

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. Opponents of this increased availability fear that congregations may practice racial discrimination when providing social services, but there is little research on this important issue. 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 community grows. This response is found only when looking at charitable activities, not when looking at other types of church activity. There is not a negative response to black residents among congregations that are overwhelmingly (but not entirely) white. All-black congregations do not display any differential response to race. Finally, all-white congregations favorably disposed towards receiving government funding do not respond differently to black residents than do not-all-white congregations.

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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). 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 seven different federal agencies, policy makers have instituted a “devolution” of federal funds intended to provide community services.¹

Proponents of this devolution contend that it will particularly benefit minorities. 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 on faith-based organizations for both basic life necessities and the delivery of specific social welfare benefits” (DiIulio, 2002).

Opponents of this devolution, however, fear that it 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.” A growing body of economic research, described in the next section, indicates that a community’s demographic composition can affect the preferences and activities of community members. This research has suggested that churchgoers may warrant special consideration as individuals whose actions are sensitive to community demographics. But despite the relevant policy considerations and the suggestions of economic research, there is no study on the important issue of whether a congregation’s propensity to provide charitable services is affected by the racial composition of the charitable recipients.

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

The goal of this paper is to see whether congregations take the surrounding community's racial composition into account when providing local charitable services. Although other demographic aspects of the community may also affect charitable church activity, it is prudent to focus on race because race-related issues have played a major role in the public debate over charitable choice. We investigate the effect of race on charitable church activity by comparing 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 relative 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, as shown below, homogeneous congregations are important because they make up a large share 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

²While 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.

residents in the community grows. This difference in response to share black is economically significant. On average, we estimate that the elasticity of per-member charitable church spending to share black in the community is 0.06 to 0.20 less for all-white congregations than for other congregations. 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. Unlike all-white congregations, all-black congregations do not display particular sensitivity to the local community's racial composition.

Despite the difference-in-difference approach, one might be concerned that unobserved phenomena correlated with race drive the results. A number of tests suggest that the results are robust to this 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. We do not find a negative response to black residents among congregations that are overwhelmingly (but not entirely) white. Moreover, 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. 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 strategy, 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. A Simple Model of Church Activity

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 (2002), 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 (2004) for a review.

This research has postulated, but not substantiated, 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 (2004) 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.

The focus here will be comparing 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:

$$y = \alpha + \sum_j \delta_j \text{race}_j + \gamma H + \sum_j \delta_j^H (H * \text{race}_j) + \beta X + \varepsilon, \quad (1)$$

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.

Multicollinearity necessitates that a certain racial group 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

$$y = \alpha + \delta_j race_j + \gamma H + \delta_j^H (H * race_j) + \beta X + \varepsilon, \quad (2)$$

for each racial group j .

One might be concerned that the racial composition of the community is likely correlated with many 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.

A robustness test that deserves special discussion involves seeing whether there is a difference between the responses to race of homogeneous congregations and the responses of nearly-homogeneous congregations. There are a number of reasons to expect a difference between these types of congregations. Alesina and La Ferrara (2000) show theoretically that members of homogeneous groups can respond to community heterogeneity much differently than members of even slightly mixed groups. Furthermore, Alesina and La Ferrara note that in the absence of travel costs, individuals who display any aversion to members of other racial groups will *always* sort into totally homogeneous social groups. Homogeneous congregations are also likely to behave differently than nearly homogeneous congregations because their homogeneity may be a signal for the latent preferences of their members. Many congregations that are now racially diverse were historically homogeneous (DeYoung et al, 2003). The fact that some congregations have slightly diversified may indicate that their members are somewhat less averse to diversification than are members of still-homogeneous congregations. Finding a difference in

the response to race by these types of congregations would therefore be compelling evidence that race-based preferences, and not unobserved phenomena, are driving our results.

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 other 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. 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 primarily 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 appendix A). For denomination 2 charitable spending is adjusted for inflation (2000 is the base year). In both cases, some church spending which is not strictly local charitable spending may be included in our measure of

³ We will also consider all-black churches in what follows. In the regression sample there are 149 all-black churches in denomination 1 and 1,242 in denomination 2. For denomination 1, only 68 churches are all-Asian and only 20 churches are all-Hispanic. For denomination 2 the figures are 125 and 67, respectively.

charitable spending (for example, spending on a local church picnic), and this will probably bias our coefficients towards zero.

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 (2004). 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 will capture relevant community characteristics. We will use the county as our measure of the church's community (we use census-tracts in the next section). 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 provided by the Bureau of Economic Analysis and the annual unemployment rate is taken from the Bureau of Labor Statistics. For denomination 2, income is adjusted for inflation. 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 not Hispanic, those responding as white alone are designated as white, the same for blacks. Asians and

Native Hawaiian/Pacific Islanders are grouped together.⁴ 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.⁵

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.) The results are somewhat sensitive to the inclusion of three churches, two in denomination 1 and one in denomination 2, with very large spending or membership values; these churches were dropped from the sample. 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;⁶ the panel regressions use county and year dummies. Only the racial coefficients are shown in table 1. The coefficients for all the covariates in columns 1 and 3 are given in the appendix; for brevity we do not discuss them except to say that they generally accord to our expectations. In all cases the R-squareds are reasonable for regressions on religious activity (Iannaccone, 1998).

⁴ For conciseness we will refer to the Asian, Native Hawaiian and Pacific Islander group as simply the Asian group.

⁵ Admittedly, race is an arbitrary construct. In what follows we rely on census respondents having concepts of race similar to those of the denominations and the NCS respondents providing the congregation data.

⁶ 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 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, the estimates suggest that if the local community went from entirely non-black to entirely black; the average all-white church in denomination 1 would be expected to decrease per-member spending on charitable activity by about 70 percent, while other congregations in denomination 1 would only be expected to decrease spending by 15 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 significant to negative and insignificant once county fixed effects are added in; 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. 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. However, in what follows we test the robustness of our findings to log-log and linear-linear specifications; under these latter specifications the interacted coefficient on Hispanic is no longer significant. 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 positive 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.

Do other types of homogeneous churches also respond differentially to the racial composition of the community? All-white churches are by far the most common type of homogeneous church in either dataset and unfortunately there are too-few all-Asian or all-Hispanic churches in the datasets to allow an analysis of their behavior. However, table 3 presents results for all-black churches and while the uninteracted coefficients are generally similar to those in table 2, the interacted coefficients are very different: none of them are significant. Column 4 shows that all-black churches in denomination 2 do not respond differently than other churches to whites—and the uninteracted coefficient is positive and significant. In other words, all-black churches here have higher levels of per member charitable spending in white communities.⁷ This could reflect a denomination-specific phenomenon, or it could be evidence that churches in highly-white neighborhoods are unobservably different from other churches in general. But this unobservable phenomenon is unique to the regressions for denomination 2, and in any case there is no evidence at all in table 3 that all-black churches in either denomination respond differently than other churches to any particular racial group.

⁷ A Wald test that the sum of the interacted and uninteracted coefficients on share county white equals zero yields $F(1, 2640) = 9.08$, which rejects the null at the 1 percent level.

In sum, the only result in table 2 or 3 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 or for all-black churches that is seen in both cases, and there is no other racial group to which all-white 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: Specification and Robustness Tests

One may question the choice of the semilog specification in tables 2 and 3, which necessitates that an increase from one percent to two percent black in the community has the same proportionate effect on per-member charitable church spending as would an increase from 98 percent to 99 percent. Alternately, one may feel that the congregation is not the correct unit of observation, but rather that churchgoers themselves are the relevant decision makers; this would suggest weighting our observations by congregational membership.

Table 4 demonstrates that our finding on all-white churches and black residents is extremely robust to various specifications. The first two columns repeat the basic regressions—regression 1 and 3 from table 2—weighting church observations by membership. The results are clearly robust under either specification. The next two columns of table 4 adopt a linear-linear approach; the dependent variable is per-member charitable church spending, not logged. The result is now significant at the one percent level for both denominations. The final two columns use a log-log specification where the log of share black is used. The results are robust to this specification as well. As mentioned before, the results on share Hispanic for denomination 1 were tested in the linear-linear and log-log specifications; under these specifications the result was no longer significant and the regressions are omitted.

While the coefficients in the three different specifications are all interpreted differently, we can compare the implied elasticities for the mean values of the regressors under each specification. For denomination 1 under the semilog specification, the difference in elasticity of church spending to share

black between all-white churches and other churches -0.06 .⁸ For denomination 2 the difference also equals -0.06 . These are essentially the same as the difference in elasticities estimated in the log-log specification (which is the interacted coefficient on share black minus the uninteracted coefficient). The differences in elasticities in the linear-linear specification are slightly larger in absolute value, about -0.2 for each denomination. Overall, the different specifications give generally similar estimates of how all-white churches respond differently to blacks than do other churches.

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 tables 2 and 5, 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.⁹ The instrument used in Alesina, Baqir

⁸ This is calculated using the results from table 2. For denomination 1 the mean share black in the regression sample is 0.11; the mean of the dependent variable (not logged) is 54.6. For denomination 2 the values are 0.12 and 19.7, respectively.

⁹ A recent paper by Alesina, Baqir, and Hoxby (2004) uses labor migration prompted by war contracts during the First and Second World Wars to identify the effect of community fragmentation. This would not work well here to identify the black coefficient for three reasons. First, communities which received such contracts were manifestly different from other communities and it is not clear how these contracts are an exogenous source of variation. Second, the war contracts could affect a community in other ways besides changing racial composition. Third, data

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 5; they are identical 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 5 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 3 and 4 of table 5, 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.

on war contracts are available for cities, whereas our data include a very large number of rural churches; using this strategy would therefore dramatically diminish the coverage of our data.

Alesina, Baqir, and Easterly (1999) mention that percent black in the community may be highly correlated with measures of community diversity. Perhaps this could bias the estimations of the effect of share black in the community (although it is unclear how it would impart a differential effect on all-white churches in black communities). Columns 6 and 7 of table 5 add the traditional fragmentation index described in Alesina, Baqir and Easterly's paper to measure church and community diversity. While the fragmentation indices are not consistently estimated across denominations, this is likely in part influenced by the inclusion of county fixed effects for denomination 2. The indices do have some effect on the estimates of percent black but do not have an effect on the interacted terms.

As mentioned earlier, if members' latent preferences on race affect a congregation's racial composition, then overwhelmingly but not entirely white churches may have different responses to race than do all-white churches. However, if some unobserved effect is driving our result for all-white churches, this effect should also appear when comparing overwhelmingly but not entirely white churches in highly black communities to other churches. It is hard to think of how any factor other than preferences over race would explain finding our result in entirely white churches but not in 99 percent white churches, for example.

Columns 8 and 9 in table 5 repeat the standard regression but this time all-white churches have been omitted and instead the share black is interacted with a dummy variable for whether or not a church's membership is over 99 percent but less than 100 percent white. There are 1,199 such churches for denomination 1 and 4,692 such churches in denomination 2. In both cases we cannot reject the hypothesis that almost all-white churches respond to blacks in the community in the same way as other churches. For denomination 1 the interacted coefficient is slightly smaller (in absolute value) than before, and for denomination 2 the coefficient is now positive.

The final two columns of table 5 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 very close to its original value but 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 -0.6470 with a standard error of 0.3238, which is very close to before and significant at the five percent level. The coefficient for denomination 1 is still insignificant in this case, however (these results are not reported in table 5 to save space).

To summarize, results using these two denominational datasets suggest that 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. The result is robust to different specifications, is found in both datasets, and is robust to controlling for member wealth, area fixed effects, community fragmentation, church fragmentation, and to instrumenting for share black. Overwhelmingly (but not entirely) white churches do not display the result. Estimated coefficients are very 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

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.¹⁰

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 6 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 Islander, black, Hispanic, and white.¹¹ As before, all-white congregations make up the vast 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

¹⁰ Further details on these data can be found in Chaves (1998) and Chaves, Konieczny, Byerlein, and Barman (1999).

¹¹ The 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.

sample is truly nationally representative, but results will nevertheless be informative.¹² As shown in table 6, 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 both sets of categories to define charitable activity. If the results are similar using both sets of categories, it should allay fears that the findings are driven by manipulating the respondents’ answers. Appendix A 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 6 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.

¹² 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.

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

There are only 49 all-black congregations in the regression sample; our focus with the NCS dataset will therefore be on all-white congregations. Table 7 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 7 can be found in table A2. The estimates shown are the marginal effects from a Probit regression.

The first column in table 7 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 insignificant. This is not surprising, given that this definition includes programs which may not be 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).

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 7 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 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. 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 8 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 8. 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.

Column 2 adds church and community fragmentation indices to the basic regression. Including the fragmentation indices has no effect on the result; the indices are not statistically significant and are suppressed. Column 3 runs the regression using almost all-white congregations instead of all-white congregations. A congregation is almost all-white if it is at least 99 percent but less than 100 percent white. There are 114 almost all-white congregations. Column 10 shows that almost all-white congregations do not respond differently to blacks than do other non-all-white congregations. Given the possibility of error among respondents giving the percent of their congregation that is white, the regression was repeated defining 95 percent and 98 percent white congregations as almost all-white; this did not change the results.

The regressions in columns 4 and 5 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.

The two last columns of table 8 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) 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.¹³

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. There are three equally valid interpretations of this latter coefficient; in this case the most pertinent interpretation of the results is that only all-white congregations who are *not* favorably inclined to seek public funding respond more negatively to the share black in the community than other congregations. For both regressions a Wald test that the sum of the triple interaction coefficient and the coefficient on the interaction between share black and the all-white dummy equals zero cannot be rejected at any level. 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 enormous 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. 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.

¹³ 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.

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 also consider this issue.

Hungerman (2004) finds evidence that charitable church activity can substitute for government activity. One might suspect 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 our difference-in-difference approach. Future research in this area should view omitted community characteristics as a primary concern.

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Appendix A: 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	62.94	16.41	25.50
	[119.40]	[156.78]	[106.09]	[241.36]
Share church members white	1	0.85	1	0.81
	[0]	[0]	[0]	[0.36]
Share church members black	0	0.07	0	0.14
	[0]	[0.23]	[0]	[0.34]
Share church members Asian	0	0.04	0	0.03
	[0]	[0.18]	[0]	[0.15]
Number of members in church	140	350	202	470
	[204]	[450]	[272]	[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	0.49	0.50	0.72
	[0.30]	[0.29]	[0.74]	[5.95]
Share of county black	0.09	0.13	0.11	0.13
	[0.13]	[0.14]	[0.15]	[0.15]
Share of county Hispanic	0.04	0.10	0.03	0.09
	[0.06]	[0.13]	[0.05]	[0.13]
Share of county white	0.85	0.71	0.84	0.74
	[0.15]	[0.20]	[0.16]	[0.19]
Share of county Asian	0.01	0.03	0.01	0.02
	[0.01]	[0.04]	[0.01]	[0.04]
Share of county under 18	0.25	0.25	0.25	0.26
	[0.02]	[0.03]	[0.03]	[0.03]
Share of county 50-64	0.16	0.15	0.15	0.14
	[0.02]	[0.02]	[0.02]	[0.02]
Share of county 65-84	0.13	0.11	0.13	0.11
	[0.03]	[0.03]	[0.03]	[0.03]
Share of county 85 and over	0.02	0.02	0.02	0.01
	[0.01]	[0.01]	[0.01]	[0.01]
Share of county immigrant	0.02	0.05	0.01	0.04
	[0.02]	[0.06]	[0.02]	[0.05]
County population density	333.28	1583	226	987
	[829]	[4847]	[588]	[2734]
County unemployment rate	4.50	4.04	5.21	4.72
	[1.99]	[1.92]	[2.36]	[2.29]
County average personal income	24557	29730	22314	26557
	[5271]	[8986]	[4882]	[7425]
Share of county HHS headed by a single female	0.11	0.12	0.11	0.12
	[0.03]	[0.04]	[0.04]	[0.04]
Total observations	3014	4660	21100	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 2,641 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 the county summary statistics are similar to those shown here.

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	-0.1487 [0.3211]	0.5236* [0.2187]	-0.3083 [1.1094]						
Share County Black*All-White Dummy	-0.5677* [0.2249]	-0.6279** [0.1538]	-0.5242** [0.1539]						
Share County White				0.3531 [0.3223]	2.1964** [0.8092]				
Share County White*All-White Dummy				0.0534 [0.1992]	0.3521* [0.1373]				
Share County Hispanic						-0.2487 [0.3688]	-3.0837** [1.1427]		
Share County Hispanic*All White Dummy						0.9769* [0.4465]	0.175 [0.3027]		
Share County Asian								-1.1979+ [0.6982]	-3.6079 [2.8373]
Share County Asian*All-White Dummy								-0.3418 [1.9394]	-1.2786 [1.1959]
All-White Church Dummy	-0.0622 [0.0438]	-0.0897** [0.0269]	-0.0578* [0.0280]	-0.1645 [0.1674]	0.3521* [0.1373]	-0.1656** [0.0408]	-0.1229** [0.0260]	-0.1175** [0.0434]	-0.1000** [0.0270]
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	33021	33021	7674	33022	7674	33021	7674	33021
R-squared	0.17	0.07	0.21	0.17	0.21	0.17	0.21	0.17	0.21

+ significant at 10%; * 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
Basic Results from Denomination Datasets: All-Black Churches versus Other Churches

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Share County Black	-0.3273 [0.3167]	-0.4722 [1.1211]						
Share County Black*All-Black Dummy	-0.4011 [0.7682]	-0.4227 [0.3278]						
Share County White			0.352 [0.3194]	2.2816** [0.8062]				
Share County White*All-Black Dummy			0.0543 [0.7231]	0.2212 [0.3188]				
Share County Hispanic					-0.1885 [0.3694]	-3.1391** [1.1654]		
Share County Hispanic*All-Black Dummy					0.2135 [0.4227]	1.1086 [0.9232]		
Share County Asian							-1.0965 [0.6973]	-3.8356 [2.8551]
Share County Asian*All-Black Dummy							0.0788 [7.1846]	-1.6777 [3.0318]
All-Black Church Dummy	0.1338 [0.3128]	-0.071 [0.1323]	-0.0268 [0.4765]	-0.3388 [0.2297]	-0.0001 [0.1750]	-0.2485* [0.1066]	-0.0012 [0.2007]	-0.1771+ [0.1048]
Total All-Black Churches in Regression	149	1242	149	1242	149	1242	149	1242
Denomination	1	2	1	2	1	2	1	2
Church & community covariates?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7674	33021	7674	33021	7674	33021	7674	33021
R-squared	0.16	0.21	0.16	0.21	0.16	0.21	0.16	0.21

+ significant at 10%; * 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. All regressions include all community and church covariates and area fixed effects where area fixed effects correspond to church jurisdictions for denomination 1 and counties for denomination 2.

Table 4**All-White Churches & Black Residents: Different Specifications with Denominational Datasets**

	Weighted Semilog		Linear-Linear		Log-Log	
	(1)	(2)	(3)	(4)	(5)	(6)
Share County Black	-0.3157 [0.4096]	1.0058 [1.3331]	1.0539 [24.5365]	-59.1505 [83.7747]		
Share County Black*All-White Dummy	-0.7475* [0.3014]	-0.4926* [0.2115]	-103.2573** [17.2000]	-34.3177** [11.0941]		
Log of Share County Black					0.0364 [0.0226]	-0.0131 [0.0393]
Log of Share County Black*All-White Dummy					-0.0343+ [0.0183]	-0.0549** [0.0126]
All-White Church Dummy	0.0846 [0.0683]	-0.0206 [0.0393]	5.6586 [4.8303]	4.1413* [2.0826]	-0.2327** [0.0693]	-0.2887** [0.0453]
Denomination	1	2	1	2	1	2
Weighted by church membership?	Yes	Yes	No	No	No	No
Church & community covariates?	Yes	Yes	Yes	Yes	Yes	Yes
Observations	7674	33021	7674	33021	7663	32921
R-squared	0.26	0.31	0.06	0.48	0.17	0.21

+ significant at 10%; * significant at 5%; ** significant at 1%

The dependent variable is congregational per-member spending on local benevolent activities; it is logged in all columns except 3 and 4. Robust standard errors in brackets. All standard errors are clustered by county. All regressions include all community and church covariates and area fixed effects where area fixed effects correspond to church jurisdictions for denomination 1 and counties for denomination 2.

Table 5
All-White Churches and Black Residents: Robustness Tests

	IV Regressions ^a		W/Donations (5)	Operating Expenses ^b		Fragmentation Indeces		Almost All-White ^c		All Interactions ^d	
	(1)	(2)		(3)	(4)	(6)	(7)	(8)	(9)	(10)	(11)
Share County Black	-0.2459 [0.3468]	-1.3053 [1.6773]	-0.2813 [0.3128]	0.1002 [0.1681]	-1.2682** [0.4462]	-0.2123 [0.3313]	2.4760* [1.2443]	-0.3153 [0.3156]	2.5379 [1.6665]	-0.3214 [0.3919]	2.5611 [1.6392]
Share County Black*All-White Dummy	-0.5628* [0.2276]	-0.5331** [0.1488]	-0.5754** [0.2113]	0.1451 [0.1195]	0.4905** [0.0869]	-0.5506* [0.2253]	-0.5020** [0.1539]			-0.4422 [0.6347]	-4.6901* [2.1154]
All-White Church Dummy	-0.0625 [0.0440]	-0.0568* [0.0268]	-0.0182 [0.0416]	-0.1373** [0.0205]	-0.1642** [0.0141]	-0.0174 [0.0445]	-0.0697* [0.0289]				
Log of Church Contributions per Member			0.9239** [0.0489]								
Church Fragmentation Index						0.8119** [0.2100]	-0.3054 [0.2590]				
Community Fragmentation Index						0.0734 [0.2184]	-1.1318* [.5743]				
Share County Black*Almost All-White Dummy								-0.4036 [0.2942]	0.2753 [0.2745]		
Almost All-White Dummy								-0.0336 [0.0584]	-0.1068* [0.0494]		
Denomination	1	2	1	1	2	1	2	1	2	1	2
Church & Community Covariates?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
All coefficients interacted w/all-White Dummy?	No	No	No	No	No	No	No	No	No	Yes	Yes
Observations	7674	33021	7664	5444	32200	7674	33021	4660	11921	7674	33021
R-squared	-	-	0.23	0.29	0.38	0.17	0.21	0.17	0.3	0.19	0.27

+ significant at 10%; * 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 one are preserved when the regressions are rerun with the smaller sample.

^cRegressions exclude all-white churches from sample. Churches are defined as "almost all-white" if more than 99 percent but less than 100 percent of their members are white. There are 1,199 such churches for denomination 1 and 4,692 such churches in denomination 2.

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

Table 6
Summary Statistics For NCS Dataset

Variable	All-White Congregations		Other Congregations	
	Mean	Std. Dev.	Mean	Std. Dev.
Share of congregation white	1	0	0.705	0.379
Share of congregation black	0	0	0.169	0.336
Share of congregation Asian	0	0	0.025	0.095
Share of congregation Hispanic	0	0	0.069	0.158
Charitably Active Dummy-general definition	0.59	0.49	0.751	0.433
Charitably Active Dummy-specific definition	0.54	0.50	0.686	0.464
Number of Participating Adults	158	187	779	1394
Cong's ratio of children and teens to adults	0.41	0.26	0.405	0.453
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	0.223	0.225
Share of congregation adults w/incomes >100k	0.06	0.13	0.097	0.145
Share of congregation new in past year	0.14	0.13	0.138	0.128
Share of congregation new to US in past year	0.01	0.05	0.025	0.078
Share of congregation Female	0.57	0.14	0.559	0.155
Share of congregation over 60	0.35	0.20	0.275	0.181
Share of congregation w/4-year degree	0.24	0.24	0.352	0.279
Share of congregation w/out H.S. degree	0.11	0.17	0.095	0.142
Share of congregation living w/in 10 minute walk	0.17	0.19	0.191	0.230
Share of congregation under 35	0.26	0.15	0.295	0.170
Dummy for cong. discussing political acitivity in worship in past year	0.26	0.44	0.404	0.491
Dummy for cong. participating in woship w/a cong. of a different racial/ethnic makeup in past year	0.25	0.43	0.327	0.469
Dummy for cong. experiencing conflict	0.22	0.42	0.282	0.450
Dummy for urban congregation	0.21	0.41	0.677	0.468
Dummy for rural congregation	0.61	0.49	0.178	0.383
Dummy for theologically conservative cong.	0.68	0.47	0.499	0.500
Dummy for politically conservative cong.	0.72	0.45	0.517	0.500
Share census-tract under 18 (1990)	0.26	0.04	0.250	0.067
Census-tract unemployment rate (1990)	0.07	0.03	0.068	0.047
Share of census-tract black (1990)	0.10	0.18	0.147	0.252
Share of census-tract Hispanic (1990)	0.02	0.05	0.081	0.148
Share of census-tract white (1990)	0.87	0.19	0.742	0.288
Share of census-tract Asian (1990)	0.01	0.01	0.024	0.054
Census tract avg. personal income (1990)	11720	3673	15031	8287
Share census tract poor (1990)	0.15	0.09	0.141	0.124
	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 7
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*White Church 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 10%; * 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 the only 99th percentile is eliminated.

Table 8
NCS Regressions: Extentions

	Noncharitable Activities Regression ^a (1)	W/Fragmentati on Indeces (2)	W/Almost all- White Dummy ^b (3)	All Interactions (4)	All Interactions (5)	Triple Difference Regression (6)	Triple Difference Regression (7)
Share Census tract Black	-0.1958+ [0.1063]	0.0774 [0.1133]	0.0145 [0.1119]	0.028 [0.1141]	0.0247 [0.0853]	0.124 [0.1689]	0.1508 [0.1526]
Share tract Black*White Church Dummy	0.1065 [0.2499]	-0.7215* [0.2945]		-1.0241+ [0.5825]	-0.8800+ [0.5263]	-1.1540** [0.4387]	-0.7297* [0.3120]
All-White Congregation Dummy	-0.0312 [0.0502]	0.0328 [0.0544]		-0.8843** [0.1104]	-0.9947** [0.0117]	0.0343 [0.0696]	0.0122 [0.0612]
Share tract Black*Almost All-White Dummy			0.1827 [0.4497]				
Almost All-White Congregation Dummy			-0.0979 [0.0617]				
Favoribly Inclined to Government Funding Dummy						0.0881+ [0.0459]	0.0598 [0.0421]
Favoriably Inclined Dummy*All White Dummy						-0.0082 [0.1140]	0.018 [0.0966]
Favoriably 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	Specific	Specific	General	Specific	General
Congregational & community covariates?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Region and Denomination Dummies?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
All coefficients interacted with all-white Dummy?	No	No	No	Yes	Yes	No	No
Observations	1020	1020	872	1016	1016	913	913

+ significant at 10%; * 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.

^bThe regression excludes all-white congregations. A congregation is almost white if at least 99 percent but less than 100 percent of its members are white; there are 114 congregations that are almost white. Using a cutoff of over 95 percent white does not change the result.

Appendix Table A1

Full Results from Basic Denominational Regressions

Variable		
Share county black	-0.1487	-0.3083
	[0.3211]	[1.1094]
All-white dummy*share county black	-0.5677*	-0.5242**
	[0.2249]	[0.1539]
Dummy for all-white church	-0.0622	-0.0578*
	[0.0438]	[0.0280]
Share of church white	0.3567*	0.1256
	[0.1757]	[0.1780]
Share of church black	0.1776	-0.4141*
	[0.2040]	[0.1764]
Share of Church Asian	0.6706**	0.9235**
	[0.1948]	[0.2006]
Log of number of members in church	0.2184**	-0.0582**
	[0.0173]	[0.0125]
Church mortality rate	3.0283**	0.3021
	[0.7137]	[0.4064]
Ratio of individuals in church education programs to members	0.5658**	0.0425**
	[0.0583]	[0.0069]
Share of county under 18	-5.8836**	-6.2025**
	[0.7784]	[1.5160]
Share of county 50-64	-0.4427	-0.6751
	[1.4743]	[2.0009]
Share of county 65-84	0.9925	-3.1435+
	[1.4135]	[1.7979]
Share of county 85 and over	-14.8500*	-12.9459
	[6.0619]	[8.1123]
Share of county immigrant	1.1442*	0.0309
	[0.5738]	[1.0680]
County population density	-0.0097+	-0.0568
	[0.0058]	[0.0432]
County unemployment rate	0.0201	-0.0038
	[0.0124]	[0.0098]
County average personal income (1000s)	0.0162**	0.0033
	[0.0033]	[0.0089]
Share of county HHS headed by a single female	4.5020**	5.7206*
	[1.1610]	[2.5263]
Denomination	1	2
Observations	7674	33021
R-squared	0.17	0.21

+ significant at 10%; * significant at 5%; ** significant at 1%

These are the full set of estimates for the regressions presented in table 1, 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.

Appendix Table A2

Full Results from Basic NCS Regression

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

+ significant at 10%; * 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 7. 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 appendix A. Standard errors in brackets. Results include denominational and regional dummy variables.