WORKING PAPER

The Matthew Effect in American Generosity?

Inequality in Philanthropic Donations and the Role of Government Support

Viviana Chiu Sik Wu, Ph.D.
Assistant Professor
School of Public Policy
University of Massachusetts Amherst
vivianachius@umass.edu

Ji Ma, Ph.D.
Assistant Professor
The Lyndon B. Johnson School of Public Affairs
The University of Texas at Austin
maji@austin.utexas.edu

Chao Guo, Ph.D.
Professor
School of Social Policy and Practice
University of Pennsylvania
chaoguo@sp2.upenn.edu

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Abstract

Nonprofit organizations' access to philanthropic donations varies across communities. This study investigates how economic, racial, and rural disadvantages interact with government support in explaining the heterogeneous philanthropic donations across American communities. We analyze a unique panel dataset detailing private donations to the human service nonprofit sector at the county level from 2000 to 2019. We find that private donations are significantly lower in economically deprived communities. We also find significant moderating effects of government support on the relationships between minority prominence and ruralness and private donations. Specifically, as the level of government funding increases within a community, the adverse impact of minority and rural disadvantage on private donations diminishes. This research makes important theoretical and empirical contributions by advancing our understanding of the complexities around the unequal access to philanthropic resources and the role of government support across various communities along the economic, ethnic, and rural lines.

Keywords: Philanthropy, government support, panel regression, Matthew effect, inequality

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For to all those who have, more will be given, and they will have an abundance; but from those who have nothing, even what they have will be taken away. (Matthew 25:29)

Philanthropy is a defining feature and cornerstone of the nonprofit sector. Among many functions it serves, the nonprofit human services sector provides important social services to protect and advocate for marginalized and vulnerable groups, thereby ensuring community and societal resilience in times of crisis. They often operate in a turbulent funding environment where policy change can reduce public spending on social service, payments and reimbursements are often delayed, and data reporting can be burdensome (Peng & Lu, 2021). Hence, they must raise private funding through philanthropic donations to piece the budget together (Coupet & Schehl, 2021; Lu, 2015)

Yet philanthropic giving varies from place to place. For example, the nonprofit sector in affluent communities have a large pool of private foundations, corporations, and wealthy individuals to draw resources from, but vulnerable and disinvested communities might have only limited philanthropic resources to support nonprofit services (Ashley, 2014; Hay & Muller, 2014; Wolpert, 1988; Wolpert & Reiner, 1984; Wu, 2021b). We know surprisingly little about what causes the disparities in philanthropic giving across communities. Extant research has focused on the characteristics of nonprofit organizations or individual donors as the determinants of philanthropic giving (Adloff, 2009; Bekkers, 2003; Bekkers & Wiepking, 2010; Sargeant & Woodliffe, 2007; Wiepking & Maas, 2009), with little attention devoted to a place-based perspective to understand community-level variations in philanthropy and how government plays a role in shaping those disparities. Unraveling the causes at the community

level is important because inequalities may exist not only at the individual nonprofit level, but also more systematically across communities (Allard, 2017; McDonnell et al., 2020; Wu, 2021). Recently, exploring the philanthropic trajectory across places has become even more pressing as the pandemic effects disproportionately fall on vulnerable communities, laying bare the deeply rooted social, racial, economic, and health disparities in the country (Adams-Prassl et al., 2020; Smith & Judd, 2020).

To address the important gap in the literature, we trace the patterns of philanthropic support to human services nonprofit sectors across U.S. counties by focusing on community-level factors and the moderating roles of government grants. Specifically, we examine how economic, racial, and rural disadvantages affect the disparities in the distribution of philanthropic resources to the human services sectors across different communities. We propose that philanthropic donations are geographically clustered and can be explained by three characteristics of the community: its economic status, the prevalence of racial minorities, and its rural or urban classification. Additionally, we investigate the extent to which government support through grant funding moderates the relationship between these types of community disadvantage and private donations to local human services nonprofit sectors. Government funding has been an important and major source of operating revenue for human services nonprofits (Guo, 2007; Lu, 2015). While research shows that government support helps boost private donations (Heutel, 2014; Lecy & Van Slyke, 2013; Paarlberg and Yoshioka, 2016), it remains unclear whether and to what extent government support can mitigate the potential effects of place-based disadvantage on private donations to the human services nonprofit sectors.

Drawing on a unique and novel panel dataset (2000 – 2019) that combines nonprofit data from the IRS tax records (e-filing and BMF) and county-level community indicators sourced from the Census, we find that private donations are significantly lower in economically deprived communities. We also find significant moderating effects of government support on the relationships between minority prominence and ruralness and private donations. Specifically, as the level of government funding increases within a community, the adverse impact of minority and rural disadvantage on private donations diminishes. The moderating effect of government support is not significant in the relationship between economic disadvantage and philanthropic donations.

A key takeaway of the study is that it reveals the potential existence of a Matthew effect in community-level philanthropic resources, which is a self-reinforcing process that serves to reproduce the disparities in the distribution of philanthropic resources across communities over time (Bol et al., 2018; Rigney, 2010). We find some evidence that the human service sectors located in affluent communities get "wealthier" by attracting more philanthropic resources, whereas those in deprived communities become even "poorer" with access to scarce philanthropic resources. Similarly, once considering the moderating factor of government grants, results show that minority-prominent and rural communities systematically suffer from lower access to philanthropic resources, threatening the long-term resilience of the local human services sectors. An important insight from our research is the varying role that government support plays in the development of local human services nonprofit sectors based on community characteristics. Specifically, government grants appear to mitigate the negative impact of minority prominence and rural settings on private donations to the human services nonprofit sectors. However, this moderating effect does not extend to economically disadvantaged communities. This nuanced

finding highlights the need for targeted strategies that address the specific disadvantages faced by different types of communities. This research thus makes important theoretical and empirical contributions by advancing our understanding of the complexities around the unequal access to philanthropic resources and the role of government support, both of which are fundamental to building a sustainable, healthy nonprofit sector that serve local communities for the future.

The remainder of the article is organized as follows. We first present the theoretical framework and a set of hypotheses, based on a review and synthesis of the existing literature, followed by the research methods and data. We then present results from the descriptive and mixed effects regression analyses. We conclude with a discussion on the study implications and contributions, alongside suggestions for potential avenues of future research.

THEORY AND HYPOTHESIS DEVELOPMENT

In the United States, philanthropic resources are not ubiquitously distributed across the nation; instead, they are heterogeneously clustered across communities (Bourdieu, 1990; Wolpert, 1988). Prior research focuses on how individual-level donor characteristics affect the distribution of philanthropic resources (Adloff, 2009; Bekkers, 2003; Bekkers & Wiepking, 2010; Sargeant & Woodliffe, 2007; Wiepking & Maas, 2009). Since the 1980s, a growing stream of literature has turned to the geographical perspective in understanding American philanthropy (Bielefeld et al., 1997; Wolpert, 1988). The earliest work can be traced back to that of Julian Wolpert (1988), which examines the spatial disparity in public support of social and amenity services. Subsequent research continues to focus on geography-related factors and explores the extent to which community resources and needs as well as the types of residential areas (e.g., urban vs. rural) affect the distribution, growth, and sustainability of

nonprofit organizations (Bielefeld et al., 1997; da Costa, 2016; Gronbjerg & Paarlberg, 2001; Joassart-Marcelli & Wolch, 2003a; Kim, 2015; Lam & McDougle, 2015; Lecy & Van Slyke, 2013; Peck, 2008; Saxton & Benson, 2005; Wu, 2021; Yan et al., 2014). While covering various spatially related factors as independent variables, most extant studies focus on only one dependent variable — the density of nonprofit organizations. Such a focus advances our understanding of nonprofit growth. However, simply knowing that a nonprofit exists says little about its capability to raise and sustain philanthropic support (Lam & McDougle, 2015), nor do we know how such capability varies across geographic regions and what explains the variations. More research is needed to gauge how wide the philanthropic gap is across communities and why such a gap exists.

In what follows, we explore the theoretical underpinnings that may explain the disparities in the distribution of philanthropic donations across the U.S. communities over the past two decades. Utilizing theoretical perspectives from urban sociology, economics, and place-based literature, we will present a conceptual framework to elucidate how three dimensions of community disadvantage—namely, economic disadvantage, minority disadvantage, and rural disadvantage—contribute to the disparities in philanthropic donations across communities through a self-reinforcing process. Additionally, we posit that government grants allocated to the local nonprofit sector plays a moderating role in mitigating the impact of these three types of community disadvantages, albeit with different directions and varying degrees of influence.

Economic Disadvantage and Philanthropic Donations

We focus on economic disadvantage as the first type of community disadvantage. A community is usually viewed as economically disadvantaged when it meets certain economic criteria such as income per adult, median household income, poverty rate, and employment rate. We draw from the social disorganization theory and the literature on economics of giving to explore how the economic disadvantage of a community affects private donations to human service nonprofits.

Initially developed by Shaw and McKay (1942), social disorganization theory suggests that structural disadvantages such as poverty, residential instability, family disruption, and ethnic heterogeneity reduce social capital and result in less active civic participation. Among the structural advantages, poverty likely receives the most scholarly attention. Scholars (Coleman, 1988; Putnam, 2000) argue that in affluent communities, more individual-level human capital gathers into more social capital. Social capital not only boosts trust and produces an atmosphere of generalized reciprocity, but it also provides the cultural will for individuals, households, and organizations to solve community problems collaboratively (Wilson, 1997). As a result, the quality and efficacy of civic participation is higher in these communities than in their poor counterparts (Coleman, 1988; Putnam, 2000). Research also shows that affluent communities are more effective at promoting nonprofit growth and participation in social action events through their requisite social capital and sociopolitical connections (Morenoff et al., 2001; Sampson, 2012). In contrast, social capital is unproductive in deprived communities where there is little reciprocity and a low level of trust (Wilson, 1997). Nonprofits in deprived communities lack the social capital necessary to broker finite and desirable resources, leading to overall reduced participation and diminished philanthropic activities (Coupet & Schehl, 2021; Smith & Lipsky, 2009; Wilson, 1997).

Similarly, literature on economics of giving also suggests that affluent communities are associated with more philanthropic activities than their deprived counterparts, albeit for different reasons. This literature stream focuses on charitable giving, one important type of civic participation. Scholars used detailed individual-level data (cross-section data in the early years and panel data recently) to examine how one's charitable giving is affected by her level of disposable income (Auten et al., 2002; Randolph, 1995). A key measure is the income elasticity of giving, which is defined as the percentage change in donations that results from a 1% change in the disposable income of a donor, all else being equal. If income elasticity is a positive number, it means that an increase in the income causes an increase in charitable giving. A consensus in the literature is that the income elasticity of giving is positive, mostly ranging between 0.40 and 0.87 (Auten et al., 2002) with Randolph's (1995) estimated income elasticity of 1.14 as an exception. The findings suggest that high-income individuals or households tend to donate more to charity. With more wealthy individuals and households, nonprofit sectors in affluent communities thus attract more philanthropic resources.

In sum, extant research views the presence of affluence in a community to be an important predictor of philanthropic donations. While various research designs might account for mixed findings in prior work, factors related to the economic status of a community such as median household income and employment remain significant determinants of nonprofit presence and philanthropic activities. In general, affluent communities have more nonprofit organizations than do deprived communities (Ben-Ner & Van Hoomissen, 1992; Wolch & Geiger, 1983). More specifically, nonprofits are often more prevalent in middle-class suburbs with higher levels of social capital and public expenditures or a higher density of similar organizations (Bielefeld & Murdoch, 2004; Joassart-Marcelli & Wolch, 2003; Wu, 2021) and

less prevalent in low-income, highly unemployed areas (Allard, 2009; Corbin, 1999; Grønbjerg & Paarlberg, 2001).

Following the social disorganization theory, economics of giving, and related empirical research, we argue that those human service nonprofits that serve economically deprived communities suffer a lower level of private donations while those serving affluent communities tend to attract more private donations. We thus propose our first hypothesis.

> **Hypothesis 1 (Economic Disadvantage)**: The levels of private donations to human services nonprofit sectors are lower in economically deprived communities than in affluent ones.

Minority Disadvantage and Philanthropic Donations

Geographic isolation and marginalization of racial minorities is another type of community disadvantage that explains the philanthropic gap across communities (Morenoff et al., 2001; Sampson, 2012). We label it as "minority disadvantage." We identify three mechanisms by which this minority disadvantage is translated into lower levels of private donations to human services nonprofit sectors. The first mechanism is social disorganization, similar to what we previously discussed for the communities suffering economic disadvantage. Place-stratification research has consistently found that communities with a larger size of minority populations tend to suffer more severe social disorganization than predominantly white communities (Albrecht et al., 2005; Ulmer et al., 2012). Social disorganization is related to racial segregation and can be attributed to institutional actions ranging from a legacy of slavery, tenant farming, residential red lining to the creation of reservations (Albrecht et al., 2005). Similarly, White neighborhoods are better connected to

politically and economically powerful actors to support a vibrant nonprofit sector (Sampson, 2012). Nonetheless, using survey methodology to examine individual-level giving, Rooney and colleagues found that race had no effect on whether someone is a donor or how much that person gives, although Whites reported significantly more giving than Black and other minority groups (Rooney et al., 2005). They argued that a "race difference" in giving can be attributable to differences in income and/or education. In a more recent study using longitudinal survey data, Osili and her team (2019) found that the predicted giving rate of White Americans was higher than that of non-White Americans.[1]

The second mechanism is related to racial stigma. Research indicates that individuals and organizations in areas characterized by high crime, poverty, disorder, and/or racial isolation are likely to be perceived adversely, reflecting the negative attributes associated with their communities (Besbris et al., 2015; Otero et al., 2021). As a result, nonprofits operating in or serving minority communities might encounter greater skepticism and mistrust from potential donors. Racial stigma could lead to challenges in securing donations, with these organizations potentially receiving less support and facing systematic discrimination in the philanthropic market, impacting both their service quality and viability (Besbris et al., 2015; Woods et al., 2023).

Third, the philanthropic motivations and behaviors of ethnic/racial minorities are often shaped by their unique historical backgrounds and cultural preferences, rather than being solely influenced by social disorganization and racial stigma. For example, Hall-Russell and Kasberg's (1997) qualitative interviews revealed that African Americans place a higher value

[1] They also found that the Great Recession had a similar negative effect on the charitable giving rates of all races.

on contributing time rather than money. They tend to prefer making formal contributions through the church, supporting neighborhood initiatives, and "giving back" to the African American community. Jackson (2001) further highlights the pivotal role of the church in African American philanthropy, particularly given the historical restrictions on African Americans in most other institutional settings in America. [2] As a result, instead of making donations to human services nonprofits, religious and kinship giving constitute a substantial part of Black philanthropy. In a similar vein, East Asian diaspora, due to their cultural and immigrant backgrounds, tend to give to their families, hometowns, and Asian American communities rather than donating to local charities (Bernstein, 2007; Drezner, 2013). Moreover, Asian American donors may focus more on educational causes because of the cultural emphasis on educational attainment (Bernstein, 2007). In line with the above reasonings, we expect that minority concentration might affect the level of private donations to local human service nonprofits; specifically, private donations tend to be at lower levels in minority-prominent communities than in White-dominant communities. We thus have the following hypothesis.

> **Hypothesis 2 (Minority Disadvantage)**: The levels of private donations to human services nonprofit sectors are lower in minority-prominent communities than in White-dominant communities.

Rural Disadvantage and Philanthropic Donations

[2] State laws in Virginia, Maryland, and North Carolina in the early 1800s prohibited African-American Americans from forming charitable societies.

The term "rural" connotes places with low population density as well as remoteness from major population centers. Based on a multidimensional Index of Deep Disadvantage, rural areas are among the most disadvantaged in the country overall: of the top 100 most disadvantaged communities, 80 are rural (Shaefer et al., 2020). These deeply disadvantaged rural areas include Appalachia, the Deep South, the Southwest, and the Native American reservations of the West (Albrecht et al., 2005). A growing body of research suggests that rural communities experience decreasing social capital and population, economic restructuring and decline, and complex and disproportionate need for health and human services as compared with the country as a whole (Heflin & Miller, 2012; Shapiro, 2017).

While there exists a large body of literature on rural development, research on rural philanthropy is still scant (The Center on Philanthropy, 2010; Walters & Wallis, 2021). Rural philanthropy warrants our investigation because rural communities face unique vulnerabilities that may affect philanthropic donations they receive. First, research suggests that rural nonprofit sectors struggle to secure foundation grants and donations (Pender, 2015; Pipa & Geismar, 2020). Compared to urban donors, rural donors donate at a lower rate and at lower amounts (The Center on Philanthropy, 2010). Second, with fewer financial resources, rural nonprofits experience hiring challenges and insufficient staffing to effectively develop donor base and implement fundraising strategies (Mackie & Lips, 2010). These operational challenges can feed into inadequate fund development (Walters & Wallis, 2021), lower operating expenditure (Shapiro, 2017), and more fiscal stress (Lin & Wang, 2016), all of which further decrease rural nonprofits' fundraising ability. Third, scholars (Allard, 2017; Walters & Wallis, 2021; Wu, 2021) have found that the nonprofit sector is usually small (in terms of the number of organizations) and underdeveloped in rural communities where substantial service

gaps exist. To close the gaps in community needs, rural nonprofits frequently provide a wide range of services that extend beyond their stated missions in an effort to ensure that rural residents have a decent quality of life (Scales et al., 2014). Drifting away from missions might make a nonprofit less appealing to its donor base and further undermine its ability to attract foundation grants and donations (Frumkin & Andre-Clark, 2000; Moore, 2000). Based on these findings, we expect to see a significant rural-urban gap in private donations to human services nonprofit sectors.

Hypothesis 3 (Rural Disadvantage): The levels of private donations to human services nonprofit sectors are lower in rural communities than in urban communities.

The Moderating Effects of Government Support

Government Support. As Salamon (1987) argues, the nonprofit sector cannot yield or attract enough resources to cope with the vast scale of societal problems. Since philanthropic resources are not necessarily available where the problems are most severe, there are considerable gaps across communities. This is where government support comes in. Government can stimulate nonprofit activities through redistribution programs that fund the nonprofit human services safety net where needs are (Gordon & Cullen, 2012; Ramcharan, 2006; Shapiro, 2017). In particular, grant programs of the federal, state, and local governments fund human service nonprofits to improve the wellbeing of marginalized and disadvantaged populations through social security, food assistance, tax credits, and housing assistance (Jung et al., 2015; Pipa & Geismar, 2020; Shapiro, 2017).

Government support is found to boost the development of the nonprofit sector in a community (Heutel, 2014; Joassart-Marcelli & Wolch, 2003b; Lecy & Van Slyke, 2013;

Paarlberg and Yoshioka, 2016). In places where local governments provide more funding to nonprofits on a per capita basis, the number of nonprofit organizations increases significantly (Joassart-Marcelli & Wolch, 2003b; Lecy & Van Slyke, 2013). Paarlberg and Yoshioka (2016) also found a positive correlation between local government revenues and the level of community philanthropy. Specifically, as reported in Heutel (2014), a dollar increase in government grants leads to an increase in private donations between 10 and 30 cents. Moreover, government grants frequently come with matching stipulations, necessitating nonprofits to secure matching funds from private sources (Abramson et al., 2012). This incentive encourages nonprofits to increase fundraising efforts to bring in more private donations.

Economic Disadvantage. We contend that government support not only can stimulate philanthropic donations to a community directly, but also exerts an indirect effect by moderating the relationship between different types of community advantage and nonprofit access to philanthropic resources in a community. To start, economic disadvantage is hypothesized to have a negative association with private donations to human service nonprofits (Hypothesis 1), and we posit that such a negative association may be reduced when government support to the community increases. The reason is as follows. As we argued in Hypothesis 1, people in a more economically disadvantaged community are less likely to donate to nonprofits in the community due to lack of trust and/or lack of financial resources. While the issue of lack of financial resources cannot be addressed by the inpouring of government grants to nonprofits, the lack of trust issue can be alleviated by government support. In a deprived community where the level of social capital and trust is low, potential donors do not have confidence in the capability and collective efficacy of the local nonprofits,

nor do they have credible information about local nonprofits and their programs. Under such circumstances, if a nonprofit organization receives government funding, such government support functions as an implicit endorsement of the organization's credibility and its program quality (Lu, 2016). Government support can also serve as a signal of the legitimacy of social needs, attracting potential donors to support addressing these social needs (Lu, 2016).

Overall, in economically disadvantaged communities where trust is low and credible information is missing, government support creates both an endorsement effect and a signaling effect that are crucial to stimulating charitable donations (Grasse et al., 2022; Heutel, 2014; Joassart-Marcelli & Wolch, 2003). This discussion leads us to the following hypothesis regarding the moderating effect of government support on the relationship between economic disadvantage and private donations to human service nonprofits.

> **Hypothesis 4a**: The negative effect of economic disadvantage on private donations to human service nonprofits lessens as government support increases within a community.

Minority Disadvantage. Next, we discuss how the negative association between minority disadvantage and private giving is moderated by government support. In Hypothesis 2, we predicted a negative association between minority disadvantage and private donations to human service nonprofits and attributed this negative association to social disorganization, racial stigma, and historical/cultural influences. While government support is often seen to boost people's trust in nonprofits by endorsing their quality and conferring legitimacy, the impact of public support is more complex for nonprofits serving minority communities. Minority communities tend to have greater distrust toward government and government

officials due to long legacy of political suppression, marginalization, and slavery (Koch, 2019; Marschall & Shah, 2007; Whetten et al., 2006). This lack of trust has been linked to neighborhood factors (Marschall & Stolle, 2004), racial disparities in policing and police violence (Shoub, 2021; Silva et al., 2020), and even lower beliefs in a just world (Hunt, 2000). Hence, government grants or contracts may not be seen as a positive sign and could potentially undermine the public legitimacy and trust of nonprofits within ethnically diverse or minority communities (Terrana, 2017). This is especially true for disadvantaged neighborhoods where a significant portion of the population is undocumented (Terrana, 2017). Securing fiscal resources through government grants and contracts may not be feasible for these organizations due to the administrative burden as well as the time gap between service provision and reimbursement (Moynihan et al., 2015; Terrana, 2017).

All in all, this line of research suggests that getting government grants and contracts may crowd out private donations and exacerbate the challenges faced by nonprofits serving minority communities, particularly those serving predominantly undocumented populations. Given how government support may or may not affect the mechanisms by which minority disadvantage influences private donations to human service nonprofits, we propose the following moderating effect regarding minority disadvantage.

> **Hypothesis 4b**: The negative effect of racial disadvantage on private donations to human service nonprofits either remains the same or exacerbates as government support increases in a community.

Rural Disadvantage. The negative association between rural disadvantage and private donations to human service nonprofits is also likely moderated by government support. Rural

and urban areas differ in many ways—socially, politically, and culturally (Parker et al., 2018). Given these differences, it is plausible that urban and rural donors respond differently to government support. Federal, state and local governments have played an important role in stimulating the philanthropic efforts in rural areas through partnerships and fiscal policies (Hammack 2018). For instance, some rural regions enjoy legislative support to establish state-wide and regional community foundations through tax credits, such as "Endow Iowa Tax Credit" program in Iowa (Hammack & Smith, 2018; Sidel, 2010). While governments and the nonprofit sector have collaborated to address rural disadvantage and promote rural development and quality of life, a robust line of research suggest that rural Americans retain negative stereotypes toward welfare receipt and exhibit strong distrust toward governments than urban Americans (Grogan, 2019; Wuthnow, 2018). Instead, they place greater trust toward their family members or friends, nonprofit providers and local development organizations, and therefore are more likely to reach out to them for help as opposed to public agencies and public health initiative (Green et al., 2002; Scales et al., 2014; Van Scoy et al., 2023). They are more wary of receiving assistance from publicly funded providers, due to popular conservative views and rugged individualism that oppose relying upon the state for aid (Wong, 2018; Wuthnow, 2018). Therefore, it is likely that rural donors respond negatively to the signal of government support.

In contrast, urban donors typically enjoy greater access to education and information and exhibit greater trust toward government (Hegle, 2021; The Center on Philanthropy, 2010). They are likely to be more deliberate in their charitable decisions and more responsive to the endorsement and signaling effects of government support. Beyond these attitudinal differences, a significant urban-rural disparity exists in terms of government funding and

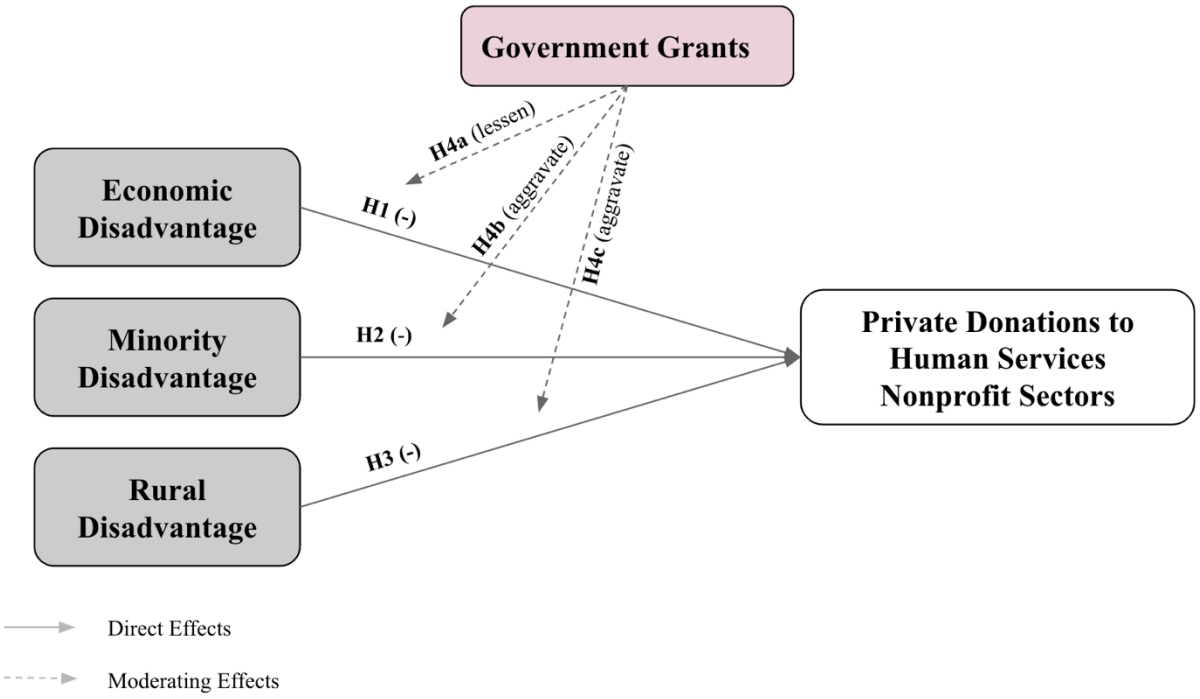
philanthropic support (Fluharty & Scaggs, 2007). For example, on a per-capita basis, the federal government allocates two to five times more funding for community development in urban areas compared to rural areas (Johnson, 2006). The larger public spending also coincides with a strong crowd-in effect on nonprofit growth in urban communities. A longitudinal study by Lecy and Van Slyke (2013) examined the density of the human services nonprofit sector across U.S. metropolitan statistical areas. Their findings indicated that while all revenue sources have a positive association with nonprofit density, government grants and contracts had the most efficient impact on the growth rate of nonprofits serving urban communities.

> **Hypothesis 4c:** The adverse effect of rural disadvantage on philanthropic capacity remains or even exacerbates as government support increases in a community.

All in all, we contend that economic, minority, and rural disadvantage each is associated with lower levels of private donations to human service nonprofits. However, the degree to which government support might mitigate the adverse effects of community disadvantage will likely vary. We hypothesize that government support has a buffering effect in that it helps stimulate local philanthropy in economically deprived communities, but not necessarily so for minority prominent and rural communities. Figure 1 summarizes our conceptual framework and hypotheses discussed above.

Figure 1

Conceptual Framework



METHODS

Data Sources

To empirically test the hypotheses, we compiled data from the following sources: *The Exempt Organizations Business Master File Extract (BMF)*. The BMF files are released by the Internal Revenue Service (IRS) and provide a list of exempt organizations registered with the IRS. The BMF is relatively comprehensive in covering the directory information but lacks the details of an organization (e.g., total contributions and government grant). We primarily used this data source to extract nonprofits' service areas (i.e., the National Taxonomy of Exempt Entities classification) and their location (i.e., the Federal Information Processing Standards county code).

Detailed annual reports of nonprofits. We extracted the variables of institutional details from the annual reports hosted at two places: the National Center for Charitable

Statistics (NCCS; https://nccs-data.urban.org/) and the Amazon Web Services (AWS; https://registry.opendata.aws/irs990/) where the raw files of electronic annual filing to the IRS were stored. These reports have meticulous details about a nonprofit organization, such as organizational structure, names and addresses of board members, and finance. The electronic 990 forms filed with the IRS (i.e., AWS) are only available from the tax years of 2014 to 2019. Past research has extensively used the National Taxonomy of Exempt Entities (NTEE) classification system to categorize nonprofits and examine the relationship between nonprofit density and community factors (Corbin, 1999; Jeong & Shicun, 2019; Kim, 2015).

American Community Survey (ACS) and Small Area Income and Poverty Estimates (SAIPE). We draw the county level social and economic statistics from the 5-year estimates of ACS given its comprehensiveness and stability through a long time-period. Additional variables at county level were draw from the SAIPE (i.e., poverty rate and median household income) and the Census Bureau's urban and rural classification.

By assembling data from the above sources, we eventually compiled a longitudinal master dataset at county level for further analysis. In the master dataset, the unit of analysis is county (i.e., one row lists the variables of a county at a specific year), and the variable of government grant is only available from 2014 to 2019.

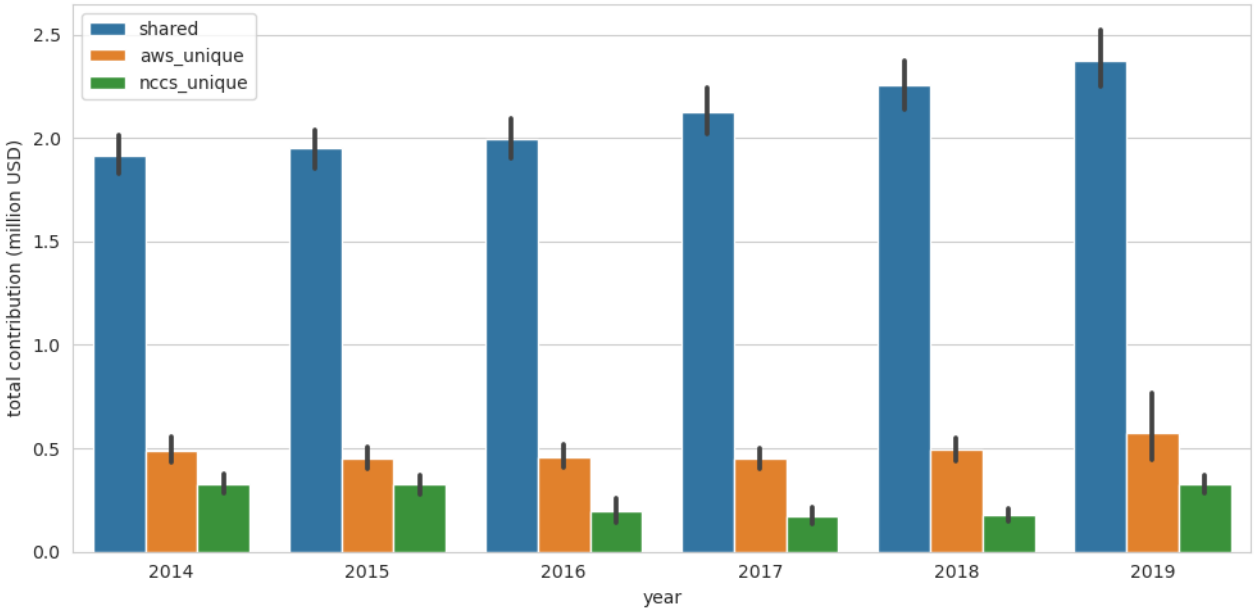
Comparing Data Sources

Data from NCCS and AWS are all extracted from the nonprofits' annual reports with IRS; however, the size of records from the two sources substantially differs. The NCCS has more paper-filings while AWS only has electronic filings. It is necessary to compare the two data sources so that our analysis can be better informed.

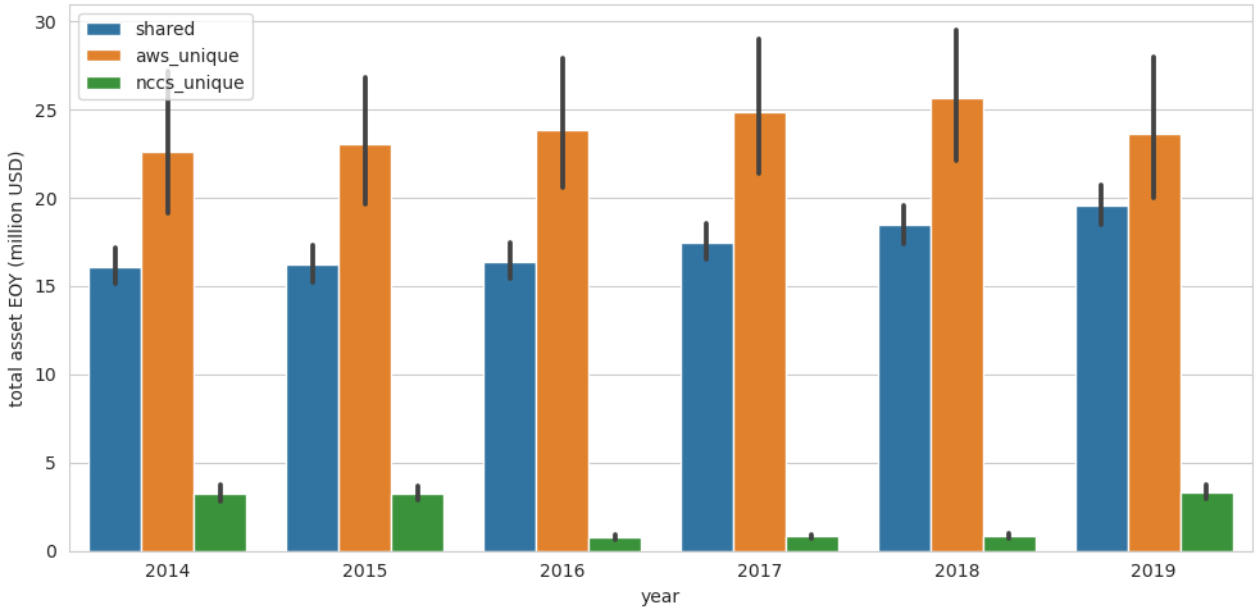
From 2014-19, there were 736,633 unique nonprofits identified according to EIN in the merged master dataset. For these organizations, 409,736 (56%) of them appear in NCCS only, 76,922 (10%) appear in AWS only, and the two data sources share the data of 249,975 (34%) organizations. Figure 2 (a-b) illustrates the profile of these organizations by data sources. As the figure shows, AWS has more data on larger organizations in terms of total contributions (a) and asset size (b), while NCCS has more data on small nonprofits. In general, by combining data from the two sources, the merged dataset is relatively more representative than either data source.

Figure 2

Comparing Nonprofit Profiles by Data Sources



(a) Total contributions by data sources



(b) Total assets by data sources

A Place-based, Sectoral Approach to Understand Philanthropic Trajectory

To deepen our understanding of the philanthropic trajectory of the U.S. nonprofit sector, we adopt a place-based approach to analyze local nonprofit sectors, rather than focusing on individual nonprofits as the unit of analysis. This place-based perspective enables a broader analysis of how philanthropic patterns and resource distributions are shaped by geographical and community-level factors, potentially uncovering systemic disparities in philanthropic donations that often vary between communities. Specifically, by exploring sectors across counties, we can better identify and address the structural inequities that influence the availability and allocation of philanthropic resources to these places as a whole.

In choosing the county level for our population-level analysis across the nation, we aim to strike a balance between the granularity of zip codes and the broad scope of state-level data. Counties provide a middle ground that captures significant local variations in economic conditions, demographic composition, and institutional structures without the excessive detail

that can obscure broader trends in zip code-level analysis. At the same time, counties offer a more localized perspective than state-level analysis, which can mask regional disparities within states. However, we recognize that using a county as the unit of analysis can introduce certain challenges. Variability within a county's economic conditions, racial composition, and urban-rural splits can potentially lead to an oversimplified or inaccurate portrayal of data. Therefore, while a sectoral view using county-level data can enhance our understanding of the distribution of philanthropic resources, we acknowledge the limitations associated with the granularity and applicability of this level of data.

Variables

The dependent variable of this study, *private donations to human service nonprofits*, is measured by (1) the aggregated amount of philanthropic contributions to human service nonprofits at the county level. The measure of philanthropic support includes grants and donations given by grantmaking organizations and individuals but excludes government grants. It is calculated by deducting "government grants (contributions)" (Part VIII, line 1e) from "contributions and grants" listed in Part VIII, line 1h of IRS Form 990.

Our definition of the independent variable, *community disadvantage*, does not confine to economic term, but also in ethnic and ecological terms, where they tend to be segregated and less accessible to valuable social resources and opportunities (Arsneault, 2006; Ashley, 2014; Sampson, 2019; Wu, 2021b). The *economic disadvantage* is measured by county-level (3) poverty rate. The *minority disadvantage* is operationalized using the percentage of ethnic minorities residing in the community. Counties where (4) minorities comprise at least one third of the population are labeled as minority prominent. Remaining counties where at least

two thirds of the residents are non-Hispanic Whites are labeled as White dominant (Albrecht et al., 2005). For the *rural disadvantage*, we adopted (5) the Census Bureau's Urban-Rural classification. We created a dummy variable to distinguish non-metro counties (coded as 1) and metro counties (coded as 0). The variable of *government support* denotes (6) the amount of government grants the nonprofits received in a given year and is extracted from line 1e in Part VIII Statement of Revenue of form 990. This variable is only available from 2014 to 2019.

To reduce the effect of confounding factors, the empirical models control for several organizational and county-level variables that can affect nonprofits' financial portfolios and the amount of philanthropic giving overtime. These variables include, (7) fundraising expenses (Line 25 in Part IX, column D of the From 990); (8) total end-of-year asset size (Line 20 in Part I); (9) total fundraising expenses (Line 16b in Part I); and (10) nonprofit earned revenues, which is gauged by subtracting "Contributions and grants" listed in Part VIII, line 1h from "Total revenue" in Part VIII, column (A), line 12 of the Form 990. Furthermore, we controlled for (11) median household income, (12) unemployment rate, and (13) racial diversity using inverted Herfindahl–Hirschman index (i.e., $1 - HHI$) that accounts for all race categories. We have also incorporated two additional variables: (14) total population of the county and (15) program service revenues of the organization. These variables help us account for the intrinsic characteristics of both the county and the organization's program. To minimize the impact of organizational diversity on our findings, we have restricted our regression analysis to human service organizations, considering their substantial size and societal roles. Table 1 summarizes all the variables, corresponding theoretical dimensions, and data sources.

Table 1

Operationalization of Variables

Theoretical Dimension	ID	Variable	Definition	Source
Private Donations to Human Service Nonprofits	1	Philanthropic Contributions	Aggregated private donations at the county level, deducting "government grants (contributions)" (Part VIII, line 1e) from "contributions and grants" listed in Part VIII, line 1h of IRS Form 990.	AWS / NCCS
	2	Asset Size	The total end-of-year asset size by county	AWS / NCCS
Economic Disadvantage	3	Poverty Rate	The percentage of people (or families) who are in poverty.	SAIPE
Minority Disadvantage	4	Minority Prominent / White Dominant	Minorities comprise at least one third of the non-Hispanic whites population are labeled as minority prominent. Remaining counties where at least two thirds of the residents are Hispanic whites are labeled as white dominant.	ACS
Rural Disadvantage	5	Urban-Rural Classification	A dummy variable to distinguish non-metro counties (coded as 1) and metro counties (coded as 0)	
Government Support	6	Government Grants	Line 1e in Part VIII Statement of Revenue of form 990.	AWS
Control Variables	7	Fundraising Expenses	Line 25 in Part IX, column D of the Form 990	AWS
	8	End-of-Year Asset Size	Line 16 in Part X of the Form 990	AWS / NCCS
	9	Fundraising Expenses	Line 25 in Part IX, column D of the Form 990	AWS / NCCS
	10	Nonprofit Earned Revenues	subtracting "Contributions and grants" listed in Part VIII, line 1h from "Total revenue" in Part VIII, column (A), line 12 of the Form 990	AWS / NCCS
	11	Median Household Income	Median of the total amount of income earned by all members of a household age 15 or older	SAIPE
	12	Unemployment Rate	The number of unemployed people as a percentage of the labor force	ACS

	13	Racial Diversity	The inverted Herfindahl–Hirschman index of race categories (i.e., $1 - HHI$).	ACS
	14	Total Population	Total county population	ACS
	15	Program Service Revenues	Part VIII, line 2h of the Form 990	AWS

Estimation Strategy

We divide our empirical analysis into descriptive and inferential sections. For the descriptive analysis, we present raw values without normalizing variables in any form, ensuring clarity and avoiding any potential inferential claims that normalization might introduce. For example, rather than presenting donation data on a per capita basis—assuming that population influences donations—we retain the original donation values. This approach allows us to provide an unadjusted view of donation distributions, and any influence of population size can be addressed by including it as a control variable in our regression analysis.

In the inferential analysis, we model year as a fixed effect while treating state and county as random effects, which captures both time-related trends and geographic variability. Using year as a fixed effect allows us to assess consistent annual changes across all counties, reflecting broader economic or policy shifts affecting donation levels. Random effects for state and county account for unobserved differences tied to state-level and localized county-level factors, respectively, allowing the model to address hierarchical clustering in the data and improve interpretability. This setup balances generalizable insights with the unique contributions of state and county contexts to donation patterns, strengthening the model's explanatory power.

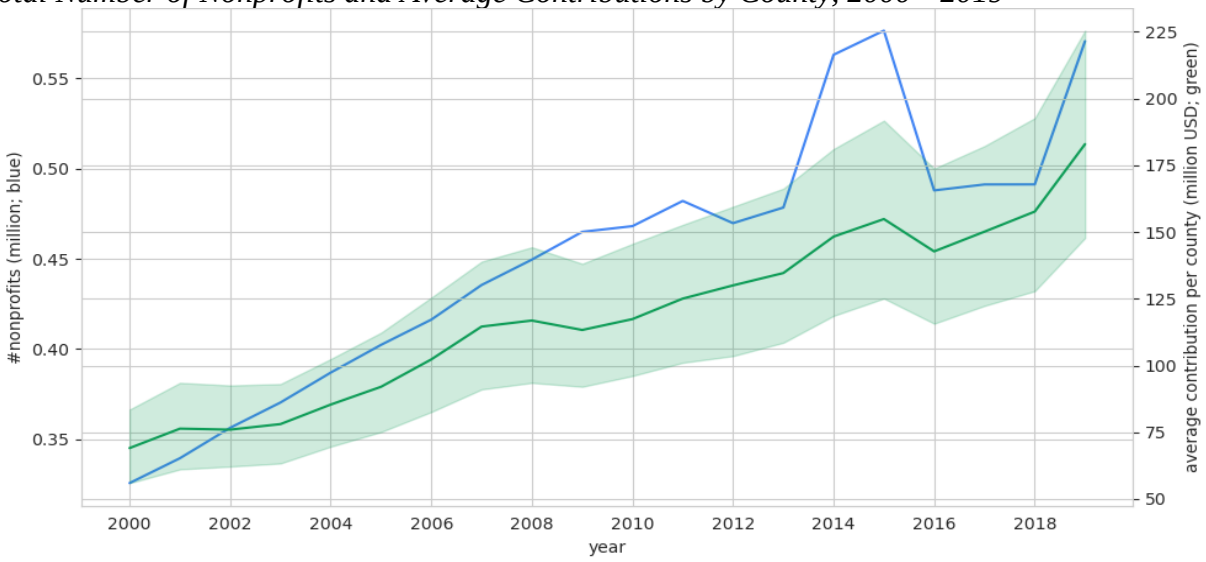
RESULTS

An Overview of the US Human Service Nonprofit Sector, 2000-2019

Figure 3 shows the overview statistics of the US human service nonprofit sector. According to this illustration, the number of nonprofit organizations that reported to the IRS between 2000 and 2019 increased from just over 0.35 million in 2000 to around 0.55 million in 2019. The average contributions by county also steadily increased from about 75 million USD in 2000 to about 190 million USD in 2019. The 2008 economic recession shows some impact on contributions, which quickly recovered and continued its momentum since 2010. The impact on the number of nonprofits is minimal.

Figure 3

Total Number of Nonprofits and Average Contributions by County, 2000—2019



Disparities in the Distribution of Philanthropic Resources: Descriptive Evidence

The descriptive statistics provide some insights into the disparities in the distribution of philanthropic resources across communities, with some communities consistently placed in a

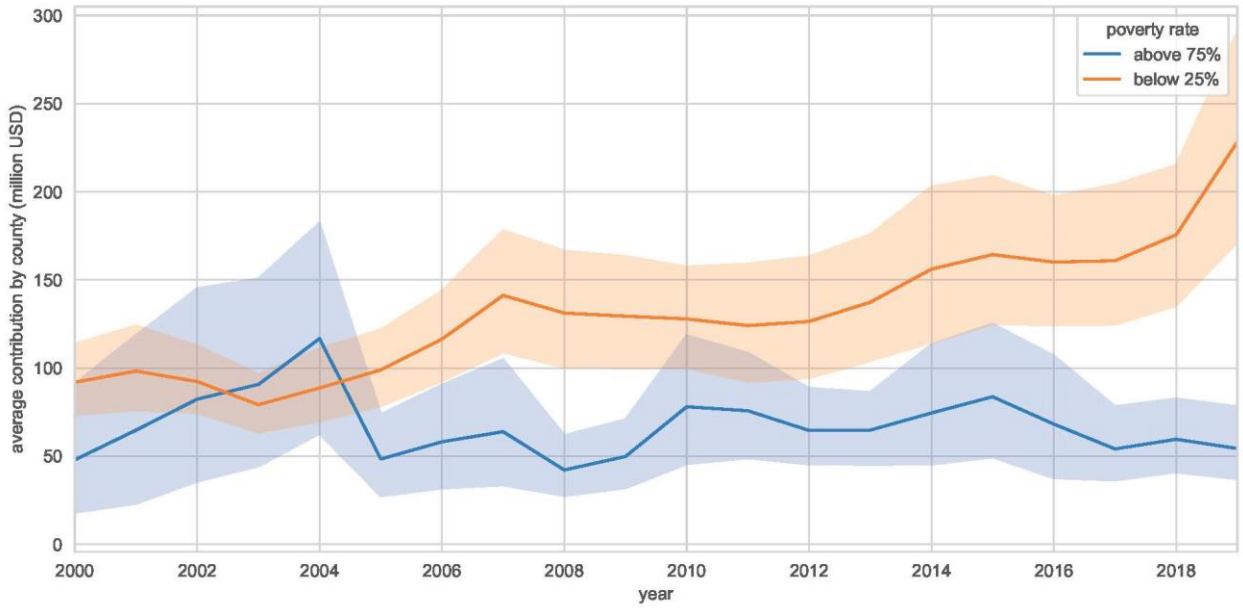
more disadvantageous position than others. We can examine the disparities in private donations from three dimensions: economic disadvantage, minority disadvantage, and rural disadvantage.

Economic Disadvantage and Philanthropic Giving

First, Figure 4 illustrates a disparity in the distribution of philanthropic resources across communities based on economic status, which is measured by county-level poverty rate. Specifically, the figure compares private donations in counties at the lower 25th percentile (lower quartile; wealthier counties) with those at the upper 75th percentile (upper quartile; poorer counties) over a twenty-year period from 2000 to 2019. As shown in Figure 4a, the levels of private donations to human service nonprofits in poorer counties remained static and consistently stayed around $54.36 million (SD = 347.98) in 2019, while wealthier counties showed a considerable increase, rising from $91.95 million (SD = 333.87) in 2000 to $228.24 million (SD = 966.03) in 2019. This indicates that philanthropic contributions to human service nonprofits in wealthier communities were increasing over time, whereas less affluent communities were not experiencing the same growth. These descriptive findings from Figure 4 indicate a widening gap in private donations between counties of different socio-economic statuses over the study period.

Figure 4

Private Donations to Human Service Nonprofits by Poverty Rate: Average Contributions by County (A) and Average End-of-Year Assets By County (B)



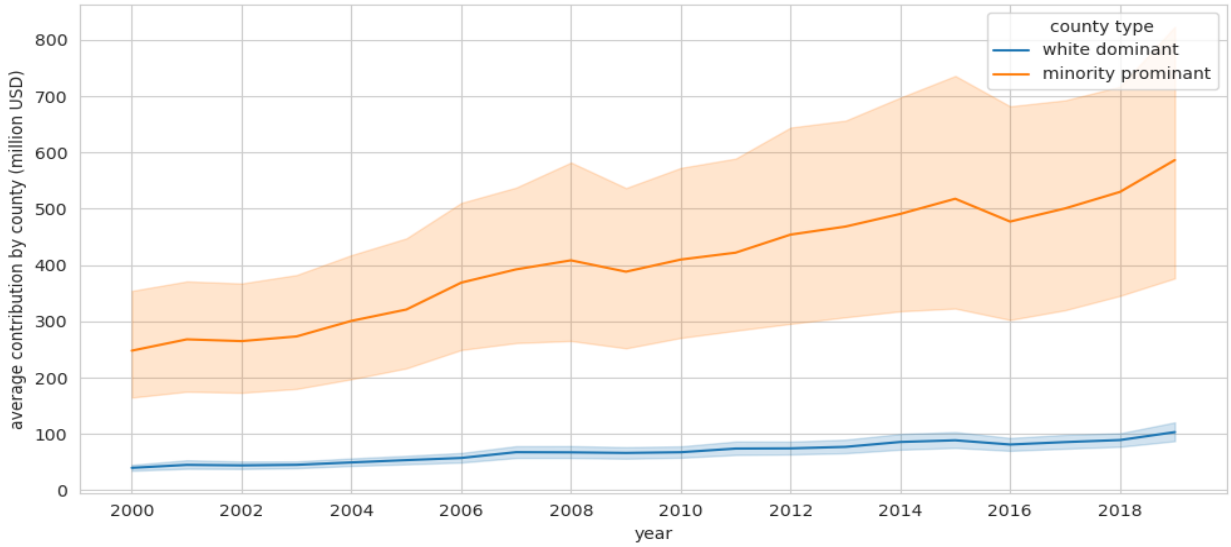
Minority Disadvantage and Philanthropic Giving

When examining disparities in private donations to human service nonprofits between minority-prominent communities and White-dominant communities, the findings are less straightforward. Figure 5 indicates that county-level average philanthropic contributions are higher in minority-prominent communities, defined as those where the minority population makes up more than one-third of the total population. Over the twenty-year period from 2000 to 2019, private donations to human service nonprofits in minority-prominent counties increased from $247.96 million (SD = 1156.79) in 2000 to $586.46 million (SD = 3012.17) in 2019. In contrast, in White-dominant counties, the figures rose from $39.85 million (SD = 170.94) in 2000 to $103.27 million (SD = 522.86) in 2019. These descriptive findings suggest that

minority-prominent communities are not necessarily at a disadvantage when it comes to philanthropic contributions and asset accumulation.

Figure 5

Private Donations to Human Service Nonprofits by Racial Groups: Average Contributions by County (A) and Average End-of-Year Assets by County (B)

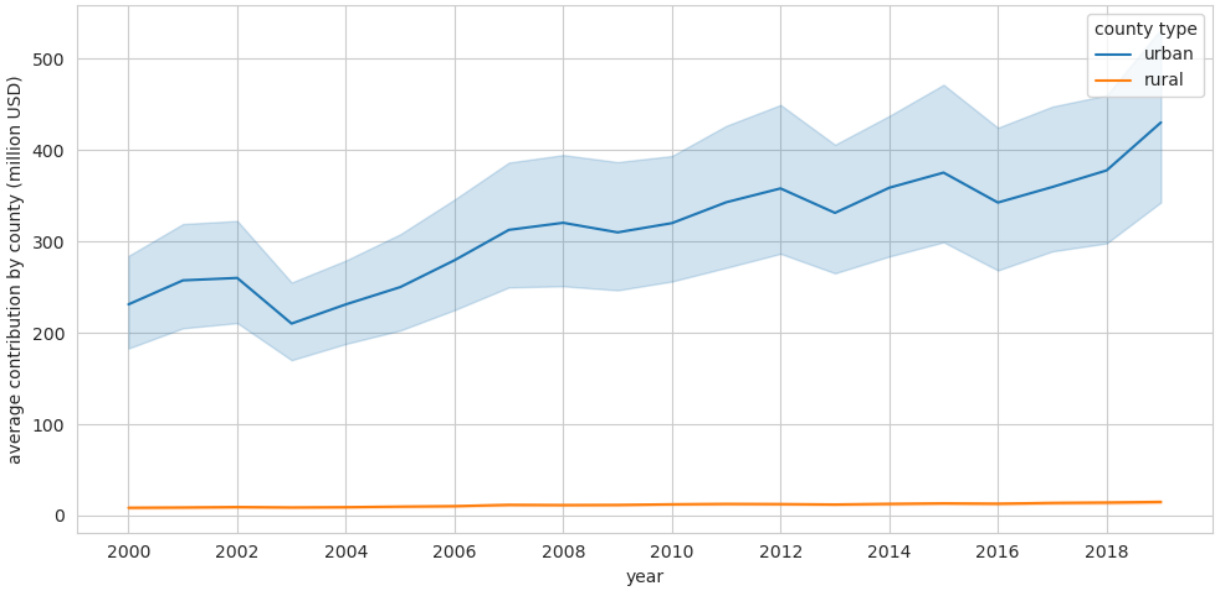


Rural Disadvantage and Philanthropic Giving

Figure 6 demonstrates that the levels of private donations to human service nonprofits are lower in rural communities than in urban areas. As detailed in Figure 6, in 2000, county-level average contributions in urban areas were $231.17 million (SD = 874.88) and merely $8.54 million (SD = 28.89) in rural areas. By 2019, the disparity had grown even more significant, with contributions reaching $430.25 million (SD = 2015.72) in urban areas, but only $14.98 million (SD = 36.39) in rural ones. The widening gap over the years suggests not only the persistence of this disparity but also its escalation.

Figure 6

Private Donations to Human Service Nonprofits by Rural and Urban County: Average Contributions By County (A) and Average End-of-Year Assets By County (B)

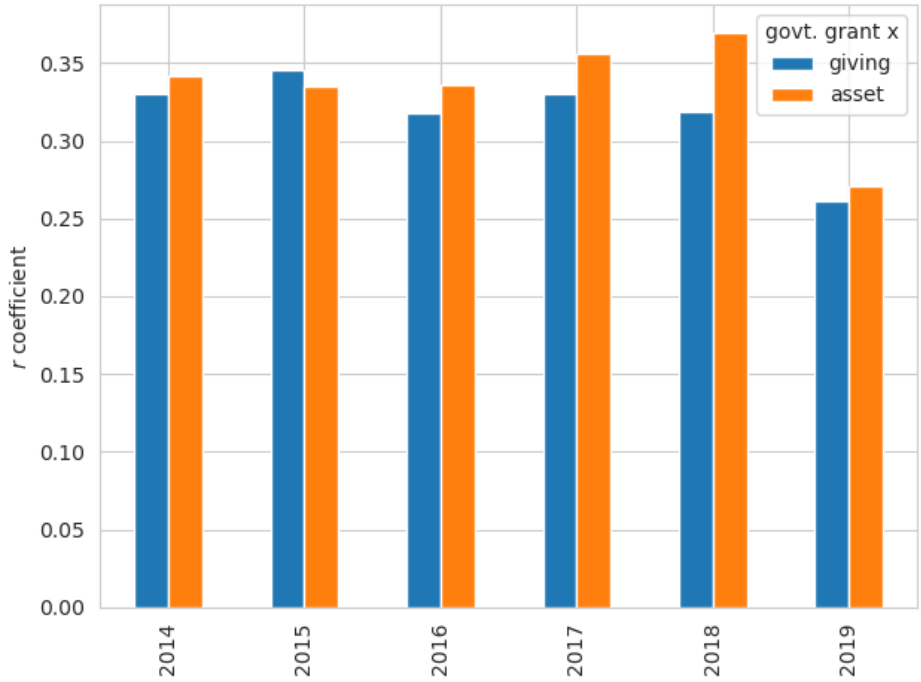


Government Support and Private Donations to Human Service Nonprofits

Figure 7 reveals the relationship between government support and private donations to human service nonprofits. The figure shows that government grants have a relatively weak but statistically significant correlation with both private giving and asset size, falling within the range of $0.25 < r < 0.40$. Though the correlation is not strong, it is significant enough to indicate that government funding does have a beneficial impact on private philanthropic contributions and asset accumulation. This suggests that public and private funding sources may operate synergistically.

Figure 7

Correlations Between Government Support and Private Giving/Assets



Note: showing correlation coefficient (*r)* values of (1) government grant and private giving (blue) and (2) government grant and end-of-year asset (orange).

Disparities in the Distribution of Philanthropic Resources: Mixed-Effects Regressions

The descriptive and bivariate analyses presented in the previous section were informative but did not control potential confounders. In this section, we examine the hypotheses using a series of mixed-effect regressions, as shown in Table 2. Given that the dependent variable, county donations to nonprofit human services sectors, is log-transformed, we will report the coefficients as percentages. Due to space constraints, we have included the summary statistics of the regression data in the appendix for reference.

Main Effects Model without Interaction Effects (Model 1)

Looking at the main effects model (Model 1), we found partial evidence to support the Community Disadvantage hypotheses. Specifically, consistent with Hypothesis 1, the results suggest that economically deprived communities tend to have significantly lower levels of private donations over time ($b = -1.7$, $p < .01$). For every 1 percent increase in poverty rate, private donations to the human services nonprofit sector tend to reduce by 1.7 percent. However, contrary to our expectations, the coefficients for minority disadvantage and rural disadvantage are not statistically significant at the 0.05 level. Additionally, our empirical findings reveal that government support has a significant positive association with private donations to human service nonprofits ($b = .04$, $p < .001$). For every 1 percent increase in government grants, private donations to the human services nonprofit sector tend to raise by 0.04 percent. This implies that governmental grants serves as an important lever for stimulating private donations, following the complementary role supported by prior studies.

Table 2

Mixed Effects Regression Models of County Donations Received for Human Service Organizations (2014-2019)

	Dependent variable: Logged County Donations Received				
	No interaction	Povt. × Govt	Min. × Govt	Rural × Govt	All interactions
	(1)	(2)	(3)	(4)	(5)
Poverty	**-1.700****	**-2.600*****	**-1.700****	**-1.600****	-1.500
	(0.700)	(0.930)	(0.700)	(0.700)	(0.980)
Minority=1	-0.088	-0.087	**-0.300****	-0.081	**-0.320****
	(0.095)	(0.095)	(0.140)	(0.095)	(0.140)
Rural=1	0.130	0.130	0.130	**-0.260***	**-0.280****
	(0.092)	(0.092)	(0.092)	(0.140)	(0.140)
Government Grants	**0.040*****	**0.027****	**0.037*****	0.012	0.008
	(0.005)	(0.011)	(0.005)	(0.009)	(0.013)
Poverty × Govt		0.088			-0.003
		(0.063)			(0.068)
Minority × Govt			**0.020****		**0.022****
			(0.009)		(0.010)
Rural × Govt				**0.036*****	**0.037*****
				(0.010)	(0.010)
Fundraising Expense	0.140***	0.140***	0.140***	0.140***	0.140***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Total Assets	0.610***	0.610***	0.610***	0.600***	0.600***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
NPO Count	0.490***	0.490***	0.490***	0.520***	0.510***
	(0.071)	(0.071)	(0.071)	(0.072)	(0.072)
Bachelor's Degree	-0.010	-0.009	-0.015	0.018	0.013
	(0.100)	(0.100)	(0.100)	(0.100)	(0.100)
Total Population	0.150	0.160	0.160	0.140	0.150
	(0.110)	(0.110)	(0.110)	(0.110)	(0.110)
Observations	18,469	18,469	18,469	18,469	18,469
State Random Intercept	yes	yes	yes	yes	yes
County Random Intercept	yes	yes	yes	yes	yes
Year Fixed Effects	yes	yes	yes	yes	yes

Marginal R-squared	0.83	0.83	0.83	0.83	0.83
Conditional R-squared	0.94	0.94	0.94	0.94	0.94
Log Likelihood	-36,392	-36,393	-36,394	-36,389	-36,392
Akaike Inf. Crit.	72,820	72,824	72,825	72,816	72,825
Bayesian Inf. Crit.	72,961	72,973	72,974	72,965	72,990
Note:					* p < 0.05, ** p < 0.01, *** p < .001

Interaction Effects Models

We now turn to the results of the interaction effects models. Hypotheses 4a-c contend that government funding serves as a moderator between the three types of community disadvantage—economic, minority, and rural—and private donations. To test these hypotheses, Models 2-5 in Table 2 display the results of mixed-effects regression analyses, incorporating specific interaction terms: government funding × poverty rate, government funding × minority prominence, and government funding × rural community. These terms are examined separately in Models 2-4 and collectively in Model 5.

As shown in Models 3, 4 and 5, the empirical evidence consistently suggests that two community disadvantages—minority and rural—are significantly associated with lower levels of private donations to the nonprofit human service sector at the 0.05 level. Notably, their interaction terms are also statistically significant: government funding × minority prominence ($b = .022$, $p < .01$) and government funding × rural community ($b = .037$, $p < .01$). This suggests that government funding significantly moderates the relationships between specific community disadvantage and private donations to the nonprofit human services sector. Nonetheless, while the main effect of economic disadvantage remains, the interaction effect is not statistically significant. In the following sections, we discuss these two significant interaction effects in greater detail.

Interaction Effect: Minority Prominence × Government Grants (Model 3)

For easier interpretation, Model 3 can be written as (DV = Logged County Donations):

$$\begin{cases} [(-1.7) \times Poverty + 0.037 \times Govt], & Minority = 0 \\ [(-1.7) \times Poverty + 0.037 \times Govt] + [(-0.3) + 0.02 \times Govt], & Minority = 1 \end{cases}$$

According to the estimation, government grants have the potential to mitigate the negative effect of minority prominence on private giving. Specifically, (1) In the absence of government support, minority prominent counties receive 30 percent less in private giving than White dominant counties; (2) Considering the positive interaction term, we find that for every one percent increase in government grant, the negative effect of the minority prominence (*b*= -.3) on private giving decreases by 2 percent (b = .02). Remarkably, when the government grant reaches 15 units (i.e., $\frac{0.3}{0.02}$), equivalent to 612 billion USD and beyond the largest observed government grant, the negative effect of minority prominence turns positive. While this suggests that government funding can serve as a counterbalance to the disadvantage in minority communities (i.e., receiving 30% less than White dominant counties), completely reversing the negative effects of minority disadvantage may be mission impossible under realistic grant allocations.

Interaction Effect: Ruralness × Government Grants (Model 4)

For easier interpretation, Model 4 can be written as:

$$\begin{cases} (-1.6) \times PovtRate, Rural = 0 \\ (-1.6) \times PovtRate + (-0.26) + 0.036 \times Govt, Rural = 1 \end{cases}$$

According to this estimation, private giving in rural areas is $(0.036 \times Govt - 0.26)$ larger than non-rural areas. Specifically, (1) In the absence of government support, rural counties receive 26 percent less in private giving than urban counties; (2) However, considering the

positive interaction term, the results suggest that for every one percent increase in government grants, the negative effect of the ruralness (*b*= -.26) on private giving decreases by 3.6 percent (b = .036). When the government grant reaches 7.22 units (i.e., $\frac{0.26}{0.036}$), equivalent to 6,309.69 USD, the difference in private giving between rural and non-rural areas becomes zero; and (3) when government grants exceed 7.22 units, rural areas receive more private giving than urban areas. Given that the threshold amount is relatively low (i.e., 6.3K USD), government grants can easily result in rural areas receiving more private contributions compared to their urban counterparts.

All Interaction Effects (Model 5)

For easier interpretation, Model 5 can be written as:

The final model including all three two-way interaction effects between government grants and community disadvantage provides further evidence to support the Community Disadvantage hypotheses and the moderating roles of government grants. The analysis reveals that while economic disadvantage become insignificant, the results for the interaction terms between government grants and both minority prominence and rural status still hold when considering all variables simultaneously. The findings suggest that government grants might serve to ameliorate the adverse effect of minority prominence and ruralness on private donations to local human services nonprofit sector. In other words, in areas with significant minority populations and in rural settings, the presence of government grants is associated with higher levels of private donations to the local human services nonprofit sector compared to what might be expected without such grants.

DISCUSSION AND CONCLUSION

A central question in the debate about government-nonprofit relationship is how government support might crowd in or crowd out private donations. Previous studies have assumed a uniform effect across communities and therefore focusing on the direct effect of government support on nonprofit density or private giving. Through analyzing multiple national panel datasets of giving to local nonprofit sectors in the past two decades (2000-2019), this study offers a more nuanced and contextualized understanding of government-philanthropy relationships by considering the two-way interactions between community disadvantage and government support in explaining the disparities in the distribution of philanthropic resources. In particular, a core contribution of the study is to identify and document the existence of a "Matthew effect" in the distribution of philanthropic resources, a potential self-reinforcing process that serves to maintain and exacerbate the disparities in nonprofit access to philanthropic resources among American communities along the socio-economic, racial and urban-rural lines.

Our contribution is both theoretical and empirical. On the theoretical side, the "Matthew effect" in the spatial distribution of philanthropic resources echoes and extends Lester Salamon's (1987) voluntary sector failure theory. As Salamon (1987) thoughtfully noted, "The central failing of the voluntary system as a provider of collective goods has been its inability to generate resources on a scale that is both adequate enough and reliable enough to cope with the human-service problems of an advanced industrial society" (p. 39). While Salamon's theory is focused broadly on the system/society level, we take one step further and argue that some communities suffer from this voluntary sector failure more than others. Specifically, we introduce the notion of "community disadvantage" and argue that community disadvantage manifests along the economic, ethnic, and rural lines. With the definition at the granular level, we theorized and

empirically demonstrated that the economic status of a community, the extent to which a community is minority prominent, and whether a community is in a rural area jointly determine the levels of private donations the human services nonprofit sector receive at the county level. If a community is disadvantaged in one or more dimensions, then there are fewer resources available to support their local nonprofits, which will further exacerbate the disadvantage of the community. By contrast, we predicted a typical "success breeds success" phenomenon in advantaged communities: those human service nonprofits in affluent, White-dominant, and urban communities can attract more non-government grants and private donations, which increase their capacity for addressing community needs and priorities. Overall, our theorization presents a nuanced picture of the Matthew effect in philanthropic giving to the human services nonprofit sectors in the U.S.

On the empirical side, our analysis of the nonprofit population data, which contains essentially the universe of registered human services nonprofits in the United States, produces interesting findings that support some aspects of our "community disadvantage" thesis but not others. On the one hand, our empirical analysis shows clear evidence of the presence of economic and minority disadvantages. We find that human service nonprofits receive lower private donations in communities with a lower SES than in communities with a higher SES. Similarly, we find that human service nonprofits receive lower private donations in minority-prominent communities (communities where minorities comprise at least one third of the population) than otherwise. Yet on the other hand, it shows the presence of a rural advantage rather than disadvantage: private donations to human service nonprofits are actually higher in rural communities than in non-rural communities.

Our contribution does not stop with the conceptualization and empirical validation of the "Matthew effect," though. Equally important, this study highlights the crucial role that government plays in countering the "Matthew effect." Our finding shows that government support to the local nonprofit sector, measured by the aggregated amount of government grants the nonprofits received, has a positive and significant effect on levels of private donations to human service nonprofits. While research has shown mixed findings on the effects of government support on charitable donations (citations?), our findings join a robust line of research that shows government spending has a crowd-in effect on charitable giving to human service nonprofits (De Wit & Bekkers, 2017; Grasse et al., 2022; Heutel, 2014).

In addition to this direct crowd-in effect, our study further establishes, both theoretically and empirically, that government funding serves to counter the "Matthew effect" by moderating the relationship between community disadvantage and nonprofit access to philanthropic resources. Click or tap here to enter text.Our interaction analyses reveal that, as government funding increases within a community, the adverse impact of economic disadvantage on private giving diminishes while the positive effect, and that private giving in rural communities can be easily increased by the elevated government support. In contrast, the negative effect of minority disadvantage remains relatively unchanged. These findings and non-findings regarding the moderating role of government funding deserve further attention and discussion. In other words, as a policy tool to help mitigate the negative consequences of community disadvantage for nonprofit access to philanthropic resources, government funding seems to work particularly well in minority prominent and rural communities.

In the meantime, it is important to note that government funding as a policy tool seems to fall short in certain places: it functions ineffectively in minority-prominent communities. While

there is an increasing call for a systematic reform in the governments to address racial justice and increasing funding in minority communities, our findings indicate that the moderating effect of government funding is positive but insignificant in minority communities likely due to the lack of trust in government and history of political suppression and marginalization.

While little is known about the mechanisms contributing to the widening rural-urban gap in philanthropic giving in the United States, we argue that it is likely because rural donors are wary of government intervention and respond more negatively to the signal of government support compared to urban donors. As Swierzewski (2007) discussed, barriers to rural giving include grantmakers' perceptions of rural communities as not having problems, a perception that rural communities are individualistic and therefore do not need or want philanthropic assistance, and low expectations for change in rural communities. Similarly, in his book Places in Need, Allard (2017) finds that central cities are where the human services safety net concentrates, and rural and suburb areas experiencing increasing poverty are left behind. These findings are alarming, considering that rural America receives much lower nonprofit human services expenditures from the government despite having a disproportionate need for human services compared with the country as a whole (Heflin & Miller, 2012; Shapiro, 2017). Taken together, we found that rural America can be characterized as a "philanthropic desert" in addition to having an underfunded nonprofit sector even in the presence of government support.

Study Limitations and Future Research Directions

As with any research, our study comes with limitations that should be taken into account when interpreting the findings. While panel regression can control for unobserved heterogeneity and the effect of time-invariant characteristics, this estimation strategy alone cannot fully

establish causality. Issues like reverse causality, time-varying confounders, and omitted variable bias can still pose challenges. To strengthen causal inference, future research may use panel regression alongside other methods like difference-in-differences, instrumental variables, where feasible. Our empirical analysis examines three types of community disadvantage individually, but we recognize that in reality, these disadvantages often intertwine. Research reveals that rural America of color faces a double structural disadvantage: for instance, black and Hispanic rural Americans are poorer than rural white Americans and black and Hispanic Americans living in metropolitan areas (Thiede et al., 2018). While our study does not account for double structural disadvantage, future research should investigate the intersectionality of multiple structural disadvantages and how they might threaten the long-term resilience of the local nonprofit sector.

Our study points to several future research directions. While we find evidence that suggests the Matthew effect in American generosity, future research is warranted to critically explore distributive justice issues in the nonprofit and philanthropic sectors (Freeman, 2018; Harvey, 2000). What does an equitable distribution of philanthropic dollars look like (Ashley, 2014)? More normatively, should philanthropy achieve distributive justice (Freeman, 2018)? Along this line, more scholarly attention is needed to examine *where*, not just how much, public and philanthropic dollars are distributed (McDougle & Lam, 2014; Wolpert, 1988, 1995; Wu, 2021b). In addition, it is important to examine the longitudinal network effect in the distribution of public and philanthropic dollars within the nonprofit sector (Faulk et al., 2016). Lastly, future research is warranted to examine the social justice movements among foundations and mega donors, and how philanthropy may tackle equity, diversity, and justice issues (Suárez, 2012; Wu, 2021a) and the extent to which they contribute to revamping or sustaining existing power structures.

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Online Appendix 1

Table 1. Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
County giving to HS nonprofits	19,059	15,960,346	106,060,693	0	3,916,053,610
Rural county	18,837	0.62	0.48	0	1
Minority prominent county	18,829	0.15	0.36	0	1
poverty rate	18,486	0.16	0.062	0.026	0.57
Government Grants	19,059	15,402,705	102,690,426	0	4,867,062,421
Program Service Revenue	19,059	48,305,938	255,533,166	-229,109	7,924,140,941
Fundraising Expenses	19,059	1,181,214	8,599,843	-120,361	376,008,577
Total Assets	19,059	137,913,071	733,281,835	-88,626	20,883,013,793
Nonprofit Density per 1,000 population	18,829	1.50	1.10	0.012	14
% Bachelor's degree	18,829	15	6.70	0.70	62
Total county population	18,829	101,519	326,155	228	10,105,722
year	19,059	2,016	1.70	2,014	2,019