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Dimensions of Regional Arts and Cultural Participation: Individual and Neighborhood Effects on Participation in the Philadelphia Metropolitan Area

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See *Individual Participation and Community Arts Groups: A Quantitative Analysis of Philadelphia* (SIAP Working Paper #1, Stern and Seifert, Oct 1994). In *Social Citizenship and Urban Poverty* (SIAP Working Paper #4, Stern and Seifert, Feb 1997), the authors found that poor neighborhoods have rates of community participation comparable to those in more affluent neighborhoods. However, the high level of local participation did not predict regional cultural participation. One implication was the need to focus on the barriers that prevent community participation from translating into regional participation

SIAP's *Culture Builds Community* research was undertaken from 1996 to 2001 with support by the William Penn Foundation.

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Dimensions of Regional Arts and Cultural Participation: Individual and Neighborhood Effects on Participation in the Philadelphia Metropolitan Area

Abstract

One of SIAP's goals has been to explore the dimensions of cultural participation and, in particular, the social context of participation. In a 1994 working paper, Stern used the Survey of Public Participation in the Arts (SPPA) specially commissioned in 1992 for the Philadelphia metropolitan area to which he added information on the number of cultural organizations located in the zip code of each respondent. The results were startling. This rough measure of community cultural resources was significantly correlated with levels of regional participation--that is, the more cultural programs located in their neighborhood, the more likely respondents were to take part in cultural activities citywide. Moreover, the relationship was stronger than that for income, education, or race/ethnicity. Thus, there appeared to be a strong "neighborhood effect" on cultural participation, something that previous research had been unable to measure.

Although these findings were instructive, the limits of the Philadelphia SPPA--lack of more precise geographical identification and relatively small sample size--made it difficult to use for more detailed analysis. During 1996 and 1997, SIAP undertook a two-pronged strategy to examine more fully the interaction between community and regional participation. First, the team collected and analyzed participant data from a cross-section of Philadelphia's regional cultural institutions. Second, they conducted a "community participation survey" in five Philadelphia neighborhoods. This paper reports the results of the analysis of regional cultural participation. A companion paper, *Cultural Participation and Civic Engagement in Five Philadelphia Neighborhoods* (January 1998), examines local participation patterns.

Disciplines

Arts and Humanities | Civic and Community Engagement | Social Statistics | Sociology

Comments

See *Individual Participation and Community Arts Groups: A Quantitative Analysis of Philadelphia* (SIAP Working Paper #1, Stern and Seifert, Oct 1994).

In *Social Citizenship and Urban Poverty* (SIAP Working Paper #4, Stern and Seifert, Feb 1997), the authors found that poor neighborhoods have rates of community participation comparable to those in more affluent neighborhoods. However, the high level of local participation did not predict regional cultural participation. One implication was the need to focus on the barriers that prevent community participation from translating into regional participation

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Social Impact of
the Arts Project

University of Pennsylvania
School of Social Work

Working Paper #6

Dimensions of Regional Arts and Cultural Participation:

**Individual and Neighborhood Effects on
Participation in the Philadelphia Metropolitan Area**

**Mark J. Stern
September 1997**

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INTRODUCTION

“Cultural participation” carries at least three distinct meanings. On the most simple level, it refers to attendance at staged cultural events: plays, exhibits, performances. More broadly, we can use the term to mean involvement with one’s cultural or ethnic group. Finally, cultural participation can refer to the extent to which individuals or groups are engaged in a wider social and cultural network; the extent to which they are *in* society.

Although these different ideas share a common term, many of the cultural and social debates of the past decade have been framed by the tensions between these concepts. The debate over *cultural capital*--the idea that involvement in “the arts” is one means of enforcing distinctions between different social groups--sees the first and third meanings of cultural participation in conflict.¹ At the same time, the debate over *multiculturalism*--places the first and second meanings of cultural participation on a collision course.

The existing literature on cultural participation has generally supported these tensions. The *Surveys of Public Participation in the Arts* (SPPA) sponsored by the National Endowment of the Arts in 1982, 1985, and 1992 have consistently found:

- that arts participation is correlated with higher income, higher occupational status, and higher educational attainment; and
- that African-Americans and Latinos have generally lower arts and cultural participation than Euro-Americans.²

One of the goals of the Social Impact of the Arts Project has been to explore the dimensions of cultural participation and, in particular, the social context of participation. In a 1994 working paper, we used the SPPA specially commissioned in 1992 for the Philadelphia metropolitan area³ to which we added information on the number of arts and cultural organizations located in the zipcode of each respondent. The results were startling. This rough measure of community cultural resources was significantly correlated with levels of regional participation--that is, the more cultural organizations located in their neighborhood, the more likely respondents were to take part in cultural activities citywide. Moreover, the relationship was stronger than that for income, education, or race/ethnicity. Thus, there appeared to be a strong “neighborhood effect” on cultural participation, something that previous research had been unable to measure.⁴

¹ For a discussion of cultural capital, see: Pierre Bourdieu, *Distinction: a social critique of the judgment of taste*, translated by Richard Nice (Cambridge, MA.: Harvard University Press, 1984).

² Paul DiMaggio and Francie Ostrower, *Race, Ethnicity and Participation in the Arts*, NEA Research Division Report #25 (Washington, D.C.: Seven Locks Press, 1992).

³ Philadelphia was one of 12 local surveys of public participation in the arts commissioned in 1992 by the National Endowment for the Arts (NEA Research Division Report #26). *The Survey of Public Participation in the Arts in Philadelphia* (July 1992), conducted by Abt Associates of Cambridge, Massachusetts, was specially commissioned by the Greater Philadelphia Cultural Alliance.

⁴ Mark J. Stern and Susan C. Seifert, *Working Paper #1: Individual Participation and Community Arts Groups: A Quantitative Analysis of Philadelphia* (October 1994).

Although these findings were instructive, the limits of the Philadelphia SPPA--the lack of more precise geographical identification and the relatively small sample size--made it difficult to use for more detailed analysis. Over the past several years, therefore, we have undertaken a two-pronged strategy to examine more fully the interaction between community and participation. First, we collected and analyzed participant data from a cross-section of Philadelphia's regional cultural institutions. Second, we conducted a series of "community participation surveys" in five Philadelphia neighborhoods. This paper reports the results of the analysis of regional cultural participation. A subsequent paper will examine local participation patterns.

DATA AND METHODS

Participant Data Base

The data for this paper are derived from lists of participants provided by a cross-section of regional arts organizations. These lists consist of computer files maintained by cultural organizations as part of their organizational routine. The most common sources are mailing lists, subscriber or membership lists, single ticket buyers, and class registration records.

We solicited information from 27 organizations drawn from a list of regional arts and cultural institutions (Figure 1). We did not select a random sample. Our criteria for inclusion were: (1) range of size and type of institution; (2) geographical distribution across the city and region; and (3) probability that the organization maintain a computerized data base. Of the organizations from which we requested data, all but three were able to provide us with lists. The cooperation of Upstages, the downtown ticketing service for nonprofit organizations, augmented the number of patron lists and the number of organizations represented. The participant data base, therefore, includes 38 listings representing 28 regional cultural institutions. Of a total of approximately 635,000 records, 430,000 are cardholders of the Free Library of Philadelphia and 205,000 are participants of the other 27 organizations (Table 1).

Unlike the SPPAs, our data sources rarely contained any information on individuals apart from their address. Our major means of analyzing the social context of participation, therefore, was based on *geographically coding* (geo-coding) the data by longitude and latitude. By so doing, we were able to examine the characteristics of the geographical unit in which the participant lived. (In this case, the unit of analysis was the block group, an area of six to eight city blocks.) Thus, we have no individual information on participants; we examine only the *neighborhood effects* of participation.

After the data were geocoded, we produced a set of counts of individuals from each participant listing who lived in a particular block group.⁵ These counts were then compiled on a single data base and rates of participation (per 1,000 population) were computed for each list.

⁵ Individuals whom we could not geocode by address were geocoded by zipcode. The number of zipcode-geocoded cases were then distributed across all of the block groups in the zipcode area proportional to the block groups' percent of the zipcode population. Cases with addresses outside of the five Pennsylvania counties of the metropolitan area were not included in this analysis.

Methodology

The analysis of these lists posed both ethical and methodological issues. Because many organizations are protective of their subscriber lists, we decided to report no findings on individual organizations. At the same time, the disparity in number of participants (from just over 100 individuals to over 400,000 individuals) meant that any attempt to simply add the counts for different organizations would effectively eliminate the smaller organizations from our analysis. Finally, we wanted to use a means of combining organizations that reflected actual patterns of participation, not our arbitrary idea about which organizations should be grouped together.

Raw participation rate

Our response to these problems took two forms. First, we separated out the Free Library of Philadelphia for independent analysis. Thus, we computed two sets of *raw participation rates*: one for the Free Library and one for all of the other institutions in our data base. This analysis gives the single best overview of regional participation as well as a counterpoint between Free Library participation and that of other arts and cultural organizations.⁶

Factor analysis

Second, we used *factor analysis* to identify the underlying patterns in the distribution of participants across the over 3,500 block groups in the metropolitan area. Factor analysis is a multivariate technique which uses the correlation between groups to examine common elements in their distribution. Factor analysis identifies several elements (or factors), each of which captures a unique dimension of the data set (rotated solution). Each of these factors is correlated with a number of the individual organizations' data counts and a particular set of block groups. Therefore, factor analysis allows us to link patterns in the participation data to characteristics of particular block groups in the metropolitan area.

The analysis then subdivides the general participation factor into a number of subfactors, each of which captures a different dimension of participation. Each block group is assigned a *factor score* which indicates how strongly it is related to that subfactor. Low scores indicate low participation, while high scores indicate high participation across the twenty-eight organizations.⁷ This method (varimax rotation) is designed to increase the distinctions between the factors; as a result, a particular organization may be strongly related to more than one factor.

Bivariate analysis (simple correlation)

The next step of the analysis was to examine the relationship between the factor scores and other characteristics of the block group. In addition to 1990 US census variables, these data include the number of social organizations of different types within

⁶ We also tested a *principal component* factor analysis that was constrained to a single factor as a way of identifying the single best index of regional participation. The resulting factor was correlated at more than .9 with the raw participation rate. Because the rates are more intuitive than the factor scores, we opted to use the participation rates.

⁷ Because all of the data are "normalized" (redistributed with a mean of zero and a standard deviation of 1), differences in the magnitude of participation rates (from a low of .03 per 1,000 population to a high of 120 per 1,000 population) are disregarded.

one-half mile of the block group (see SIAP Working Paper #3)⁸ and selected data from the 1980 census.

Multivariate analysis

As the final phase of the study, in order to summarize the additive effect of different variables in explaining variation in participation, we conducted a set of multiple regression analyses. A separate analysis was carried out for each of the three participation variables--raw participation rate, mainstream factor, and alternative factor--presented in the findings below.

The variables included in the regression equation were: percent of adults with bachelor's degree, percent of workers in professional or managerial occupations, percent of population 18 to 34 years old, percent of nonfamily households, per capita income, ethnically diverse neighborhood (dummy variable), city/suburb (dummy variable), total number of social organizations within one-half mile of block group, arts organizations as percent of all social organizations within one-half mile of block group (art percent).⁹ A second set of regressions were run in which the number of arts organizations was substituted for total number of organizations and arts and cultural organizations as a percent of all organizations.

We then entered all variables into the equation and used a backward stepwise method to remove variables that did not have sufficient explanatory power.

FINDINGS

Overall Participation Rate

Regional cultural organizations

The total participation rate of all the regional organizations in the study, excluding the Free Library of Philadelphia, is presented on the map in Figure 2. The map shows that the highest rates of participation (per 1,000 residents) are concentrated in five sections of the region: Center City, suburban Montgomery County, Chestnut Hill and Mount Airy, East Falls, and the Art Museum area. Most of West Philadelphia, South Philadelphia, North Philadelphia, Delaware County, and lower Bucks County show relatively low overall participation in regional cultural organizations.

The median block group in the city had a participation rate of approximately 60 participants per 1,000 residents or six percent. The high participation areas of the city had rates above 120 participants per 1,000 residents (12 percent). At the other extreme, some sections of Delaware County and much of the city had participation rates below 30 per 1,000 residents (3 percent), less than half of the median for the metropolitan area.

Free Library of Philadelphia

The participation pattern of the Free Library of Philadelphia stands in sharp contrast to that of the other regional cultural organizations for which we have data.

⁸ Mark J. Stern, *Re-Presenting the City: Arts, Culture, and Diversity in Philadelphia*, Social Impact of the Arts Project Working Paper #3, February 1997.

⁹ A measure of economic diversity ("pov-prof") was excluded because of its high correlation with per capita income, percent managers and professionals, and the total number of organizations.

First, of course, if we define library cardholders as participants, overall rates are much higher. In the average block group, about twenty percent of the residents have library cards. For a quarter of block groups, more than thirty percent are cardholders.

A map of participation for the Free Library is more difficult to characterize than for other organizations. The low rate of cardholding in Center City and University City is notable. In addition, large areas of North Philadelphia, Kensington, and Port Richmond have rates of cardholding well below those of most of the city. In contrast with other measures of cultural participation, the Northeast--especially Fox Chase, Rhawnhurst, and Pennypack--has relatively high rates of library cardholding (Figure 3).

When we examine the number of materials checked out per capita, the geography of use becomes more clear. Here, the high rates of library usage in the Northeast are quite apparent. In addition, although rates are high throughout the Northwest, library use in Roxborough is among the highest in the city (Figure 4).

Dimensions of Participation (factor analysis)

The total rate of participation, discussed above, was the single factor that captured the most variation in participation patterns. The factor analysis identified seven factors, each of which captured at least 2.7 percent of variation. Because these factors are not correlated with one another, they allow us to identify independent dimensions of participation. (See Appendix Table A-1.)

By using more than one factor, our analysis captures a larger share of the variation in patterns of participation among all of the institutions. Together, these seven factors captured two-thirds of all the variation. The first factor, strongly related to the raw participation rate, accounts for 43 percent of the variation. The next three factors account for between eight (8) and four (4) percent of total variance, and the last three factors together account for about nine (9) percent of variance.¹⁰

Through the process of “rotation,” the factor analysis increases the distinctions among different factors. By increasing the relationship between particular variables and the factor, the factors can be more easily interpreted as relating to a particular dimension of participation.

The analysis produced five factors that have a straightforward interpretation. However, of these five, the first two are notable because they account for the majority of variance in participation and because they are the only two that are closely related to more than two or three groups.

Factor 1 (mainstream)

The first factor, which we have called “mainstream,” captures the lion’s share of the variation in participation among all organizations. The groups most strongly related to this factor tend to be large, Center City-based groups like the Philadelphia Orchestra,

¹⁰ The commonality statistics suggest that most organizations are accounted for in this analysis. Over half of the groups have commonality scores of over .7, indicating that most of the variation is included in one or more factors. At the other extreme, no group has a commonality score below .3.

the Opera Company of Philadelphia, the All Star Forum, and the Philadelphia Museum of Art. A second set of organizations substantially related to this factor, although not as strongly represented, include the Fleisher Art Memorial, the Bach Festival of Philadelphia, the Philadelphia Singers, and the Please Touch Museum (Figure 5).

The geography of this factor is similar to the analysis of raw participation. Suburban Montgomery County and Center City are the sections of the city that are correlated most strongly with the mainstream factor. In addition, Chestnut Hill and the Swarthmore section of Delaware County tend to score strongly on this factor.

Factor 2 (alternative)

The second factor, which we have called “alternative,” represents about 8 percent of all of the variation in participation among all the organizations. This factor is strongly related to some groups also represented by Factor 1 (mainstream), for example, Fleisher Art Memorial, American Musical Theater Festival, and the Wilma Theater. However, it also includes a set of more specialized and diverse groups, such as Prints in Progress, the Philadelphia Arts Bank, the Painted Bride Art Center, and the International House of Philadelphia (Figure 6).

Although many of the organizations related to the alternative participation factor are identified as African-American, these groups have high participation within the region’s more diverse neighborhoods. This factor has strong representation in sections of West Philadelphia, Point Breeze in South Philadelphia, and some neighborhoods in North Philadelphia as well as more ethnically diverse areas like Mount Airy, Germantown, East Falls, and neighborhoods near Center City.

Thus, in contrast to Factor 1, the alternative participation factor is strongly related to the city of Philadelphia. In addition to parts of Center City and the areas mentioned above, this factor is strongest in neighborhoods on the periphery of Center City to the north (Art Museum, Fairmount, Northern Liberties) and south (Queens Village, Bella Vista).¹¹

¹¹ The full factor analysis is presented in Appendix Table A-1. In addition to the two factors presented here, the next three factors were connected with more specialized dimensions of participation.

Factor 3 (Northwest)

Factor 3, which represents roughly four percent of the total variation in participation, is more specialized than either of the previous factors. Its geography reflects the prominence of Northwest institutions (Allens Lane Art Center, Bach Festival of Philadelphia, Philadelphia Folksong Society) in its composition. Mount Airy, Chestnut Hill, and Germantown are all strongly related to this factor. In addition, sections of Montgomery County near the Northwest including the Main Line, Whitemarsh, Springfield, and Cheltenham are strongly related to this factor. (See Appendix Figure A-1.)

Factor 4 (City Neighborhoods)

Factor 4, which represents about four percent of variation among all of the organizations, is related exclusively to organizations that serve city neighborhoods. In addition to the Free Library, this factor is closely related to several arts groups (notably, Asociacion de Musicos Latino Americanos) that have a strong presence in the city’s African-American and Latino neighborhoods.

With the exception of some neighborhoods near City Line, all of the neighborhoods strongly related to this factor are in the city. Sections of the Northwest, the Fifth Street corridor

Factors Related to Participation (simple correlation)

The mainstream and the alternative participation factors discussed above each have a distinctive geography. In this section, we examine the relationship between regional cultural participation and other characteristics of the region's block groups. We pay particular attention to the impact of: (1) social organizations, (2) socio-economic status, 3) race and ethnicity, and (4) family structure.

Social organizations

Relationship to overall participation

Regional cultural organizations. The presence of social organizations in the vicinity of a block group and, in particular, the presence of arts and cultural organizations have a strong impact on variations in a number of the factors we have examined. (In addition to arts and cultural groups, this analysis includes local nonprofit organizations and voluntary associations of all types--neighborhood and community improvement, social service and youth, houses of worship, social and fraternal, recreational, and special interest.)

The strongest influences on the total rate of participation were the number of cultural and other social organizations within one-half mile of a block group. The correlation between the number of social organizations within one-half mile of a block group and the level of cultural participation was .50, indicating that the number of social organizations "explained" a quarter of the variance in participation. The relationship with the presence of arts organizations was even stronger (.59). In other words, more than a third of the variation in participation rates were associated with the number of arts and cultural groups located within one-half mile (Table 2).

Among block groups with the lowest number of social organizations, the total participation rate averaged only 40 per 1,000 residents. Among the quarter of block groups with the most social organizations, the participation rate was about two and a half times higher, nearly 100 per 1,000 residents (Figure 7). The difference in participation rates was more dramatic for sections of the metropolitan area with a higher or lower number of arts and cultural organizations. Whereas the block groups with the fewest arts organizations had less than 30 participants per 1,000 residents, neighborhoods with the most arts groups had nearly 120 or four times as many participants (Figure 8).

Free Library of Philadelphia. In sharp contrast to the other regional cultural organizations in the study, the Free Library's cardholder rate and per capita use are not

that is home to many of the city's Latino residents, and a substantial portion of the Northeast score more strongly on this factor than on any other. (See Appendix Figure A-2.)

Factor 5 (African-American)

Factor 5 represents about three percent of all the variation in the participation data. It is most strongly related to organizations that identify themselves as serving the black community--the Afro-American History and Cultural Museum and the Freedom Theater performance patrons and students. In addition, the Free Library cardholders and the Painted Bride performance patrons also show moderate loading on this factor. (See Appendix Figure A-3.)

related to the presence of social organizations. The correlation between these factors and the number of organizations are all below .3. The relationship of materials checked out per resident was roughly the same. The ratio of materials checked out per cardholder, however, was even weaker.¹²

Relationship to “mainstream” and “alternative” factors

The number of organizations is also an important predictor of the “mainstream” and the “alternative” factors in our rotated solution. As with the raw participation rate, total number of organizations (.44) and number of arts and cultural organizations (.54) are the most strongly correlated variables in explaining the “alternative” factor (Figure 9). For the “mainstream” factor, they are important but somewhat less powerful than socio-economic status (Figure 10).

In addition to the raw number of organizations in a block group, we also computed arts and cultural organizations as a *percent* of all organizations (art percent).¹³ Again, the participation rate in block groups with a low percentage of arts groups was about a quarter of that in which the arts percentage was high (Figure 11).

Socio-economic status

Relationship to overall participation

Regional cultural organizations. The overall rate of participation in regional cultural organizations is strongly related to economic and occupational status. The correlation coefficient with median family income is .43 and with per capita income (which controls for family size) is .55. Higher educational attainment--percent of residents with bachelor's degree (.60) and professional and managerial occupational status (.56)--are also strongly related to the raw participation rate (Table 3).

For example, among the region's block groups with the lowest per capita income, there were about 25 cultural participants per 1,000 residents. At the other extreme, among the richest block groups in the metropolitan area, there were nearly 160 participants per 1,000 residents (Figure 12).

Free Library of Philadelphia. Income, education, and occupational status had only a weak relationship to Free Library cardholding among residents throughout the city. The strongest relationship, that with median family income, was only .23, quite weak compared to those we found with raw participation.

There was a strong connection, however, between income, education, and occupational status and use of the library. Sections of the city with lower per capita incomes, fewer college graduates, and fewer managers and professionals checked out fewer materials per capita and fewer per cardholder than more prosperous areas of the city.

¹² We use the term “check out rate” for the number of items checked out per 1,000 residents and the term “check out ratio” for the number of items checked out per 1,000 cardholders.

¹³ This variable is somewhat less correlated than raw number of organizations with total participation rate (.43). The usefulness of *art percent* becomes evident when we turn to multivariate analysis. Because the total number of social organizations and the number of arts and cultural organizations are themselves highly correlated, it is impossible to enter them simultaneously into a regression analysis. However, because art percent is less correlated with total number of organizations, it can be entered in the same analysis.

Relationship to “mainstream” and “diversity” patterns

Socio-economic position is even more strongly related to the “mainstream” factor in our rotated solution. This dimension of participation has correlation coefficients of .54 with median family income, .62 with per capita income, .54 with percentage with bachelor’s degree, and .51 with managerial and professional occupations.

The “alternative” factor, in contrast with the total participation rate and “mainstream” factors, has a very weak relationship to socio-economic status. Although the correlation coefficients with education and professional and managerial occupational representation are statistically significant, they would explain only about one percent of variance in this factor. What is more striking is that the measures of income are all *negatively* correlated with the “alternative” factor. In other words, for this factor, participation is higher in block groups with lower family incomes.

These conclusions are reinforced by an analysis using the economic diversity variable that we developed in SIAP Working Paper #3. Sections of the metropolitan area with both higher than average numbers of professionals and higher than average poverty had slightly more cultural participation than sections of the city with below average poverty, but the difference was not statistically significant (Table 4). Block groups with below average poverty were more likely to have higher “mainstream” participation than other sections of the city.

Notably, the “alternative” participation factor was strongly related to economic diversity. Participants associated with these institutions were more likely to live in neighborhoods with a higher than average number of professionals and managers *and* above average poverty than in other sections of the city (Table 5).

Race and ethnicity

Relationship to overall participation

Regional cultural organizations. Generally speaking, race and ethnicity are not strong predictors of regional cultural participation. Neighborhoods with a greater proportion of white residents did tend to have higher participation rates, while areas with a greater proportion of African-Americans had lower participation and a weaker relationship to the mainstream factor. However, none of these correlations were stronger than .22, indicating that race explained less than four percent of the variance in participation. The relationship between the proportion of Latinos or of Asian-Americans in a block group and total participation or mainstream participation was even less strong (Table 6).¹⁴

Free Library of Philadelphia. Although Free Library cardholding in African-American neighborhoods was similar to that of other sections of the city, use of the library was dramatically lower. The correlation between the check out rate and the percent of African-American residents in a block group was -.47. In other words, the higher the number of African-Americans, the lower the rate of materials checked out. Whereas the average block group had a check out ratio (materials per 1,000 cardholders)

¹⁴ The proportion of the population that was African-American or Latino was correlated with the factors that were loaded on arts organizations that identify themselves as serving these ethnic groups. However, we have not reported individual results for these factors.

of 20, in black and Latino neighborhoods, the rate was only 13 and 10 respectively. By comparison, the ratio in white neighborhoods was 22 (Table 7).

Relationship to “mainstream” and “alternative” patterns

Black and Latino neighborhoods had somewhat lower regional participation as measured by the raw participation rate and mainstream factor. However, ethnic diversity tended to boost participation on the “diversity” factor. Black/white, Latino, and other ethnically diverse neighborhoods had significantly higher levels of participation. Average participation in white block groups was 69 per 1,000 residents, compared to only 31 and 42 per 1,000 residents in African-American and Latino block groups, respectively. Integrated black/white block groups, by contrast, had the highest participation rates in the region, over 90 per 1,000 residents (Figure 13).

Age and family structure

The final set of factors that influenced regional cultural participation were age and family structure. In particular, neighborhoods with a higher than average proportion of *nonfamily households*--typically single individuals, same sex households, and POSSLQs (persons of opposite sex sharing living quarters)--were strongly related to raw participation rates (.28) and to the alternative participation factor (.34). In addition, the presence of young adults (between the ages of 18 and 34) was related to the alternative participation factor but not to the raw participation rates (Table 8).

Interaction of organizations, socio-economic status, and diversity variables

Although the presence of social organizations, socio-economic status, and neighborhood diversity each had an important influence on participation, they tended to act independently of one another. For example, participation in low-income neighborhoods (bottom quartile on per capita income) was generally lower than that in other sections of the city, but low-income neighborhoods with many social organizations had higher participation than did those areas with few organizations. Among low-income neighborhoods with few arts and cultural groups, the participation rate was only 11 per 1,000 residents, but it rose to 40 per 1,000 residents in block groups with many organizations. At the same time, the rate in high income neighborhoods rose from 56 participants per thousand for block groups with few organizations to 341 per thousand for those with many (Table 9, Figure 14).

Neighborhoods that were *both* economically and ethnically diverse were much more likely to have high rates of participation than other sections of the metropolitan area. For example, the raw participation rate in these neighborhoods was 115 per thousand, more than twice the rate in homogeneous neighborhoods (Figure 15). Even more striking were the differences for the alternative participation factor. The participation rate for diverse neighborhoods was nearly a full standard deviation higher than that for homogeneous neighborhoods (Figures 16, 17).

Cumulative Influences on Participation (multivariate results)

The above analysis of the factors relating to regional cultural participation point to a number of clear conclusions:

- The presence of social organizations, and particularly of arts and cultural organizations, is consistently the strongest predictor of levels of participation among the region's block groups.
- Socio-economic standing--whether measured by income, occupational status, or education--is an important predictor of raw participation rates and of "mainstream" participation.
- In addition to the presence of social organizations, the most consistent predictor of the "alternative" dimension of participation is neighborhood ethnic and economic diversity. Block groups with many nonfamily households and above average numbers of young adults, also, are likely to have high levels of "alternative" participation.

However, in order to disentangle the correlation among these different factors, we now turn to the findings of the multivariate analysis of participation.

Overall participation rate

Regional cultural organizations

As noted earlier, the number of social organizations, the percent of arts organizations, and per capita income were the major determinants of a block group's raw participation rate. Controlling for other factors, an increase of ten organizations within one-half mile of a block group increased the participation rate of a block group by 3.5 per 1,000 residents (compared to an average rate of 60 per thousand). Similarly, an increase of one percent in the proportion of arts or cultural organizations near a block group resulted in an increase of 2.6 per 1,000 residents in regional participation (Table 10).

Socio-economic variables were also important determinants of raw participation. An increase of one thousand dollars in a block group's per capita income resulted in an increase in participation of nearly 5 per 1,000 residents. A gain of one percent in a block group's proportion of bachelor's degrees or professional/managerial occupational titles raised participation by 1 per 1,000 and .5 per 1,000 residents, respectively.

When other variables were controlled, the proportion of young adults did not significantly influence participation. However, a one percent increase in nonfamily households was related to a .3 per 1,000 increase in participation rates.

Ethnically diverse neighborhoods, on average, had a participation rate that was 7 per 1,000 residents greater than homogeneous black or white neighborhoods. Finally, when other variables are controlled, urban block groups (located in the city of Philadelphia) had participation rates that were 20 per thousand greater than those in the suburbs.

The analysis using number of arts and cultural organizations did not differ markedly from that based on number of social organizations and arts groups as percent of all organizations. However, it suggests that when other variables are controlled the increase of one cultural organization in a block group increased the participation rate by 3 per thousand residents.

The summary statistics for the regression underline the strength of the relationships they identify. Taken together, the variables explained between 63 and 65 percent of the variance in the raw participation scores. The beta weights for number of

organizations and per capita income were both around .4 while those of the other variables were significantly lower.

Free Library of Philadelphia

As noted, Free Library participation was much less related to the variables we examined than participation with other regional cultural organizations. Compared to the raw participation rate, for which we were able to “explain” nearly 65 percent of the variance, the explanatory power of our model for the Free Library was only 9 percent (Table 11).

However, the results of the analysis were surprising in one respect. Whereas the bivariate correlation between number of arts and cultural organizations and Free Library participation was not significant statistically, when controlled for the other variables in our analysis, it is significant. Generally, the more arts organizations in a block group, the *lower* the number of Free Library cardholders in the area; however, there had to be five organizations in the neighborhood to reduce the number of cardholders by 1 per 1,000 residents.

The strongest variables in the model were the percent of high school dropouts (beta of .19) and the percent of managers and professionals (.11). The number of library cardholders decreased by about 1 per 1,000 residents for each increase of one percent in dropouts. Cardholder rates increased by about .6 per 1,000 for each increase of one percent of managers and professionals.

The percentage of African-Americans or of Latinos in a block group did not statistically affect the library cardholder rate. However, when other variables are controlled, neighborhoods that were ethnically diverse had cardholder rates that were 10 per 1,000 residents higher than homogenous neighborhoods.

Thus, library cardholding in the city of Philadelphia was not sharply differentiated by social status. Although the range of cardholding varied among neighborhoods, participation was not strongly related to social status, the organization of neighborhoods, or family structure. In this respect, the Free Library of Philadelphia appears to be a public resource that serves equally the entire city.

Mainstream factor

A similar set of analyses for the mainstream factor confirmed our earlier findings. In contrast to raw participation, per capita income, with a beta-weight of .55, was by far the most important factor in explaining mainstream participation patterns. The other major effect was organizational presence. Total number of arts and cultural organizations had a beta-weight of .37; in the second analysis, total number of social organizations had a beta-weight of .38, and percent arts groups had a beta of .04. The influence of other variables in the analysis was quite weak (Table 12).

Overall, the predictive power of this model, which explained about 53 percent of the variance, was somewhat weaker than that for raw participation rates.

Alternative participation factor

As we would expect, because of the lack of importance of income, the model for the alternative factor stood out from the previous analyses. The proportion of the

population with a college education or a managerial or professional title had significant positive effects on participation. However, when controlled for these variables, income was actually *negatively* correlated with alternative participation.

Organizational presence continued to be important. The beta for arts and cultural groups was .44 in one analysis; in the other, the beta for social organizations and percent arts were .27 and .17, respectively.

Neighborhoods with younger, ethnically diverse populations and many nonfamily households were the most likely to display high rates of alternative participation. Overall, the models explained 35 and 30 percent of variance (Table 13).

CONCLUSION

Influence of Socio-economic Status

The theory of cultural capital has dominated empirical work on arts and cultural participation for most of the past decade. According to this perspective, arts and cultural participation is one “field” in which social inequality is manifested. Those with higher income, more education, and more prestigious occupations engage in arts and cultural activities as a means of reinforcing their social position. Findings from the NEA’s surveys of public participation in the arts have reinforced this position.

We might have expected the *multicultural* perspective to have challenged the hegemony of cultural capital, but ironically the two have maintained a kind of peaceful coexistence. “True,” its advocates contend, “mainstream arts and culture are dominated by the elite. Support for organizations that represent people of color is a way to counter this tendency.”

There is much in this paper that supports this perspective. Certainly, our findings show that socio-economic status is an important determinant of cultural participation. Per capita income, education, and managerial and professional occupational strong have a strong correlation with participation.

Importance of Neighborhood Effects

But this is not the whole story. First, we have found that one factor that has hardly figured in the discussion of participation--the number of social organizations, including arts and cultural organizations--is as important as socio-economic status in predicting the level of participation among residents of a block group. In addition, we have found that if we disaggregate total participation into separate dimensions, an important dimension--what we have labeled “alternative” participation--is hardly correlated at all with socio-economic differences.

Thus, although this study does not tear down the twin towers of cultural capital and multiculturalism upon which contemporary views of arts and cultural participation are based, it suggests at least that we shift our frame of reference.

On the one hand, the findings suggest that neighborhoods with many community arts and cultural programs--as well as many social organizations generally--are also likely to have high rates of regional cultural participation. We have yet to isolate the connection between these two phenomena, but neighborhood participation

might be a reasonable place to start. In SIAP Working Paper #4¹⁵, we found that poor neighborhoods have rates of community participation that are comparable to those in more affluent neighborhoods. However, this high level of local participation does not predict regional cultural participation. One implication is that we need to focus on the barriers that prevent community participation from translating into regional participation.¹⁶

In addition, as in earlier working papers, the findings suggest that *diversity* has been greatly underestimated in our understanding of patterns of cultural participation. Because diversity is a characteristic of a neighborhood, not of an individual, it has been missing from SPPA analyses. Yet, it is a critical determinant of the number of social organizations in an area which, in turn, is highly correlated with arts and cultural participation.

Finally, the findings suggest that we have overestimated the role of cultural capital because we have ignored these ecological influences on participation. This is what statisticians call “auto correlation;” if we do not take into account ecological similarities, we are likely to assume that individual characteristics have more of an influence than they do. If we had the equivalent of the SPPA but with precise information on neighborhood context, we could assess the influence of individual socio-economic status on participation when neighborhood effects are taken into consideration.

What we need is a survey that measures both regional and neighborhood participation as well as features of neighborhood context. Although we do not have such data for the entire metropolitan area, for our case study neighborhoods, we have gathered information that meets these requirements. In the next paper, we will turn to our findings on local patterns of participation.

¹⁵ Mark J. Stern and Susan C. Seifert, *Civic Engagement and Urban Poverty in Philadelphia*, Social Impact of the Arts Project Working Paper #4, February 1997.

¹⁶ This reframing of the issue has important implications for policy. From the SPPA perspective, the question is: “Why is engagement in regional arts and culture so low among poor people?” If we take the ecological context into consideration, the question becomes: “What barriers prevent high levels of local participation from translating into high rates of regional participation?” One lesson of the past generation has been that social policies are more effective at changing the institutional context within which people operate than they are at changing people’s existing attitudes and behavior. If the “problem” with poor people’s participation is “institutional,” it too may be more amenable to policy interventions.

Table 1. Regional cultural organizations included in participation database

<u>Name of organization</u>	<u>Type of data</u>	<u>Records</u>
Academy of Vocal Arts	Subscribers, contributors, artists	8,263
African Amer Historical and Cultural Museum	Members	4,596
Allens Lane Theater	Subscribers, single tickets	1,259
American Music Theater Festival	Upstages ticket sales	11,496
Annenberg Center	Performing arts patrons	8,148
Asociacion de Musicos Latino Americanos		
School of Music	Active, former, interested students	1,068
Bach Festival of Philadelphia	Upstages ticket sales	1,445
Concerto Soloists	Upstages ticket sales	549
Fleisher Art Memorial	Students, teachers, artists, events patrons,	7,007
	donors, staff, board	
Franklin Institute	Members	12,812
Free Library of Philadelphia	Cardholders (all branches)	428,899
	Items borrowed per year (all branches)	9,372,719
International House of Philadelphia		
Festival of World Cinema	Single tickets, coupon books, opening night	1,121
	Upstages ticket sales	2,981
Folklife Center	Music series subscribers	107
	Single ticket buyers	503
	Upstages ticket sales	1,874
Mann Music Center	Summer festival patrons (Phila Orchestra)	1,928
New Freedom Theatre	Theater patrons	1,541
	Training program registration	710
Opera Company of Philadelphia	Subscribers (96-97), single tickets (95-96)	3,415
Painted Bride Art Center	Mailing list	5,044
	Membership	153
Philadelphia All Star Forum Series	Philly Pops and classical subscribers,	6,274
Philadelphia Arts Bank	Upstages ticket sales	7,253
Philadelphia Folksong Society	Mailing list	11,978
Philadelphia Museum of Art	Members, education program participants	36,370
Philadelphia Orchestra	Subscribers, single tickets, donors,	20,943
Philadelphia Singers	Upstages ticket sales	2,177
Philadelphia Theatre Company	Upstages ticket sales	6,799
Please Touch Museum	Members (96-97)	2,333
	Former members	3,409
Prints in Progress	Workshop enrollment, three sites	620
University of the Arts, Continuing Studies	Summer School, Fall Saturday School	252
Walnut Street Theatre Company	Subscribers (95)	11,615
	Single ticket buyers (95)	14,898
Wilma Theatre	Subscribers	2,546
Notes:		
1. Cultural organization data were collected Oct-Dec 1996 and were current except as otherwise noted.		
2. Free Library of Philadelphia cardholder and usage data were current as of March 1997.		
3. "Upstages ticket sales" lists were received directly from Upstages rather than the presenting organization.		

Table 2. Correlation coefficients. Measures of regional cultural participation and number of arts and social organizations within one-half mile of each block group

	Measures of regional cultural participation					
	Raw Participation Rate	Free Library Cardholders Rate	Free Library Check-out Rate	Free Library Check-out Ratio	Mainstream Factor	Alternative Factor
Social organizations	.50	.32	.29	.04*	.35	.45
Arts organizations	.59	.27	.29	.08	.42	.54
Percent arts groups	.43	.29	.30	.10	.26	.33

Note: All coefficients are significant at the .01 level, except those with * which are significant at .05 level.

Table 3. Correlation coefficients. Measures of regional cultural participation and socioeconomic indexes

	Measures of regional cultural participation					
	Raw Alternative Participation Rate	Free Library Cardholders Rate	Free Library Check-out Rate	Free Library Check-out Ratio	Mainstream Factor	Factor
Median family income	.43	-.37	-.13	.19	.53	-.12
Per capita income	.55	-.29	-.06	.18	.62	-.03*
Poverty rate	-.11	.35	.08	-.20	-.17	.06
Percent not high school grad.	-.33	.38	.12	-.20	-.34	-.03#
Percent not college grad	-.61	.21	-.01#	-.20	-.54	-.16
Percent managers or professionals	.56	-.15	.07	.21	.51	.12

Note: All coefficients are significant at the .01 level, except those with * which are significant at .05 level and those with # which are not significant.

Table 4. Raw participation rate (per 1,000 residents) by economic diversity of block group

	Raw Participation Rate
Economically diverse	76.4
Concentrated poverty	24.6
Above average poverty	0.1
Below average poverty	8.1
All block groups	60.7

Note: $\eta = .1741$, $p < .001$

Table 5. Alternative participation index by economic diversity of block group

	Alternative Participation Index
Economically diverse	.374
Concentrated poverty	-.055
Above average poverty	-.116
Below average poverty	-.036
All block groups	-.000

Note: $\eta^2 = .1353$, $p < .001$

Table 6. Correlation coefficients. Measures of regional cultural participation and ethnicity of block group

	Measures of regional cultural participation					
	Raw Participation Rate	Free Library Cardholders Rate	Free Library Check-out Rate	Free Library Check-out Ratio	Mainstream Factor	Alternative Factor
Percent African-American	-.13	.39	.06	-.24	-.21	-.02#
Percent Latino	-.06	.13	.00#	-.11	-.08	.04*
Percent Asian-American	.03#	.09	.11	.06	.03#	.02#

Note: All coefficients are significant at the .01 level, except those with * which are significant at .05 level and # which are not significant.

Table 7. Free Library of Philadelphia checkout ratio (items per 1,000 cardholders) by ethnic composition of block group

	Checkout Ratio
African-American	13.3
Latino	10.2
White	22.5
Black-Latino	12.3
Black-White	20.9
Asian-Other	22.8
Other (diverse)	20.5
All block groups	20.0

Note: $\eta^2 = .2613$, $p < .001$

Table 8. Correlation coefficients. Measures of regional cultural participation and age and family structure of block group

	Measures of regional cultural participation					
	Raw Participation Rate	Free Library Cardholders Rate	Free Library Check-out Rate	Free Library Check-out Ratio	Mainstream Factor	Alternative Factor
Percent nonfamily households	.12	.34	.28	.25	.29	.09
Percent 18-24 year olds	-.04*	.36	.12	.07	.07	.00#

Note: All coefficients are significant at the .01 level, except those with * which are significant at .05 level those with # which are not significant.

Table 9. Raw participation rate (per 1,000 residents), by number of social organizations within one-half mile of each block group, by per capita income

	Raw Participation Rate
<u>Social organizations (fewest)</u>	<u>28.0</u>
Per capita income (lowest quartile)	11.9
Per capita income (25-49th)	17.2
Per capita income (50-74th)	28.9
Per capita income (highest quartile)	55.8
<u>Social organizations (25-49th quartile)</u>	<u>39.0</u>
Per capita income (lowest quartile)	14.4
Per capita income (25-49th)	23.7
Per capita income (50-74th)	35.2
Per capita income (highest quartile)	91.1
<u>Social organizations (50-74th quartile)</u>	<u>55.1</u>
Per capita income (lowest quartile)	18.7
Per capita income (25-49th)	35.8
Per capita income (50-74th)	56.8
Per capita income (highest quartile)	147.4
<u>Social organizations (highest quartile)</u>	<u>121.4</u>
Per capita income (lowest quartile)	39.9
Per capita income (25-49th)	118.4
Per capita income (50-74th)	157.5
Per capita income (highest quartile)	342.0
All block groups	60.7

Table 10. Multiple regression analysis. Raw participation rates

With Total Number of Social Organizations and Percent Art

R-square: .633

With Total Number of Arts and Cultural Organizations

R-square: .648

Variable	B	SE B	Beta	significance(t)	B	SE B	Beta	significance(t)
Percent w/o BA	-.960	.124	-.17	.0001	-1.011	.121	-.181	.0001
Pct mgr /professl	.480	.128	.073	.0002	.513	.126	.079	.0001
Pct non-family HH	.303	.077	.047	.0001	.294	.075	.045	.0001
City/suburban	20.3	2.77	.096	.0001	28.8	2.57	.136	.0001
Pct 18-34 yrs	---	---	---	---	---	---	---	---
Ethnic diversity	7.21	3.09	.026	.02	9.41	3.01	.033	.002
Per cap income (1,000s)	4.82	.203	.409	.0001	.458	.199	.389	.0001
Social organizations	.351	.011	.374	.0001	---	---	---	---
Arts percent	2.57	2.77	.132	.0001	---	---	---	---
Arts organizations	—	—	—	—	2.62	.072	.439	.0001

Table 11. Multiple regression analysis. Free Library of Philadelphia participation rate (cardholders per 1,000 residents)

With Total Number of Social Organizations and Percent Art

With Total Number of Arts and Cultural Organizations

R-square:

R-square

Variable	B	SE B	Beta	T	B	SE B	Beta	T
Percent w/o BA	-.960	.124	-.17	.0001	-1.011	.121	-.181	.0001
Pct mgr /professl	.480	.128	.073	.0002	.513	.126	.079	.0001
Pct non-family HH	.303	.077	.047	.0001	.294	.075	.045	.0001
City/suburban	20.3	2.77	.096	.0001	28.8	2.57	.136	.0001
Pct 18-34 yrs	---	---	---	---	---	---	---	---
Ethnic diversity								
Per cap income (1,000s)	4.82	.203	.409	.0001	.458	.199	.389	.0001
Social organizations	.351	.011	.374	.0001	---	---	---	---
Arts percent								

Table 12. Multiple regression analysis. Mainstream participation factor

With Total Number of Social Organizations and Percent Art

R-square: .533

With Total Number of Arts and Cultural Organizations

R-square .530

Variable	B	SE B	Beta	significance(t)	B	SE B	Beta	significance(t)
Percent w/o BA	-.003	.001	-.058	.0033	-.003	.001	-.060	.002
Pct mgr /professl	--	--	--	--	--	--	--	--
Pct non-family HH	--	--	--	--	--	--	--	--
City/suburban	--	--	--	--	.088	.027	.044	.0015
Pct 18-34 yrs	-.007	.001	-.072	.0001	-.007	.001	-.075	.0001
Ethnic diversity	-.062	.033	.023	.06	--	--	--	--
Per cap income (1,000s)	.063	.002	.566	.0001	.061	.002	.551	.0001
Social organizations	.003	.001	.377	.0001	--	--	--	--
Arts percent	.007	.002	.042	.0013	--	--	--	--
Arts organizations	—	—	—	—	.021	.001	.373	.0001

Table 13. Multiple regression analysis. Alternative participation factor

With Total Number of Social Organizations and Percent Art

R-square: .302

With Total Number of Arts and Cultural Organizations

R-square .353

Variable	B	SE B	Beta	significance(t)	B	SE B	Beta	significance(t)
Percent w/o BA	-.003	.002	-.064	.0001	-.004	.002	-.078	.0001
Pct mgr /professional	.004	.002	.072	.0110	.004	.002	.070	.0100
Pct non-family HH	.007	.001	.107	.0001	.005	.001	.085	.0001
Pct 18-34 yrs	.018	.002	.188	.0001	.015	.002	.154	.0001
City/suburban	-.133	.036	-.066	.0001	-.093	.033	-.046	.0048
Ethnic diversity	.146	.040	.054	.0003	.164	.039	.062	.0001
Per cap income (1,000s)	-.014	.003	-.128	.0001	-.017	.003	-.153	.0001
Social organizations	.002	.000	.270	.0001	---	---	---	---
Arts percent	.032	.003	.170	.0001	---	---	---	---
Arts organizations	---	---	---	---	.025	.001	.441	.0001

Appendix Table A-1. Factor analysis. Percent of variance and rotated factor loadings

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
Percent of Variance	43.0	7.9	4.2	3.9	3.2	2.7	2.7
Name	Mainsteam	Alternative	Northwest	City Neighborhood	African- American		
FLPPATPC	-.022	.140	.029	.854	.345	.051	-.091
OPCOPC	.804	.291	.047	.034	-.051	.153	-.012
AMLAPC	-.052	.080	-.075	.465	-.246	-.147	.237
FLEIPC	.486	.615	-.057	.137	.142	-.113	-.027
PIPPC	.116	.427	.183	.252	.087	.204	.051
AAHCMPC	.063	.184	.122	.116	.718	-.094	.036
ALACTHPC	.114	.115	.791	.125	.140	.008	-.091
ALSTARPC	.857	.034	-.007	-.070	.003	-.020	.068
AMTFPC	.791	.486	.106	.096	.078	.069	-.004
ARTBNKPC	.635	.612	.048	.095	.143	.103	-.084
AVAPC	.821	.284	.095	.065	.027	.141	-.027
UPBACHPC	.487	.140	.521	.131	-.049	.198	-.096
BRIDCSPC	.360	.779	.051	.132	.240	-.058	-.045
UPCONSPC	.641	.249	-.009	.082	.013	.139	-.094
FLKSOCPC	.330	.256	.510	-.213	-.122	.085	-.057
IHFKTXP	.166	.456	.242	-.028	-.001	.436	.270
FRETHRPC	.233	.245	-.007	-.074	.580	.103	-.149
FINSTPC	.710	-.022	.450	-.028	.051	.076	.221
MANNPC	.810	-.053	.148	-.044	.008	.012	.149
UPFWCPC	.515	.673	.086	.142	.017	.209	-.003
PORCHPC	.886	.182	.082	-.059	.148	.001	.006
PMAPC	.866	.251	.256	.020	.023	.088	.111
PSNGRPC	.642	.334	.211	.069	-.024	.231	-.116
PTCPC	.821	.413	-.022	.064	.087	.052	-.042
PTMPC	.556	.131	.317	.192	.027	.144	.159
PTMXPC	.668	.070	.285	.134	.157	.104	.241
UNIARTPC	.101	.037	-.076	-.045	.006	.038	.774
UPFOLKPC	.343	.593	.306	.087	.045	.352	.152
UPFLPPC	.684	.326	.154	.160	.069	.054	-.089
WILMAPC	.784	.393	.051	.092	.031	.072	-.083
WALSGLPC	.754	.314	.043	-.110	.032	.001	-.007
IHFSUBPC	.113	.077	.046	.034	.066	.716	.002
IHFXTXP	.456	.687	.088	.135	.027	.123	-.031
BRDMEMPC	-.011	.539	.375	-.007	.110	-.340	.166
FLPITMPC	.139	.198	.143	.795	.168	.125	-.146

ANNENPC	.647	.436	.170	-.001	.142	.149	.050
FTRAINPC	-.074	-.037	-.027	.159	.639	.071	.071
WALSUBPC	.826	.071	.095	-.093	-.029	-.061	.039

Figure 1. Location of regional cultural organizations included in participation database

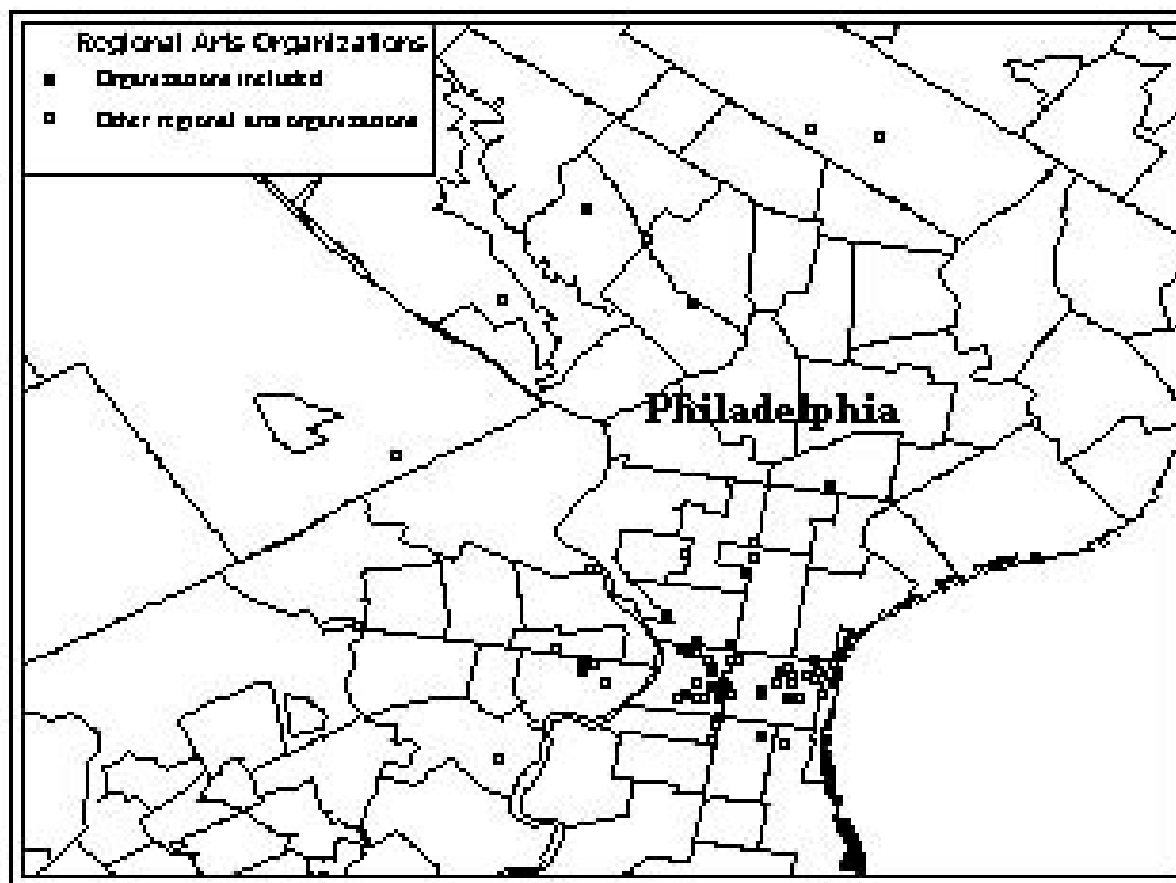


Figure 2. Regional cultural organizations, total participation per 1,000 residents, Metropolitan Philadelphia block groups, 1996

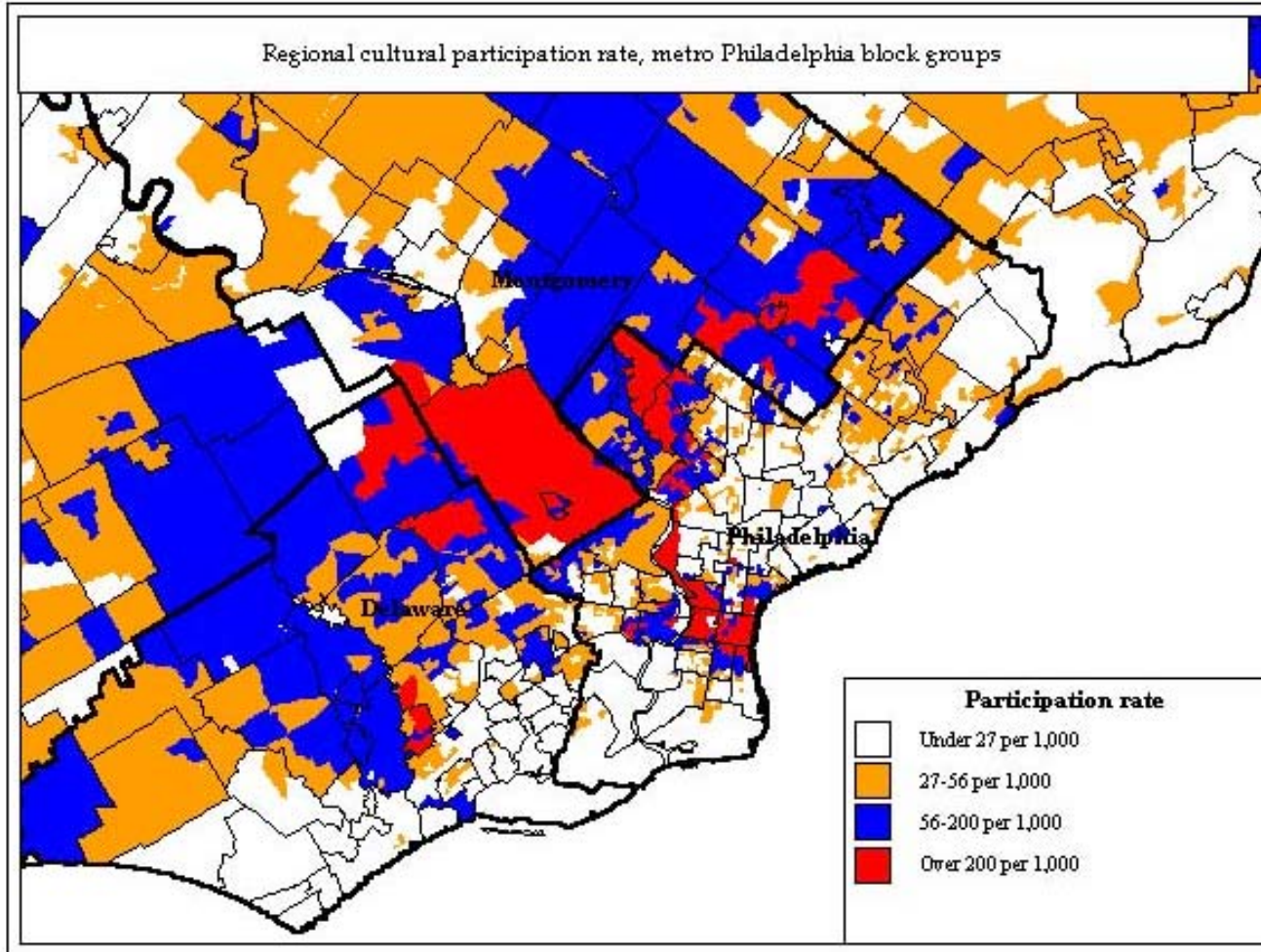


Figure 3 Free Library of Philadelphia cardholders per 1,000 residents, Philadelphia block groups, 1997

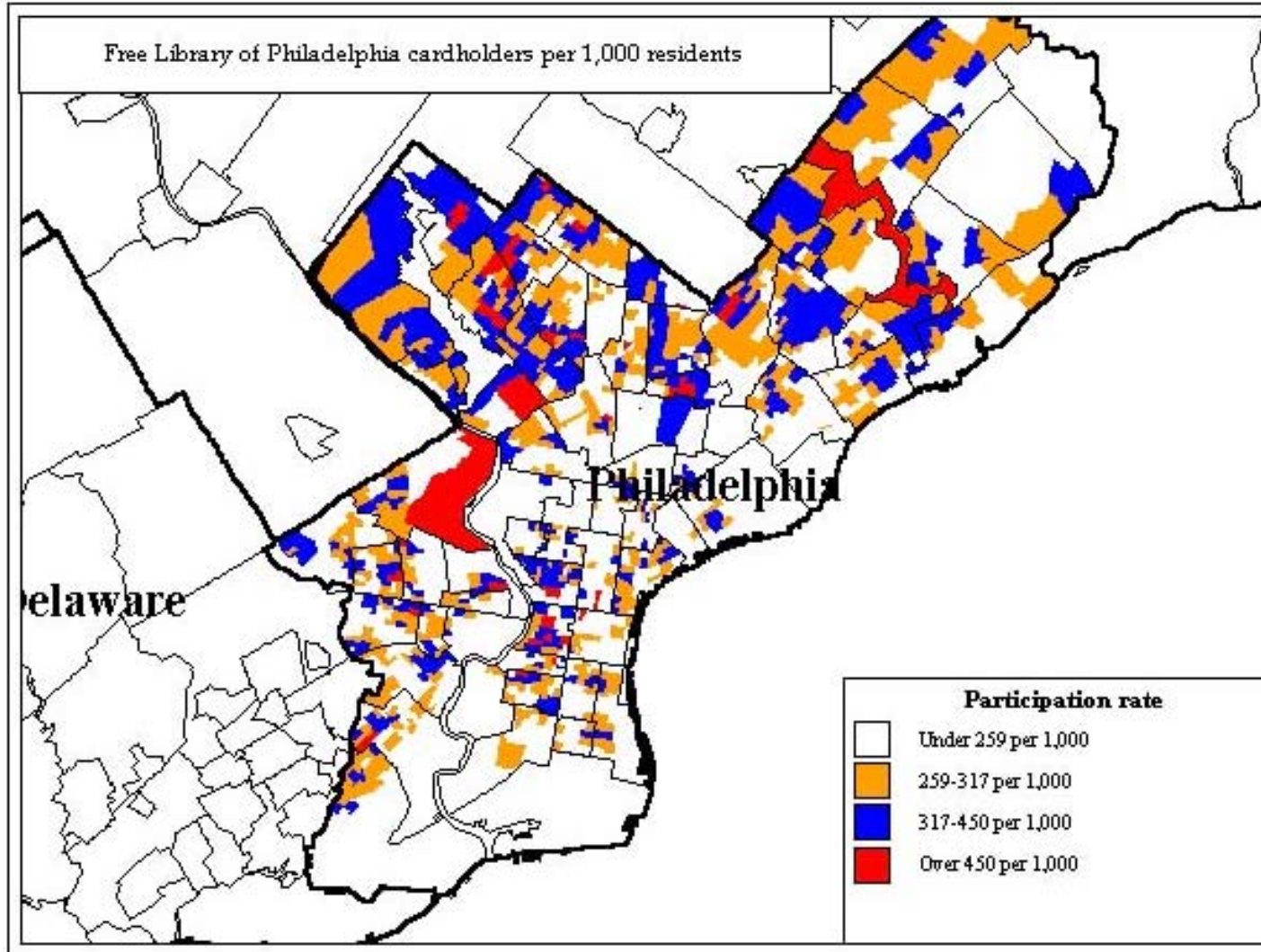


Figure 4. Free Library of Philadelphia items checked out per 1,000 residents, Philadelphia block groups, 1997

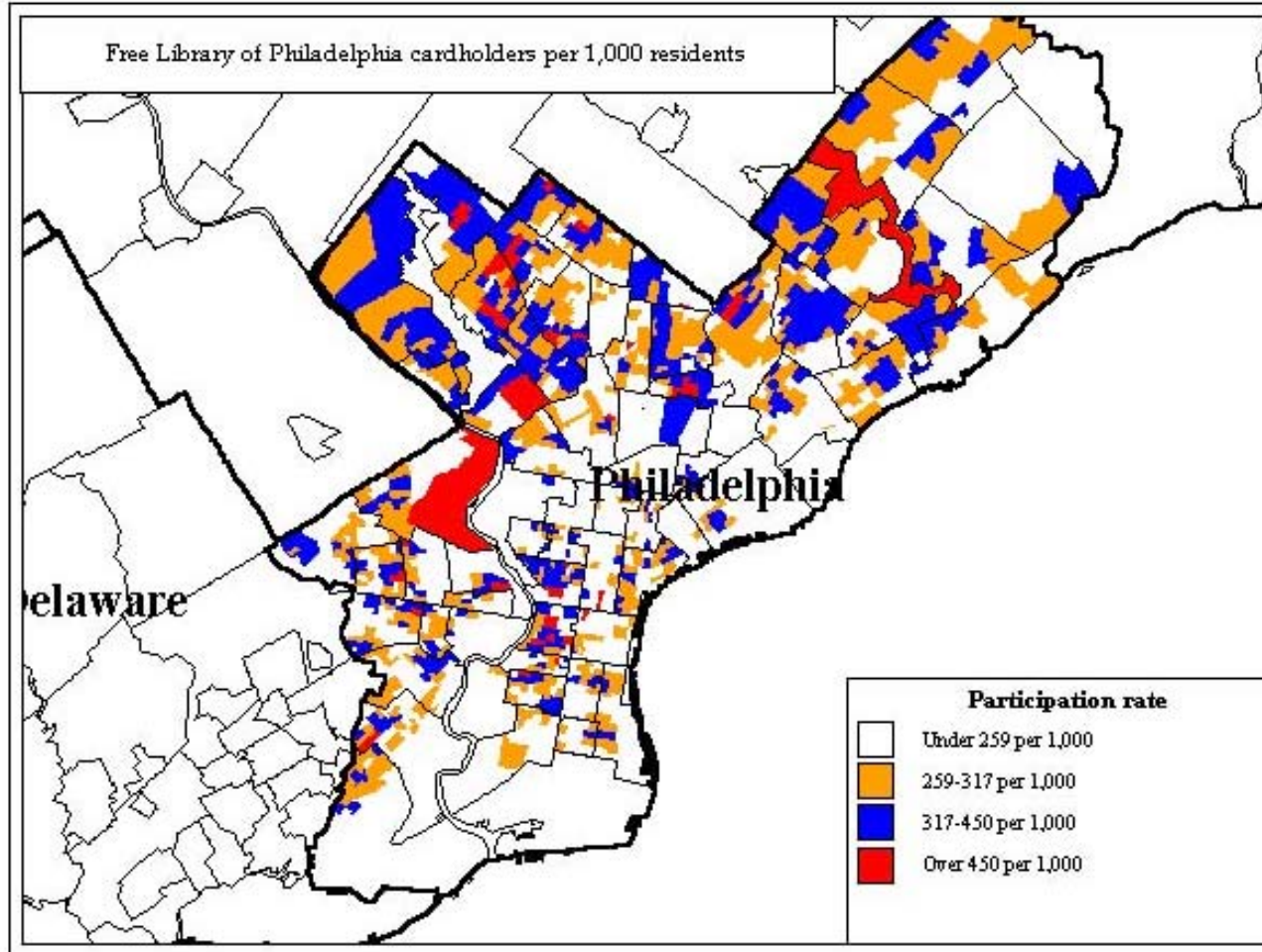


Figure 5 Regional cultural organizations, mainstream participation, Metropolitan Philadelphia block groups, 1996

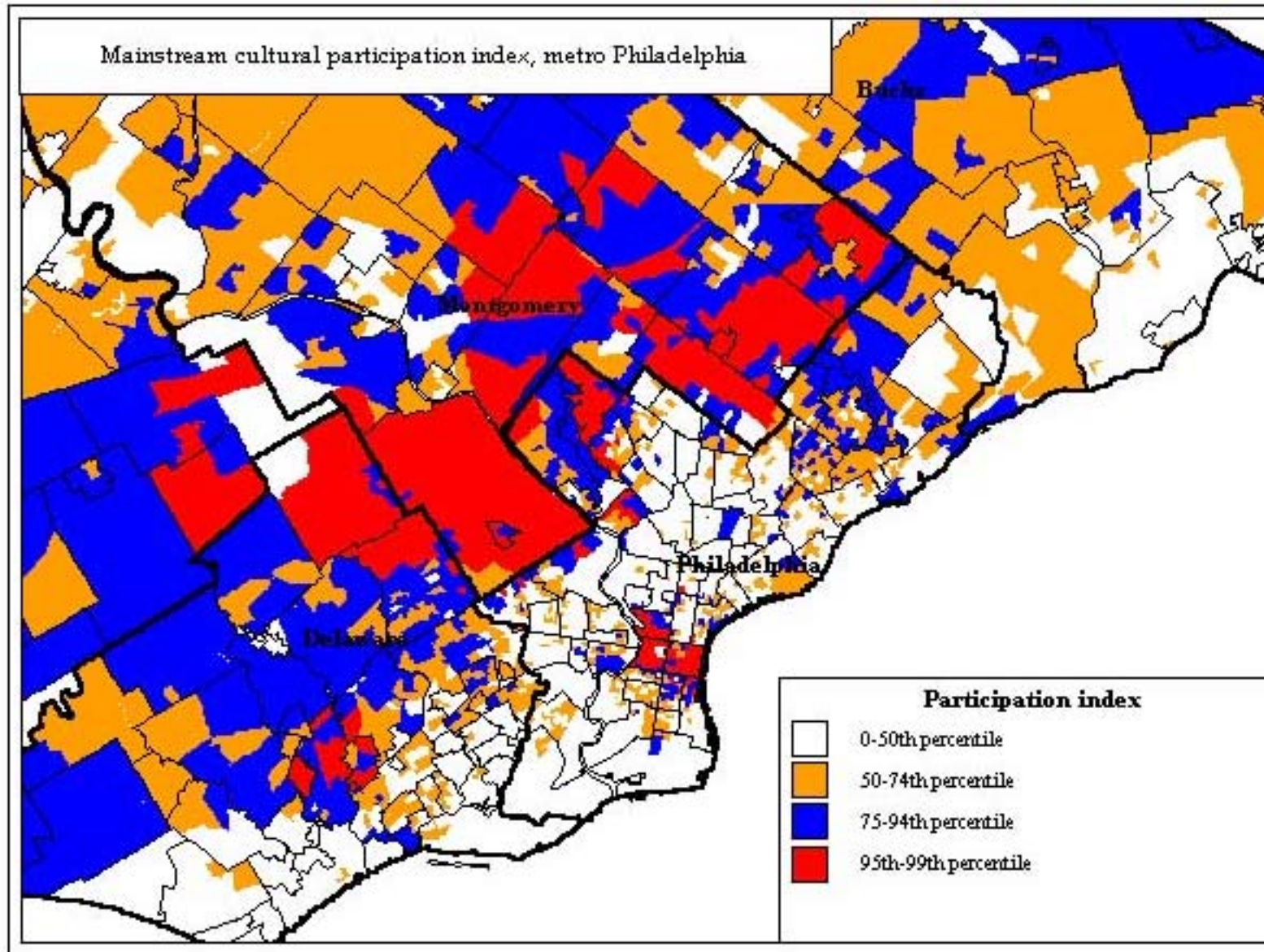


Figure 6. Regional cultural organizations, alternative participation, Metropolitan Philadelphia block groups, 1996

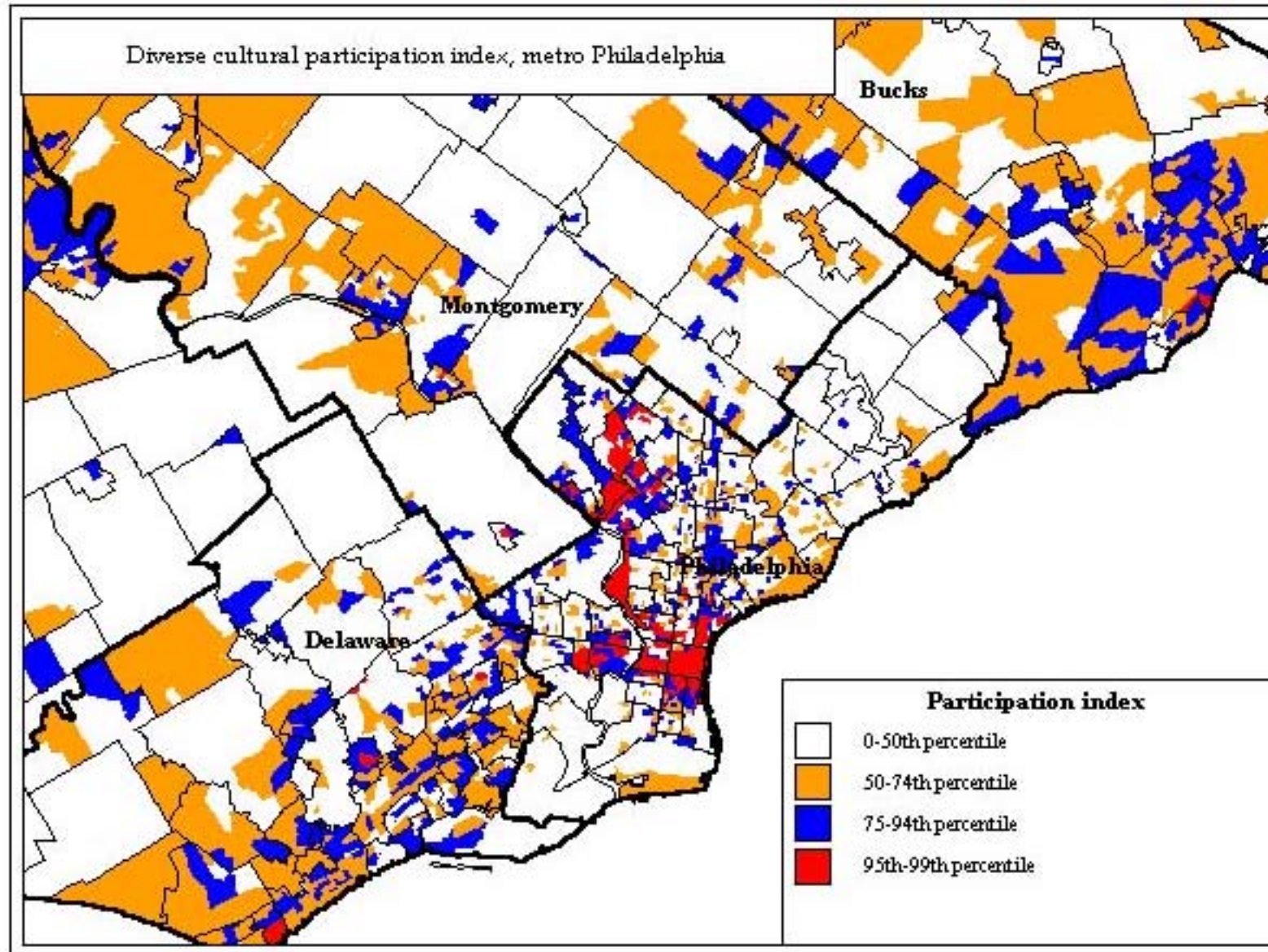


Figure 7. Raw participation rate by number of social organizations within one-half mile of block group (quartiles)

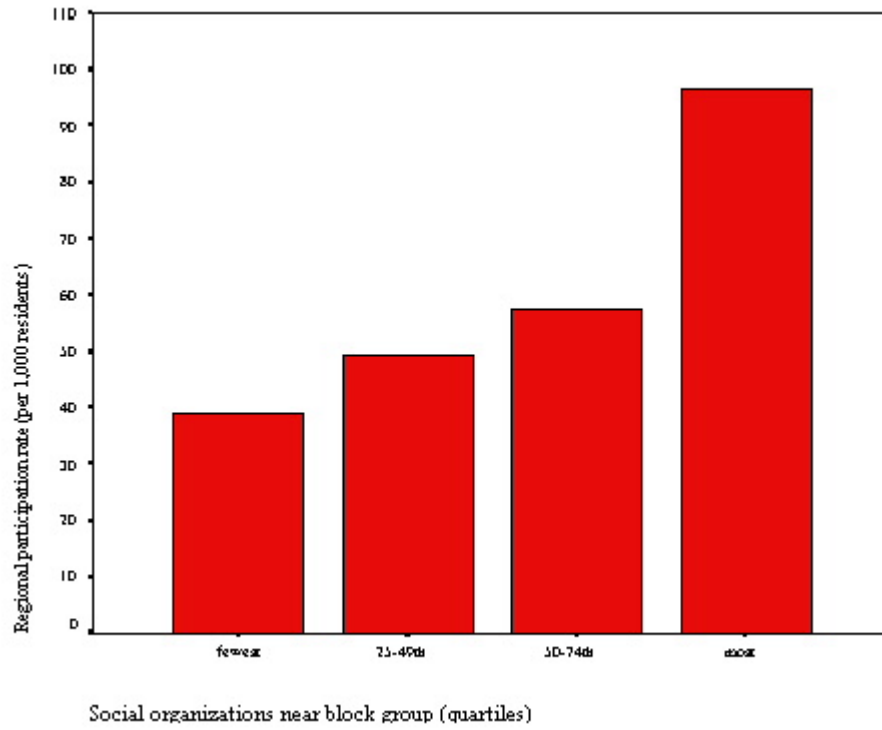


Figure 8. Raw participation rate by number of arts and cultural organizations within one-half mile of block group (quartiles)

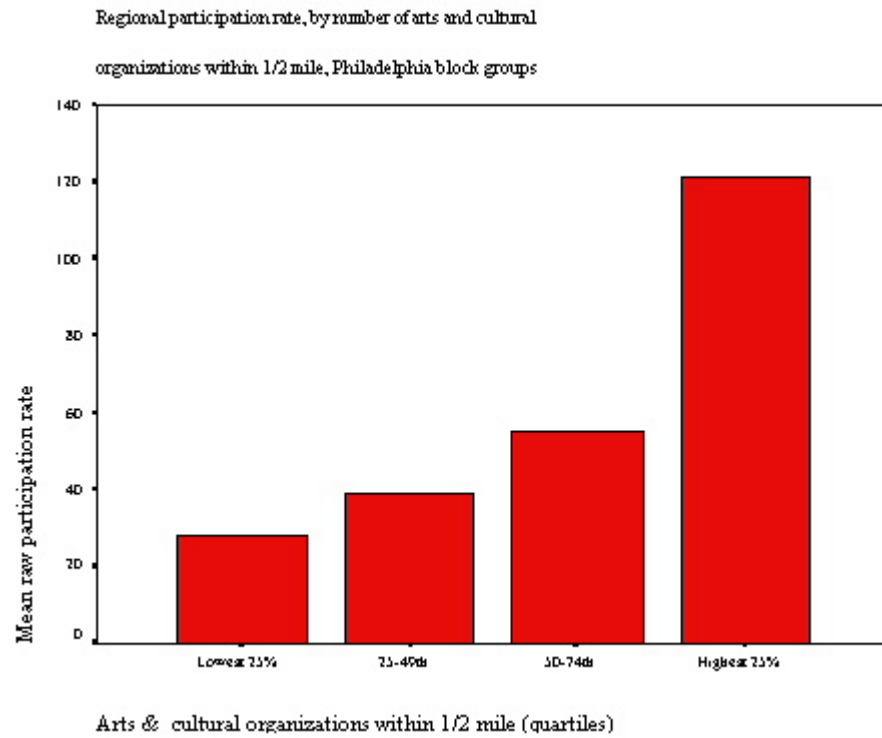


Figure 9. Alternative participation index by number of arts and cultural organizations within one-half mile of block group (quartiles)

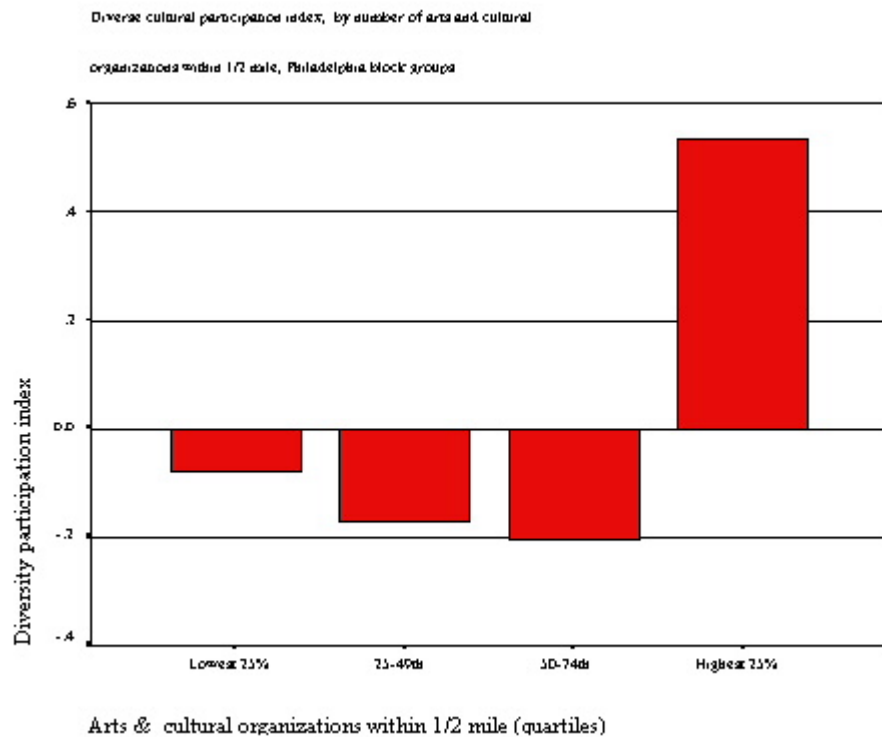


Figure 10. Mainstream participation index by number of arts and cultural organizations within one-half mile of block group (quartiles)

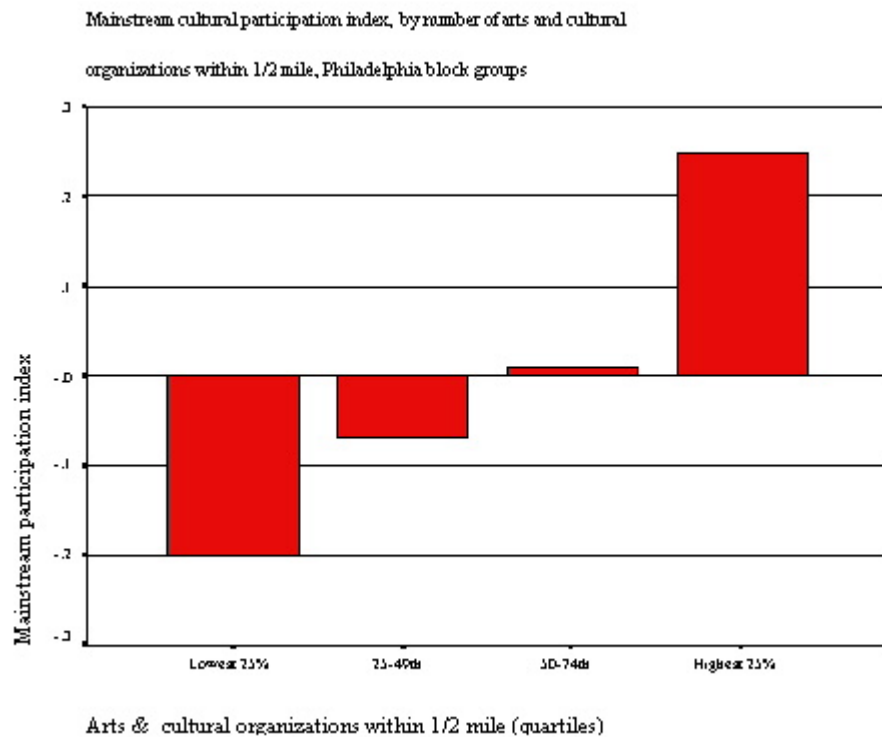


Figure 11. Raw participation rate by arts and cultural organizations as percent of all social organizations in block group (quartiles)

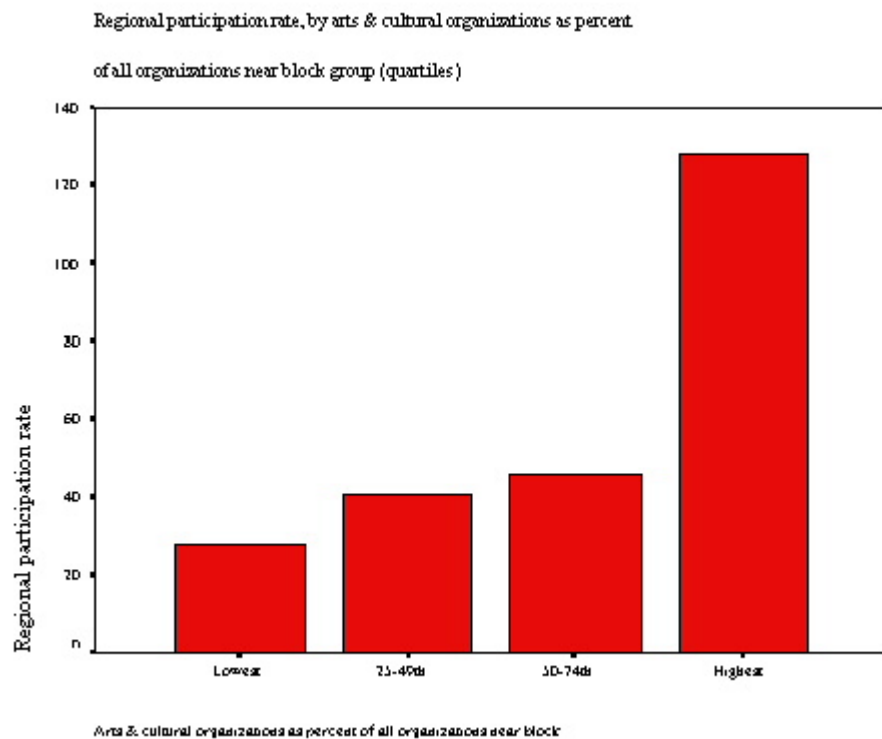


Figure 12. Raw participation rate by per capita income of block group (quartiles)

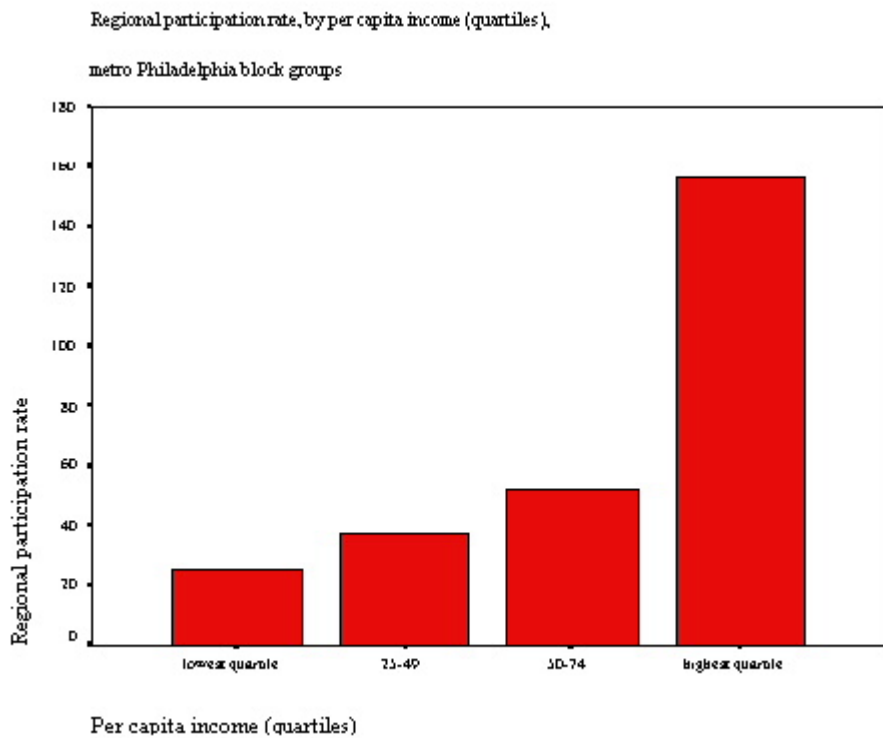


Figure 13. Raw participation rate by ethnic composition of block group

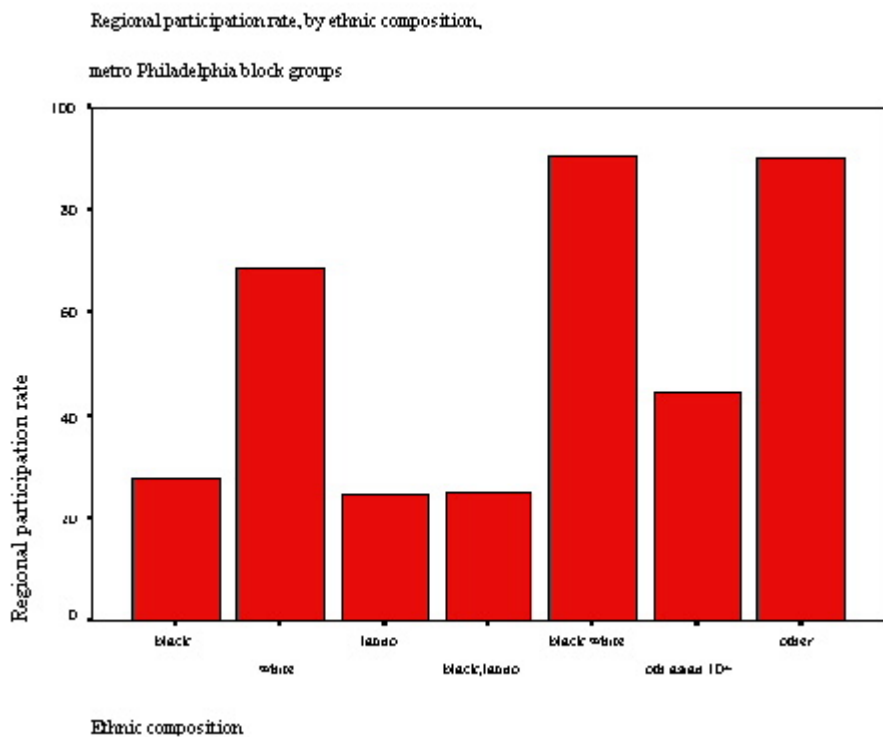


Figure 14. Raw participation rate, by number of arts and cultural organizations within one-half mile of block group, by per capita income

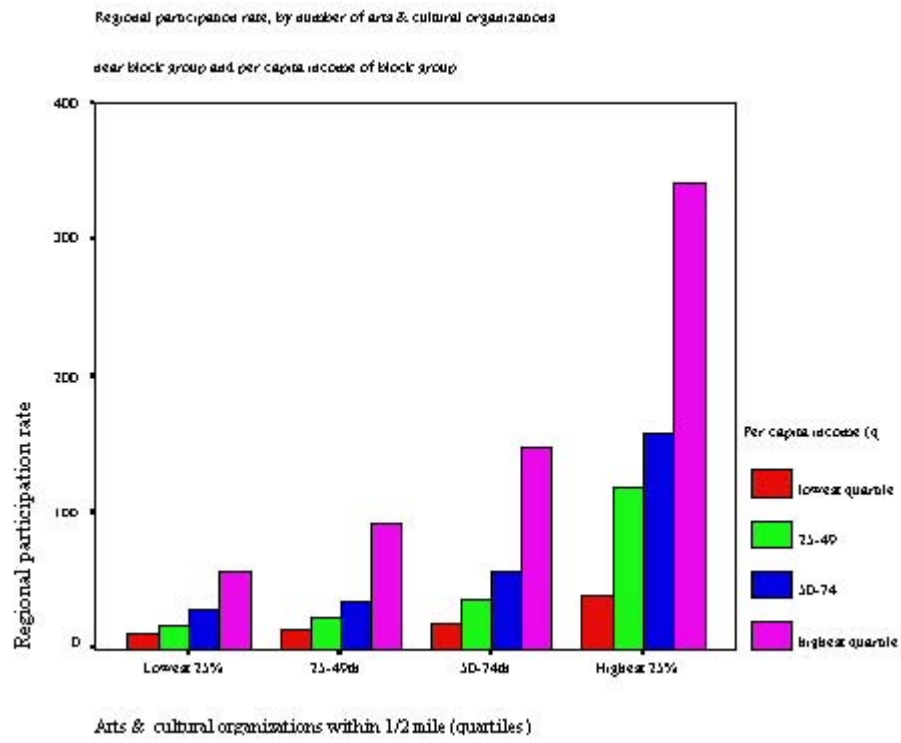


Figure 15. Raw participation rate by economic and ethnic diversity of block group

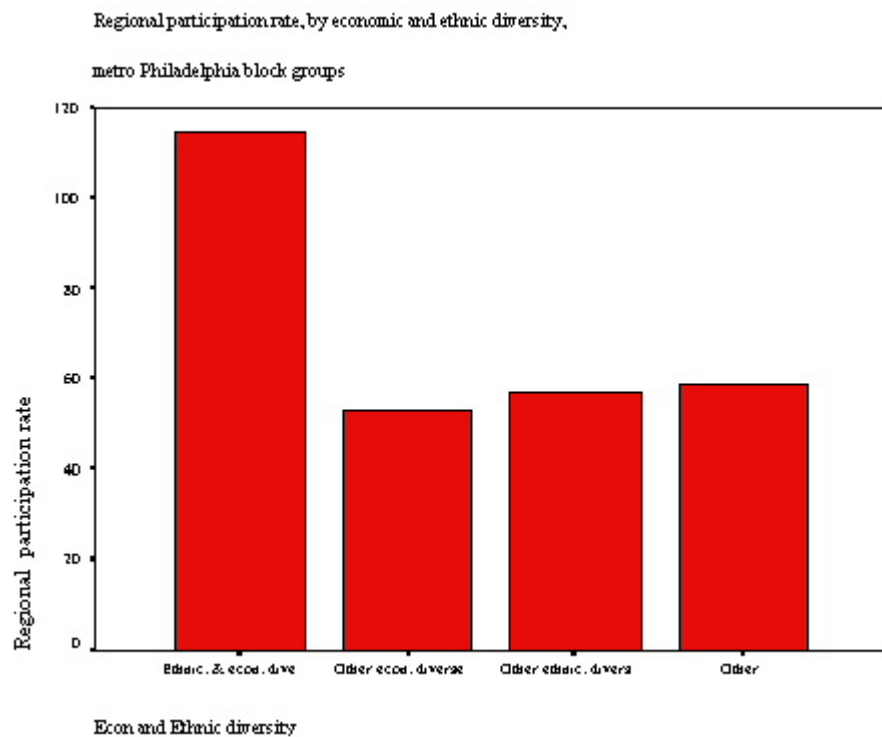


Figure 16. Alternative participation index by economic diversity of block group

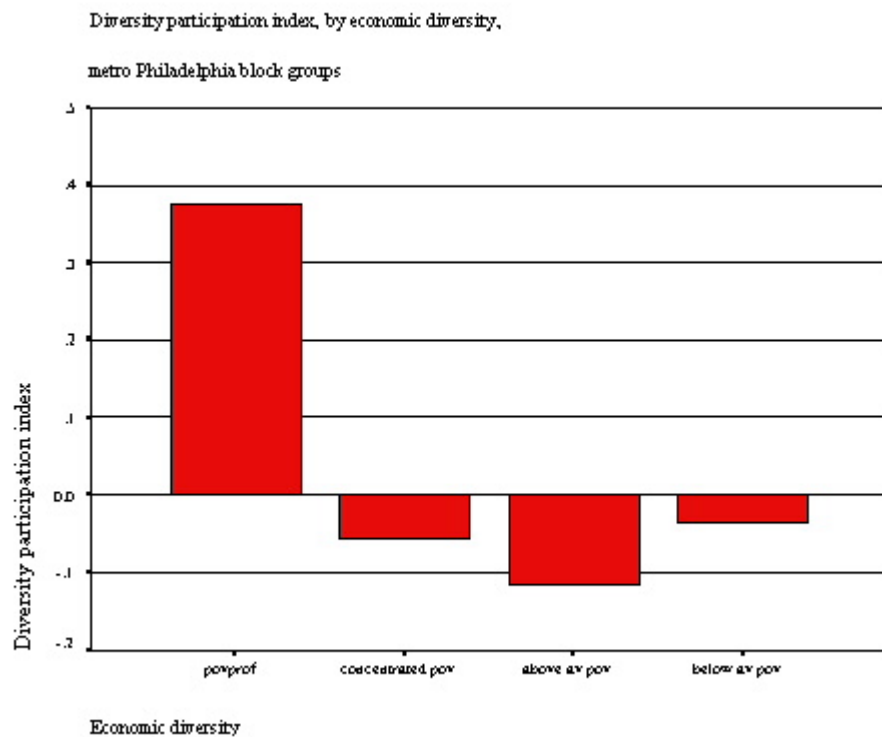


Figure 17. Alternative participation index by economic and ethnic diversity of block group

