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Daniel M. Hungerman

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Race and Charitable Church Activity
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ABSTRACT

The availability of public funding for charitable church activity has increased dramatically in the past decade. A key dispute over this increased availability is whether congregations' propensity to provide charitable services depends upon the racial composition of the community served. This paper uses three different congregation-level datasets to investigate how race affects charitable church activity. In all three datasets there is evidence that all-white congregations become less charitably active as the share of black residents in the local community grows. This response is found only when looking at charitable activities, not when looking at other types of church activity. Additionally, all-white congregations favorably disposed towards receiving government funding do not respond differently to black residents than do congregations which are not all-white.

Daniel M. Hungerman
Department of Economics
University of Notre Dame
439 Flanner Hall
Notre Dame, IN 46556-5602
and NBER
dhungerm@nd.edu

Introduction

Faith-based organizations provide social services for over 70 million Americans annually (Johnson, Tompkins, and Webb, 2002). Of the more than 350,000 congregations in the country, over 85 percent support some type of social service activity (Solomon, 2003). Biddle (1992) estimates that each year congregations spend 24 billion dollars on philanthropic activities.

These actions have gained new relevance for policy makers as the availability of public funding for charitable church activity has dramatically increased in the past decade. Starting with the “charitable choice” provision of the 1996 welfare reform law and continuing with the creation of Centers for Faith-Based and Community Initiatives located in eleven different federal agencies, policy makers have instituted a “devolution” of federal funds intended to provide community services. In 2005, more than 2.1 billion dollars in government grants were awarded to religious organizations by federal agencies (Office of the Press Secretary, 2006).¹

Some observers fear that this policy trend will encourage racial discrimination by congregations (Leonard, 2002). As Bartkowski and Regis (2003) write, “Congregational definitions of legitimate [social] problems that members care about are, in actuality, influenced by various considerations—among them, racialized perceptions of welfare recipients.” Past studies by economists have postulated, but not substantiated, that churchgoers warrant special consideration as individuals whose actions are sensitive to community demographics (for example, Alesina and La Ferrara, 2000; and Gruber, 2005).

Alternately, some policy makers have championed faith-based organizations because they are *not* likely to display sensitivity to community demographics when providing services. As President Bush stated in a speech in 2002, “Faith-based charities work daily miracles because...above all, they recognize the dignity of every citizen and the possibilities of every life” (Office of the Press Secretary, 2002). John DiIulio, the former director of the White House Office of Faith-Based and Community Initiatives, argued for charitable choice by saying, “government at all levels blatantly denies the equal protection of the laws to low income, urban African American and Latino children and families who depend disproportionately

¹ See Cnaan and Boddie (2002) for an overview of the charitable choice provision and related research.

on faith-based organizations for both basic life necessities and the delivery of specific social welfare benefits” (DiIulio, 2002). There is also (non-economic) research consistent with this view (e.g., Johnson, 1977; and Billiet, 1995).

The goal of this paper is to see whether congregations are affected by the racial composition of the local community when deciding whether and how much charitable activity to provide. Exploring this relationship is not only valuable because it addresses a key policy debate, but also because it contributes to existing economic work on diversity and redistribution. Much prior work on socioeconomic conditions and tastes for redistribution relies on hypothetical questions asked to respondents in the General Social Survey or in Gallop Polls (examples include Alesina and La Ferrara, 2005a; Luttmer, 2001; and Fong, 2001). This paper examines how a community’s racial composition affects actual charitable expenditures. Studying actual charitable activities will be valuable if individuals’ stated preferences are different from their actual preferences or if stated preferences are sensitive to the wording of a question (as is the case in Alesina and La Ferrara, 2005a).

To investigate the effect of race on charitable church activity, we compare how racially homogeneous congregations respond to the community’s racial composition relative to other congregations. Several factors support this approach. First, members of homogeneous congregations have ostensibly taken race into account when selecting a congregation to attend; consequently, these congregations may be especially likely to display sensitivity to a community’s racial composition when providing charitable services. Second, comparing one type of congregation’s response to race to the response of other congregations offers some of the empirical robustness of a standard difference-in-difference estimator. Our identification will come from comparing the difference between homogeneous congregations in (for example) highly black communities to homogeneous congregations in other communities and seeing if this difference is similar to the one observed for non-homogeneous congregations. This greatly decreases the likelihood that unobserved phenomena correlated with race will drive our results, although we will spend considerable time addressing that concern. Third, homogeneous

congregations are important because they make up a large share (about 25 percent, in the nationally-representative data used here) of all congregations.

Three different datasets of charitable church activity are used.² The first two datasets contain information on the churches belonging to two predominantly white, Protestant denominations. Both denominations are among the largest in the country. One dataset is a cross-section and the other is a panel. The third dataset is the National Congregations Study (NCS), a multi-faith, nationally representative survey of congregations taken in 1998.

The only finding consistent across all three datasets is that congregations composed entirely of white members become less charitably active, relative to other congregations, as the share of black residents in the local community grows. This difference in response to share black is economically significant. If the share of black residents in the local community increased by 10 percentage points, the average all-white church in denomination 1 would be expected to decrease per-member spending on charitable activity by about 6 percent, while other congregations in denomination 1 would on average decrease spending by less than 1 percent. Further, the results indicate that if the share black in the community increases by one standard deviation, the probability of a congregation participating in a local charitable activity would fall by about one fifth if the congregation were all white, and would slightly increase otherwise. We do not find consistent evidence of a unique response by all-white congregations to any racial group except blacks.

Despite the difference-in-difference approach, one might be concerned that unobserved phenomena correlated with race drive the results. For instance, all-white churches in diverse neighborhoods may have poorer members or fewer resources than other churches. A number of tests suggest that the results are robust to this sort of concern. We find a differential response to black residents by all-white congregations only when looking at charitable activities, not when looking at other types of church activity. In fact, there is some evidence that all-white churches spend *more* on non-

² While this paper will focus mostly on churches, other types of congregations (i.e., non-Christian) will be considered as well. Thus it is with some abuse that the general term “charitable church activity” is used.

charitable activities as the share of black residents grows, consistent with a story where all-white churches in black communities are not poorer than other churches but substitute out of charitable spending and into other types of church spending. Additionally, the result is robust to using both monetary and non-monetary measures of charitable activity, controlling for congregation-member income, using community fixed effects, using either the county or the census-tract to represent the local community, and instrumenting for share black using lagged values of share black. Results from the NCS dataset indicate that all-white congregations favorably disposed towards receiving government funding do not respond differently to black residents than do congregations which are not all-white.

The remainder of the paper is organized as follows. Section two sets out the empirical approach; section three describes and presents findings using the denominational datasets; section four describes and presents findings using the NCS dataset, and section five concludes.

2. Empirical Approach

A growing body of economic research documents that in many situations individuals display “group preferences,” whereby one’s tastes for public goods, collective activities, and redistribution are sensitive to the local community’s demographic composition. Examples include Glaeser (2005), Alesina and La Ferrara (2002 and 2000), Vigdor (2004 and 2001), Luttmer (2001), Alesina, Baqir, and Easterly (1999), and Poterba (1997). See Alesina and La Ferrara (2005b) for a review.

This research has suggested but not verified that congregation members may warrant consideration as individuals likely to display group preferences. Alesina, Baqir, and Hoxby (2000) find evidence suggesting that “observed differences in preferences among denominations may be largely the result of ethnic differences,” and Gruber (2005) uses a community’s ethnic makeup to instrument for religiosity. Alesina and La Ferrara (2000) find that church participation is very sensitive to a community’s racial composition. Luttmer (2001) postulates that religion may affect individuals’ preferences for income redistribution.

However, some research suggests that churchgoers and other individuals may not discriminate based on race when interacting with others. Work by Levitt (2004) and Antonovics, Arcidiacono, and Walsh (2005) finds little evidence of race-based discrimination in a high-stakes game show. Research outside of economics has used survey data to argue that religious participation decreases prejudice among Catholic churchgoers (Billiet, 1995) and young Mormons (Jacobson, 1998).

As mentioned earlier, work on tastes for redistribution and community socioeconomic conditions has relied to some extent on responses given in Gallop Polls and the General Social Survey. While these studies are valuable, they may not accurately reflect the actions taken by individuals if individuals give mendacious responses, or if variations in the wording of a question generate different answers. The focus here will be on the actual charitable spending rather than on stated preferences.

Other studies, including Alesina, Baqir, and Easterly (1999) and Poterba (1997) provide a link between ethnic or racial fragmentation and community outcomes such as per-capita citywide public debt. But as Vigdor (2004) argues, interpretation of these studies “is frequently hampered by the complexity of the aggregation mechanism linking individual preferences to [the] community-level outcomes.” Here the focus is not on “community-level outcomes” but on the actions taken by members of particular congregations.

To investigate the role of race in affecting charitable church activity, the empirical model compares how homogeneous congregations respond to race relative to other congregations when providing charitable services. With this in mind, let y represent a measure of a congregation’s charitable activity such as the log of congregational charitable expenditures or a dummy variable equaling unity if a congregation participates in a local charitable activity. Ideally we would estimate:

$$y = \alpha + \sum_j \delta_j race_j + \gamma H + \sum_j \delta_j^H (H * race_j) + \beta X + \varepsilon, \quad (1)$$

where $race_j$ is the share of local community residents that are race j , H is a dummy for whether a congregation is homogeneous (composed entirely of members of one race), X is a vector of congregational and community characteristics, and ε is exogenous noise. We could think of this as

holding for congregation i in community k at time t ; the subscripts have been suppressed. One might consider interacting all of the covariates with the homogeneity dummy, not just the racial covariates; this specification will be considered. The coefficients δ_j^H capture the difference between homogeneous congregations' response to racial groups in the community and other congregations' response.

A certain racial group must be omitted; this complicates the comparison of coefficients between homogeneous congregations and other congregations. For example, if we omitted Hispanics and then estimated (1), the interacted coefficient on share black would be $(\delta_{Black}^H - \delta_{Hispanic}^H)$. It is impossible to say whether this coefficient is driven by a differential response of homogeneous congregations to blacks or to the omitted group. However, estimating (1) with all but one racial group omitted does yield a meaningful comparison. For example, if we estimate (1) including only the black racial group the interacted coefficient is $(\delta_{Black}^H - \delta_{Non\ Black}^H)$, which is readily interpretable. We consequently estimate

$$y = \alpha + \delta_j \text{race}_j + \gamma H + \delta_j^H (H * \text{race}_j) + \beta X + \varepsilon, \quad (2)$$

for each racial group j .

While specification (2) has the advantage of providing a meaningful interpretation of δ_j^H , one issue with this specification is that it assumes that a congregation responds in the same fashion to all of the omitted groups. The results of this paper are robust to specifications which allow heterogeneous responses to multiple groups at once. This is discussed more below.

Additionally, one might be concerned that the racial composition of the community is correlated with unobserved phenomena that simultaneously affect charitable church activity. As explained before, one advantage of (2) is that this approach will be robust to unobserved phenomena that affect all congregations in the same fashion. We will also address this concern using instrumental variables and a number of robustness tests.

One might suspect that congregations have a great deal of control over who receives their charitable services. Homogeneous congregations that do not want to support certain groups in the

community may be able to selectively direct charitable services to community members of a specific race. If so, then congregations might actively provide services regardless of the relative size of their target demographic in the community and this would bias the results towards zero.

3. Analysis of Denominational Datasets

3.a Description of the Data

In this section we will estimate equation (2) using church-level data from two denominations; the datasets were obtained directly from the denominations themselves. Both denominations are Protestant, predominantly white, and are among the largest and most widespread denominations in the country. The dataset for denomination 1 contains a cross section of every church in the denomination in the year 2000. The dataset for denomination 2 is a panel with every church in the denomination in the years 1990 and 2000. Racial data are available for churches in both datasets. Denomination 2 is larger but suffers from a missing values problem. Otherwise, the two datasets are similar.

Table 1 presents summary statistics for both denominations. Because of the small number of homogeneous churches that are not all-white, we will focus on comparing all-white churches to other churches; the summary statistics here are separated by whether or not a church is all-white.³ The measure of charitable church activity used with these datasets is per-member spending on local charitable activity; the mean of this variable is somewhat different between denominations but this is not surprising given that the variable is not precisely the same in both cases (definitions are given in the appendix). For denomination 2, which covers multiple years, charitable spending is adjusted for inflation (2000 is the base year). In both cases, some church spending that is not strictly local charitable spending may be included in our measure of charitable spending (for example, spending on a local church picnic). Such spending may be unresponsive to community demographics and this would probably bias our coefficients towards zero.

³ For denomination 1, only 68 churches are all-Asian and only 20 churches are all-Hispanic; for denomination 2 the figures are 51 and 26, respectively. There are only 149 all-black churches in denomination 1; there are 516 in denomination 2.

Looking at the other church variables, the denominations are similar in terms of size and racial makeup, and in both cases all-white churches are smaller than other churches. We will control for white, black and Asian/Pacific Islander churchgoers; the (relatively small) number of churchgoers belonging to other races will form the excluded group. Both denominations have a large share of all-white churches and even the non all-white churches are mostly white. The church mortality variable (equal to the number of member deaths in the past year over the total number of members) is similar for each denomination. This mortality variable will be used to proxy for a congregation's age, as in Hungerman (2005). The ratio of church individuals involved in church school membership to adult members is also included for each denomination.

The rest of the variables in the table capture relevant community characteristics. We use the county as our measure of the church's community (we use census-tracts in the next section).⁴ Most of our data on the church's community come from the decennial Census. Average per-capita income is taken from the Regional Economic Information System (REIS) provided by the Bureau of Economic Analysis and the annual unemployment rate is taken from the Bureau of Labor Statistics. Population density will control for churches in urban areas. The differences in the demographic and economic variables generally suggest that all-white churches are in less urban areas than other churches.

The 2000 Census allowed respondents to designate themselves as members of multiple racial groups. Separate from any racial affiliation, respondents in both 1990 and 2000 could also identify themselves as "Spanish/Hispanic/Latino." In both denominational datasets, and in contrast to the Census, Hispanic was included as an option for racial designation. To make the census data comparable to the denomination data, we construct our community racial profiles as follows: any respondent who identified himself or herself as Spanish/Hispanic/Latino will be considered Hispanic. Among respondents who are

⁴ Whether the county or the census tract is most ideal for measuring the area served by a church is unclear. For example, Eisinger (2002) reports enormous variation in the scope of food assistance programs, the great majority of which are faith-based. Data from the NCS show that congregations frequently pull members from a reasonably wide area with many members living further than a 10 minute walk away from the congregation but most living within a 30 minute drive. However, the scope of some charitable activities may be limited. All this suggests results from both measures of community will be valuable.

not Hispanic, those responding as white alone are designated as white; the same for blacks. Asians and Native Hawaiian/Pacific Islanders are grouped together.⁵ Respondents identifying themselves as members of a race not listed in the census form, American Indian/Alaskan Natives, and non-Hispanic respondents naming multiple races are classified together as Other race. This gives us the racial categories Asian/Pacific Islander, black, Hispanic, white and Other.⁶

As mentioned at the bottom of table 1, about 3,500 churches in denomination 1 do not report their spending and race data and are dropped. The problem is worse for denomination 2, with over 30,000 observations not reporting these variables. (A comparison of churches with missing data to other churches is briefly given under table 1.) Three churches, two in denomination 1 and one in denomination 2, report very large spending or membership values⁷; these churches were dropped from the sample. However, the basic results are unchanged if these observations are included. Also, some complications in county FIPS coding involving REIS data for counties in Virginia and Alaska led to a relatively small number of churches being dropped from the data. Given that the missing values problem is dramatically worse in the second dataset, similar findings across the two datasets may help alleviate concerns about the effects these omissions have on the estimates.

3.b Results

Table 2 reports regression estimates on charitable church activity comparing the response of all-white churches to race relative to the response of other churches. The dependent variable is church per-member spending on local charitable activities, logged. All residuals are clustered by county and control for heteroskedasticity. All denomination 1 regressions include dummies for each church's jurisdiction;⁸

⁵ For conciseness we will refer to the Asian, Native Hawaiian and Pacific Islander group as simply the Asian group.

⁶ Admittedly, race is an arbitrary construct. For each denomination the church race data come from a congregational respondent (such as a pastor or church secretary) whose responses may be subjective and affected by (for instance) informational constraints. In what follows we rely on census responses on race being conceptually similar to those of the denominational and the NCS respondents providing the congregation data.

⁷ The large membership value is about 5,000 and the per-member spending values go from \$2,000 to over \$30,000

⁸ The term "jurisdiction" here refers here to the region covered by the local church governing body. It is roughly analogous to a Catholic diocese.

the panel regressions use county and year dummies.⁹ Only the racial coefficients are shown in table 2. Additional coefficients for the covariates in columns 1 and 3 are given in appendix table A1; for brevity we do not discuss them except to say that they generally accord to our expectations. The R-squareds are reasonable for regressions on religious activity (Iannaccone, 1998).

The first column presents the baseline regression for denomination 1 on share black in the county. The uninteracted variable on share black is not significant, but the interacted variable is, suggesting that as the share of black residents increases all-white churches spend less per member on charitable activities. Given the semilog specification and that share black is measured on a 0-1 scale, one could interpret the coefficient as follows: if the share of black residents in the local community increased by 10 percentage points, the average all-white church in denomination 1 would be expected to decrease per-member spending on charitable activity by about 6 percent, while other congregations in denomination 1 would only be expected to decrease spending by 1 percent; the difference between the two responses is statistically significant.

Column 2 presents the same regression for denomination 2 without county fixed effects, and column 3 presents the same regression with fixed effects added in. The uninteracted share black in the county goes from positive and marginally significant to negative and insignificant once county fixed effects are added; however, the interacted coefficient is similarly sized and still significant at the one percent level. This suggests that the share of black residents in the county is positively correlated with unobserved county characteristics that lead to higher charitable church activity, but that these characteristics affect all-white churches and other churches similarly. All-white churches in denomination 2 also spend significantly less per member on charitable activity than do other denomination 2 churches.

Do all-white churches show differential preferences to any other racial group? The remainder of the columns repeat the basic regression using the share of white, Hispanic, and Asian residents. All-white churches in denomination 2 are more responsive to whites in the community than are other churches.

⁹ Using church dummies causes all the coefficients to be estimated imprecisely, which is not surprising given slow changes in church racial makeup over time.

This is not the case for denomination 1 churches. This could be the result of our inability to control for community fixed effects with denomination 1, or could indicate that denomination 1 views different non-white racial groups in different ways, or it could simply reflect denominational idiosyncrasies.

Columns 6 and 7 consider all-white churches' response to Hispanics. Column 6 indicates that all-white denomination 1 churches respond much more positively to Hispanics than do other denomination 1 churches. This denomination had recently adopted a strategy to increase outreach to Hispanics, so this finding may reflect homogeneous churches in denomination 1 trying to (selectively) diversify.¹⁰ Moreover, this finding is not consistent across both datasets. While denomination 2 churches are in general less active in highly-Hispanic communities, all-white churches in this denomination do not respond to Hispanics differently than do other denomination 2 churches.

The last two columns of table 2 look at the share of Asians the community. Denomination 1 has a marginally significant and negative coefficient for the uninteracted share Asian coefficient, but for both denominations the interacted coefficient is insignificant. Looking at both the interacted and non-interacted terms, there is no result consistent across both datasets—except that all-white churches decrease charitable activity as the share of black residents in the community increases.

As mentioned in the previous section, the specification in table 2 allows straightforward interpretation but assumes that congregations respond the same way to all omitted groups. As shown in the appendix (table A2, columns 1 and 2), repeating these regressions with multiple racial groups at once yields strikingly similar coefficients. The results are not being driven by constraining churches to respond to all omitted residents in the same fashion.¹¹

In sum, the only result consistent across denominations is that all-white churches become less charitably active as the share of black residents in the community increases. There is no finding for non-homogeneous churches that is seen in both cases, and there is no other racial group to which all-white

¹⁰ However, we tested the robustness of our findings to log-log and linear-linear specifications; under these latter specifications the interacted coefficient on Hispanic was no longer significant.

¹¹ The similarity of the coefficients in the appendix to table 2 is likely driven by the fact that white residents make up the dominant share of omitted residents in most table 2 regressions. But it should be clear that the coefficients in the appendix have a different (and less straightforward) interpretation than those in table 2.

churches in both denominations respond differentially. The next subsection will focus on testing the robustness of the finding on white churches and black residents.

3.c All-White Churches and Black Residents: Robustness Tests

One might be concerned that all-white churches in highly-black communities are unobservably different from other all-white churches and that this difference is not found when comparing non-all-white churches in black communities to other non-all-white churches. For example, suppose that there is an all-white church in an initially white community. As blacks begin to move into the community, suppose that there is “white flight,” where the richest whites leave the community to live elsewhere. Suppose also that whites are willing to pay a premium to live with other whites. After white flight the church in the community is still all-white, but it is composed of the poorest whites—those who did not relocate. Because of the housing market premium paid by whites, the whites who did not flee are also poorer than the new black residents in the community. If a church’s charitable activity is determined by the wealth of its members, this all-white church will be less charitably active than other white churches, and less active even than other churches in black communities. This would give us the result in table 2 regardless of whether the churchgoers in these all-white churches take race into account when providing charitable services.

One potential solution to this problem would be to instrument for share black. It is difficult to find an instrument that clearly satisfies the exclusion restriction. The instrument used in Alesina, Baqir and Easterly’s (1999) well-known paper on ethnic divisions is lagged demographic characteristics. The results from instrumenting for current share black with share black lagged by 10 years are in the first two columns of table 3; they are close to the OLS results.

These 2SLS results may not address the “white flight” scenario described previously in that lagged black residency could be correlated with historic episodes of white flight, and the effects of these historic episodes could persist across time. However, there are a number of ways to test the robustness of the result. Under the “white flight” scenario and others like it, all-white churches in black communities are poorer than other churches and therefore are less charitably active. One way to address this scenario

is to control for the wealth of churchgoers. While there is no measure for church member wealth available for denomination 2, data on church member donations are available for denomination 1. Church donations and church member income have been shown to be strongly related (Iannaccone, 1998). Column 3 of table 3 reports the results for denomination 1 controlling for logged per-member donations. While donations are clearly significant, implying almost unit-elasticity between giving and spending, the interacted coefficient on share black is now slightly larger than before and the standard error is slightly smaller. This suggests that differences in churchgoer income are not driving the result.

A second test of the white-flight scenario involves looking at church expenditures on non-charitable activities, such as expenditures on day-to-day operating expenses and church upkeep. In the white flight scenario all-white churches in all-black neighborhoods are poorer than other churches and would likely spend less on all types of activities. Columns 4 and 5 of table 3, however, show that these churches do not spend less on church operating expenses. In fact, the interacted coefficient for both denominations is *positive* and for denomination 2 it is significant at the one percent level. This is consistent with a story where all-white churches in black communities are not poorer than other churches, but substitute out of charitable spending and into other types of church spending.

One might be concerned that all-white churches are located in different communities than other churches, and this difference is driving the results. Columns 6 and 7 of table 3 repeat the standard regression but limit the sample only to churches located in counties that house both an all-white church and a church that is not all-white. For each denomination the result is close to the baseline results in table 2.

The final two columns of table 3 present results from the standard regression interacting all the covariates, including the area fixed effects, for each denomination. (Given that the area fixed effects are interacted with the all-white dummy, the all-white dummy itself becomes essentially meaningless and is not reported.) For denomination 1 the interacted coefficient is closer to zero in value and is not significant. For denomination 2 the coefficient is larger in absolute value than before and is still 95 percent significant. In both cases interacting the area fixed effects raises some near-multicollinearity

concerns; regressing the interacted share black variable on all other covariates yields an R-squared of 0.96 for denomination 1 and 0.99 for denomination 2. Repeating the regression without interacting the area fixed effects gives a coefficient for denomination 2 of -0.8855 with a standard error of 0.3414, which is much closer to before and significant at the one percent level. The coefficient for denomination 1 is still insignificant in this case, however (these results are not reported in table 3 to save space).

One may wonder whether the relationship between all-white churches and blacks is being driven by rural churches, or churches in the south. The main regressions in table 2 were repeated with churches in southern states (defined as the states of the confederacy) omitted; this did not change the results.¹² The regressions were also repeated omitting churches in counties whose population density ranked in the bottom quartile, and again this did not change the result. The results are also robust to including an interaction of share black and density. For both denominations the results are qualitatively similar when weighted by membership or when estimated using log-log or linear models. These regressions are all omitted for brevity.

To summarize, results using these two denominational datasets suggest that churches do respond to race when providing charitable services, and in particular churchgoers who attend all-white churches respond negatively to the presence of blacks in the community relative to other churchgoers. This is the only consistent result in the data. This response is found only when looking at charitable activities, not when looking at other types of church activity. The result is robust to different specifications, is found in both datasets, and is robust to controlling for member wealth, area fixed effects, and to instrumenting for share black. Estimated coefficients are similar even when all covariates are interacted with an all-white dummy, but are less precise than before for denomination 1. The following section investigates whether this result is found in the National Congregations Study as well.

4. Analysis of Congregations from the NCS

¹² Although in this case the standard errors for denomination 1, which has a relatively larger share of churches in the south, increased somewhat.

4.a Description of the Data

In this section we use data from the National Congregations Study (NCS) to estimate equation (2). This study was made available by the American Religion Data Archive. It is a nationally representative sample of American congregations, providing data on 1,236 congregations across the country from numerous religious traditions. The NCS data were collected mostly by phone interviews with congregational pastors, staff or leaders; three-quarters of NCS interviews were with clergy. Congregations were selected using responses from the 1998 General Social Survey. Respondents in the GSS who attended religious services at least once a year were asked to give the name and location of their congregation; in this fashion a random sample of congregations across the nation was generated.¹³

The advantages of the NCS dataset are that it includes congregations from multiple faiths and denominations, it contains a rich body of information for each congregation, and it allows for a study of non-pecuniary charitable church activity. The disadvantages of the NCS are its smaller size and the fact that the NCS data do not precisely identify where a congregation is located. However, the parties responsible for maintaining the NCS data have linked congregations to some of the census-tract variables from the 1990 Census and we were able to obtain these variables for use here; we also have learned that there are 1,036 unique census tracts and 41 states represented in the data. The NCS data come from 1998. While the 2000 Census variables would be better than the 1990 Census variables, the demographic information should not be too different.

Table 4 presents summary statistics for the NCS data. The NCS reports racial data on congregations by asking what percent of regular adult participants in the congregation are white and non-Hispanic, black or African American, Hispanic or Latino, and Asian or Pacific Islander. Respondents are also asked, “Of the regular adult participants in your congregation, are there any other ethnic groups?” but no percent for other groups is given. We use these answers to create the categories Asian/Pacific

¹³ Further details on these data can be found in Chaves (1998) and Chaves, Konieczny, Byerlein, and Barman (1999).

Islander, black, Hispanic, and white.¹⁴ Homogeneous congregations make up about a fourth of all congregations, but, all-white congregations make up the majority of racially homogeneous congregations and the summary statistics are broken down by all-white congregations and other congregations. For a small number of congregations the percent of all racial groups is reported as zero and respondents indicated that there are no additional racial groups in the congregation; these congregations are dropped. There are also missing data for various other regressors; the number of usable congregations for most of the regressions is 1,020. This may affect whether the sample is truly nationally representative, but results will nevertheless be informative.¹⁵ As shown in table 4, there are fewer all-white congregations and the non-all-white congregations are less white in the NCS than in the denominational datasets.

The dependent variable for NCS regressions will be a binary variable equaling unity if a congregation participates in local charitable activities and zero otherwise. NCS respondents were asked, “Has your congregation participated in or supported social service, community development, or neighborhood organizing projects of any sort within the past 12 months?” Respondents then named all relevant projects and each project was coded into various pre-determined categories. For example, a congregation participating in a program to provide clothes for the homeless would be marked as participating in a program focused on clothing, and also marked as participating in a program to help the homeless. Our dependent variable equals unity if a congregation was marked as participating in any category that is likely to be both local and charitable in nature.

There is some subjectivity involved in selecting the categories most likely to involve local charitable work. We therefore identified two different sets of categories; the first set is smaller and includes only the categories most likely to involve local charitable work, and the second set is larger and includes any category which might feasibly be related to charitable work. We run our regressions using

¹⁴The percent of all racial groups in the congregation added up sometimes exceeds 100. The best response to this problem is not clear. Given that the totals are generally very close to 100, the percent estimates are not re-weighted in any way. One should interpret the congregational data as estimates and thus subject to some misreporting.

¹⁵ Chaves (1999) explains that the congregations can be weighted in different ways to make the data representative either for the population of congregational attendees or the population of congregations. Given that we will be estimating Probit regressions on a subsample of the data, we do not weight the data in any way.

both sets of categories to define charitable activity. The appendix reports the set of categories used in each definition. Aside from the categories used in the two definitions of charitable activity, there are a few other categories that are not likely to represent local charitable activities (for example, recreational programs and programs undertaken to help international causes). We will use these other activities in a robustness test. Table 4 shows that a majority of all congregations are likely to participate in charitable activities, but all-white congregations are slightly less likely to do so than other congregations.

The NCS data also capture numerous congregational attributes including information on congregation members' income, education, sex, age, and political and theological conservatism. As before, all-white congregations tend to be smaller and are more likely to be in rural locations. Congregation members in all-white congregations are slightly less educated, older, and more conservative (politically and theologically) than other congregations and are less likely to have discussed politics during worship.

4.b Results from Estimates using the NCS Data

The focus with the NCS dataset will again be on all-white congregations.¹⁶ Table 5 presents the basic results for all-white congregations in the NCS dataset. As before we suppress the non-racial covariates to save space; other coefficients for the first regression in table 5 can be found in table A2. The estimates shown are the marginal effects from a Probit regression.

The first column in table 5 uses the more specific definition of charitable activity. The coefficient on the interacted term is very negative and significant. It roughly suggests that if the share black in the community increases by one-standard deviation (0.25 for the regression sample), the probability of a congregation participating in a local charitable activity would fall by about one fifth if the congregation were all white, and would slightly increase otherwise. The uninteracted share-black coefficient and the all-white dummy are both insignificant. The second column repeats the regression using the more general definition of charitable activity. The interacted coefficient is less negative than before and is marginally significant. This is not surprising, given that this definition includes programs which may not be

¹⁶ There are only 49 all-black, 2 all-Asian, and 3 all-Hispanic congregations in the regression sample.

charitable in nature (such as a holiday program sponsored by the congregation) or local (such as a program to feed the hungry, which could be international in focus).¹⁷

The next three columns repeat the standard regression looking at other racial groups. The dependent variable is the more specific definition of charitable church activity. The only significant finding is that all-white congregations may be slightly more active in highly Hispanic communities. This result was also found for denomination 1 in the previous section, although there the finding was sensitive to the use of the semilog specification and may have been partly influenced by denominational idiosyncrasies.

The use of census tracts instead of counties creates much more variation in the racial composition of the community than in the denominational datasets; one might be concerned that outlier values are driving the result. Ideally we would repeat the regression using county-level data; but as mentioned before it is not possible to match the NCS data up to county covariates. Instead, columns 6 and 7 repeat the regressions on share black, but for both all-white and not-all-white congregations observations whose communities' share black is in the 95th percentile or above are removed. (The results are very similar if only the 99th percentile is removed). The interacted coefficients in columns 6 and 7 are now more negative than before and the result is significant at the five percent level using either the specific or the general definition of charitable activity. This suggests that the increased volatility gained from using census-tract measures of share black weakens the precision of the estimates, which is intuitive if congregations generally have a conception of the local community that is larger than the local census tract.

The last two columns of table 5 repeat the robustness test for Hispanic communities (again, these results are very similar to those obtained by only eliminating the 99th percentile of Hispanic communities). Now the interacted coefficient is insignificant. This suggests that our earlier finding on all-white congregations in Hispanic communities was sensitive to the inclusion of a few congregations in

¹⁷ Estimating linear probability models yields similar results. For a discussion of interacted effects in linear and nonlinear models see Ai and Norton (2003).

highly Hispanic areas; perhaps this is because highly Hispanic areas are more “needy” than other areas and our community regressors do not adequately control for this.

As noted before, this specification assumes that congregations respond to all omitted races in the same way. Appendix table A2 shows that, as was the case with the denominational datasets, the estimates here are clearly not being driven by this assumption. We now focus on testing the robustness of the result on white congregations and black residents.

4.c All-White Congregations and Share Black: Extensions with the NCS Dataset

To check the robustness of the previous results, the first column of table 6 repeats the standard regression on share black but this time the dependent variable equals unity if a congregation participated in a program which is *not* likely to be local or charitable in nature; a list of the programs used is given beneath table 6. The non-interacted share black coefficient is marginally significant, but the interacted coefficient is now positive and insignificant. Regarding international programs, recreational programs and other non-charitable activities, we cannot reject the hypothesis that all-white congregations respond to the share black in the same way as other congregations.¹⁸

The regressions in columns 2 and 3 interact all covariates with the all-white dummy. Four observations had to be dropped because they became perfect predictors after including interactions for the denominational and regional dummies. (Rerunning the regression without interactions for the denominational and regional dummies does not change the results.) The interacted coefficient is large, negative, and significant for both definitions of charitable activity.

The NCS survey asked congregational informants whether their congregation was receiving public funds, and if not whether their congregation “would apply for government money to support [the congregation’s] human services programs if it was available.” It will be interesting to see if all-white congregations receiving or inclined towards receiving public money respond to blacks differently than do other congregations.

¹⁸ The results in column 1 are similar if only international programs are used.

The two last columns of table 6 present a triple interaction regression, where the interactions are (a) a dummy for whether a congregation receives or is favorably inclined towards receiving public funding, (b) a dummy for whether or not a congregation is all white, and (c) the share of black residents in the congregation's census tract. There are a number of missing values for whether a congregation is favorably inclined towards receiving public funding and we eliminate congregations who "don't know" if they are favorably inclined or not, making the sample size slightly smaller than before.¹⁹

In both columns the simple interaction between all-white congregations and share black is negative and significant, and in both cases the triple interaction term is large, positive, and marginally significant. For both regressions a Wald test that the sum of (a) the triple interaction coefficient and (b) the coefficient on the interaction between share black and the all-white dummy equals zero cannot be rejected. This suggests that all-white congregations favorably disposed towards receiving government funding for the provision of charitable services do not respond differently to black residents than do congregations which are not all-white. This result is somewhat tempered by the small number of all-white churches receiving or inclined to receive public funds (45) but it is worth emphasizing that despite the somewhat small sample size the triple interaction term is measured with at least some precision in both regressions; the Wald tests are not simply driven by large standard errors.

5. Conclusions

This paper provides evidence that an important type of congregation—the all-white congregation—is affected by the racial composition of the community when deciding whether and how much charitable activity to provide. Relative to other congregations, all-white congregations become less charitably active as the share of black residents in the community grows. We find this result in three different datasets of charitable church activity; it is the only result consistent across the three datasets. This response is found only when looking at charitable activities, not when looking at other types of

¹⁹ Of the 913 congregations used in the regression, 132 are all-white, 450 are favorably inclined to receive public funds, and 45 are both all-white and favorably inclined to receive public funds.

church activity. The result is robust to using different measures of the community, using monetary and non-monetary measures of charitable activity, controlling for congregation member income, controlling for community fixed effects, and using an instrumental variables specification.

This finding has a number of implications. First, the present analysis has focused on race, but it may be the case that congregations take other demographic characteristics into account as well. This is an area for future research. Additionally, the small number of homogeneous churches in the data that are *not* all-white limits our ability to say how they respond to race. Future research should consider this issue. Future research is also needed to explore the cause of our findings here—whether they are driven by what Alesina and La Ferrara (2000) call race-based “aversion” on the part of all-white churches, by not-all-white churches having especially favorable responses to blacks in a community, by technological considerations, or by some other factor.

Additionally, Hungerman (2005, 2007) and Gruber and Hungerman (2007) find historic evidence of substitutability between charitable church activity and government activity. It is possible that individuals with group preferences would respond to increased community diversity by devolving funds out of the public arena, where categorical qualifications for transfer programs are race-blind, to congregations, which may be able to offer transfers more selectively. This would be consistent with the findings of previous economic research. However, if congregations do target charity towards specific groups in a community this would lead to underestimates of the effect of race in the present setting for reasons discussed in section two.

Finally, this paper uses a panel to study the effects of community composition on collective actions. Although the main results here are not sensitive to the inclusion of community fixed effects, this is not generalizable to previous work on group preferences. Rather, the robustness of our results is likely a result of the difference-in-difference approach. Future research in this area should not neglect the role of fixed community characteristics in the empirical analysis.

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Appendix: Definitions of Charitable Church Activity

Denomination #1 All money paid by local church for local mission programs, approved community projects, and to local ecumenical agencies.

Denomination #2 Monies paid directly by the local church to local benevolence or community organizations, or to non-denominational organizations outside of the local church.

National Congregations Study: Respondents in the NCS data were asked the question, “Has your congregation participated in or supported social service, community development, or neighborhood organizing projects of any sort within the past 12 months? Please don't include projects that use or rent space in your building but have no other connection to your congregation.” Respondents then named all relevant projects and each project was coded into a number of pre-determined categories.

For our specific measure of charitable church activity, we identified the categories most likely to relate to local charitable church activity, and created a new variable equal to unity if a congregation was marked as participating in a program in any of these categories. The categories are (# congregations in each category in parentheses):

- Giving cash to the needy (120)
- Programs focused on physical health needs (112)
- Programs for home building, repair, or maintenance, Habitat for Humanity Projects, day sheltering programs (400)
- Programs directed at the homeless or transients (200)
- Programs directed at immigrants, migrants, or refugees, including English-as-a-Second-Language classes (26)
- Programs whose purpose is to help people obtain jobs (33)
- Programs whose purpose is specifically to train people in work skills or job-seeking skills (15)
- Tutoring or mentoring for children or youth (38)
- Programs mentioning helping the needy or the poor in an unspecified way (99)
- Programs focused on those in prisons or in trouble with the law, or with their families (59)
- Programs focused on clothing or blankets, including rummage sales (214)
- Programs explicitly providing only short-term, emergency, or temporary assistance (641)
- Programs specifically directed at the physically or mentally ill or injured, or at relatives of the ill or injured (153)
- Programs described as "community service" without further elaboration (25)
- Programs targeting substance abusers (44)
- Programs providing furniture, household items, and money for rent or utilities (61)

There are 648 charitably active congregations by this definition.

For our general measure of charitable activity, a church is defined as charitably active if it participates in a program in any of the above categories or in any of the following categories (# congregations in each category in parentheses):

- Programs whose main purpose is to visit people (33)
- Programs focused on social justice or political activity (43)
- An activity that explicitly occurs seasonally, at holidays, or annually (110)
- Programs explicitly mentioning volunteering, not including Habitat for Humanity projects (55)
- Programs focused on crime prevention, crime victims, or police and fire departments (23)
- Programs specifically focused on children, youth, or young adults as beneficiaries (320)
- Programs explicitly focused on addressing long-term needs or involving substantial face-to-face contact between service providers and the needy (211)
- Clean highways and/or parks (37)
- Programs for victims of rape or domestic violence (86)
- Programs mentioning a general purpose social service agency such as St. Vincent De Paul, Catholic Social Services, Lutheran Social Services, United Way, Red Cross, etc.(105)
- Programs explicitly mentioning giving or loaning money to individuals or organizations (257)
- Programs with educational purposes, not including religious education and mentoring (131)
- Programs directed specifically toward senior citizens (121)
- Programs focused on issues of race or ethnicity (50)
- Programs for family-related issues (48)
- Programs focused on feeding the hungry (600)

There are 743 charitably active congregations by this definition.

Table 1
Summary Statistics for Denominational Datasets

Variable	Denomination 1	Denomination 1	Denomination 2	Denomination 2
	All-White Churches	All other Churches	All-White Churches	All other Churches
	Mean	Mean	Mean	Mean
Per-member charitable spending	41.62 [119.40]	62.94 [156.78]	16.41 [106.10]	25.50 [241.36]
Share church members white	1 [0]	0.85 [0]	1 [0]	0.81 [0.36]
Share church members black	0 [0]	0.07 [0.23]	0 [0]	0.14 [0.34]
Share church members Asian	0 [0]	0.04 [0.18]	0 [0]	0.03 [0.15]
Number of members in church	140 [204]	350 [450]	202 [272]	470 [625]
Church mortality rate	0.02 [0.02]	0.02 [0.02]	0.02 [0.02]	0.02 [0.02]
Ratio of individuals in church education programs to members	0.49 [0.30]	0.49 [0.29]	0.50 [0.74]	0.72 [5.95]
Share of county black	0.09 [0.13]	0.13 [0.14]	0.11 [0.15]	0.13 [0.15]
Share of county Hispanic	0.04 [0.06]	0.10 [0.13]	0.03 [0.05]	0.09 [0.13]
Share of county white	0.85 [0.15]	0.71 [0.20]	0.84 [0.16]	0.74 [0.19]
Share of county Asian	0.01 [0.01]	0.03 [0.04]	0.01 [0.01]	0.02 [0.04]
Share of county under 18	0.25 [0.02]	0.25 [0.03]	0.25 [0.03]	0.26 [0.03]
Share of county 50-64	0.16 [0.02]	0.15 [0.02]	0.15 [0.02]	0.14 [0.02]
Share of county 65-84	0.13 [0.03]	0.11 [0.03]	0.13 [0.03]	0.11 [0.03]
Share of county 85 and over	0.02 [0.01]	0.02 [0.01]	0.02 [0.01]	0.01 [0.01]
Share of county immigrant	0.02 [0.02]	0.05 [0.06]	0.01 [0.02]	0.04 [0.05]
County population density	333.28 [829]	1583 [4847]	226 [588]	987 [2734]
County unemployment rate	4.50 [1.99]	4.04 [1.92]	5.21 [2.36]	4.72 [2.29]
County average personal income	24557 [5271]	29730 [8986]	22314 [4882]	26557 [7425]
Share of county HHs headed by a single female	0.11 [0.03]	0.12 [0.04]	0.11 [0.04]	0.12 [0.04]
Total observations	3014	4660	21099	11921

Means are unweighted, standard deviations in brackets. Data on income are taken from the REIS, data on unemployment are from the BLS, other county data are from the decennial Census. Data from denomination 2 are for years 1990 and 2000; church spending and income in these data are adjusted for inflation. There are 1,924 counties in the regressions for denomination 1 and 2,640 counties for denomination 2. About 2,400 churches in denomination 1 do not report charitable spending by members; an additional 1,000 churches do not report racial data and these churches are not included. In denomination 2, 19,000 observations do not report charitable spending and an additional 16,000 do not report race data; the statistics here do not include any of these observations. In both cases omitted churches are smaller, have lower mortality rates, and are slightly less white than the included churches, but their county summary statistics are similar to those shown

Table 2
Basic Results from Denomination Datasets: All-White Churches versus Other Churches

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Share County Black	-0.0993 [0.3203]	0.3509 [0.2173]	-0.212 [1.0968]						
Share County Black*All-White Dummy	-0.5082* [0.2224]	-0.4554** [0.1489]	-0.4207** [0.1466]						
Share County White				0.2408 [0.3275]	2.0498* [0.7958]				
Share County White*All-White Dummy				0.0514 [0.1968]	0.2982* [0.1312]				
Share County Hispanic						-0.1025 [0.3641]	-3.0322** [1.1381]		
Share County Hispanic*All White Dummy						0.9003* [0.4484]	0.0485 [0.2914]		
Share County Asian								-1.4214* [0.7098]	-3.8814 [2.7472]
Share County Asian*All-White Dummy								-0.3911 [1.8540]	-0.7008 [1.1573]
All-White Church Dummy	-0.0681 [0.0439]	-0.0627* [0.0262]	-0.0305 [0.0270]	-0.1627 [0.1653]	-0.3216** [0.1091]	-0.1611** [0.0410]	-0.0789** [0.0252]	-0.1163** [0.0432]	-0.0682** [0.0264]
Denomination	1	2	2	1	2	1	2	1	2
Church & Community Covariates?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects?	No	Yes	Yes	No	Yes	No	Yes	No	Yes
Area Fixed Effects?	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7674	33020	33020	7674	33020	7674	33020	7674	33020
R-squared	0.17	0.09	0.23	0.17	0.23	0.17	0.23	0.17	0.23

* significant at 5%; ** significant at 1%

The dependent variable is congregational per-member spending on local benevolent activities, logged. Robust standard errors in brackets. All standard errors are clustered by county. Denomination 1 is a cross section of churches in 2000; denomination 2 is a panel of churches in 1990 and 2000. Area fixed effects correspond to church jurisdictions for denomination 1 and counties for denomination 2 (see text).

Table 3
All-White Churches and Black Residents: Robustness Tests

	IV Regressions ^a		W/Donations	Operating Expenses ^b		Counties with Both Types of Church ^c		All Interactions ^d	
	(1)	(2)		(3)	(4)	(5)	(6)	(7)	(8)
Share County Black	-0.182 [0.3485]	-0.4153 [1.5678]	-0.304 [0.3120]	0.136 [0.1684]	-1.1185* [0.4426]	-0.2807 [0.4316]	-0.1348 [1.1629]	-0.324 [0.3873]	2.6679 [1.6211]
Share County Black*All-White Dummy	-0.5086* [0.2249]	-0.5287** [0.1490]	-0.5412** [0.2089]	0.1696 [0.1196]	0.4654** [0.0874]	-0.4286 [0.2621]	-0.4038** [0.1464]	-0.2029 [0.6715]	-4.5336* [2.0867]
All-White Church Dummy	-0.068 [0.0440]	-0.0569* [0.0268]	-0.021 [0.0418]	-0.1420** [0.0206]	-0.1397** [0.0139]	-0.0699 [0.0514]	-0.0288 [0.0270]		
Log of Church Contributions per Member			0.9276** [0.0484]						
Denomination	1	2	1	1	2	1	2	1	2
Church & Community Covariates?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
All coefficients interacted w/all-White Dummy?	No	No	No	No	No	No	No	Yes	Yes
Observations	7674	33020	7664	5444	32199	5871	30652	7674	33020
R-squared	-	-	0.24	0.29	0.39	0.17	0.23	0.2	0.28

* significant at 5%; ** significant at 1%

The dependent variable is congregational per-member spending on local benevolent activities, except columns 4 and 5. Robust standard errors in brackets. All standard errors are clustered by county. All regressions include all community and church covariates as well as area fixed effects where area fixed effects correspond to church jurisdictions for denomination 1 and counties for denomination 2.

^aRegressions are second stages of 2SLS regressions using lagged share black and lagged share black interacted with an all-white dummy as instruments.

^bFor these regressions the dependent variable is congregational per-member spending on operating expenses. Operating expenses include expenses on salaries, printing, postage, utilities, and insurance. For denomination 2 they are adjusted for inflation. The result in column 3 is not driven by the change in sample size; the basic results from table 2 are preserved when the regressions are rerun with the smaller sample.

^cRegressions are limited to counties having both an all-white church and a not-all-white church.

^dThese regressions interact the all-white church dummy variable with all covariates, including area fixed effects.

Table 4
Summary Statistics For NCS Dataset

Variable	All-White Congregations		Other Congregations	
	Mean	Std. Dev.	Mean	Std. Dev.
Share of congregation white	1	0	0.71	0.38
Share of congregation black	0	0	0.17	0.34
Share of congregation Asian	0	0	0.03	0.09
Share of congregation Hispanic	0	0	0.07	0.16
Charitably Active Dummy-general definition	0.59	0.49	0.75	0.43
Charitably Active Dummy-specific definition	0.54	0.50	0.69	0.46
Number of Participating Adults	158	187	779	1394
Cong's ratio of children and teens to adults	0.41	0.26	0.41	0.45
Number of official committees in congregation	6.32	7.27	10.23	18.03
Share of congregation adults w/incomes <25k	0.27	0.28	0.22	0.22
Share of congregation adults w/incomes >100k	0.06	0.13	0.10	0.14
Share of congregation new in past year	0.14	0.13	0.14	0.13
Share of congregation new to US in past year	0.01	0.05	0.02	0.08
Share of congregation Female	0.57	0.14	0.56	0.16
Share of congregation over 60	0.35	0.20	0.27	0.18
Share of congregation w/4-year degree	0.24	0.24	0.35	0.28
Share of congregation w/out H.S. degree	0.11	0.17	0.09	0.14
Share of congregation living w/in 10 minute walk	0.17	0.19	0.19	0.23
Share of congregation under 35	0.26	0.15	0.30	0.17
Dummy for cong. discussing political activity in worship in past year	0.26	0.44	0.40	0.49
Dummy for cong. participating in worship w/a cong. of a different racial/ethnic makeup in past	0.25	0.43	0.33	0.47
Dummy for cong. experiencing conflict	0.22	0.42	0.28	0.45
Dummy for urban congregation	0.21	0.41	0.68	0.47
Dummy for rural congregation	0.61	0.49	0.18	0.38
Dummy for theologically conservative cong.	0.68	0.47	0.50	0.50
Dummy for politically conservative cong.	0.72	0.45	0.52	0.50
Share census-tract under 18 (1990)	0.26	0.04	0.25	0.07
Census-tract unemployment rate (1990)	0.07	0.03	0.07	0.05
Share of census-tract black (1990)	0.10	0.18	0.15	0.25
Share of census-tract Hispanic (1990)	0.02	0.05	0.08	0.15
Share of census-tract white (1990)	0.87	0.19	0.74	0.29
Share of census-tract Asian (1990)	0.01	0.01	0.02	0.05
Census tract avg. personal income (1990)	11720	3673	15031	8287
Share census tract poor (1990)	0.15	0.09	0.14	0.12
	Total all-White congs: 148		Total other congs: 872	

Means are unweighted.

Share variables for congregation are the share of regular adult participants in the congregation.

Table 5
NCS Regressions

	On Share Black (1)	On Share Black (2)	On Share Hispanic (3)	On Share Asian (4)	On Share White (5)	Black No Outliers ^a (6)	Black No Outliers (7)	Hispanic No Outliers (8)	Hispanic No Outliers (9)
Share Census tract Black	0.0728 [0.1131]	0.0675 [0.1016]				0.1196 [0.1428]	0.0778 [0.1291]		
Share tract Black*All-White Dummy	-0.7197* [0.2880]	-0.3229 [0.2159]				-1.0687* [0.4821]	-1.0502* [0.4270]		
Share tract Hispanic			-0.2005 [0.1655]					-0.2418 [0.2880]	-0.3304 [0.2626]
Share Hispanic*All-White Dummy			2.6494* [1.2828]					1.5699 [2.8124]	2.6711 [2.4295]
Share tract Asian				0.1998 [0.4121]					
Share Asian*All-White Dummy				2.85 [3.6394]					
Share tract White					0.0198 [0.1093]				
Share tract White*All-White Dummy					0.4031 [0.2510]				
All-White Congregation Dummy	0.0275 [0.0540]	0.0098 [0.0483]	-0.0865 [0.0580]	-0.0534 [0.0574]	-0.4138 [0.2292]	0.0392 [0.0550]	0.0377 [0.0481]	-0.0709 [0.0636]	-0.0647 [0.0587]
Definition of charitable activity	Specific	General	Specific	Specific	Specific	Specific	General	Specific	General
Congregational & Community Covariates?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region and Denomination Dummies?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1020	1020	1020	1020	1020	970	970	970	970

* significant at 5%; ** significant at 1%

Standard errors in brackets

Results are marginal effects of a Probit regression where the dependent variable equals unity if congregation supports any local charitable project.

^aThe "No Outliers" regressions eliminate, for both all-white and other congregations, observations whose share black in the community is in the 95th percentile or above.

The results are very similar if only the 99th percentile is eliminated.

Table 6
NCS Regressions: Extensions

	Noncharitable Activities			Triple Difference	Triple Difference
	Regression ^a	All Interactions	All Interactions	Regression	Regression
	(1)	(2)	(3)	(4)	(5)
Share Census tract Black	-0.1958 [0.1063]	0.028 [0.1141]	0.0247 [0.0853]	0.124 [0.1689]	0.1508 [0.1526]
Share tract Black*All-White Dummy	0.1065 [0.2499]	-1.0241 [0.5825]	-0.88 [0.5263]	-1.1540** [0.4387]	-0.7297* [0.3120]
All-White Congregation Dummy	-0.0312 [0.0502]	-0.8843** [0.1104]	-0.9947** [0.0117]	0.0343 [0.0696]	0.0122 [0.0612]
Favorably Inclined to Government Funding Dummy				0.0881 [0.0459]	0.0598 [0.0421]
Favorably Inclined Dummy*All White Dummy				-0.0082 [0.1140]	0.018 [0.0966]
Favorably Inclined*Share Black				-0.0346 [0.1634]	-0.0741 [0.1474]
Triple Difference				0.9002 [0.6124]	0.9927 [0.5222]
Definition of charitable activity	Noncharitable	Specific	General	Specific	General
Congregational & Community Covariates?	Yes	Yes	Yes	Yes	Yes
Region and Denomination Dummies?	Yes	Yes	Yes	Yes	Yes
All coefficients interacted with all-white Dummy?	No	Yes	Yes	No	No
Observations	1020	1016	1016	913	913

* significant at 5%; ** significant at 1%

Standard errors in brackets

Results are marginal effects of a Probit regression where the dependent variable equals unity if congregation supports any local charitable project.

^aThe dependent variable in column 1 is set to unity if a congregation participated in any of the following activities: Programs explicitly mentioning beneficiaries outside the United States, including "Crop Walk"; Recreational programs; Disaster relief programs; Programs specifically directed at either females in particular or males in particular; and Programs with explicit religious content.

Appendix Table A1

Additional Results from Basic Denominational Regressions

Variable		
Share county black	-0.0993	-0.212
	[0.3203]	[1.0968]
All-white dummy*share county black	-0.5082*	-0.4207**
	[0.2224]	[0.1466]
Dummy for all-white church	-0.0681	-0.0305
	[0.0439]	[0.0270]
Share of church white	0.3452	0.157
	[0.1770]	[0.1556]
Share of church black	0.1954	-0.3161*
	[0.2063]	[0.1546]
Share of church Asian	0.7099**	0.9946**
	[0.1956]	[0.1788]
Log of number of members in church [†]	10.6480*	0.2184**
	[4.6081]	[0.0173]
Church mortality rate	2.5894**	3.0283**
	[0.7047]	[0.7137]
Ratio of individuals in church education programs to members	0.4967**	0.0281**
	[0.0582]	[0.0064]
Share of county under 18	-5.3705**	-6.1479**
	[0.8108]	[1.5165]
Share of county 50-64	0.0501	-1.7231
	[1.5196]	[2.0339]
Share of county 65-84	1.0955	-2.7053
	[1.4041]	[1.7959]
Share of county 85 and over	-13.4030*	-8.0799
	[6.1053]	[8.4527]
Share of county immigrant	0.83	-0.4752
	[0.5729]	[1.1449]
County population density	-0.0084	-0.0001
	[0.00554]	[0.0001]
County population density, logged	0.0391	0.2374
	[0.0226]	[0.1710]
County unemployment rate	0.0224	-0.0034
	[0.0132]	[0.0097]
County average personal income (1000s)	0.0122	0.0038
	[0.0377]	[0.0085]
Share of county HHs headed by a single female	3.4592**	5.9224*
	[1.3261]	[2.5076]
Denomination	1	2
Observations	7674	33020
R-squared	0.17	0.23

* significant at 5%; ** significant at 1%

These are the estimates for the regressions presented in table 2, columns 1 and 3, respectively. The dependent variable is congregational per-member spending on local benevolent activities, logged. Robust standard errors in brackets. All standard errors are clustered by county. Denomination 1 is a cross section of churches in 2000; denomination 2 is a panel of churches in 1990 and 2000. Area fixed effects correspond to church jurisdictions for denomination 1 and counties for denomination 2.

[†]A fifth-order polynomial for logged members is included in all regressions.

Appendix Table A2

Fully Interacted Models

	Denomination 1	Denomination 2	NCS Dataset
Share County Black	-0.1231 [0.3798]	-0.7572 [1.1357]	0.0434 [0.1200]
Share County Black*All-White Dummy	-0.4480* [0.2251]	-0.4040** [0.1475]	-0.6617* [0.2881]
Share County Hispanic	-0.3591 [0.4571]	-3.2764** [1.1670]	-0.1994 [0.1749]
Share County Hispanic*All White Dummy	0.9128* [0.4501]	-0.0442 [0.3089]	2.4348 [1.2643]
Share County Asian	-1.4976 [0.7833]	-3.9114 [2.4016]	0.2677 [0.4235]
Share County Asian*All-White Dummy	-1.3294 [1.8462]	-0.8725 [1.2245]	-0.0931 [4.0008]
Share County Other Race	-0.0793 [0.5336]	-2.913 [2.0458]	-0.3224 [0.9184]
Share County Other Race*All-White Dummy	0.9915 [0.6486]	0.9609 [0.6612]	-2.6424 [5.4511]
All-White Church Dummy	-0.1211* [0.0533]	-0.0326 [0.0342]	-0.0117 [0.0700]
Observations	7674	33020	1020
R-squared	0.18	0.23	-

* significant at 5%; ** significant at 1%

White residents make up the omitted racial group in each regression. The category Other race is comprised of individuals identifying themselves as members of a race not listed in the census form, American Indian/Alaskan Natives, and non-Hispanic respondents naming multiple races.

The first two columns repeat the least-squares regressions shown in table 2, except that now a full set of racial groups are included at once. The dependent variable is congregational per-member spending on local benevolent activities, logged. These columns include church & community covariates and area fixed effects, and column 2 includes year fixed effects. Robust standard errors in brackets, clustered by county.

The last column repeats the basic Probit regressions on the NCS shown in table 5, with a full set of racial groups included at once. The dependent variable is a dummy variable equaling unity if a congregation supports any local charitable project (the specific definition). The regression includes congregational and community covariates, as well as region and denominational dummies. Standard errors in brackets.

Appendix Table A3

Full Results from Basic NCS Regression

Share Census-tract black	0.0728 [0.1131]	Dummy for cong. worshipping w/a cong of a different racial/ethnic makeup in past year	0.0750* [0.0334]
Share tract black*All-white dummy	-0.7197* [0.2880]	Dummy for cong. discussing political activity in worship in past year	0.0766* [0.0329]
Dummy for all white congregation	0.0275 [0.0540]	Cong's ratio of children and teens to adults	0.0616 [0.0430]
Share of congregation White	-0.0005 [0.0009]	Number of official committees in congregation	0.0005 [0.0010]
Share of congregation black	-0.0008 [0.0010]	Dummy for cong. experiencing conflict	-0.0212 [0.0358]
Share of congregation Asian	-0.0004 [0.0021]	Share of congregation adults w/incomes <25k	-0.0009 [0.0008]
Share of congregation Hispanic	-0.0008 [0.0014]	Share of congregation adults w/incomes >100k	-0.0023 [0.0013]
Share of congregation new in past year	0.00002 [0.0013]	Dummy for urban congregation	-0.0477 [0.0489]
Share of congregation new to US in past year	-0.0001 [0.0022]	Dummy for rural congregation	0.0273 [0.0534]
Share of congregation female	0.0009 [0.0011]	Dummy for theologically conservative cong.	-0.0119 [0.0395]
Share of congregation over 60	0.0037** [0.0010]	Dummy for politically conservative cong.	-0.0677 [0.0390]
Share of congregation w/4-year degree	0.0013 [0.0007]	Share census-tract under 18 (1990)	-0.7514* [0.3143]
Share of congregation w/out H.S. degree	-0.0021 [0.0012]	Census-tract unemployment rate (1990)	-0.3717 [0.6255]
Share of congregation living w/in 10 minute walk	0.0003 [0.0008]	Census tract avg. personal income, 1000s (1990)	0.0026 [0.0036]
Share of congregation under 35	0.0015 [0.0010]	Share census tract poor (1990)	0.1672 [0.2534]
Number of adult participants in cong., logged	0.0953** [0.0173]	Definition of Charitable Activity	Specific
		Observations	1020

* significant at 5%; ** significant at 1%.

Both columns report coefficients from the same regression; these are the full estimates from the regression presented in column 1 of table 5. Results are marginal effects of a Probit regression where the dependent variable equals unity if congregation supports any local charitable project using the more specific definition given in the Appendix. Standard errors in brackets. Results include denominational and regional dummy variables.