46 Participation

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Introduction[1]

The arts are complicated phenomena in modern society. They are, among other things, hobbies, means of personal expression, spectator entertainments, social statements, offensive activities and debatable policy issues. But in all of these manifestations, they retain a unifying theme: the arts are economic activities, consuming resources that have alternative uses. Production and consumption of the arts constitute supply and demand in more or less well developed markets. Patterns of participation in the arts, as defined for the purposes of this chapter, provide information on the demand side of the arts market place and, in some instances surely, possible insights into market equilibrium outcomes.

The past two decades have seen a burgeoning interest in public participation in the arts, by which is meant the extent that citizens engage in artistic activities, primarily as either audience or hobbyist. This distinguishes such participation from the professional artist or performer. The US National Endowment for the Arts, the chief arts policy-making and implementation body of the federal government, has to date sponsored five national surveys, in 1982, 1985, 1992, 1997 and 2002, to determine the extent and nature of public participation.[2] Even a cursory search through websites of the cultural ministries of many nations will yield results of their own arts participation measures.

This chapter examines the topic through an economist's lens and offers typical empirical findings based on that perspective. The focus here is on participation as an audience member or visitor, that is, as a consumer of the arts rather than a producer, although the Surveys of Public Participation in the Arts (SPPAs) also include information on this latter form of participation. Indeed, the SPPAs are a wealth of information supporting endless analysis by the interested researcher.

The chief participation indicator used here is whether or not a survey respondent participated in, or attended, one of several 'core' arts activities during the prior twelve-month period.[3] These core, or benchmark, arts, listed in the order of presentation in the survey results, are jazz, classical music, opera, musical theatre, non-musical plays, ballet, dance other than ballet, and museums and galleries.

The following section briefly describes the essence of the economics per-

spective and resulting hypotheses. The next section presents the statistical model, results and interpretation. Summary and conclusions bring the chapter to a close.

The economic perspective

The economic approach to understanding and analysing public participation in the arts is based on the assumption that individuals are constrained utility maximizers. Each person strives to meet his or her wants or needs as fully as possible subject to limited command over resources, inadequate time, cognitive errors and other constraints. When deciding whether or not to attend an orchestral concert, purchase an opera on compact disc (CD) or visit a museum, a person will take into account ticket or purchase price, time and effort expenditure, alternative time uses and similar factors. This perspective informs the testable hypotheses that explicitly underlie the economic approach – and implicitly underlie the interpretation of empirical work representing other disciplines.

In a market setting, public participation in the arts is a demand-side phenomenon. Standard utility theory stipulates that any consumer seeks to maximize utility, U:

$$U = U(A,Z);$$

that is, utility is determined by consumption of art goods and services, A, and all other goods, Z. The consumption of any specific art goods and services, A_i, is in turn a function of lessons in that art form, L_i, and other relevant human capital investment, H_i, such as childhood exposure or appreciation classes (Stigler and Becker, 1977):

$$A_i = f(L_i,H_i).$$

Consumption of these goods and services is, of course, subject to time and budget constraints, which means that each individual must choose among alternatives. It can be demonstrated formally that increases in time and money prices will reduce participation; the task of empirical inquiry is to confirm or disconfirm these expectations. Likewise, we hypothesize that pertinent human capital investments will increase participation, with additional burden on empirical research.

Factors influencing arts participation: hypotheses

Before the data presentation and statistical analyses of this part of the report, it is appropriate to consider some of the factors expected to influence arts participation. These give rise to the hypotheses which provide a framework or focus for the analyses, and which are summarized in Table 1.

Table 1 Summary hypotheses pertaining to arts participation

Variables	Comment	Expected impact on participation
Implicit price		
Children at home	Implies childcare expenses plus implicit costs in the form of parental concern	−
Age	After some age, an evening out can be presumed to entail additional implicit costs	−
Hours worked per week	More hours imply less leisure time	−
Ability to purchase		
Household income	More income implies more ability to pay	+
Hours worked per week	More hours worked implies greater opportunity costs but also more earnings	−/+
Investment		
Age	Additional consumption skills are acquired with the passage of time	+
Education level	General knowledge acquisition may enhance enjoyment	+
Art/music lessons	Experience-based exposure should enhance enjoyment	+
Other		
Sex–Male		−
Race		
Black		*
Hispanic		*
Asian		*
American Indian		*

Note: *Indeterminate, depending on cultural relevance of art form.

The impact of place The existence of economies of agglomeration in the art and culture industry now seems well established.[4] Such economies occur when firms are able to share one or more common productive factors in a given geographic region. For example, domestic car firms historically chose to locate in or near Detroit because they could share a trained labour force, transport infrastructure and access to raw materials.

Another factor causing the arts to play a disproportionate role in places with larger populations is the existence of threshold market sizes. Whereas a small community could scarcely support a symphony orchestra or major

art museum, most major metropolitan areas are able to support both, and additional cultural organizations as well.

Accordingly, one might expect that residents of metropolitan regions would generally exhibit a greater likelihood of attending the live arts if for no other reason than that of their greater availability. The 1997 SPPA noted only whether respondents resided in one of twelve major metropolitan areas. In view of the size of these areas and corresponding economies of agglomeration, we might reasonably expect greater participation than by those residing elsewhere, including other metropolitan areas.[5]

Age Culture, it is said, is an acquired taste, and acquisition of taste takes time. It would follow that participation would increase with age. The exceptions might be those art forms that, for one reason or another, inherently appeal to younger people.

Education One means by which we acquire a taste for culture and the arts is exposure through education. It has been argued that appreciation of the more complex arts requires investment in 'consumption skills', learning to understand, say, opera.[6] Elementary and secondary school curricula typically offer art and music classes, and most colleges offer – and many require – art or music appreciation courses. Accordingly, we would reasonably expect participation to rise as education level rises.

For purposes of subsequent analyses, reported years of education have been aggregated into the following four groups: middle school or less, high school, college and graduate school. In addition to general education, which can enhance taste for the arts, a more focused education in the form of arts training is intended to have an even greater impact. This has been indicated by prior research, and variables measuring such are included in the results reported here. More specifically, the equation for each of the reported years includes an indicator of whether the respondent had art, music, theatre, ballet or other dance lessons earlier in their lives.

Income The most obvious means by which income would affect arts participation would be ability to pay. Clearly, people with higher incomes are more likely to be able to afford to attend a performing arts activity or to visit a museum. For analytical purposes, the several reported income bands were aggregated into four groups. These have been characterized as 'poverty', the lowest group (which does not necessarily correspond to Census Bureau definitions of the poverty level); low, the next lowest; moderate, which may be regarded as 'middle class'; and high.

Gender There is no obvious or intrinsic reason to expect differential participation rates between men and women, yet the differences are well known: women participate in the arts at higher rates than men. Perhaps this is rooted in early acculturation processes, when boys were often channelled into sports, to the exclusion of arts.

Race As in gender, there is no obvious source of race-based differentials in art participation. Accounting for other factors that are correlated with race, such as income and education, may not eliminate racial differences. Racial or ethnic groups which are not European in origin may not be strongly attracted to such art forms as symphonic music and traditional opera, which are firmly rooted in Western artistic traditions. Minority groups may feel, or even be, excluded from 'mainstream' arts. The racial groupings of the survey are collapsed into white, black (African American), Asian and Indian (including all Native Americans). Respondents of Hispanic origin are identified separately.

Multivariate statistical results

The primary question addressed here is: what is the impact of any one variable on arts participation, controlling for all other influences? Multivariate statistical techniques are most appropriate to address questions of this nature. Such techniques generate estimates of the parameters, or relationships, among a number of variables simultaneously. The specific technique used here is logistic regression, which deals with categorical response variables. An example of a categorical response variable is sex, where a respondent can be either male or female, that is, may fall into one category or the other. This contrasts with more nearly continuous variables, such as household income, which can take values from zero to the millions of dollars or higher. But even these latter can be grouped into categories for statistical purposes, as has been done for this chapter. Statistical results, literal interpretations and inferences are indicated in the sections that follow.

Logistic models

Logistic regression estimates the probability of an event occurring: for example an individual attending a live performance. The logistic model can be written in terms of the 'log of the odds', which is called a logit:

$$\log\left(\frac{Prob(event)}{Prob(no\ event)}\right) = B_0 + B_1X_1 + \ldots + B_nX_n.$$

An equivalent expression is:

$$Prob(event) = \frac{1}{1 + e^{-(B_0 + B_1X_{1\ldots})}},$$

Table 2 Weighted logistic regression, benchmark US arts participation, 1997 (limited subsample)

Var.	Jazz	Class.	Opera	Musical	Theatre	Ballet	Dance	Museum
Const	−2.3830	−1.8775	−7.7928	−1.1874	−1.7916	−2.1785	−2.2441	−2.4516
Age	−0.0299	−0.0719	−0.0755	−0.0465	−0.0564	−0.0327	−0.0433	−0.0484
AgeSq	0.0002	0.0010	0.0010	0.0006	0.0006	0.0005	0.0004	0.0006
Inclow	0.2001	0.4474	−0.1549	0.0389	0.4293	−0.1942	0.3778	0.3064
Incmod	0.5571	0.9486	0.4360	0.6736	1.0563	0.2304	0.5655	0.5316
Inchigh	0.9286	1.2542	0.7997	1.1616	1.2585	0.6666	0.5913	0.8875
Edhigh	0.6946	0.2105	5.4287	0.2032	0.7320	−0.1403	0.5189	1.9455
Edpost	1.5527	1.1145	6.2229	1.0150	1.5622	0.6250	0.7132	2.6017
Edgrad	2.1816	2.0736	6.8139	1.7195	2.2500	0.9323	1.5522	3.4314
Metro	0.1208	0.1091	0.6290	0.1195	0.1270	0.0028	−0.0348	0.1976
Male	0.3060	−0.2517	−0.4082	−0.4092	−0.1193	−0.5899	0.0565	−0.1042
Black	0.7847	−0.1671	−0.4416	0.3897	0.4466	−0.0161	0.4681	0.2611
Hispanic	0.0680	0.0561	0.9619	0.2725	0.3456	0.2446	0.9019	0.7310
Indian	−0.0316	−0.4953	0.6868	0.0601	−2.0301	−1.4961	−0.8267	−0.0501
Asian	−0.8418	−1.0396	−0.3027	−0.7656	−0.2437	−0.5934	0.0845	0.1117
Wrkhrs	−0.0411	−0.0384	−0.0355	−0.0134	−0.0241	−0.0341	−0.0147	−0.0015
Wrkhrs 2	0.0004	0.0003	0.0004	0.0001	0.0001	0.0005	0.0002	−0.0010
Mus/art	0.5151	1.1808	0.5944	0.4446	0.7622	1.3593	1.0218	0.8748
N	3095	3096	3096	3094	3094	3096	3096	3092

Note: All individual coefficients are significant at the 0.001 level or better; model chi-square for each equation is significant at the 0.001 level or better.

which we can use to construct an illustrative example. Borrowing some values from the first column of Table 2, we seek to determine the probability that a 30-year-old black male with moderate income, a 40-hour-per-week job and a high school education would attend a jazz concert in the survey period. The calculation is

$$Prob(jazz) = \frac{1}{1 + e^{-[-2.3830 + (-0.0299)(30) + (0.0002)(30)^2 + 0.5571 + 0.6946 + 0.1208 + 0.3060 + 0.7847 + (-0.0411)(40) + (0.0004)(40)^2]}}$$
$$= 0.1624,$$

which means that there is about a one in six chance that the person described above would have attended a jazz performance during the survey period.

A positive value of B_i increases the log of the odds, while a negative value decreases the log of the odds. Put less precisely but more simply, a positive

coefficient indicates that the variable increases the likelihood of the event, while a negative coefficient decreases the likelihood. The greater is the absolute value of a coefficient, the greater the impact of the variable. For example, a positive value of the coefficient of an age group indicator indicates that someone in that age group is more likely to participate.

Statistical results

Although the 1997 SPPA results included more than 12000 respondents, a more limited subsample answered some of the questions explored here. Accordingly, the results below are based on just under 3100 respondents, still ample for the purposes of this chapter.

Jazz The logistic regression results for jazz participation are generally consistent with the hypotheses stated earlier. Participation rises with income and education. The negative coefficient of age would indicate that jazz is a young person's art form – but this conclusion, while supported by other studies (Gray, 1995, 2001a, 2001b), cannot be distinguished from the results for other art forms as reported below. Blacks are more likely to participate than whites, and men are more likely to participate than women. The selected metropolitan area residents participated more than those residing elsewhere. The music lessons variable is positive, as hypothesized, and the work hours measures have the expected impact.

Classical music Participation in classical music rises with income level and education, as expected. The graduate education influence is larger than just post-secondary attendance. The age coefficient has an unexpected negative sign, unlike other studies (Gray, 2001a, 2001b), but this is very likely due to inclusion of, and multicollinearity with, the age-squared variable, suggesting that the latter adds little new information. This pattern persists with all the other art forms reported below. Non-whites are generally less likely to participate, men are less likely to participate than women, and metropolitan area residents are more likely to participate.

Opera As with classical music, participation in opera rises with income, but, given the generally higher prices of opera tickets, it may seem surprising that the income coefficients are higher for classical music than for opera. One explanation may be that opera seasons are shorter than symphony seasons, and household incomes may be covering overall subscription outlays rather than prices of individual concert tickets. Education has a far more pronounced impact on opera than on classical music, perhaps reflecting the greater complexity of opera and the ability of the more highly educated to ingest the complexity. Age shows the same anomalous results as

for classical music, non-white and male respondents generally participate less than their reference groups, and the impact of music lessons is positive. The results for work hours is as expected.

Musicals As with jazz, classical music and opera, participation in musicals rises with income and education, is higher for residents of the twelve metro areas, and lower for males. The race/ethnic groupings show a mixed pattern, and the impact of work hours is consistent with the hypotheses. Music lessons are associated with a higher level of participation.

Plays In accordance with the pattern that has by now become well established, participation rises with income, education and metropolitan residence. While the ethnic groupings had a mixed impact, it is worth noting that, for both musicals and plays, black participation was higher than for whites, perhaps reflecting the fact that some musicals (such as *Porgy and Bess*), playwrights (for example, August Wilson) and theatres (for example, the Penumbra Theater in St. Paul) more fully capture the African American experience and hence have more appeal than, say, most classical music and opera.

Ballet Attendance at ballet shows a mixed income and education impact, although the metropolitan area and sex variables have the expected effect. Ethnic effects are mixed, and both work hours and ballet lessons have the expected effect.

Dance Dance attendance rises with income and education, but the incremental effects of sequential groupings are small. All ethnic groups but Indians participate more than whites, perhaps reflecting the role of dance in ethnic life. Males participate less than females. This is the sole art form in which non-metro residents actually participate more than metro residents. Another conjecture: dance touring programmes may be providing more access to dance for outstate residents than is easily available to those in suburban areas, but this begs additional specific research. Dance lessons and work hours have the expected effects.

Art museums and galleries Visits to art museums and galleries are generally associated with higher levels of income and education. Metro residents and females are also more likely to attend, as are those who have taken art lessons. All ethnic variables had positive associations with attendance, except for American Indians.

Summary and conclusions

This chapter introduced an economic approach to arts participation and reported results of multivariate statistical analyses of participation (attendance) in each of the 'core' arts of jazz, classical music, opera, musicals, plays, ballet, dance and visual arts. Hypotheses pertaining to the influence of income, education, age, sex, race/ethnicity, work and location were generally supported in each of the equations. A few areas call for additional research, and additional implications await exploration (Walker *et al.*, 2000; McCarthy *et al.*, 2001; McCarthy and Jinnet, 2001).

Notes

1. This research was supported in part by the National Endowment for the Arts under grants C97–61, C97–63, and C99–81. Opinions and conclusions expressed herein are those of the author and do not reflect an official position of NEA or any other agency. Some of the material in this article draws upon Gray (2001a, 2001b).
2. Many of the reports commissioned by NEA are listed separately in the Bibliography.
3. For an additional set of indicators and accompanying discussion, see Gray and Heilbrun (2000).
4. For a general discussion, see Heilbrun and Gray (2001, pp.337–42). Two earlier studies by Heilbrun (1987, 1989) offer additional insights.
5. The Bureau of the Census has changed its nomenclature over time, so that Standard Metropolitan Statistical Area (SMSA), which applied to the earlier SPPAs, has ceased to be used. Nonetheless, since this overview bridges that period, the terms SMSA and 'metropolitan area' are used interchangeably here.
6. This has been explored with varying degrees of rigour by Scitovsky (1976) and Stigler and Becker (1977).

See also:

Chapter 38: Marketing the arts; Chapter 50: Public support; Chapter 56: Taste formation.

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