. John, K. Mossberger, & S. E. Clarke (Eds.), *The Oxford handbook of urban politics*. Oxford Academic. https://doi.org/10.1093/oxfordhb/9780195367867.013.0024

Getz, D., & Page, S. (2019). Event studies: Theory, research and policy for planned events (4th ed.). Routledge. https://doi.org/10.4324/9780429023002

Greffe, X. (2010). Introduction: L'économie de la culture est–elle particulière? *Revue d'économie politique*, *120*(1), 1–34. https://doi.org/10.3917/redp.201.0001

Hewings, G. (2020). *Regional input–output analysis*. Web Book of Regional Science. Regional Research Institute, West Virginia University.

Hewings, G. & Fernández, E. (2019). Entropy maximization and input–output analysis. *Interdisciplinary Science Reviews*, *44*(3–4), 272–285. https://doi.org/10.1080/03080188.2019.1670429

Higgs, P., Cunningham, S., & Pagan, J. (2007). *Australia's creative economy: Basic evidence on size, growth, income and employment* (Technical Report). Faculty Research Office, ARC Centre of Excellence for Creative Industries & Innovation (CCI).

Holý, V., & Šafr, K. (2023) Disaggregating input–output tables by the multidimensional RAS method: A case study of the Czech Republic. *Economic Systems Research 35*(1), 95–117. https://doi.org/10.1080/09535314.2022.2091978

Hutter, M., & Frey, B. (2010). On the influence of cultural value on economic value. *Revue d'économie politique*, *120*(1), 35–46. https://doi.org/10.3917/redp.201.0035

Klamer, A., Petrova, L., & Eva Kiss, D. (2022). Cultural value of a festival: The quality evaluator for assessing impact. In E. Salvador & J. Strandgaard Pedersen (Eds.), *Managing cultural festivals: Tradition and innovation in Europe* (pp. 210–231). Routledge. https://doi.org/10.4324/9781003127185-15

Kulenovic, J., & Cech, A. (2015). *Six case studies of economically successful cities: Competitive cities for jobs and growth*. World Bank. http://hdl.handle.net/10986/23573

Lévy-Garboua, L., & Montmarquette, C. (2011). Demand. In R. Towse (Ed.), *Handbook of cultural economics* (2d ed., Chapter 26, pp. 177–186). Edward Elgar Publishing. https://doi.org/10.4337/9780857930576.00032

Llop, M., & Arauzo-Carod, J. M. (2012). Identifying the economic impact behind a cultural asset: An input–output subsystems analysis. *The Annals of Regional Science*, *49*, 861–877. https://doi.org/10.1007/s00168-011-0464-2

Mahajan, S. (Ed.) (2018). *Handbook on supply and use tables and input–output tables with extensions and applications*. United Nations.

Matarasso, F. (1997). *Use or Ornament? The social impact of participation in the arts.* Comedia.

McCain, R. (1979). Reflections on the cultivation of taste. *Journal of Cultural Economics*, *3*(1), 30–52. https://doi.org/10.1007/BF00167321

McCarthy, K., Ondaatje, E., Zakaras, L., & Brooks, A. (2004). *Gifts of the muse: Reframing the debate about the benefits of the arts.* Rand Corporation, Santa Monica, United States. https://doi.org/10.7249/MG218

Meeprom, S., & Fakfare, P. (2021). Unpacking the role of self-congruence, attendee engagement and emotional attachment in cultural events. *International Journal of Event and Festival Management*, *12*(4), 399–417. https://doi.org/10.1108/IJEFM-02-2021-0018

Miernyk, W. H. (2020). *Regional and interregional input–output analysis. The elements of input–output analysis.* Web Book of Regional Science. Regional Research Institute, West Virginia University.

Miller, R., & Blair, P. (2022). *Input–output analysis: Foundations and extensions* (3rd ed.). Cambridge University Press. https://doi.org/10.1017/9781108676212

Moggridge, D. (Ed.) (1982). *The collected writings of John Maynard Keynes. Vol. XXVIII: Social, political and literary writings* (Chapter 3, pp. 341–349). The Macmillan Press.

Organization for Economic Co-operation and Development. (2005). *Culture and local development*. OECD Publishing.

Organization for Economic Co-operation and Development. (2023a). *How to measure the impact of culture, sports and business events: A guide, Part I, No 2023/10* (OECD Local Economic and Employment Development (LEED) Papers). OECD Publishing.

Organization for Economic Co-operation and Development. (2023b). *Impact indicators for culture, sports and business events: A guide – Part II, No 2023/11* (OECD Local Economic and Employment Development (LEED) Papers). OECD Publishing.

Palma, M., Palma, L., & Aguado, L. (2013). Determinants of cultural and popular celebration attendance: The case study of Seville Spring Fiestas. *Journal of Cultural Economics*, *37*(1), 87–107. https://doi.org/10.1007/s10824-012-9167-5

Partal, A., & Dunphy, K. (2016), Cultural impact assessment: A systematic literature review of current methods and practice around the world. *Impact Assessment and Project Appraisal*, *34*(1), 1–13. https://doi.org/10.1080/14615517.2015.1077600

Pereira, F., Amaral e Silva, M., & Martins de Brito, D. (2023). The economic contribution of the cultural sector in Brazil: an input–output approach with different income groups. *Creative Industries Journal.* https://doi.org/10.1080/17510694.2023.2203397

Pereira, L., Jerónimo, C., Sempiterno, M., Lopes da Costa, R., Dias, Á., & António, N. (2021). Events and festivals contribution for local sustainability. *Sustainability*, *13*(3), Article 1520. https://doi.org/10.3390/su13031520

Petrova, L., Graça, S., & Klamer, A. (2022). Evaluating qualities of cultural production: a value-based approach. *Media Practice and Education*, *23*(2), 112–125. https://doi.org/10.1080/25741136.2022.2056793

ten Raa, T. (2009). *The economics of input–output analysis*. Cambridge University Press. https://doi.org/10.1017/CBO9780511610783

Rodrigues-Ferreira, A., Afonso, H., Mello, J. A., & Amaral, R. (2023). Creative economy and the quintuple helix innovation model: A critical factors study in the context of regional development. *Creativity Studies*, *16*(1), 158–177. https://doi.org/10.3846/cs.2023.15709

SACO. (2016). *National arts festival. Monitoring and evaluation: Key development indicator report on a DAC intervention.* South African Cultural Observatory, SACO, Department of Arts and Culture, Republic of South Africa, Port Elizabeth, Republic of South Africa.

SACO. (2019). *An input–output model for the cultural and creative industries in South Africa and possible extension*. South African Cultural Observatory, SACO, Department of Arts and Culture, Republic of South Africa, Port Elizabeth, Republic of South Africa.

Šagovnović, I., Pivac, T., & Kovačić, S. (2022). Examining antecedents of residents support for the European Capital of Culture project – event's sustainability perception, emotional solidarity, community attachment and brand trust. *International Journal of Event and Festival Management, 13*(2), 182–202. https://doi.org/10.1108/IJEFM-02-2021-0009

Santamarina, B. (2023). *The global competition of the intangible*. UNESCO as a Producer of Heritage Brands, Heritage & Society. https://doi.org/10.1080/2159032X.2023.2226572

Seaman, B. (2006). Empirical studies of demand for the performing arts. In V. Ginsburgh & D. Throsby (Eds.), *Handbook of the economics of art and culture* (Vol. 1, pp. 15–472). Elsevier. https://doi.org/10.1016/S1574-0676(06)01014-3

Seaman, B. (2020). Economic impact of the arts. In R. Towse & T. Navarrete Hernández (Eds.), *A handbook of cultural economics* (pp. 241–253). Edward Elgar Publishing. https://doi.org/10.4337/9781788975803.00033

Snowball, J. (2008). *Measuring the value of culture. Methods and examples in cultural economics.* Springer Verlag.

Snowball, J. (2020). Cultural value. In R. Towse & T. Navarrete Hernández (Eds.), *A handbook of cultural economics* (pp. 206–215). Edward Elgar Publishing. https://doi.org/10.4337/9781788975803.00029

Stigler, G., & Becker, G. (1977). De gustibus non est disputandum. *American Economic Review, 67*(2), 76–90.

Sung, H. (2014). UNESCO framework for cultural indicators. In A. C. Michalos (Ed.), *Encyclopedia of quality of life and well–being research.* Springer. https://doi.org/10.1007/978-94-007-0753-5_3079

Throsby, D. (2003). Determining the value of cultural goods: How much (or how little) does contingent valuation tell us? *Journal of Cultural Economics*, *27*, 275–285. https://doi.org/10.1023/A:1026353905772

Throsby, D. (2020). Cultural statistics, in R. Towse & T. Navarrete Hernández (Eds.), *A handbook of cultural economics* (pp. 197–215). Edward Elgar Publishing. https://doi.org/10.4337/9781788975803.00028

UNESCO, & World Bank. (2021). *Cities, culture, creativity: Leveraging culture and creativity for sustainable urban development and inclusive growth.*

UNESCO. (2015). *Festival statistics: Key concepts and current practices.*

UNESCO. (2022). *Reshaping policies for creativity: Addressing culture as a global public good.*

UNESCO. (2009). *The 2009 UNESCO framework for cultural statistics (FCS).*

United Nations. (2000). *Recommendations on tourism statistics. Statistical Papers, Series M, 83.* United Nations Publication Series M No. 83 (Rev–1.0).

van der Hoeven, A., Behr, A., Hamilton, C., Mulder, M., & Rozbicka, P. (2021). 1–2–3–4! Measuring the values of live music: Methods, models and motivations. *Arts and the Market*, *11*(2), 147–166. https://doi.org/10.1108/AAM-09-2020-0041