

## **Political Geography, Campaign Contributions, and Representation**

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May 2010

**PRELIMINARY DRAFT: PLEASE DO NOT CITE**

**Abstract:** Voters care about public policy that affects them directly, and the scope of their interests may not be well defined by congressional district boundaries. The constraints of the electoral system are particularly evident within metropolitan areas, where citizens may live and work and shop and pray and play in different congressional districts. When citizens cannot vote to express their preferences in a relevant congressional race they may seek to express their political preferences by other means. In this paper we examine one such form of participation: campaign contributions. We hypothesize that citizens' contribution decisions will be a function of the connectedness of their metropolitan region: citizens living in more interconnected regions will be more likely to donate to candidates in neighboring congressional districts than those who live in less connected regions. To support this conjecture, we geolocate all congressional campaign contributions by individuals in the 2007-08 election cycle. Using ArcGIS technology, we overlay maps of congressional boundaries and metropolitan regions (MSAs) to identify the congressional district and MSA of each donor and each recipient. We use several measures to compute interconnectedness of the MSA, including commuting times, mode of transportation, and work/residence patterns. We find positive and significant support for our hypotheses. Our results call to question the conventional theory of representation with its underlying premise of a dyadic relationship between the constituent and her home-district representative.

## Introduction

From Pitkin (1967) to Mayhew (1974) to Fenno (1978), the dominant modern theory of representation in the American political system remains premised on the dyadic relationship between the voter and her congressional representative. Recent empirical work continues this tradition, seeking to establish the extent of congruence between what a legislator does and what his/her constituents want, and the conditions that lead to more or less congruence (e.g., Quaile Hill and Hurley 1999, Hurley and Quaile Hill 2003, Bailey and Brady 1998, Adams et al. 2004, Gerber and Lewis 2004, Wlezien 2004, Griffin and Newman 2005).

Despite the continued dominance of the dyadic theory, some scholars have begun to conceive of representation in systemic terms (e.g., Weissberg 1978, Mansbridge 2003). We highlight one of the systemic alternatives, characterized by Mansbridge as *surrogacy*: when a political official represents someone outside of his district. Mansbridge offers as examples instances of identity representation, such as Barney Frank, the Massachusetts representative, acting as the de facto representative for the nation's gay population. Another example of surrogacy is issue- or interest-based representation, when one representative takes the lead on writing anti-war or pro-choice legislation of interest to a population scattered nationwide. Surrogacy may also be implied when citizens care about overall party representation in Congress (Gimpel, Lee, Pearson-Merkowitz 2008). When surrogacy is based on broad national issue or interest categories, it may be likened to institutionally-based theories of representation (Jackson and King 1989), where a citizen wants to maximize the influence over her issue in the legislature.

In this paper we challenge both the district-based dyadic theory of representation and the institutionally-based theory as well. Instead, we suggest a middle path, where citizens express support for a regionally-based team of representatives. We find evidence that citizens respond to a mismatch between their designated political geography and their economic area of interest. We look at a form of political participation, individual campaign contributions, that allows citizens to choose where to express a preference; our results indicate that voters care about the outcome of elections in neighboring districts. This neighborhood interest grows as the citizen's relationship with other districts intensifies due to economic integration. Our results suggest that a citizen's sense of her "representative" may not fit neatly into the one-to-one correspondence implied by representational theory. Her preferences may not derive solely from political boundaries, but instead are also based on occupational interests or localized policy spillovers.

### **The Disconnect Between Political and Economic Geography**

The most commonly studied form of political participation is voting. Conventionally, participation is likened to a ladder: voting is at the bottom rung, while other forms of political expression, such as placing yard signs, campaigning, registering voters and contributing financially to campaigns, are often explained by the same predictors, but with an assumption that augmented intensity of political preferences moves the citizen up the ladder of participation (eg. Verba and Nie, 1987). Citizens are defined politically as constituents within political districts that are assigned based on their residential address. The system is based upon the citizen's position in geographic space: the address of her house. However, the dominant theories of why people participate in politics focus primarily on individual characteristics of the citizen--

education, financial resources, age, religion, information, etc. Precious few of these explanations consider the person's location in space, and how that location may affect the individual's participation decisions.<sup>1</sup>

While voting may be the most common form of political expression, it is also highly unusual in the sense that the electoral process places significant constraints on political behavior. Apportionment of citizens into legislative districts fragments political space, imposing artificial/arbitrary boundaries that limit citizens' political choices. Geographic districts delineate the set of citizens to whom a representative is electorally accountable. Yet the actions of one legislator are bound to spill outside his/her district boundaries, creating externalities for people living in other districts. From a voter's perspective, geographic apportionment limits her electoral choices. It means that a voter can only vote for a subset of legislators whose actions will affect her well-being. A citizen in one district may feel that a legislator from a different district better represents her interests, but her residential address makes her ineligible to vote for that candidate.

These constraints may limit the appropriateness of transferring insights about voting behavior to other domains of political behavior. We should also hesitate to extrapolate from

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<sup>1</sup> A seminal exception is Huckfeldt and Sprague (1987) who chart the influence of social context on political behavior; social context is strongly correlated with location. Recently interest has bloomed in the effect of spatial context on political participation. Cho and Nicley (2008) demonstrate the effect of state boundaries in creating political identity and shaping voting decisions. OTHER CITES.

observed voting behavior to formulate our theories of representation. In constructing theories of representation and accountability, we may overlook meaningful sources of political preferences simply because a citizen is unable to express them electorally.

We contend that political boundaries – particularly legislative districts that are drawn to achieve legal mandates such as contiguity or compactness, or political goals such as partisan or incumbent advantage (Cain 1984) – may often not map onto a citizen’s need for representation or her desire to express a political preference. The legislative district is a created space that may change with each apportionment, and sometimes even more frequently. Motivations for political action defy such boundaries and come from other spatial contexts.

Other forms of participation expand the set of political choices. One such form of behavior is contributing to political campaigns. Whereas voters are limited to choosing between the subset of candidates running to represent the district in which they reside, they are free to make campaign contributions to any candidates running in any district (subject to an overall dollar limit). As such, contributions as a form of political participation may reveal much about citizen preferences.<sup>2</sup>

We study whether campaign contributions serve as a means for addressing spillovers in legislative behavior. Do donors target contributions in ways that address geographic spillovers? If they do, it suggests that contributions may offset some of the artificial fragmentation created by legislative apportionment. If they do not, it suggests that donors are motivated by considerations other than affecting regional election outcomes and policies.

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<sup>2</sup> Recent studies by Ansolabehere et al (2003) and Gordon et al (2007) consider the possibility that individual campaign contributions should be viewed as “consumption” rather than as “investments,” with Ansolabehere et al. concluding “yes” and Gordon et al. concluding “no.” Consistent with Gordon et al., we provide evidence that donors respond to the interconnectedness of their economic regions and target contributions in ways that are consistent with advancing their economic self-interest.

We focus on a conception of space that is defined by behavior rather than politics: U.S. metropolitan areas. Metropolitan areas are defined as regions surrounding a central city or cities with high population density and strong social and economic ties. A great deal of economic activity in the U.S. takes place on a metropolitan scale (Brookings 2009). People are tied in myriad ways to the people, places, businesses, and politicians throughout their metropolitan region; these linkages help to define an individual's political interests. In larger metropolitan regions, this space generally crosses several congressional district boundaries. We hypothesize that metropolitan area-level context will have an important impact on individual's contribution decisions.

In addition, many public policies are explicitly or implicitly metropolitan in scope. For example, the major U.S. surface transportation programs require planning and funding to take place at the metropolitan level (Gerber and Gibson 2009). Many housing, environmental, emergency preparedness, and other policies are also metropolitan in scale (NARC 2002). These programs create policy linkages within metro areas; we hypothesize that donors will recognize these linkages and direct their contributions to candidates across their metro area.

We believe that by shifting attention away from strictly individual-level factors, and acknowledging the potential importance of local economic context on individual participation decisions, this study has the potential to dramatically change the way we think about and study representation and political participation in a complex political system.

### **Capturing the Effect of Regional Interconnectedness on Representation**

Contributing to political candidates represents a form of political expression that frees the citizen from the spatial constraints imposed by the electoral process. Each donor is tied to a particular geography (i.e., street address) but is unlimited in the choice of candidate(s) to support (subject to candidate- and election-cycle-specific dollar limits). Contributions to congressional candidates are also a well-documented form of political participation, at least for amounts of \$200 or more. Therefore campaign contributions offer a unique opportunity to observe political participation.

[Add section on campaign contribution literature – PACs vs. individuals, total amount of individual contributions, theories about donor motivations.]

We begin by noting the prevalence of out-of-district campaign contributions. In the 2007-08 election cycle, 62% of the contributions made and 64% of the dollars contributed by individuals to any congressional candidate were made to candidates outside of the donor's district.<sup>3</sup> The average candidate received 59% of contributions and 61% of dollars raised from out-of-district contributors. In the 2007-2008 electoral cycle, 93 congressional candidates reported that they raised *no money at all* from within their own district. Given that the majority of donations are sent outside of a donor's district, and a majority of contributions are received from donors outside of a candidate's district, one should not infer that the congressional district boundary is the strongest spatial context affecting a donor's decision.

Gimpel, Lee, and Pearson-Merkowitz (2008) study the patterns of individual out-of-district campaign contributions. Their research confirms earlier findings that individuals are more likely to donate to a campaign if the election is competitive. By further tracking donation

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<sup>3</sup> These percentages are calculated from the 1,178 congressional candidates in the 2007-2008 electoral cycle.

patterns by donor zip code, they are able to trace a significant proportion of the donations to populations with high wealth and education. They infer that donors are motivated by partisan concerns for congressional control, and will donate funds to competitive districts nationwide to maximize the party's control of congressional seats. Their results are consistent with an institutional conception of representation (Jackson and King 1989).

We investigate the extent that local economic concerns influence where donors send their checks. It is possible that donors perceive the economic effects of policy to be largely contained within the boundaries of their own district, therefore leading them to contribute to the campaigns of home district candidates. But as policy concerns spill across political boundaries, citizens grow more concerned about electoral outcomes in neighboring districts. As the regional economy becomes more interconnected, donors grow more likely to send their checks out of their districts, and to a neighboring district.

By examining contribution patterns across the economic space of metro areas, we can examine the effects of geographical spillovers on political participation. Our voting rights are restricted by residence, but political interests extend beyond the boundaries of congressional districts because the effect of policies may spill across political lines. Citizens with significant ties - perhaps employment, perhaps educational, perhaps social or recreational - to a neighboring congressional district will care about the district's political representative. The greater these ties, the greater the likelihood of cross-district activity. Therefore our primary hypothesis is:

**Hypothesis 1:** *People living in highly interconnected metropolitan areas are more likely to make out-of-district campaign contributions to candidates within their metro area than are people living in less interconnected metro areas.*

In the following sections, we describe our data and methodology for measuring and analyzing spatial patterns of campaign contributions. We then define our measures of regional interconnectedness and various controls. We present our analyses and results, and conclude with a discussion of implications.

## **Methodology and Data**

### ***Individual Contributions***

Testing our hypotheses requires us to measure individual contributor behavior, each donor's precise geographic location, and aspects of the spatial and electoral environments. Our primary data source is the database of individual contributions to U.S. congressional candidates, available from campaign disclosure reports filed by federal campaign committees (including candidate committees, party committees, PACs, and others) with the U.S. Federal Elections Commission. The data files report each individual donor's name, occupation, contribution date, contribution type, recipient committee, and amount for each contribution over \$200. For all electronically filed reports, the donor's address is also available in a separate pdf file. For the 2007-08 election cycle, the Center for Responsive Politics has combined these data sources and added each donor's address to the contribution database file. Since our analyses require us to identify each contributor's location in several spatial dimensions based on their street address, we focus on the

07/08 election cycle for which these data are available. That file contains records for 595,566 individual contributions to congressional candidates.

The FEC/CRP data are in several ways particularly well suited for our analyses. They are comprehensive as they include every contribution over \$200 received by every registered committee, as required by federal law. They are reliable in the sense that they are filed by committees, who are subject to substantial penalties for misreporting, and not by individual donors who may be vulnerable to non-reporting, recall errors, or response bias. And they contain several important pieces of information, particularly the donor's address, occupation and employer. However, the FEC data are limited in several ways as well. First, they do not include many other pieces of personal information about individual donors that would be helpful for analyzing behavior and inferring motivations such as ideology, partisanship, income/wealth, attitudes, and other forms of political behavior. We are therefore limited to modeling the effects of factors that occur/vary at the level of the district or metro area, rather than at the individual level. And second, the address information is limited to street address and does not include other spatial information such as congressional district or metro area. Our methodology allows us to map individual donors to congressional districts and metro areas, as well as other relevant spatial locations, as described below.

Unlike previous analyses of the FEC individual contributor data, which could rely on simply mapping ZIP codes to congressional districts, our analyses require us to spatially locate contributors on several spatial dimensions, many of which do not line up with ZIP codes.<sup>4</sup> Since

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<sup>4</sup> For example, in the 2007-08 individual contributor file, we find that approximately 21% of ZIP codes in which contributors reside are split between multiple congressional districts. While previous analyses could reasonably assign donors within those ZIP codes to the district containing the centroid of the ZIP code area, our analyses require assignment to multiple geographies, so that approximate assignment approach would introduce an unacceptably high degree of error.

the FEC/CRP data report each donor's street address, it is straightforward to geocode each donor's reported address using GIS and locate its x-y coordinates. Geocoding links address information to geographic coordinates contained in a reference layer. The ESRI Streetmap for North America 9.3.1 provides a current reference layer that includes all roads in the 50 states, DC and PR, thereby allowing us to efficiently conduct this geocoding. However, our geocoding revealed that the FEC/CRP address data is of low quality. Many addresses are partial, incorrect, or missing entirely. In our preliminary geocoding, only 73% of addresses could be matched to an address in the Streetmap layer, even using a generous 80% spelling sensitivity threshold. Of the unmatched 161,597 records, 35,600 contain only ZIP code and no street address, while 42,419 list only a P.O. Box. In future work, we hope to manually recode some (large) fraction of the remaining 83,578 records.

We then overlay electronic boundary maps from the U.S. Census Bureau's TIGER/Line files to place each address within its corresponding congressional district and metro area (as well as other geographic units such as county, neighborhood (tract), and census block).<sup>5</sup> For congressional districts, we use the 2008 Congressional Districts Boundary File, which describes the relevant boundaries for the 2007-08 election cycle. For metro areas, we use the 2000 MSA and CMSA Boundary Files. An MSA (Metropolitan Statistical Area) is a geographic area that "contains a core urban area of 50,000 or more population.... Each metro [or micro] area consists of one or more counties and includes the counties containing the core urban area, as well as any adjacent counties that have a high degree of social and economic integration (as measured by commuting to work) with the urban core" (OMB 2003). A CMSA (Consolidated Metropolitan Statistical Area) is a larger region, also characterized by a high degree of social and economic

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<sup>5</sup> We join the donor location point file with the CD and MSA/CMSA boundary files using the spatial join tool in ArcGIS 9.3.

integration, that contains two or more MSAs.<sup>6</sup> In 2003, the Census Bureau moved to a new metropolitan area designation – the Core Base Statistical Area or CBSA – to replace the MSA/CMSA designation. However, the commuting data, which forms the basis of our main independent variables, is only available at the MSA/CMSA level, so we use that designation for our metro area analyses. Since we are interested in contribution flows within and between MSAs, we further limit our analysis to those 432,875 geocoded donors in our database who reside within an MSA.<sup>7</sup> For simplicity, when we refer to MSAs, we include both MSAs and CMSAs.

Once each donor is assigned to his/her CD and MSA, the next step is to identify the CD and MSA of the recipient candidate. Identifying the recipient's congressional district is easy: each contribution record includes the recipient candidate's committee code, and each congressional candidate is uniquely linked to a single CD in a given election cycle. Identifying the recipient's MSA, however, is more difficult. As discussed in the Introduction of this paper, and as illustrated in figure 1, congressional district boundaries rarely correspond to MSA boundaries; indeed, that spatial mismatch is the primary motivation for this paper.

### **Figure 1 Here**

From a methodological perspective, however, the spatial mismatch between congressional districts and metro areas means that a given MSA may contain parts of several congressional districts, and single congressional district may lie within several MSAs. Figure 2 illustrates this mismatch on a micro level: it shows the Detroit, Michigan CMSA, which contains nine counties, and the ten congressional districts that lie fully or partially within the CMSA. Our primary dependent variable – contributions to candidates in a different CD but same MSA –

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<sup>6</sup> A CMSA may also contain micropolitan statistical areas. These are similar to MSAs but contain between 10,000 and 50,000 persons.

<sup>7</sup> Approximately 93% of the total US population currently lives within an MSA/CMSA (US Census 2009).

requires us to determine whether the recipient is in the donor's CD and MSA. For our purposes, we say that a recipient's CD is within the donor's MSA if any part of the CD lies within the MSA. Since we are interested in contributions to different CDs within the donor's MSA, we further limit our analysis to the 258 MSAs that contain parts of two or more congressional districts.

### **Figure 2 Here**

Table 1 reports the number and amount of contributions to three types of recipients: candidates in the donor's own district (in district or "IND"), candidates in a different district and different MSA (out of district/out of MSA, or "ODOM"), and candidates in a different district but same MSA (out of district/in MSA or "ODIM"). This last category is the quantity of interest for our study. Overall, we see that 29% of all contributions and 31% of all dollars contributed are ODIM. This amount varies across MSAs from 0% of contributions in 46 districts to 79% of contributions and 77% of dollars contributed, respectively, in Lewiston-Auburn, ME. Figure 3 shows the distribution of these three types of contributions for donors living within the Detroit CMSA.

### **Table 1 Here**

### **Figure 3 Here**

#### ***MSA Characteristics***

The next step in constructing our data set involves measuring the interconnectedness of metropolitan areas. Our theory suggests that in regions where people tend to live/ work/ shop/ pray/ play all in the same small geographic area, they will have less of a personal stake in the politics and policies of districts other than their own and so will be less likely to engage in, participate in, and contribute to the political process outside of their own district. In regions

where people regularly move about the region in their personal lives, by contrast, we expect them to perceive a greater benefit from participating in the politics of those neighboring places. This notion of interconnectedness therefore implies a measure that taps into how people move about the region.

Because the literature provides little guidance, we create several related measures of interconnectedness from numerous data elements in the 2000 Census. The first four measure various dimensions of commute times. *Average Commute* is created from Table P31: Travel Time to Work for Workers 16 Years and Over in the 2000 Census, SF3 sample. The table reports, for each MSA/CMSA, the number of workers with commutes less than 5 minutes, 5-9 minutes, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-59, 60-89, and over 90 minutes. We multiply the number of workers in each category by the midpoint of the range, omitting those workers who worked at home. This variable ranges from 15.68 minutes in Grand Forks, ND/MN to 35.37 minutes in New York – Northern New Jersey – Long Island NY/NJ/CT/PA.

The other three commute time variables are also created from Table P31. *Commute 30+* is the percent of workers in each MSA with commute times over 30 minutes. *Commute 60+* is the percent with commute times over 60 minutes. *Commute 30-60* is the percent with between 30 and 60 minutes. We conceive of highly interconnected MSA as those with many workers commuting a moderate distance – between 30 and 60 minutes. In MSAs with shorter commutes, people working closer to home. In those with extremely long commutes, we anticipate that many workers live or work in remote rural areas or work outside their own MSA.

A second set of interconnectedness measures seek to capture the extent of daily movement of people to different parts of the MSA. Table P28: Place of Work for Workers 16 Years and Over of the 2000 Census (SF3) reports the numbers of workers that live in various

parts of each MSA (i.e., central city, remainder of MSA), and for each of those groups, whether they work in their own MSA (also central city or remainder) or outside their MSA. From these numbers, we compute the percent of workers that live in the central city and work in another part of their own MSA (*LiveCC\_WorkOut*) and the percent that live outside the central city and work in the central city of their own MSA (*LiveOut\_WorkCC*).

A third measure of interconnectedness is the percent of workers living in the MSA who use public transportation to get to work (*Public Transit %*). We conjecture that regions with extensive public transit are those in which significant public dollars have been invested in facilitating the interconnectedness of the region. This measure is constructed from P30: Means of Transportation to Work for Workers 16 Years and Over and includes all workers who report using bus or trolley bus, streetcar or trolley car, subway or elevated, railroad, ferryboat, or taxicab. It ranges from 0.1% in Gadsden, AL to 25% in New York – Northern New Jersey – Long Island, NY/NJ/CT/PA.

Our fourth measure seeks to capture the extent of urbanization in the region. *Urban %* is created from the Census' Table H3: Urban and Rural Housing Units (SF1). It measures the percent of households in each MSA that lie within urbanized areas. *Urban %* ranges from 45% in Decatur, AL to 99% in Miami – Ft. Lauderdale, FL.

Finally, our analyses include several additional characteristics of MSAs. Two capture aspects of the electoral environment in each MSA. *Open Seats %* is the percent of congressional districts in the MSA in which no incumbent ran in the 2008 general election. This includes 33 districts in which the incumbent retired and three in which he/she was defeated in the primary. We hypothesize that donors in MSAs with one or more open seats will send a greater share of their contributions to those races, thereby increasing the proportion of ODIM contributions. *Out*

*of District %* is the percent of donations made by people living in an MSA to candidates outside of their own congressional district. We include this variable to control for the electoral environment in a donor's own congressional district. Because our dependent variable is the share of all contributions made by donors in a given MSA to races outside their own district but *within their MSA*, *Out of District %* allows us to control for differences in the share of contributions going out of the district.

Several additional controls are intended to capture aspects of the size and population distribution in each MSA. *# CD in MSA* is intended to capture opportunities for out-of-district contributions within a donor's MSA. *CMSA* is a dummy variable to capture any systematic differences between MSAs and CMSAs. *MSA Area* is the area in square miles.

Three of our controls measure population and housing characteristics. *Median Household Income* and *Median Home Value* are two measures of wealth, while *Median Year Built* captures the age of the region.

Table 2 reports descriptive statistics of all variables use in our analyses.

### **Table 2 Here**

## **Analysis and Results**

We present the results of a series of regression analyses in Table 3. We seek to explain the relationship across MSAs between out-of-district, in-MSA (“ODIM”) campaign contributions and regional interconnectedness. The unit of analysis is the MSA; the dependent variable is the percent of out-of-district donations to congressional candidates in each MSA that are ODIM; and the main independent variables are various measures of interconnectedness. Each column in table 3 represents a separate OLS regression with different independent variables.

The results highlight three findings. First, our primary hypothesis - that donors are more likely to contribute to neighboring district campaigns when there is a stronger economic bond between the districts - is supported by the results. The variables listed in bold represent our measures of interconnectedness. As described above, these include commuting times, the percentage of the population who live and work in different parts of the MSA, the percentage that commute via public transit, and the percentage that live in urbanized areas. All of these factors are associated with the proportion of ODIM contributions, though to varying degrees. Second, several of the control variables relating to the electoral environment are also significant. Finally, household income is significant, while median house value and age of structures are not. Income is commonly found to be related to contribution levels; our study suggests that people with more income are more likely to take advantage of opportunities to promote their interests by making ODIM contributions. By contrast, while wealth must surely also affect a donor's decision to contribute, and at what amount, it appears that once the donor has decided to send a check out of her district, her wealth seems not to affect her decision about where to send it.

While all of our interconnectedness measures are signed consistently with our expectations, two sets stand out. Perhaps the most significant and strongest results are from the commuting data. In each regression, commuting variables are significantly related to out-of-district in-MSA campaign contributions, with one exception that we discuss below. As people's average commuting time increases, they are more likely to donate to a campaign in a neighboring district. The effect is not strictly monotonic in commuting time. Notice the regression results displayed in the second output column of Table 3, which includes variables for commutes of 30 minutes or longer, and its subset, 60 minutes or longer. While the first, *Commute 30+*, is significant and positive, as we hypothesize, its subset of longer commutes, *Commute 60+*, is

weakly negative. As commuting distance shifts from moderate commutes to very long commutes, donors are less likely to contribute to neighboring districts within their MSA. As we described in the data section, the negative relationship between very long commutes and out-district in-MSA contributions fit our expectations; long commutes often take workers out of the MSA, reducing the MSA's interconnectivity.

Our second set of measures of MSA interconnectivity relies on the data relating work location to residence: whether the respondent commutes in or out of the central city for work. Here, one of the two measures is signed as hypothesized, with a positive relationship between ODIM contributions and the percent of respondents who commute out of the central city to work in other destinations within the MSA. This result is strongly consistent with our hypothesis. When workers commute out of the central city and to other destinations around the region, they are exhibiting exactly the sort of complex interconnectedness that forms the basis of our hypothesis. By contrast, when many workers live in the suburbs and commute uni-directionally into the central city, there exists less potential for residents to develop interests throughout the region. The null result on our other live-work variable reflects this less interconnected alternative.

Our third measure of MSA interconnectedness is the percentage of MSA workers who commute to work via public transit. As discussed above, we hypothesize that extensive public transit systems are evidence of a significant public investment that both acknowledges and facilitates a region's interconnectedness. In our analysis, we find a positive relationship, where regions with a greater percentage of workers commuting via public transit also witness a higher proportion of campaign contributions going to ODIM candidates. However, the estimated effect is not significant.

Our fourth and final measure of interconnectedness is the percentage of households within the MSA that are located in urbanized areas. By definition, each MSA contains at least one urbanized area. In some, most households are tightly clustered in and around that area, facilitating connectivity. In others, by contrast, people are disbursed throughout the region in both urban and rural areas. We find strong support for our hypothesis that contributors from more urbanized MSAs will direct their campaign contributions in ways that indicate a higher degree of interconnectedness across the region, that is, they will make more ODIM contributions. This effect is strong and significant.

Many of our control variables are significantly related to ODIM contributions as well. *Open Seat %* and *Out of District %* seek to capture differences in the electoral environment that affect opportunities for donors to make ODIM contributions. As hypothesized, the higher the proportion of open seats within an MSA, the greater the proportion of contributions that flow outside of a donor's own district to other (presumably competitive) races throughout the MSA. We also find that the higher the share of total out of district contributions, the higher the share of ODIM contributions.

The next three variables control for the size of the MSA. The number of congressional districts in the MSA is positively and significantly related to ODIM contributions, suggesting that as the number of nearby races increases, the donor's attention is more likely to be caught by one outside of her district. However, while the number of congressional districts is related positively and significantly to ODIM contributions, our next measure of size – *MSA Area* – is negatively related to ODIM contributions. In other words, once we control for the electoral environment and the availability of opportunities for ODIM, donors in larger, more sprawling

MSA are less likely to contribute to candidates in other parts of their MSA than those in more compact MSAs.

Finally, our dummy variable for CMSA asks whether donors in these larger population areas behave differently, on average, from those in other MSAs. The results show no discernable difference in donation patterns between the CMSAs and the MSAs. It does not appear that objective significance of the region, based on its scale, makes local ODIM elections more salient to contributors.

This result - that donor patterns in CMSAs are no different from smaller MSAs - is particularly interesting because it may serve as a proxy for the size of the media market. New York, Los Angeles, Chicago, Dallas, and Detroit are all CMSAs, and each has its own local media broadcasting local election coverage. If the variance in out-of-district in-MSA donations were well explained by accessibility to information about neighboring elections, we would expect the CMSA dummy to be positively and significantly related to ODIM donations. Instead, it shows little to no effect, implying that the patterns in ODIM contributions are driven more by economic considerations and less by information/ news media effects.

We find a significant and positive effect of household income. This effect is consistent with other studies which find significant income effects both on contributions by individuals generally and for out-of-district contributions (eg. Berg, Eastland, and Jaffe 1981, Brown, Powell, and Wilcox 1995, Francia et al 2003, Gimpel, Lee, and Pearson-Merkowitz 2008). In our data, we find that donors in higher income MSAs are more likely to make ODIM contributions. However, median house value, a measure of wealth, shows no significant effect.

Lastly, we note the at-times significant and negative relationship between the median year of residential construction and ODIM contributions. City centers often lack open space for

new development, so newer residential construction tends to be suburban and exurban. Therefore, in many regions, particularly in the fast-growing metro areas in the American Southwest, new construction tends to be in less dense areas. We find that the more recent the median residential house, the less ODIM contributions, a result consistent with our notions of regional interconnectedness.

## **Discussion**

Our results indicate that when citizens are freed from the artificial constraints of electoral district boundaries, they often express political preferences in congressional races that are outside their home district but within their economic region. As the economic region becomes more interconnected, donors are more likely to keep their money local: they invest in the campaigns of nearby candidates. The relationship is particularly strong in metropolitan areas where the typical commuter travels moderate distances to work, with commute times of less than an hour.

The representational relationship suggested by our data is broader than the dyadic relationship posited by most theories of representation: citizens have preferences over electoral outcomes beyond the boundaries of their congressional district. But the representational relationship is not as generalized as the institutional theories of partisanship, where voters treat Congress akin to a parliamentary system, and aim to maximize their party's control of the legislature. Instead, the representation that we identify lies in between: citizens' political identity extends beyond their district boundaries, but in many cases, not too far beyond. It is a regionalized view. Citizen's interests are pulled across political boundaries by economic interconnectedness and policy spillovers. In a complex political space, citizens seek to assemble

teams of local representatives using votes when they can, and turning to other means when necessary.

Table 1: Individual Campaign Contributions to US House Candidates, 2007-08

<b>Recipient</b>	<b>Number</b>	<b>%</b>	<b>Amount</b>	<b>%</b>
In district (IND)	165,061	38.13	121,563,179	36.04
Different MSA (ODOM)	141,863	32.77	111,095,654	32.94
<b>Same MSA (ODIM)</b>	<b>125,951</b>	<b>29.10%</b>	<b>\$104,652,478</b>	<b>31.03%</b>
Total	432,875	100.00	\$337,311,311	100.01

Table 2: Summary Statistics

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>Std.Dev</b>	<b>Min</b>	<b>Max</b>
ODIM %	258	.18	.17	0	.79
Avg Commute	258	22.67	3.14	15.68	35.37
Commute over 30 mins	258	.24	.078	.090	.50
Commute over 45 mins	258	.096	.039	.036	.29
Commute 30-60	258	.20	.066	.064	.38
Public Transit	258	.016	.022	.0011	.25
LiveCC_WorkOther	258	.067	.030	.018	.18
LiveOther_WorkCC	258	.21	.060	.042	.38
Live_Work_Other	258	.28	.065	.065	.41
Urban %	258	.78	.12	.45	.99
Open Seat %	258	.10	.18	0	1
Out of District %	258	.47	.24	.017	1
CD in MSA #	258	4.45	4.24	2	46
CMSA	258	.070	.26	0	1
Med HH Inc	258	39,462	5,921	24,863	62,024
Med House Value	258	101,338	37,145	46,000	3340,800
Med Year House Built	258	1970	8.72	1943	1989

Table 3: Regional Interconnectedness and Within-MSA Contributions  
DV=Percent of Out of District Individual Contributions to Within MSA Races, 2007-08  
OLS Estimates, 258 MSAs  
Standard Errors in Parentheses

<b>Avg Commute</b>	<b>.021**</b> (.0065)	<b>.10*</b> (.056)					
<b>(Avg Commute)<sup>2</sup></b>		<b>-.0018</b> (.0012)					
<b>Commute 30+</b>			<b>1.12**</b> (.33)				
<b>Commute 60+</b>			<b>-1.30</b> (1.10)				
<b>Commute 30-60</b>				<b>1.060***</b> (.30)			
<b>Public Transit %</b>					<b>.38</b> (1.20)		
<b>LiveCC_WorkOut</b>						<b>1.11**</b> (.50)	
<b>LiveOut_WorkCC</b>						<b>-.0015</b> (.26)	
<b>Urban %</b>							<b>.36**</b> (.14)
Open Seats %	.38*** (.082)	.36*** (.083)	.36*** (.083)	.36*** (.082)	.38*** (.084)	.39*** (.084)	.39*** (.083)
Out of District %	.18** (.065)	.19** (.065)	.17** (.065)	.17** (.065)	.19** (.066)	.21** (.066)	.19** (.065)
#CD in MSA	.023** (.0081)	.025** (.0082)	.023** (.0081)	.023** (.0079)	.033** (.0079)	.035*** (.0075)	.033*** (.0074)
CMSA	-.034 (.079)	-.018 (.079)	-.042 (.079)	-.043 (.078)	.0065 (.080)	.0092 (.078)	-.0087 (.078)
MSA Area (Sq. Miles/1000)	-.0060** (.0017)	-.0052** (.0018)	-.0054** (.0018)	-.0055** (.0018)	-.0071*** (.0018)	-.0070*** (.0017)	-.0067*** (.0017)
Med HH Inc/10000	.012** (.0036)	.013** (.0037)	.0099** (.0039)	.010** (.0037)	.013** (.0037)	.012** (.0037)	.011** (.0037)
Med Year Built	-.0025 (.0018)	-.0024 (.0018)	-.0032* (.0019)	-.0032* (.0019)	-.00034 (.0018)	-.00016 (.0018)	-.0013 (.0018)
Med House Value	-.0011* (.00058)	-.0011* (.00058)	-.00087 (.00061)	-.00095 (.00058)	-.0012* (.00063)	-.0012** (.00059)	-.0013** (.00059)
Constant	4.19 (3.60)	3.13 (3.66)	5.89 (3.72)	5.89 (3.72)	.38 (354)	-.025 (3.54)	2.16 (3.50)
Adj R <sup>2</sup>	.25	.25	.25	.25	.22	.23	.24

Figure 1: US Congressional Districts and MSA Boundaries

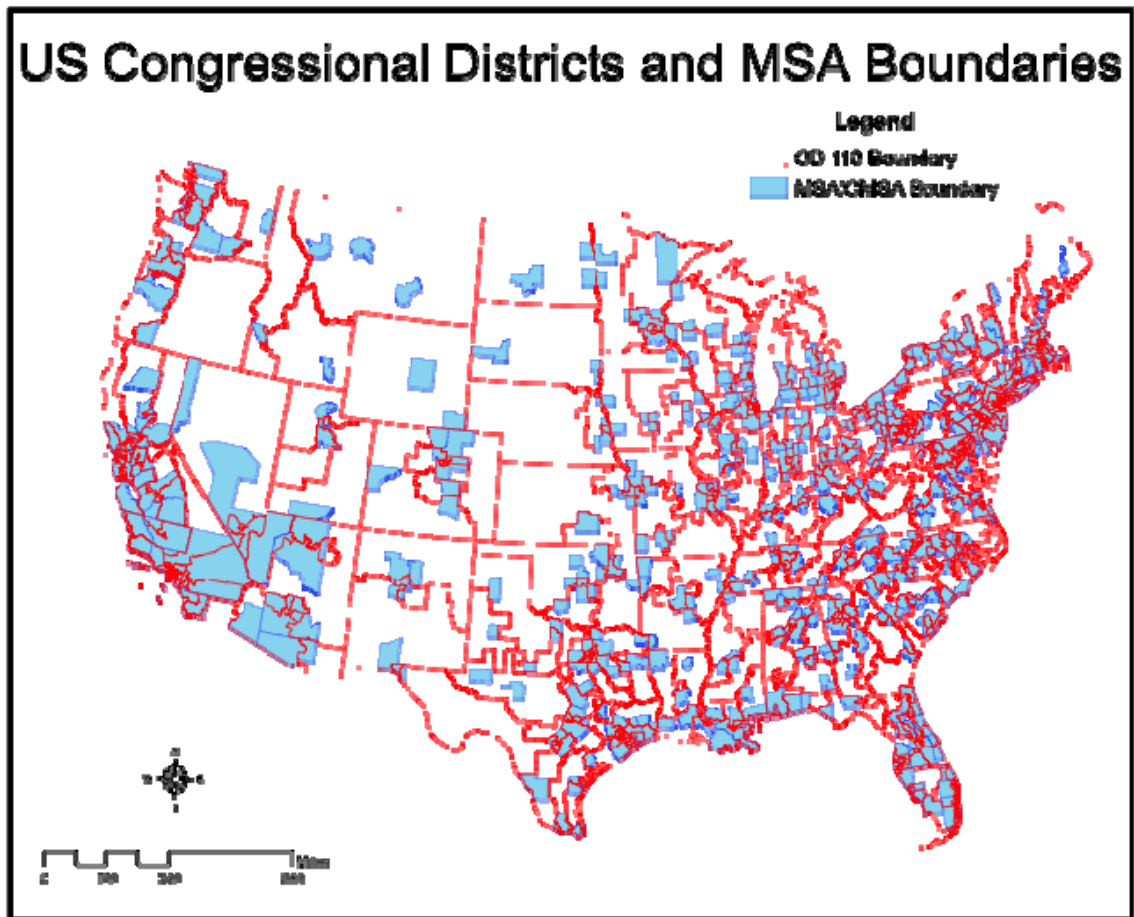


Figure 2

### US Congressional Districts in the Detroit, MI CMSA 110th Congress, 2007-08

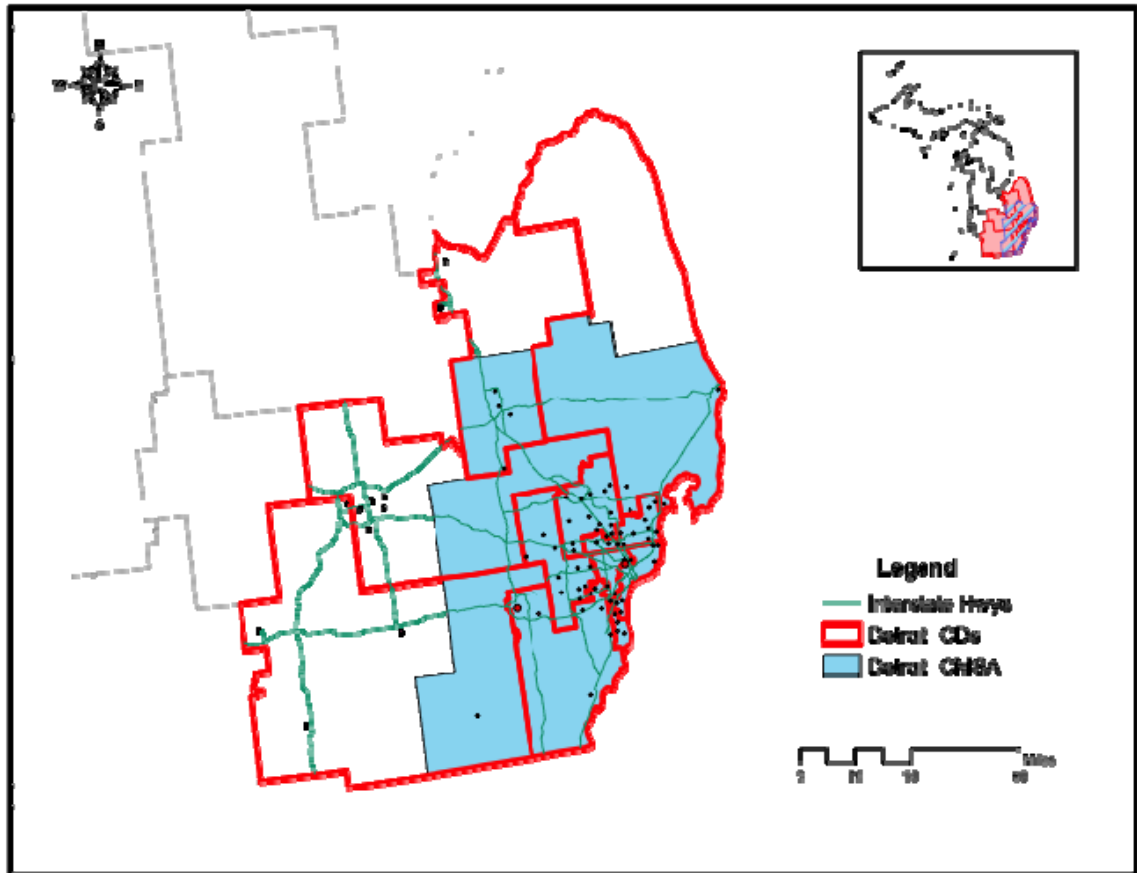
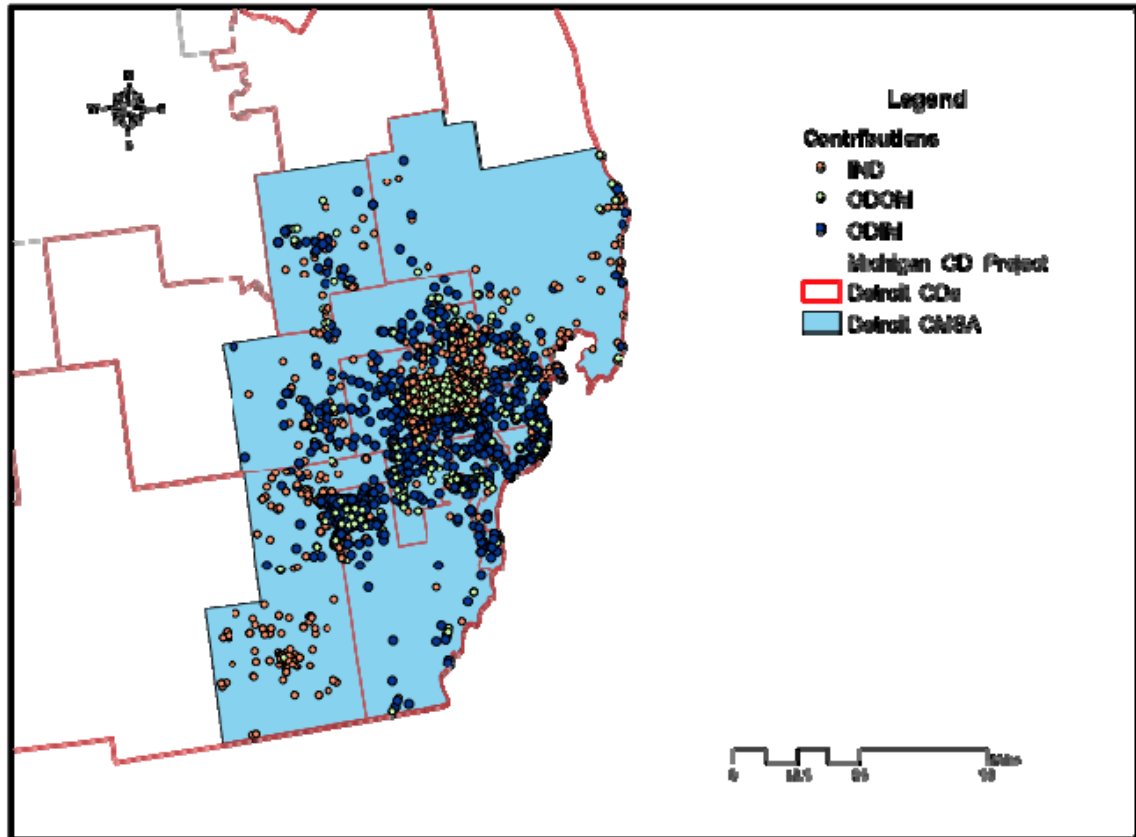


Figure 3

### Contributions to US House Candidates Detroit, MI CMSA 2007-08



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