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THE IMPACT OF MUSIC FESTIVALS ON THE TOURISM ECONOMY

NOS Alive Case Study

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Abstract

In the recent times, music festivals are being used as relevant tools for tourism development and promotion thanks to their capacity to attract tourists in every moment of the year. For this reason, it becomes extremely important for policy-makers and festival organizers to quantify and examine the economic, social and cultural impact of these special events on the local economy. This paper is focused on *NOS Alive*, a famous music Festival held in the city of Lisbon. The main objective of this study is to have a full understanding of visitors' profile, the motivation and visitation patterns during their stay in Portugal and to estimate the direct, indirect and induced impact of the festival at the regional level.

Keywords: NOS Alive, Music Festivals; Tourism, Visitors Profile, Economic Impact.

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1. Introduction

In the so called *Experience Economy*, the participation in cultural events and festivals has become essential in people's life. Some authors used to refer to the terms *Festivalization* or *Eventification* to indicate economic and social phenomena in which urban space is turned to a place of constant festivals or events. (Nikolay Zherdev, 2014).

During the last half of the century, in Europe, the number of festivals and cultural events has increased exponentially. In general, this has been attributed to different factors: on the demand side, the increase in living standard, disposable income and recreation time; on the supply side, the decrease of marginal production costs associated with festivals (D. Felsenstein and A. Fleischer, 2003).

In this context, music festivals in particular draw the attention of many academics, researchers and policy makers for their capacity to generate a big impact on the local economy, and function as a leverage on the tourism industry. Among the European countries, Portugal represents one of the most vibrant and active scenes in hosting music festivals all year long. According to the *Associação do Festivais de musica Portugueses* (Aporfest), the number of music festivals in Portugal is increasing year by year: in 2015, in total, 160 festivals were organized in Portugal, of which 50 of them were first editions. The majority of the festivals occur in the summer time, between 21st of June and 20th of September and attract an increasing number of tourists who want to discover the country, whilst attending the festival.

This study is focused on a worldwide known music festival, which is held every year in Portugal: *NOS Alive*. The festival attracts a significant number of international visitors thanks to its competitive line-up and its location: the city of Lisbon, which is recently living an exponential growth in tourism. Furthermore, *NOS Alive* became over the years an important

reference also for the local community as demonstrated by many people who repeated the visit at the festival several times or never missed one edition.

This paper is the result of an intensive Direct Research Internship. The main objectives of the study are the characterization of visitors' profile and the estimation of the general impact generated by the festival on the local economy. For this purpose, a consistent number of surveys has been conducted among festival attendants, investigating the demographic profile, motivation to travel, length of stay and many other features. The research was structured in line with previous researches commissioned by the festival organiser of *NOS Alive*. However, for the first time, the surveys involved also the participation of local residents. Furthermore, this study represents the first attempt to estimate the direct, indirect and induced impact of the festival.

The following pages contain a general overview of music festivals' impact according to the literature. Moreover, information about the festival's history, the tourism industry in Portugal and a description of the research methodology are provided. The empirical results and research findings are analysed in two different parts in relation with the two main objectives of the study: the characterization of the visitors' profile and the impact assessment. To conclude, a discussion and a set of limitations and recommendations are analysed.

2. Theoretical Framework

2.1. The impact of music festivals

The organization of music festivals continues to attract the interest of economists, sociologists and policy-makers as it generates important benefits within the local community. According to Carneiro et al. (2011) music festivals are important generators of economic benefits as they contribute to economy's growth and job creation. Indeed, they attract a significant number of tourists, which contribute with their spending to the growth of the local

economy. Furthermore, special events like music festivals help to reduce seasonality in tourism (Getz, 1997) and increase the visitor's length of stay in the region (B. Janeczko, T. Mules and B. Ritchie, 2002). However, the impact of music festivals is not limited to economic benefits, but it include also social, cultural, political, physical and environmental effects (F. Langen and B. Garcia, 2009). Indeed, music festivals can contribute to create the image of a place (D. Felsenstein and A. Fleischer), improve the destination awareness and increase civic pride or community solidarity (F. Langen and B.Garcia, 2009). Especially in case of continuous events, local residents can mature a sense of belonging to the community, which help to foster a “creative community” (Nikolay Zherdev, 2014).

As music festivals are becoming such important component in tourism destination portfolios (Bowdin et al. , 2006) it is crucial to quantify and examine the economic, social and cultural impact that these events generate on the local economy. The literature consists in plenty of different methodologies and procedures to estimate economic impact of music festivals. According to Archer (1982) and Mules (1996) the most usual economic model, especially at the regional level, is the *input-output model*. Besides that, the *Keynesian model* is also often cited in many researches (Eusebio, 2007). However, the absence of standardized methodological approaches and specific regional *multipliers* made the calculation of the economic impact a controversial subject for many academics. The formula to analyse the outcomes are different from festival to festival and this creates problems for benchmarking (UNESCO, Festival Statistics Handbook, 2009). In this context, two studies emerge in particular as the most comprehensive and accurate in the methodology: the *Glastonbury Festivals 2007 Economic Impact Assessment* (The Baker Associates, 2007) and *Edinburgh Art Festival* (BOP Consulting, 2016), which are both taken as a reference and guidance for this study.

2.2 Definition and concept of economic impact

Before exploring the research question, it is important to define the concept of economic impact. According to S. Richards (2010), economic impact of events refers to “the total amount of additional expenditure generated within a defined area, as a direct consequence of staging the event”. In general, economic impact can be categorized into *primary impact* that is the direct impact and *secondary impact* that refers to indirect and induced impact. (S. R. Miller, 2007).

The **direct impact** results from the additional expenditures undertaken by festival organisers (spending on staff, subcontractors and suppliers) and visitors (through purchases of goods and services inside and outside the festival enclosure).

In particular, the *festival expenditure* includes all the costs and expenses that have a direct impact on the local economy; so it refers only to the purchase of goods and services that are sourced locally. According to B. Janeczko, T. Mules and B. Ritchie (2002), in the calculation of *festival expenditure*, account must be taken on *leakages*, which refer to the amount of money that leaves the region through outside employment, purchases, taxation etc. The other component of the direct impact is the *visitor expenditure*, which is the biggest factor in generating economic impact (Sarah Richards, 2010). Typically, the estimation of visitor spending arises from primary data to be collected through visitor surveys, box office data, and stakeholder interviews (F. Langen and B. Garcia, 2009). When calculating the *visitor expenditure*, only the expenditures that are genuinely additional to the economy should be considered. Many academics used to refer to the term *deadweight* that by definition is the spending that would have occurred anyway, independently of the festival taking place. For this reason, residents in the local area are usually excluded from the calculation of *visitor expenditure* as their spending represents a recirculation of existing wealth within the local economy (S. R. Miller, 2007). Moreover, also *displacement* effects should be taken into

account, which occur when the organization of the festival displaces other types of economic activities in the local area. However, those effects are very difficult to assess and require a collection of high quality data among many stakeholders.

The **indirect impact** is a result of the direct impact, representing the additional input purchases made by local businesses (i.e. bar, restaurants, shops..) which are not necessarily involved in the event (S. R. Miller, 2007). For instance, “new” tourists spend money in local restaurants and lead them in turn to purchase more inputs from local suppliers and hire new workers. Finally, the **induced impact** is the final impact that arises from the spending (by local businesses, suppliers, and employees) of the additional income (increased wages) resulted from the previous direct and indirect impact, that is directly or indirectly associated with the festival. This process of additional spending further stimulates the economic activity and lasts until the total amount re-spent diminishes. Hence, the indirect and induced impacts derive from a multiplicative effect of the direct impact. For this reason, a set of *multipliers* is generally used in order to capture the secondary effects on the local economy. Those multipliers usually lie in the range of 0.2 and 0.5 and depends on the size and structure of the economy (Baker Associates, 2007).

3. Research Methodology

This study is based on estimates and assumptions derived from primary and secondary data analysis. In collecting primary data, the research methodology comprised 2000 self-completing questionnaires on paper, distributed to festival attendants randomly selected, during the three days of the Festival. The survey explored the *demographic profile*, *motivation to travel*, *festival attendance*, *trip details*, and a range of issues including the *experience with music festivals* in general and with *NOS Alive* in particular (See Appendix, **Figure I: Survey’s template**). The questionnaires were delivered mostly to people waiting in

line; for this reason, there was a high level of collaboration in the survey with a very low refusal rate. However, problems may arise when conducting self-administrated surveys. A 100% level of accuracy cannot be guaranteed in absence of support to respondents having difficulties completing or understanding the survey. However, the high level of commitment and the large dimension of the sample make us confident about the reliability of the data. After being accurately collected, data were analysed by using two different programs for data analysis: Microsoft Excel and STATA IC 14.0 (Data Analysis and Statistical Software).

This study does not involve any particular economic model. However, the *Economic Impact Assessment Study of Glastonbury* (Baker Associates, 2007) has been used as a guide in the process of estimating the economic impact. Furthermore, secondary data and confidential management information were needed. In the absence of primary data about *visitor expenditure*, information was provided by a previous academic research that estimated the visitors' expenditure of another Portuguese festival, which is validly comparable with *NOS Alive*. In addition, face-to-face interviews were conducted among business partners in the hospitality industry in order to examine eventual effects of *displacement*.

Management information about the *festival expenditure* was directly provided by the Festival Organisers whereas a set of derived and specific *multipliers* was used for calculating the indirect and induced impact.

4. NOS Alive History Background

NOS Alive opened its doors for the first time in 2007 with the name of *Optimus Alive*, thanks to the initiative of “*Everything is new*”, a media-entertainment company based in Lisbon, run by Álvaro Covões. The festival took his name from its main sponsor, a Portuguese telecommunication company, rebranded NOS in 2014.

Every year the festival is held at the beginning of July, in the location of Algés, Oeiras, in the Region of Lisbon, a 5-minute drive from the Capital city. *NOS Alive* immediately drew the attention of the international scene mostly because of combination of different factors: the *exceptional music line-up* in line with the international hits, a *cheap ticket price* (if compared with the rest of Europe) and a *unique location*, in proximity of beaches and the city of Lisbon, with its bright sky and sun all over the year. This is what made *NOS Alive* positioning over the years as a “*beach by day, music by night*” destination festival.

Since the beginning the Festival has grown both in size and reputation. The UK magazine *NME* defined *NOS Alive* as a parallel universe to UK Festivals for its spectacular line ups and in 2009 it placed *NOS Alive* in one of the top 12 European Festivals. For the fourth year in a row, *NOS Alive* won this year the prime *Marketeer 2016* in the category “Event and Entertainment (See Appendix, **Table I: NOS Alive history**).

The 10th edition occurred in the days 7-8-9 of July and hosted **165000 visitors** and **128 artists** in total. About 20% of the total audience was composed by international visitors (32000), which more than doubled if compared to the past year. (See Appendix, **Graph I: International visitors at NOS Alive - Evolution from 2007 to 2016**).

5. Tourism in Portugal: Key facts - July 2016

Before exploring in details the research findings, it seemed necessary to examine the main tourism trends in Portugal during the period of the festival.

In general, July 2016 was a highly profitable month for the tourism industry in Portugal. According to *Instituto Nacional de Estatística*, hotel establishments in Portugal recorded **2,1 million guests** and **6,5 million overnight stays**, showing an increase of 10.2% and 7.0% respectively, if compared with July 2015. Furthermore, total revenues increased by 16.8% and revenues from accommodation grew by 17.5%.

TABLE I: Tourism revenue by region in Portugal (unit Euros). Source: Instituto Nacional de Estatística -Tourism Activity – July 2

NUTS II	Total revenue		Revenue from accommodation	
	Jul-16	Year-on-year change rate (%)	Jul-16	Year-on-year change rate (%)
Portugal	371.6	16.8	280.6	17.5
North	38.5	23.8	29.2	24.9
Centre	25.5	14.7	17.8	14.6
M.A Lisbon	87.8	14.4	67.4	12.2
Alentejo	10.1	14.9	7.4	16.4
Algarve	159.1	17.2	124.3	18.9
A.R. Azores	10.5	25.8	8.2	25.1
A.R Madeira	40.1	14.1	26.3	18.1

Overnights stays by residents in Portugal and residents abroad increased respectively by 2% and 9.3%. The increase interested all the regions of Portugal, however Algarve, Lisbon and Madeira were the main tourist regions. Compared to July 2015, the average overnight stay slightly declined to 3.13 nights.

Regarding the type of accommodation, *hotels* concentrated 63.9% of overnight stays representing an increase of 10.6%. Following, *apartment hotels* also recorded an increase of 9.4%, especially the one with four-star units. As in the previous month, there was a decline in tourist apartments (-9.6%). Overnight stays in *camping sites* from residents and non-residents increased respectively by 23.1% and 12.2% , while *youth hostels* showed a declining trend (-12.6%).

The main inbound markets were represented by *Great Britain*, *Spain*, *Germany* and *France*. *Great Britain* is the absolute first inbound market in line with the previous year, and it represented 24.8% of overnight stays from non-residents; while *Spain* covered 12% of the total overnight stays representing the second largest market. *Germany*, *France* and *United States* registered in July a large increase of respectively 14,1%, 18,3% and 28.8%, while *Brazil* declined (-2,2%) and the *Netherlands* increased less than in the previous month (only +3,3% in July 2016 from +17,2 % in June 2016).

Referring to the internal market (residents), Algarve and Lisbon represented the main destinations. Besides Madeira, Algarve and Azores, Lisbon was one of the Region with the highest net bed occupancy rate in Portugal (68%) and the highest RevPAR (Average Revenue per available room= EUR 71.5).

6. Empirical Results and Research Findings

In the following pages, the empirical results derived from the on-site visitor surveys and the main research findings based on secondary data analysis are presented. For a clear and easy reading, respondents are distinguished in two categories: *Locals* (residents in Portugal) and *Internationals* (residents abroad).

6.1. Characterization of Visitor's profile

A total number of 2000 visitors participated in this study; however, the sample comprising relevant data consists of **1898 responses**, providing a 95% response rate. In this chapter, the following aspects are analysed: *demographic details, motivation to travel, trip details, experience with other music festivals, and experience with NOS Alive*.

▪ Demographic details

The sample is composed by 46% *male* and 54% *female*. Females represent the minority within the local audience (46%) and the majority within the international audience (64%). In general, the average age is *26 years old* for male and *24 years old* for female. In particular *Internationals* are on average much older than *Locals*: the average age is **28** for *Internationals*, while is **21** for *Locals*. (See Appendix, **Table II: Age groups at NOS Alive'16**.)

The sample is composed by **838 Portuguese people**, (47% of them are residents in the Region of Lisbon and 53% in the rest of the country), and **1063 people from a foreign country**.

Internationals came to Lisbon from all over the world, however British represent the largest segment among the others. In particular, 36% of the *Internationals* came from *Great Britain* (England, Wales, Scotland) and 35% of them are residents in London. *Spain* represents the second largest segment, counting 11,32% visitors of the sample. A previous research (“*Impacto turístico NOS Alive*” by Paula Cordeiro, 2014) shows that also in the past edition (2014) British and Spanish were the main visitors accounting for 35% and 12% visitors (respectively). This year, French visitors represented a significant segment within the international audience (7,45%), in coherence with the general tourism trend.

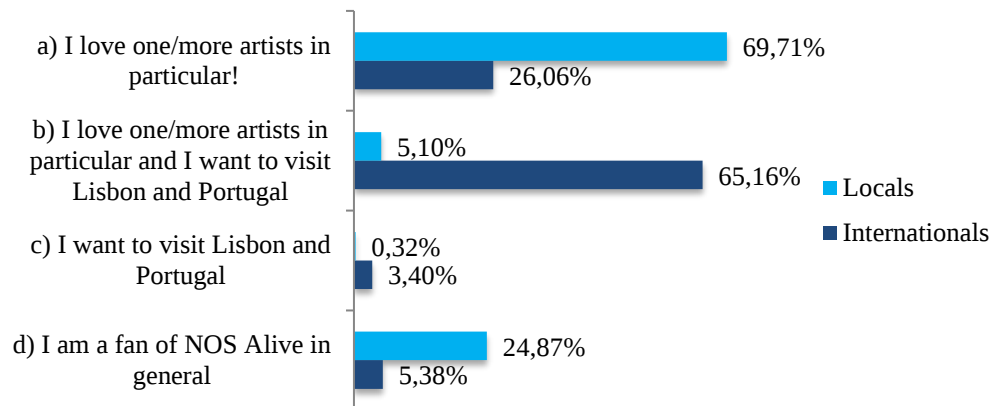
Locals are mainly composed by residents of the *Region of Lisbon* (40%). The rest came from all over the country, mainly from the big cities: *Oporto* (10%), *Braga* (4%), *Leiria*, *Aveiro* and *Coimbra* (3% each). (See Appendix, **Figure II: Sample composition based on visitor nationality**).

▪ **Motivation to travel**

According to 65% of the responses, *Internationals* attended *NOS Alive* because they were interested in *particular music/artists* and, at the same time, they wanted to *visit Lisbon and Portugal*. It is interesting to point out that only 3,40% of the *Internationals* came to Lisbon solely for tourism purposes.

Locals decided to attend *NOS Alive* more specifically because of the *interest in particular music/artists*. Furthermore, almost a quarter of local visitors revealed to be *fan of NOS Alive in general*. Hence, they would have probably chosen *NOS Alive* anyway, *independently* of a specific *interest in music/artist*.

GRAPH I: Motivation to travel according to Locals and Internationals



▪ Trip Details

Note: For obvious reasons, residents in the Region of Lisbon were not asked to answer to the session “Trip details” therefore, they are not included in this analysis.

Overnight Stays- Most of the *Internationals* spent several days in the city, coherently with the intention to enjoy the festival and visit the city on the same time. In particular, *Internationals* distinguish between the ones who spent *5 or more nights* (57,48%), and the ones staying in the city from *2 to 4 nights* (almost 40%).

According to the sample, *Locals* spent on average less time in Lisbon, since the main intention was uniquely attending the Festival. However, 40% of *Locals* spent between *2 and 4 nights*, whereas almost 17% stayed for *5 or more nights*. It has been observed that the ones who extended their stay in Lisbon up to 5 or more nights, were mostly accommodating at family and friends house. Finally, almost 16% of the respondents were just day-trippers as they spent *not even one night*, which are probably the ones living not too far from Lisbon. (See Appendix, **Graph II:** *Overnight stays according to Locals and Internationals*).

Accommodation- Almost a quarter of *Internationals* accommodated in *Airbnb*, while 21% of them chose the option *Hotel*. The options *Camping site* and *Hostel* were respectively chosen by 19% and 17% of the international visitors. It is interesting to point out that *Airbnb*

was mainly chosen by the ones who spent in the city *5 or more nights*; while *Hotel* was the favourite option of the ones who spent between *2 and 4 nights*.

Locals mostly stayed at *friend/family house* (48%). However, 13% of the visitors accommodated in *Hotel* and 22,11% in *Other*. (See Appendix, **Graph III**: Type of accommodation according to *Locals* and *Internationals*).

Mode of transportations- Over three quarter of *Internationals* travelled to Lisbon by *airplane*. Oppositely to 2014, *Ryanair* was the most chosen flight airline (23%) followed by *Easyjet* (19%) and *TAP* (18%). Those who travelled by private vehicle (8%) mostly came from *Spain* (64%) obviously due to the short distance, and from *Great Britain* (20%).

Locals came to the Festival mainly by *train* (42%) and *private vehicle* (36%). The ones who travelled by *airplane* mostly came from *Funchal* (40%) and *Oporto* (20%). *TAP* and *Ryanair* were chosen respectively by 50% and 20% of the local travellers. (See Appendix, **Graph IV**: means of transportation according to *Locals* and *Internationals*).

▪ **Experience with other music festivals**

In general, *NOS Alive* attendants are “festival lovers”: almost 60% of *Internationals* and 40% of *Locals* are used to participate in plenty of festivals both in their own country and abroad. Furthermore, about 10% of both *Internationals* and *Locals* revealed that they usually attend more music festivals abroad than in their own country.

When asking which other music festivals they are familiar to, most of the *Internationals* cited *Reading Festival* and *Glastonbury Festival*, which were respectively attended by 20% and 15% of the respondents. Differently, *Locals* are more familiar with *Rock in Rio* (Lisbon) and *NOS Primavera Sound* (Oporto), which were respectively attended by 63% and 14% of the respondents. (See Appendix, **Graph V**: Experience with music festivals according to *Locals* and *Internationals*).

- **Experience with NOS Alive**

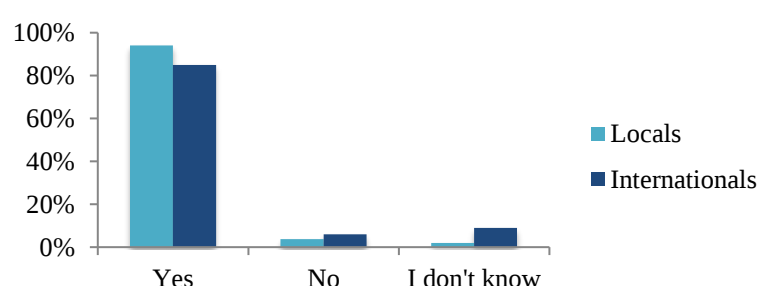
Festival's attendance- In total 92% of *Internationals* were at NOS Alive for the first time, while the 61% of *Locals* repeated the visit at the Festival. Regarding the type of purchased ticket, it is observed that 72% and 40% of *Internationals* and *Locals* hold the 3 days ticket pass.

Source of information- *Locals* and *Internationals* alike cited *friends* and *social media* as the means by which they discovered about the festival. “Word-mouth” was revealed fundamental especially in attracting *Internationals* to the Festival, while *Television* and *radio* were obviously more influent among *Locals*. (See Appendix, **Graph VI: Source of information according to Locals and Internationals**)

Motivational factors- All the participants were asked to rate in a 5-point scale (*from 1: “not very important at all” to 5: “very important”*) the influence of several criteria on the choice of attending NOS Alive. According to the results, the majority of respondents defined *Headline act* as the most important criteria (4.5), while *Atmosphere* (3.84), *Infrastructures & facilities quality* (3.74) and *Ticket Price* (3.73) were perceived almost as “quite important” and they preceded *Location* (*Country* 3.55; *Festival site* 3.54). *Popularity of the Festival* was the less important criteria (2.90). It is very interesting to notice that the variable *Ticket price* is not the most important criteria and *Atmosphere* into the enclosure is considered a more valuable criteria than *Location*. It is possible to relate this result to the emotional and priceless value of seeing live performance of their favourite bands/artists. Like groupies, people are willing to go no matter the place or price. However, the variable *Ticket price* becomes the most decisive when people have to choose between two or more music festivals proposing a similar line up or having similar characteristics. In this case, *Ticket price* is the most important variable (4.05), followed by *Location* (*Country* 3.84; *Festival Site* 3.83) and *Infrastructures & facilities quality* (3.80).

Intention to return- Most of the visitors would like to come back to *NOS Alive* next year. In particular, respectively 85% and 94% of *Internationals* and *Locals* would like to repeat the visit. Although the option “I don’t know” was not included in the survey, respectively 9% and 2% of *Internationals* and *Locals* revealed that they did not know yet if attending the festival in the next edition because the line-up was still unknown.

GRAPH II: *Intention to return according to Locals and Internationals*



Final comments- Although a specific space for final comments was not designed in the questionnaires, many respondents spontaneously add personal thoughts about the festival. In this context, both positive and negative feedback were provided. In the latter, some issues were in particular addressed regarding environmental and organizational aspects. In particular, festival attendants were asking for a “greener” atmosphere, and more efficiency regarding the general organization of the event with a particular focus on transportation and services quality. However, in general visitors showed a high level of satisfaction.

6.2. Economic Impact Assessment

6.2.1. Direct Economic Impact

As it has already been discussed, the calculation of the direct economic impact arises from the estimation of *visitor* and *festival* expenditure.

- **Visitor expenditure**

Visitor expenditure comprises the *off-site expenditure*, the spending that occur outside the festival enclosure (i.e. for restaurants, accommodation, souvenirs, transport, etc.) and the *on-site expenditure*, the visitors' spending in the festival enclosure (i.e. for food and beverage, merchandising, etc.). Unfortunately, the surveys conducted among the festival attendants did not investigate on spending patterns, therefore secondary data is needed in order to assess the visitor spending. A research study conducted in 2012 named "*Customer satisfaction and expenditure behavior in music festivals: The Optimus Primavera Sound Case Study*" (P. Rodrigues, A. Borges, A. Matias, 2016) estimated the daily average visitor expenditure during *Primavera Sound Festival* in Oporto, based on different factors (See **TABLE II** below). Considering the similarity of the city of Oporto with the city of Lisbon and the comparable nature of the festivals, it is possible to refer to the estimated expenditure for our purpose. However, some limitations occur when referring to secondary data. In particular, the audience of *Primavera Sound Festival* is characterized by an older segment of attendants (almost 47% is in the age in between 25–34, and almost 20% is in the age in between 35–44) which are usually willing to spend more money inside and outside the festival's enclosure, as showed in the study (the people in between 25-34 and 35-44 years old spend on average 60% more than people in between 15-24 years old). Without any adjustments, the use of the same visitors' expenditures of *Primavera Sound Festival* may result in an overestimation of the general spending at *NOS Alive*. However, it is also verified that the living costs in Oporto are lower than in Lisbon (roughly 10% lower) therefore decreasing the expenditures would not seem very appropriate. In light of all these considerations, the average daily expenditures at *Primavera Sound* can be, without any adjustments, a right approximation of the visitor spending at *NOS Alive*. Furthermore, some feedback were provided directly from the festival organisers, which showed high confidence about the following estimations.

TABLE II : Average daily expenditures at Optimus Primavera Sound Oporto (2012)

Type of Visitors	Off site (€)	In site (€)
Residents in the Reg. of Lisbon	-	35,796
Residents in Portugal (*)	46,992	43,376
Internationals (*)	76,569	50,840

(*) Note: According to data, primarily collected among local traders, *International* people spent on average 54 Euros for accommodation (Hotel), which represents only one item of the total expenditure. By adding other expenditures like food, souvenirs and entertainment activities, it results that the estimated value of 76,569 Euros (presented in the table) is a right approximation of the *International* spending. Furthermore, according to Instituto Nacional de Estatística, Portuguese tourists spent on average 40,33 Euros for holiday, leisure and recreational activities inside the country, which is also a value close to the one presented in the table.

Once the average daily expenditure is defined, it is important to distinguish the expenditures that are *additional* and *relevant* to the local economy. In calculating the total *off site expenditure*, the spending by the following categories of visitors has been excluded:

- Visitors who came solely for touristic purposes
- Day visitors
- Residents in the Region of Lisbon

The first are called “casual visitors” meaning that, as the festival is not the main reason for them to be there, they probably would have visited (and spent) in the city anyway. Their spending represents a *deadweight* and therefore should be discounted from the total *off site expenditure*. Furthermore, the category of day visitors or day trippers (which are the ones who spent *not even one night* in the city) tend to spend most of the day at the festival site, without spending in the city. Therefore, their spending is not relevant in the calculation of the *off-site expenditure*. Finally, the residents in the Region of Lisbon obviously do not spend for

any accommodation (which usually represents the most significant item of the total spending) and their general spending in the city, during the time of the festival, would have occurred anyway.

Although excluding the residents in the Region of Lisbon seems obvious when calculating the *off-site expenditure*, it becomes instead a controversial decision when calculating the *on-site expenditure*. It may be argued that, on the one hand, if the festival would have not taken place, local residents would have probably spent their money in other economic activities within the local community. In this view, their spending represent just a recirculation of the existing wealth in the community and should not be included in the calculation. On the other hand, it must be highlighted that the festival entices local residents to remain and spend money inside the local community instead of outside (for example by attending a Festival with the similar line up, abroad). Thus, they also contribute to increase the local spending. However, both of these perspectives cannot be simply assumed but should be accurately assessed through designed surveys to visitors in order to estimate the exact portion of the expenditure that is *additional* (for instance by asking what they would have done or how they would have spent their money if *NOS Alive* would have not taken place this year). In absence of this data and in order to avoid errors or overestimations, the on-site spending by residents in the Region of Lisbon, which approximately amounts to *4.5 million*, has been simply excluded also from the calculation of the *on-site expenditure*. In total, the **deadweight** derived from the spending of “casual visitors” (off site) and local residents (on site) approximately amounts to **6 million**.

Furthermore, attention has been placed on *displacement* effects. Several face-to-face interviews were conducted among business partners in the hospitality industry (mostly hotels and hostels) in order to gain some feedback about the level of occupancy. Almost all of the interviewees revealed that the majority of hotels and hostels were 100% full. They also

revealed that they would have covered those reservations even in absence of the festival since July is a month of intensive tourism activity in Lisbon. Thus, the level of *displacement* of other economic activities related with tourism seems to be quite low. However, due to the little evidence available it is not possible to provide an accurate number.

By applying all these considerations, the total the **visitor expenditure** has been approximately estimated at **26,3 million (Euros)**.

TABLE III: On-site and Off-site visitor expenditures at NOS Alive (Unit in € million)

Type of visitors	Off site Exp.	On site Exp.	Total expenditure
Residents in the Reg. of Lisbon	-	-	-
Residents in Portugal	7.4	5.2	12.6
Internationals	9.6	4.1	13.7
Total	17	9.3	26.3

In particular, the estimation of the total **off-site expenditure** was obtained by multiplying the *number of visitors* with the *average daily expenditures (off-site)* and the respective *average overnight stay* which correspond to 4,12 nights for *Internationals* and 2,72 nights for *Locals* (See **Appendix, Table III: The total off-site visitor expenditure at NOS Alive'16**).

The estimation of the total **on-site expenditure** was obtained by multiplying the *number of visitors* which were distinguished based on the purchased ticket (daily, 2 days, 3 days ticket) with the *average daily expenditures (on-site)* and the respective *days of attendance*. (See **Appendix, Table IV: The total on-site visitor expenditure at NOS Alive'16**).

It has to be noted that the *ticket expenditures* were not included in the calculation of the *on-site expenditure* in order to avoid double counting. Indeed, they represent an item of

revenues for the festival organizers, which in turn often use those revenues to fund the organization of the event (i.e. sustaining staging costs) (S. Richards, 2010).

- ***Festival Expenditure***

The festival expenditure refers to the spending made by the organization and the business sponsors. It includes all the payment to staff, contractors, suppliers, artists (i.e. performing rights fees) that are locally sourced. For instance, only payment to Portuguese bands were considered in the calculation in order to take account of *leakages*. Indeed payments to international bands are not going to affect the local economy as the artists will probably spend their income outside Portugal. However, taxes from those payments are retained inside the country and therefore are included in the calculation.

According to confidential management information directly provided by the organization, the *festival's expenditure* amounts to **9 million** (Euros).

TABLE IV: *The Direct Economic Impact of NOS Alive '16 (unit in € million)*

Expenditures	Total
Festival	9.0
Off site	17.0
On site	9.3
Total	35.3

The **direct economic impact** has been approximately estimated at **35.3 million** (Euros). This equates to an expenditure of 2,92 (Euros) by visitors to the festival for every 1(Euro) of expenditure by NOS Alive (26.4/9.0).

6.2.2. Total Economic Impact

Whereas the direct economic impact involves only the “first round” spending that results from the organization of the festival, the **total economic impact** takes into consideration also the “knock on” benefits on the local economy, which is derived from the direct impact. The total economic impact consists in the estimation of indirect and induced impact.

In particular, *multipliers* occurred to assess the spill over effect generated by *visitor* and *festival expenditure* upon the local economy. A specific tourism *multiplier* for Portugal was used to estimate the effects generated by the *off-site expenditure*, while other *multipliers* were derived from The *Scottish Tourism Multiplier Study* (STMS).

In order to capture the effect derived from the *festival expenditure*, a non tourism multiplier has been used. Indeed, the *festival expenditure* does not affect directly tourism related businesses, but instead goes to suppliers involved in the production of the events. (Edinburgh Festivals 2015 Impact, BOP Consulting, 2016). Instead, a tourism *multiplier* was applied to the *on-site expenditure* as the expenditures directly affect the tourism economy. According to the Glastonbury study, those multipliers both correspond to 0.25. A specific tourism *multiplier* for Portugal, was applied to the *off-site expenditure*. According to C.M.M. Costa (1996) this *multiplier* can be found in the range of 0.6 and 0.9. Finally, the combined *multiplier* has been calculated as the average of the three *multipliers* weighted by each spend (festival, on-site and off-site). The final *multiplier* results to be in the range of **0,42** and **0,56**. (See Appendix, **Table V: The estimation of weighted multipliers**).

Then, by applying the *combined multiplier* to the direct economic impact, the indirect and induced impact has been estimated as a number in between *14.8 and 19.9 million (Euros)*.

Consequently, based on the data, it can be assumed that the total economic impact lies in the range of **50.2** and **55.3 million (Euros)**. (See **Appendix, Table VI: Total Economic**

Impact of *NOS Alive*'16). However, since this data is the result of a “conservative” estimation, the actual economic impact is likely to be even higher.

6.2.3. Less quantifiable impact

Beside the relevant economic benefits, the festival generates also a social and cultural impact, which is usually more difficult to quantify. However, by presenting the responses gained from the surveys in a deeper analysis, it is possible to obtain some feedback towards the cultural and social importance of the event. First of all, the high intention to return to the next edition and the number of repeating visits at *NOS Alive*, indicate that the festival has reached a high level of “brand awareness” and it is becoming over the years a strong point of reference for the local community. The feeling of strong attachment to the festival by the local audience has important consequences in terms of **social cohesion** and **sensitization** towards the importance of cultural and creative events.

The exponential growth in the number of international visitors attending the festival in this edition is for sure the result of a competitive line-up that put together big names (like Radiohead, Arcade Fire and Tame Impala), but it also due to the **consolidation** of *NOS Alive* as one of the best music festival in Europe. The high “word-of-mouth” as the means by which most of the people discovered the festival has a fundamental meaning in terms of the perception of the festival. When people return to their own country after the festival, they like to relive and share (personally and through social media) their experience and eventually **recommend** it to others. Thus, the impact that immediately follows the event, here assessed, will generate also a second impact in the medium and long run. Finally, the festival has a very positive impact upon the **image** and the **perception** of the **city**. The organization of cultural and creative events such as music festivals and in particular *NOS Alive* help in promoting Lisbon as a *Creative Capital City* which in turn can open to new opportunities and investments, not only related with the tourism industry. This is recently demonstrated by the

numerous start-ups and entrepreneurs from all over Europe that are moving their offices or opening new ones in Lisbon.

7. Discussion, Limitations and Recommendations

The provision of an indisputable and precise economic value as indicator of the economic and social impact of the festival is beyond the possibility of this study. Some limitations have been already discussed throughout this paper and are relative to the complexity of the required procedures. In particular, the use of secondary data and the absence of specific *multipliers* represent considerable limits. However, the study provides relevant information and accurate estimations, which is believed to be very close to reality. All the effort was made in order to avoid unfair overestimations and therefore provide a “conservative” estimation of the economic impact. This study represents a valid starting point for future researches. In particular, improvements and adjustments can be made in the research methodology. The study shows that *NOS Alive* has a significant impact on the local economy not only in financial terms but also in terms of social and cultural development. In this sense, a quantification in economic terms of the social impact of the festival should be undertaken by further researches.

Finally, as the industry of music festivals is growing in Portugal, it becomes extremely important to develop effective tools in order to facilitate the impact assessment of such big events. Specifically in Portugal, there is the need of standard models/methodologies and specific multipliers (based on inter-industry relationships). Looking at the UK as great example, it is fundamental to create synergies and valid partnerships between several actors such as local institutions (public and private), statistic and tourism agencies, event organizers, tourism-related companies and associations.

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