Determinants of demand and participation in cultural events

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ABSTRACT

The research on the determinants of demand and participation in cultural events is still rather sparse and fragmented today. Whereas there is already an established empirical evidence with respect to the standard determinants such as admission price, education and income, more research is required to explore the impact of other important factors affecting visits at cultural events. This applies, among others, to socio-economic and socio-demographic characteristics of the visitors, both subjective (perceived) and objective quality of the cultural event, habit and rational addiction, and time-allocation decisions of individuals.

There also has been more attention paid in the literature to the determinants of attendance at highbrow cultural events such as theatre, classical music concerts, or visiting museums than at the lowbrow or more popular cultural events. This is mainly due to the cost trap experienced by suppliers of the former events as they experience decreasing revenues and increasing wage costs over time (Baumol and Bowen, 1966). Furthermore, the definition of cultural events tends to be 'almost completely blurred' due to increased variety of the digital cultural supply today (Peukert, 2019). Therefore, a more holistic research on the factors affecting demand and participation in all cultural events is essential.

BACKGROUND

As noted, we adopt a wider definition of cultural events. We examine mainly performing arts (PA) events such as: theatre or drama plays, dance, ballet, opera performances and classical music concerts, but we also include visits to museums, galleries and monuments. Furthermore, we also consider visits to cinema and popular music concerts. Hence, this definition encompasses both the highbrow and lowbrow arts events. All these activities have in common that they take place outside home and they involve a passive attendance of the visitor in contrast to active participation (e.g. performing with an ensemble, playing music or painting). Such definition of cultural events is also important for authorities whose aim is to promote cultural demand in general, in order to ensure social cohesion, cultural heritage and development (Muñiz et al., 2017).

According to Throsby (1994, p. 7), the "demand function for attendance at live events in theater, opera, dance and music would be expected to contain own admission price, price of substitute entertainments, consumer income, and quality characteristics of performances as explanatory variables". Moreover, the consumption of the live cultural events is highly time-intensive activity indicating that perhaps the leisure time is likely to be more influential than the ticket price itself. We also expect that the income per capita would have a positive effect on attending cultural events as higher income groups are especially predisposed to attend highbrow cultural events such as performing arts or museums. On the other hand, education level might be more important than income (Borgonovi, 2004; Ateca-Amestoy 2008; Willis et al. 2012). Education is closely linked to the concept of cultural capital that is the ability to experience or appreciate the arts, defined as the 'capacity to inspire or to be inspired'. In what follows, we will review the evidence regarding the most important determinants.

EVIDENCE

Table 1 presents the main studies that to the best of our knowledge provide the most important findings about the determinants of attendance at cultural events. We divide the previous research into demand studies and into individual survey data-based or participation studies. The aggregate demand studies use the number of visitors or tickets sold as the outcome variable. The survey level studies examine the likelihood of attending a cultural event, and/or frequency of such visits (see e.g. Borgonovi, 2004; Palma et al., 2013). Ateca-Amestoy (2008) examined, in the context of the PA events, the differences in the determinants between those individuals who will never participate and those who will definitely participate. In contrast to the examination of the actual choices through revealed preferences approach, other articles used the stated preferences method by directly examining the willingness to pay (WTP) (see e.g. Grisolía and Willis, 2012, for theatres; Munley, 2018, for museums).

Price effects

The admission price has usually a negative effect on demand for all types of cultural events. This finding is in line with standard rational utility maximisation theory. The demand for highbrow cultural events (PA firms, museums) is relatively inelastic with respect to admission price, indicating that charging a higher ticket price will not necessarily decrease the revenue from the tickets sales (e.g. Zieba, 2009; Castiglione

and Infante, 2017; Grisolía and Willis, 2012; Luksetich and Partridge, 1997). The demand is, however, highly price-elastic for cinema in Dewenter and Westermann (2005). Other factors can also determine the price effect as noted by Throsby (1994) and evidenced in later studies. Akdede and King (2006) found, for example, that price elasticity of demand for Turkish theatres is largely elastic in the least developed cities as opposed to developed cities. Baldin et al. (2018) used the booking data for the Royal Danish theatre and confirmed that young customers are the most price sensitive audience group with the price elasticity well above one in absolute value. Laamanen (2013) found the effect of price on demand is smaller for Finish National Opera performances in their premiere season, whereas demand for reprises is highly elastic.

In general, the demand for a cultural event will become more price-elastic, the more substitutes for it will be available in the market. However, the data on other cultural goods that would be relevant substitutes or complements for the cultural events, are also difficult to obtain. While Zieba (2009) found that orchestras are substitutes for theatres, the TV sets are found to be substitutes for attending cinema movies by Dewenter and Westermann (2005). In a quasi-field experiment, Bakhshi and Throsby (2014) showed that the live broadcasts of theatre to cinemas in the UK, can generate greater audiences at the theatre. The case study by Evrard and Krebs (2018) about the digital reproduction of an artwork of the Louvre museum in Paris, also revealed that substitutability was rejected by all types of consumers, and that virtual visits will often be used as a complement to the actual participation.

Table 1: Empirical studies on demand and participation in cultural events

Type of study	Aggregate (market) demand for cultural events		Individual demand or participation in cultural events	
Type of event and the studies to which the model was applied	**PA sector**	Throsby (1994); Withers (1980) & Gapinski (1984, 1986).	**PA sector**	Borgonovi (2004)
	Theatres	Throsby (1990); Abbé-Decarroux (1994); Corning & Levy (2002); Urrutiaguer (2004); Akdede & King (2006); Werck and Heyndels (2007); Zieba (2009, 2011); O'Hagan & Zieba (2010); Castiglione & Infante (2016)	**Theatres**	Lévy-Garboua & Montmarquette (1996); Ateca-Amestoy (2008); Willis & Snowball (2009); Grisolía & Willis (2011, 2012); Willis et al. (2012)
	Classical concerts	Zieba ad O'Hagan (2013)	**Cultural events**	Muñiz et al. (2017); Zieba (2017); Palma et al. (2013)
	Opera	Laamanen (2013), Wu et al. (2018)	**Museums, galleries and heritage sites**	Falk & Katz-Gerro (2016); Brida et al. (2012); Munley (2018), Evrard & Krebs (2018)
	Museums	Luksetich & Partridge (1997)		
	Cinema	Fernández-Blanco & Baños-Pino (1997); Cameron (1999); Dewenter & Westermann (2005); Sisto & Zanola (2010)	**Galeries and jazz concerts**	Ateca-Amestoy & Prieto-Rodriguez (2013)
			Popular music concerts	Montoro-Pons & Cuadrado-García (2011); Montoro-Pons et al. (2013)
Countries examined	USA, UK, Australia, Germany, Austria, Switzerland, France, Spain, Turkey, Belgium, Italy, Finland, China		USA, UK, Spain, France, Ireland, Austria, South Africa, Taiwan	
Type of Data	The number of attendees/tickets sold.		Individual survey-based data collected from respondents.	
Model and dependent variable	Demand function model estimated at the country, region or city level; at the firm level (e.g. theatre, opera, museum or cinema), or for a single performance or production.		The indirect utility function is maximised by estimating: o The likelihood and/or frequency of attending (the revealed preferences) o Willingness to pay (WTP) using the stated preferences approach.	
Econometric method	o OLS and panel data fixed effects models o 2SLS or GMM dynamic panel data model o The censored linear or Tobit regressions o Price confirmed to be exogenously determined as it does not respond to demand.		o Logit or probit, or multinomial logit, for the likelihood of attending or WTP. o The count data models, e.g. poisson or negative binomial, for frequency of attendance. o To distinguish between never-goers and participants, the zero-inflated negative binomial models (ZINB) are applied.	
Variables used and main findings*	o Admission price (-) and mostly inelastic (<|1|) for PA and museums, and elastic for cinemas. o Income elasticity (+), often <1 as the effect is offset by other factors such as price of leisure time, quality and education. (+) o Price of substitutes/complements provide mixed evidence (+/-) o Quality characteristics (+) o Capacity of venue (+) and market size (+/-) o Past and future attendance (+) and price (-)		o Price (-) rarely used and insensitive o Income (usually classes) (+) o Education (categories or years of schooling) (+) o Age (+/-) (mostly the younger and/or the oldest group attend more) o Gender, occupation and race (+/-) o Type of the play, consumer classes (+/-) o Subjective quality (word of mouth opinions and reviews) (+)	

* Indicates: '(+)' positive effect, '(-)' negative effect, '(+/-)' effect will vary.

Education

Education level proved in numerous studies as one of the most important factors that is linked to the concept of cultural capital as noted by Wen and Cheng (2013), Falk and Katz-Gerro (2016) and Borgonovi (2004), and also for popular music concerts by Montoro-Pons et al. (2018). Ateca-Amestoy (2008) and Prieto-Rodriguez (2013) confirm that cultural capital is determined by the following factors: the one's own general education, education transmitted by parents, early exposure to the arts and specific artistic training.

Income and time allocation

Numerous studies confirmed a positive association between the level of income and demand or participation in cultural events but the results with regard to the exact magnitude of the income effect are actually mixed. This might be because the income effect is correlated with the education variable, or also because the participation in cultural attractions usually requires a sizeable amount of leisure time. Withers (1980) for the U.S. PA firms, Zieba (2009), and Zieba and O'Hagan (2013) for German public theatres and orchestras, respectively, confirmed that the income effect could be a net effect of two factors: a positive large full-income effect and a negative leisure-price substitution effect. The cost of leisure time was also a deterring factor from attending popular music events in Montoro-Pons and Cuadrado-García (2011). On the other hand, Machado et al. (2017) using more detailed 'time-use' data, argued that while time availability had a positive effect, the low levels of cultural consumption in Brazil were more related to the lack of habit than the lack of time or monetary resources.

Habit formation and rational addiction

Lévy-Garboua and Montmarquette (1996) studied the individual demand for theatre in France and noted that attending a cultural event involves an element of uncertainty or surprise. They estimated a "learning-by-consumption" demand model assuming that consumers alter their taste and behaviour through unsystematic experiences of cultural consumption, which might have a positive or a negative random impact. In contrast, the rational addiction model for cinema was proposed by Cameron (1999), and Dewenter and Westermann (2005) showed that the rate of addiction is always positive and deterministic for cinema in Germany. Sisto and Zanola (2010) confirmed the findings

using aggregated pooled panel data for 13 EU countries. Moreover, Castiglione and Infante (2016) concluded that not only the future and past attendance, but also the level of past and future prices influences the probability of Italian theatregoers' becoming addicted. The results suggest that Italian theatregoers are not myopic, i.e. addicted in a pejorative sense as with cigarettes, drug or alcohol but fully rational.

Subjective and objective quality

Another factor that might determine a low impact of income and admission price is quality dimension. Throsby (1990) was the first study that considered the repertoire classification and also the standard of source material and production, and of acting and design for theatrical productions in Australia. To measure these, the 'condensation of press reviews' were used on a cardinal 1-5 scale and some tentative findings were presented confirming a positive effect of quality. Other studies followed a similar approach and provided comparable findings (Abbé-Decarroux, 1994; Urrutiaguer, 2002; Corning and Levy, 2002). Werck and Heyndels (2007), in addition to the repertoire classification, introduced a concept of objective output characteristics in the context of the Lancasterian consumer theory that states that characteristics, not goods themselves, are relevant to consumers. They found that larger productions (measured by the cast size) and the 'Dutch plays' had a positive effect but the innovation index, as a proportion of new productions in the programme, had a negative effect on attendance at Flemish theatres. Zieba (2009), in particular O'Hagan and Zieba (2010), using an extensive dataset for East and West German theatres, found that the expenses for décor and costumes, and the artistic wages are important indicators of objective quality, and that reputation as measured by guest performances or guest attendance, had also a strong positive effect. Moreover, Grisolía and Willis (2011, 2012) proves that expert reviews and word of mouth opinions affect positively demand for regional theatre in England, and that the utility of attending the particular type of the play will depend on the consumer's characteristics. Snowball and Willis (2009) further confirmed that both professional actors and the shows directed by famous directors increase the WTP of the National Arts Festival goers in the South Africa. Luksetich and Partridge (1997) was the only study to confirm that the value of the collections increases attendance not only at art museums but also at the science museums in the U.S.

Consumer's characteristics

The findings about the socio-demographic determinants such as age and gender are still rather fragmented. In general, females are more likely to attend but men will be more frequent visitors (Ateca-Amestoy, 2008; Brida et al., 2012). Willis and Snowball (2009) found that the impact of age will depend on the genre of shows being offered and that older visitors are less likely to choose comedy or drama (in contrast to musicals) than those in the younger age group. Willis at al. (2012) also found that the higher proportion of young (≤25) and 45-59 age groups, the greater the number of trips to the theatre. According to Borgonovi (2004) and Muñiz et al. (2017), this result is linked to the effects of the life cycle: family responsibilities that arise during middle age might reduce individuals' cultural participation. In fact, other gender-related variables (the number of adults in the household, marital status and the number of children under 13) decrease both the likelihood and frequency of attendance. Moreover, Willis et al. (2012) found that those economically inactive or those in professional occupations will be more likely to travel to theatre. Similar results were found in Zieba (2017) for tourists attending cultural events while on trip in Austria and abroad. Finally, Grisolía and Willis (2012) identified that different pricing strategies should be applied to different consumer classes. The 'popular' class embraces the youngest attendees and is interested more in comedies and has lower WTP. The wealthy 'affluent' class enjoys all types of plays. The 'cultural' class, whose members belong to older age group and have high WTP, love all aspects of theatre, particularly drama performances.

SUMMARY AND EVIDENCE GAPS

The previous empirical research provides generally consistent findings with respect to the *admission price*, *income* and *education* levels. Moving forward, more evidence on other factors affecting the demand and participation in cultural events is needed.

It would be interesting to examine, if the digital supply is a complement or substitute for cultural events which was already documented in the first such studies presented above (e.g. Evrard and Krebs, 2018). More detailed diary-type data are necessary to examine the time allocation of not only individuals but also households and how they perceive or divide time between the household members. This research could relate to work in the leisure and happiness field (Cameron, 2019). Furthermore, rational addiction or models

under uncertainty have not yet been explored extensively in the previous literature (Montoro-Pons et al., 2013).

Socio-demographic characteristics such as: age, gender, ancillary gender variables (i.e. marital status, number of children etc.), and race, but also other socio-economic variables such as, e.g. occupational status, require further attention from the policy perspective. Measuring quality for cultural events is still a challenge. In fact, both quality characteristics of cultural events and the consumer's characteristics (or class) will jointly determine the attendance.

While the number of visits at live cultural events depends positively on the capacity and quality of the venue, other geographical factors, not explored in detail in this review, require further investigation. For example, the evidence about the size of the market, as measured by the population or tourism, is rather sparse and mixed today (see. e.g. Werck and Heyndels, 2007; Willis et al., 2012; Zieba, 2017; Brida et al. 2012).

The recent studies mostly focused on the PA sector. More evidence should be provided for other types of cultural events such as: visiting museums or gallery exhibitions, comedies, cinemas or popular music events. Finding appropriate data should be another important research agenda in this field. Falk and Katz-Gerro (2016) is the only study that applied the most comprehensive survey data to date on visiting museums, galleries and heritage sites for several EU countries.

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