

# **Does Coproduction of Public Services Support Government’s Social Equity Goals? The Case of U.S. State Parks**

## **Abstract**

In the U.S., nearly half of all state parks now have a charitable “Friends of the Park” partner. While their support is welcome, differences in wealth across counties also imply these supporting charities may create inequities in parks’ resources. Logit and tobit regression analysis using multiple data sources tests this idea on the California and Florida state parks systems. Coproduction theory has been largely neutral on the social equity question. The context of public parks may be especially useful to study given the strong historical association between White, middle-class interests and the politics of outdoor recreation. Our results do indeed suggest such concerns apply to this context, although outcomes for parks users are also contextual to state policy decisions. Theoretically, these findings offer a means of understanding coproduction’s possible effects within the larger framework of government-nonprofit macro theories such as interdependence, demand-heterogeneity and philanthropic failure theory.

**Keywords:** Coproduction, social equity, public parks, philanthropic failure

## **Evidence for Practice**

- Charitable “friends of the parks” are now affiliated with nearly half of U.S. state parks, but with widely varying resources and capacities.
- Testing this argument on California and Florida state parks, we find the presence and capacity of Florida “friends of the parks” are strongest in counties with the greatest income inequality.
- Policymakers should consider the possible unforeseen implications of relying on private sector resources for support given the distributional inequities they may produce.

Changes in U.S. tax policy under neo-Conservative governments and the 2008-2011 global recession caused a “new fiscal ice age” for many public services (Kiewiet and McCubbins 2014, 105). This fiscal crisis resulted in unmet public infrastructure needs, especially for services deemed non-essential, like public parks (Kaczynski and Crompton 2006). U.S. state and national parks continue to report deferred maintenance backlogs in the billions of dollars, shortfalls in capital funding, staff cuts, and a constrained ability to meet the challenges of climate change (National Park Service 2015; Walls, Darley, and Siikamaki 2009).

The response by government agencies at all jurisdictional levels has been to seek non-public sources of revenue, including fees and concessions but also private philanthropic sources (Smith and Leung 2016). They also initiate the creation of, or encourage citizens to form affiliated tax-exempt public charities engaged in a variety of supporting activities (fundraising, planning, maintenance, advocacy, programming). While this phenomenon is not new historically (Salamon 1987), long-term trend analyses report an increase in public school (Nelson and Gazley 2014) and public parks supporting charities (Gazley, Cheng, and LaFontant 2018). A more general

trend has also been observed in which U.S. federal agencies create fundraising divisions. Even the Central Intelligence Agency now has a foundation (Cohen 2012).

The focus of this article is on whether the benefits are distributed equitably to service users when philanthropy is used to underwrite or substitute for public services. The question is justified because some studies of other public services find a connection between community wealth and the capacity of these government-supporting charities. For example, Nelson and Gazley (2014) found in a U.S. national study that school foundations and parent-teacher organizations raising funds for U.S. public school districts raise fewer dollars per pupil in poorer communities. In a Russian national study of parental support for Russian public schools (Suslova 2018), and in a study of public schools in the California San Francisco Bay Area (Paarlberg and Gen 2009), strong relationships were found between community wealth and the presence of a school-supporting charity, as well as how many dollars per pupil the charity raised. These equity concerns are intensified as scholars find that these government-supporting charities may crowd out public resource investment in corresponding services at the city level (Cheng 2019a). The poorer and more deprived communities may get the worst of both worlds because of the existence of these government-supporting charities. This point matters when considering the extensive research demonstrating connections between human health outcomes and access to green space and the natural environment (Strife and Downey 2009).

## **Literature Review**

The literature addressing this phenomenon of charitable support for public services rests on two rich theory fields. The first is the study of social equity in the context of public management. Next are the three related economic macro-theories upon which so many studies of charitable

activity vis-à-vis the public sector have been built: (1) three-failures theory (especially philanthropic and government failure theories), (2) its close relation, coproduction theory, and (3) interdependence theory. Together, these theories help to understand the normative goals driving public action, and also variations in charitable activity through supply-side and demand-side lenses. They also help to explain why one government or community might muster the resources to meet citizen demand for services while another might not.

### **Social Equity in Public Service Delivery**

Frederickson (1990, 228) famously argued for social equity to become a “third pillar” in public service, reminding readers that social equity’s roots lie firmly in the 14<sup>th</sup> Amendment’s “equal protection” clause. A good amount of the subsequent public management social equity literature focuses on “distributive equity” (Gooden 2015; Lucy, Gilbert and Birkhead 1977; Wooldridge and Gooden 2009). Public service delivery should not simply produce “equality” (identical distribution) but “equity” (fairness) in the sense of using government services to correct imbalances in service distribution, particularly to ensure benefits are greatest for those most disadvantaged (Gooden 2015; Denhardt 2004, 105). For example, in the context of public recreation, an inquiry into its fairness of services might address how the quality of recreation as a public service is related to racial and socio-economic characteristics of the community (Floyd and Johnson 2002, 62).

This article addresses several small but notable gaps in the social equity research. First, most of the past public recreation research has been focused on equitable access to municipal and urban parks, with some focus on federal parks, but with rather less focus on state parks (which host enormous and disproportionate numbers of public parks users, most of whom come from

adjacent communities; NASPD 2015). As in public education, the examination of public land use is also valuable when only a small range of “pure public goods” are available for application of the social equity lens (Chitwood 1974).

There is some disagreement on the social equity consequences of public land access. Lucy, Gilbert and Birkhead (1977, p. 690), viewed public parks as a “developmental service”, meaning neither a routine nor an essential service, and suggested the equity considerations are therefore less momentous even when the public investment is insufficient. However, others have pointed out the health consequences of unequal access to outdoor space, making park access a more serious environmental justice consideration (Byrne et al. 2009; Strife and Downey 2009; Floyd and Johnson 2002). And Guy and McCandless (2012, S12) have observed that the equity issues can extend well beyond access to services to also include bigger questions such as whether underserved populations have “a place at the table to express views on policy choices” regarding public goods.

Additionally, despite calls for a better understanding of the “social and institutional mechanisms that generate inequities” (Boone et al. 2009, 767), very little coproduction *or* parks research has addressed outcomes (for exceptions, see Fortwangler 2007; Jakobsen and Andersen 2013).

“Outcomes” represent one of the four pillars of social equity concern according to the National Academy of Public Administration (Johnson and Svara 2015). The question here is whether charitable “friends of the parks” improve distributional justice (such as equitable access to services) through their philanthropy, or conversely whether they exacerbate the inequities because of unbalanced and unregulated philanthropy. This article, therefore, addresses a gap in the coproduction literature as well since others have observed the relative lack of attention to

understanding whether coproduced public services really achieve the democratic principles to which they aspire (see Verschuere, Brandsen, and Pestoff 2012). For example, Jakobsen and Andersen (2013, p. 705) speculate that in coproduced services, users of high socio-economic status may coproduce more than low-SES service users, “even though the latter usually have the greatest need for public services”. Our study looks at whether charitable support as a form of coproduction widens or narrows such a divide. The following sections of this literature review turn to theories of nonprofit activity, including coproduction, to discuss what each might predict.

### **Coproduced Parks Support Through the Lens of *Government Failure* Theory: What are the Predicted Outcomes for Social Equity?**

Theories of market, government, and philanthropic failures provide arguments both for why a robust three-sector economy exists and also for why each sector regularly fails to entirely meet consumer expectations. Coproduced activity provided by volunteers and donors to public parks charities is a response to government “failure”, whereby the service is not sufficiently popular to be provided by public funds (see for example median voter theory) but is still able to generate niche support. In such instances, private citizens with resources and motivation may step in to offer the necessary collective action.

Since the early 1980’s – not coincidentally, also an era of government fiscal retrenchment— coproduction has been regarded as a central mechanism for *improving* public service quality through citizen participation and involvement (Parks et al. 1981; Brudney and England 1983). Scholars interested in coproduction generally point to its beneficial properties, such as offering a mechanism for citizen voice and civic engagement (Pestoff, 2006; Suslova, 2018). In the context of public parks, Fortwangler (2007) notes the greater opportunity to protect natural resources,

while Brecher and Wise (2008) suggest the opportunity for innovations in parks management.

Although seldom explicitly linked in the literature, coproduction theory therefore is an outcome of government failure theory. Indeed, private citizens working through various forms of collective action such as automobile clubs and chambers of commerce were instrumental in driving the creation of some national and state parks in the late 19<sup>th</sup> and early 20<sup>th</sup> century. And as Gazley, Cheng, and LaFontant (2018) have observed, this citizen action and private support may come in the form of organized, permanent, institutional support via charities created with missions to serve a particular park or parks system.

### **Parks Charity Activity as a Source of *Philanthropic Failure*: What are the Predicted Outcomes for Social Equity?**

Although coproduction has generally been viewed as a benign form of citizen action, when private citizens or charities step in to support public services, various forms of “voluntary” or “philanthropic failure” may also then emerge. Here, the “failures” are “inherent limitations” on the voluntary sector’s ability to substitute for governments or markets (Salamon 1987, 39). Both of these phenomena may consequently serve to amplify rather than alleviate inequality in service provision.

Specifically, two forms of philanthropic failure may occur. “Philanthropic insufficiency” describes instances where voluntary contributions do not adequately meet demand in the absence of taxation authority. Historically, in the case of some but not all of the charities created to support public institutions such as schools, libraries, and parks, governments have chosen to legislate a solution by allowing many of these charities to collect user fees, entry fees, or other

involuntary service charges in lieu of taxation. In other cases, where these government-supporting charities depend on gift income, they may be financially unstable and unreliable especially during economic downturns that limit philanthropic capacity. Neither of these situations supports a socially equitable outcome because they either restrict user access to services on the basis of ability to pay, or they rely on inequalities in community wealth to coproduce the service.

A second “failure”, “philanthropic particularism”, describes the potential ability of a private sector service provider, including a charity, to select clients, the nature, or the location of services based on its own criteria. This ability is considered to be “one of the purported strengths of the voluntary sector” (Salamon 1987, 40) when the services are intended to serve only niche demands. However, in the context of parks privatization, government failure may cause a possible range of negative effects related to the loss of public accountability (Neal 2010; Gazley 2015). Imagine, for instance, a “niche” parks-supporting charity is created through the efforts of a subgroup of parks users, such as back-country rock climbers. The result could be excellent rock climbing opportunities but a failure for the charity to support other, high-demand services such as a disability-friendly children’s playground.

A possible downstream outcome of these failures is “mission drift”, a phenomenon well-known to charitable observers. Paarlberg et al. (2014) have suggested that public school parent-teacher organizations face mission drift as they focus more on supplementary activities such as fundraising and less on their traditional mission to provide an instrument for parental advocacy and voice. These problems may also affect the missions of previously existing charities operating in the same sphere. Imagine for example how a community foundation might face challenging

decisions when public parks foundations heretofore funded by tax revenues come knocking at their door for support.

Further, public accountability may be reduced when public officials allow money to dictate policy – i.e., allowing philanthropic interests to have greater influence than citizens and service users. Anecdotal evidence suggests that “philanthropic particularism” can happen with parks (Kleiman 2004; Wade 2005). Indirectly, Marwell (2004) has argued that charities aligned closely with a governmental interest (in her case, nonprofit welfare service providers) may intensify inequalities by focusing their political efforts on securing only the local public funding on which they depend. Moreover, despite the overwhelmingly positive public benefit potential of the charitable sector, its legal form also challenges public accountability when decisions are made in a closed boardroom rather than an open legislative chamber, and when those decisions are shielded from public view in the absence of “sunshine laws” or some other mechanism for transparency (Eagles 2009).

When, as noted, U.S. state and national public parks charge entry fees, whether under a public or semi-privatized model, the definitive outcome is less access to natural resources for low-income users. Charitable resources may not be sufficient to offset government cutbacks to retain free public access to parks, although they can produce better quality service to those who can pay by way of new educational programming. Some observers of semi-privatized public services also express concern about possible “crowding out” of government funding when charities step in (Murray 2010), meaning charitable support for a public service may only continue to erode government willingness to pay for it through taxes.

While there are mechanisms for preventing such an outcome, such as restricting philanthropy to non-operational needs, there is some evidence that crowding out happens anyway (Gazley, Cheng, and LaFontant 2018). In a study from the U.S. state of Illinois, Schatteman and Bingle (2015) found that while public libraries in this state are mainly dependent on public funding, the reliance on private philanthropy through “Friends of the Library” charities increases as local government funding declines. Such outcomes have implications for public services facing enormous maintenance backlogs, such as parks.

Services provided by charities may also be harder to measure, based on Bekkers’ and Wiepking’s (2011) argument that the donors for these charitable services bring multiple motivations and expectations. In other words, “philanthropic particularism” may not only create inequities, it may complicate performance measurement. And philanthropic insufficiencies may also emerge because cross-sectoral partnerships of any kind introduce a range of challenges related to cross-sector collaborative capacity (Gazley 2010). In the case of natural resources, privatizing support for public land may also exacerbate tensions with nearby residents, sometimes in racially charged ways (Fortwangler 2007), and reduce environmental quality (Friends of the Earth International 2005). Other questions, such as whether a privatized or public parks model offers more ecological integrity or protects better against environmental degradation, have not generally been explored in research (More 2005).

Finally, there is some evidence that private funding for public services increases inequities in service quality. Brecher and Wise (2008, S156), for example, find substantial variations in dollars raised per square footage of one municipal park system, concluding that for New York City, “the parks benefitting from ...significant supplemental resources [via parks charities]

generally are those *least* in need” (emphasis added). Brecher and Wise are observing a manifestation of philanthropic particularism (Steinberg 2003), whereby the donor exercises the right to determine how a gift is used, e.g., the tendency for New York City philanthropists to support the parks located near their residence.

Wolpert has argued (1993a, 26) that national patterns of philanthropy follow substantial geographic variations that “can be highly prejudicial to low-income people in the less generous places.” He suggests that these differences occur especially for “amenity” causes as opposed to “charity” causes because while wealthy donors are like all donors in being predominantly drawn to support local causes, they also tend to support those causes from which they benefit, such as better schools, healthcare, arts, and culture (1993b). Public parks are interesting subjects because they are not only amenities, they are place-based in the sense that they cannot be relocated like a good hospital or school. Donors to parks charities that view parks as an amenity are likely to live nearby, supporting those parks that can provide them with reciprocal benefits.

### **Parks Charity Activity as a Reflection of *Interdependence* Theory: What Relationship to Social Equity?**

As noted, government failure theory predicts that nonprofits will supplement or replace government support. This inverse relationship between public and charitable parks funding has empirical support (Gazley, Cheng, and LaFontant, 2018) so may explain the situation in which U.S. state parks find themselves. However, some investigations of nonprofit activity have discovered that their growth may not, in fact, be inversely related to governmental activity (Lecy and Van Slyke 2012).

Interdependence theory has been used in recent years to explain situations in which government actors recognize that nonprofits play a role in public service provision and enlist these private sector organizations as partners rather than as substitutes. In such instances, governmental and nonprofit expenditures on the same services might be positively related. In fact, the government may have no interest in withdrawing from a service; they merely want to tap the expertise and capacity of the private, nonprofit sector through subsidies. The assumptions of interdependence theory could also be reflected in the somewhat “contractual” nature of a state park agency enlisting charitable support.

While interdependence theory has been viewed as a fairly positive reflection of cross-sector activity, certainly when compared to the zero-sum game represented in “three failures” theories, its relationship to social equity is only partially understood. It is known that wealthier and more populous communities are more likely to enjoy both nonprofit growth and governmental support for that growth. But some of the strongest prior studies in this area have overlooked socio-demographics such as race. The impact of community racial characteristics on nonprofit activity can result in social inequities in service. But it can also foster more nonprofit activity when it serves as a reflection of demand heterogeneity. For example, Uzochukwu and Thomas (2018) have found racial minorities to engage in more coproduction under specific circumstances. For those reasons, community diversity will not always predict charitable activity in the same direction, as will be explained in the next section.

Based on interdependence theory, the hypothesis is that there will be a positive association between state expenditures on parks and the presence and capacity of a parks charity. Despite the partnership relationship between the government and nonprofits, as suggested by

interdependence theory, this positive relationship may still limit social equity since parks that have a higher level of public and charitable investment may still be distributed inequitably across communities based on community capacity to support them.

H1a: State park units with a higher level of public spending will be more likely to have a charity supporting that state park, everything else being equal.

H1b: Where a state park charity operates, its budget size will be positively related to the level of public spending in the supporting park unit, everything else being equal.

### **Parks Charity Activity as a Reflection of *Supply and Demand Heterogeneity*: What Can Explain Social Inequity?**

This discussion now turns to possible explanations for social inequity when and if they occur. The arguments made by Becher and Wise, and Wolpert, above, underline an uncomfortable feature of the U.S. charitable sector: the majority of private philanthropy goes to organizations from which donors derive some instrumental or reciprocal benefit, such as a community hospital, school, religious, or cultural amenity (Havens, O’Herlihy, and Schervish, 2006). This fact introduces the need to view parks charities as subjects of citizen preference or demand (the donor gives because the donor uses the park while their government fails to provide the desired quality of service) which then produce a supply-side response (the donor choice is based on the capacity to give). A donor may find it hard to separate their preference to support a park as an *amenity* from their more altruistic public-benefit goals such as helping to promote biodiversity or encourage physical fitness. It is interesting to note that at the institutional philanthropic level, “place-based” giving also appears to be on the rise among private foundations (Atkinson, 2016).

Therefore, setting aside motives, supply-side factors may play a role in parks charity activity and the resulting distribution of benefits.

A supply-side consideration related to government failure theory is that heterogeneous communities may generate more nonprofit organizations to meet the demand for heterogeneous services (Salamon 1987). Kim (2015) finds that at least some kinds of nonprofit density relate to more diverse communities, measured by greater income inequality. Both Paarlberg and Gen (2009) and Nelson and Gazley (2014) also found the presence of school-supporting charities to be associated with demand heterogeneity (but also with community wealth), and Abercrombie et al. (2008) found a similar demand heterogeneity for municipal parks. For parks, however, many studies focus on major population centers so are not relevant to the study of state and federal parks located in rural communities. A related limitation is that many previous studies do not control for population density (e.g., population per acre), which is a consideration in public parks placement, demand, and usage.

An additional limitation to a simple, demand-side solution relates to the longstanding and somewhat troubling history of minorities and parks access. Pease (2011) lists a variety of diversity-related, demand-side reasons why U.S. parks are visited less by minority racial and ethnic groups, including access, language barriers, fear of discrimination, and the fact that wild spaces may have negative associations for some ethnic groups (see also Floyd and Johnson's, 2002, discussion of "marginality"). Le (2012) has also noted more generally an ethnic variation in preference for parks services. Therefore, more diverse communities may not translate into more socially equitable parks usage. Based on demand heterogeneity theory, the hypothesis is a positive relationship between community racial diversity and the presence of a parks charity, as

well as its charitable capacity.

H2a: More racially diverse communities in which a state park is located will more likely have a charity supporting that state park, everything else being equal.

H2b: Where a state park charity operates, its budget size will be positively related to the racial diversity of the community, everything else being equal.

Despite the prevalence of the demand heterogeneity theory, supply-side factors may play a more important role than demand-side factors in explaining charitable activities. For example, the public school research found that while the demand-side of community diversity might *create* a school-supporting charity, it is the supply-side factors of wealth, education, and racial homogeneity that predict the magnitude of impact (Paarlberg and Gen 2009). In other words, the *substantive* differences in charitable support for public services (the amount of dollars raised) may depend on supply-side considerations, such as community wealth and population (e.g., the availability of supporters), as argued by Nelson and Gazley (2014), and Suslova (2018).

Some research does suggest that demand for public recreational services also varies according to a range of socio-economic factors, including wealth, education, and race. For example, a study based in Melbourne, Australia found one common form of parks-dependent exercise, walking, to be associated with higher socio-economic status. For these various reasons, the models that follow include both supply-side variables for charitable activity related to community wealth and the demand-side variables of racial diversity and age. Only one prior study has tested any of these ideas on parks philanthropy. Yandle, Noonan, and Gazley (2016) found in a study of the 400+ U.S. national parks and monuments that parks-supporting charities were associated with

the supply-side factors of more populated and wealthier communities, but that (supporting Pease's arguments) they differed from the public education studies cited above in finding parks charities to be associated with Whiter communities, rather than with the demand factor of racial diversity.

Returning to the central concern, the possible impact of philanthropic failure on public parks, the hypothesis is that there will be a positive association between the presence of a parks charity, and also between community wealth and charitable capacity to support a park. These differences will occur *despite* the expected demand heterogeneity as measured by racial diversity. The presence of a park charity will support coproduction theory but a positive association between parks charity activity and community wealth will also reflect the resulting philanthropic failure and challenge the idea that offloading public services to charity produces a more efficient, effective, or more equitable public service. More specifically, building on the findings of philanthropic failure found by Yandle, Noonan, and Gazley (2016) in national parks, and Nelson and Gazley (2014), Paarlberg and Gen (2009), and Suslova (2018) in public education systems, socio-economic characteristics of communities will also be associated with park-supporting charitable activity.

H3a: Wealthier communities in which a state park is located will be more likely to have a charity supporting that state park, after controlling for other community diversity measures.

H3b: Where a state park charity operates, its budget size will be positively related to the wealth of the community, after controlling for other community diversity measures.

## **Data and Methods**

This study tests the hypotheses posed above in the context of the parks systems of the State of California and the State of Florida. These are the first and third most populous states in the U.S., accounting for nearly one-fifth of the U.S. population. According to data published by Gazley, Cheng, and LaFontant (2018), California, Florida, and New York are the top three in the nation in terms of the number of state park-supporting charities. Because of data availability issues, New York could not be included. California and Florida also offer important political variations (especially with respect to their tax policies) which allow some across-state tests related to the theoretical framework. The analyzed data come from five sources:

(1) California state park names, budgets, locations and visitorship come from 2014-2015 State Parks System Statistical Report, published by the California Department of Parks and Recreation.

(2) Florida state park names, budgets, locations, and visitorship come from the 2014-2015 Economic Impact Assessment for the Florida State Park System, published by the Florida Department of Environmental Protection.

(3) The 2014 -2015 National Center for Charitable Statistics Core Public Charity files to identify all registered charities that are supporting a California or Florida state park, using keyword searches as the primary tool and internet searches as a secondary form of verification. The keywords search protocol follows Gazley, Cheng, and LaFontant (2018).

(4) Original data was then added, by performing internet searches with state parks names as the reference points to pull in both filing and non-filing charities (i.e., with IRS 990 Forms). The resulting full population of state “friends of the parks” includes all that have registered with the Internal Revenue Service, or have incorporated with a state government, or have done neither

(i.e., not sought government recognition) but have an operating website.

(5) Community demographics are then matched to each geographic area (county) in which a California or Florida state park operates via the 2014 American Community Survey published by the U.S. Census Bureau (median household income, race, education, age etc.).

These methods produced 280 California state park units, of which 164 or 58.6 percent include at least one parks-supporting charity and 36 or 12.9 percent include 2 to 3 parks charities. There are also 175 Florida state park units, of which 108 or 61.7 percent include at one park-supporting charity, and 5 or 2.9 percent include 2 parks charities.

## **Models**

Based on the prior literature, the final choice of models includes two dependent and nine independent variables, estimated using either Logit or Tobit regression analysis. The Tobit model is used to account for the censored data included in the second level of analysis, charitable expenditures. Due to the data limitations inherent to U.S. charity tax law, the full population of filing and non-filing parks-supporting charities can only be used to test Hypothesis 1 (the presence of a charity). To test Hypothesis 2, where data include charity revenue from 990 filers, a Tobit model is used.

***Dependent Variables.*** One dependent variable represents the demand-side argument: (1) Presence of a parks charity serving a distinct state park unit. The second dependent variable represents the supply-side argument: (2) Amount of dollars spent by this charity. This aspect of social equity is related to resources or inputs, per Lucy, Gilbert and Birkhead (1977). The variable is standardized in two ways: dollars spent per capita, based on county population in

which the park is based, and dollars spent per park visitor (charitable expenditures divided by number of parks visitors). These strategies account for across-park differences.

***Independent variables.*** Proxies for service/amenity demand include a proxy for racial diversity (percent of county population that is White, meaning the obverse describes the percent of non-White population) and Percent of county this is Seniors (ages 65 and greater). The inclusion of “Seniors” also helps to account for across-state differences between California and Florida. Supply-side variables related to the amount of charitable activity and also hypothesized to be related to social inequity include county median household income (logged for outliers), and income inequality as reflected in the Bureau of Census Gini Coefficient.<sup>1</sup> Park age and acreage are control variable both on the demand and supply-side as larger and older state parks often have more service needs. In the meantime, they also creates more opportunities for citizens to participate in park operation. . Other control variables related to the park include State per-park or per-visitor expenditures. A state dummy variable is added to control for unobservable across-state differences.

## **Findings**

Table 1 presents the comparative descriptive statistics for California and Florida state parks with and without state-park supporting charities. Descriptively, across both states, Table 1 suggests that state parks associated with a supporting charity are older and larger, and operate in counties with higher median household incomes. Possible income and income distribution differences between communities with parks-supporting charities and those without appear minimal, as do racial and age differences.

Notably, state park expenditure patterns diverge between California and Florida. California parks with a supporting charity had a higher public expenditure per visitor than those without a supporting charity. In Florida the opposite occurred. Florida counties housing a parks charity were associated with less state spending, and also had slightly higher income inequality.

[Tables 1 and 2 here]

The findings in Table 2 address Hypotheses 1a, 2a and 3a, while Tables 3 and 4 address Hypotheses 1b, 2b, and 3b. Table 2 presents the results of a Logit model using odds ratios, testing possible socio-economic associations on the presence of a parks charity (the dependent variable). The results suggest that the association between community wealth and park charity presence is heavily dependent on state characteristics. While overall there is a negative association between community wealth and presence of a park-supporting charity (first column), it disappears when controlling for state differences (second column) and reappears as a positive association in Florida (last column) where counties that are wealthier and have greater income inequality are more likely to have a parks charity. There is no association between the percent of White/non-White population and presence of a parks charity (first variable), but younger and smaller parks are more likely to have a charity. These results offer weak to little support for demand heterogeneity theory (Hypothesis 2a). There is also no support for interdependence theory (Hypothesis 1a) in the sense that states do not appear to spend more on those parks with a park charity. Overall, the results offer no support for H1a or H2a, and some support for H3a predicting philanthropic failure.

[Tables 3 and 4 here]

In Tables 3 and 4, the dependent variable switches from a (dummy) presence of a parks charity to the dollars the charity spends per associated park. In Table 3, charitable expenditures per capita (based on county population) are used; in Table 4, each parks charity's expenditures per park visitor are substituted as an alternative model for testing interdependence theory (with some loss of sample size due to missing values). This test of both models is also warranted under the presumption that parks visitors (and the presumed pool of potential parks charity supporters) don't all come from the immediate surrounding county.

In Table 3, the main philanthropic failure hypothesis (3b) is supported in part with the finding of a positive association between community wealth in Florida and the amount of expenditures from that park charity. However, there is some support for interdependence theory (Hypothesis 1b) in that Florida parks spend more per capita (based on county population) in counties where a parks charity also spends more per capita. The same association is not found in California. Demand heterogeneity theory (Hypothesis 2b) is also supported in the positive association between community diversity and the greater wealth of parks charities in Florida.

In Table 4, when substituting charitable expenditures based on county population for an expenditure based on visitorship, all statistically significant relationships between community diversity or wealth disappear (Hypotheses 1b and 3b are not supported), and the only remaining association is consistent with interdependence theory (Hypothesis 2b) in suggesting that as public parks expenditures grow, so do charitable expenditures (although the change may be driven by the decrease of sample size due to missing information on visitorship for some parks).

## DISCUSSION AND IMPLICATIONS

Although government-nonprofit collaboration in public service provision has a long-standing presence in the public affairs scholarship, it has been discussed almost entirely from the perspective of nonprofits as *recipients* of public monies to extend public services while limiting the size of bureaucracy (e.g., Salamon's "third-party government", 1987). Some of this privatization research points to troubling social equity concerns (Marwell 2004). Much less is understood about the impact of nonprofits as philanthropic *providers* or coproducers of public services. But the growing phenomenon of government-supporting charities prompts "hollow-state" observers to ask whether these institutions help or hinder public values of equity in public service access. These social equity concerns mount as government-supporting charities are not only involved in the implementation of public services but also engaged in the planning and design of public services (Cheng 2019b).

Viewing this question through the lens of public recreation and natural resources management, this study set out to understand whether the phenomenon of parks charities will unfold as it seems to be unfolding for public school charities, where there is little evidence to suggest that these charities are going to compensate for the distributional inequities of American economic life. Government and philanthropic failures theories, along with coproduction theory, have only recently and partially been utilized to help explain the rise of government-supporting charities. This outcome-focused study is therefore timely and helpful for policymaking, especially to help governments understand possible unforeseen implications of relying on the private sector for resources (Floyd and Johnson 2002; Verschuere, Brandsen, and Pestoff 2012).

In the context of natural resource support and management, this study finds support for several major theories of nonprofit-government relations, and for both supply-side and demand-side

arguments for charitable activity. Certainly, coproduction theory is supported in finding a majority of California and Florida state parks have one or more associated charities (see also Gazley, Cheng, and LaFontant, 2018, for a more detailed description of how these state parks charities spend their resources). This analysis finds some weak support for Paarlberg's and Gen's (2009) findings that community homogeneity measured by race will be associated with coproductive activity as a form of demand heterogeneity. As noted in this article's literature review, however, the different result may lie in the differences between the educational versus recreational contexts.

Occasional support is found herein for a philanthropic failure hypothesis when community wealth seems to be related to parks charity activity and capacity. These signs of social inequities appear only for Florida parks, a finding inviting further research. The difference between the Florida and California experiences may reflect state budget policy. The comparison of two states active in parks coproduction that also happen to have very different fiscal policies invites larger, cross-state comparisons. For example, according to the 2014-2015 National Association of State Park Directors Annual Information Exchange, more than 80% of the funding for the Florida state park system comes from park generated revenue while the California state park system relies on park generated revenue for less than 30%. The funding structure of state park systems seems to be a key factor in determining the equity implications of the charitable support for these systems. Finally, only in some instances does interdependence theory appear, when the wealth of the charity seems aligned with state priorities reflected in greater public park expenditures. In fact, only on some occasions (not at all in Table 2, partly in Table 3 and wholly in Table 4) does public spending on a park have any relationship to charitable spending.

The main strength of this study is its ability to expand the theory-testing efforts of other scholars into a new arena of government coproduction: public parks-supporting charities. This study also extends theory development related to collective action in natural resource provision, providing new empirical details on the role of charities in public parks support, a role that had been hitherto more commented on than measured. Additionally, this study may improve approaches to tests of interdependence theory by providing more focused and relevant charity-state service comparisons: as opposed to other studies using raw aggregates of community social sector and government activity to test resource interdependence, this study focuses on the governmental and nonprofit actors that are linked to the same, distinct public service.

### **Limitations**

This study also highlights some possible limitations in current approaches to coproduction research. Thinking about public service provision from both demand- and supply-sides reinforces the idea that the public sector is responsible for more than meeting median voter preferences—it also enforces service equity through public law. Coproduction theory has been largely neutral on social equity, conceptualized as a demand-side argument: a citizen requires a better service so helps to produce it. But left to themselves, do coproducers individually or collectively meet demand equitably (the supply-side question)? Although not part of the analysis, private sector charities coproducing public services are not subject to public accountability standards (e.g., collective bargaining, open meetings, etc.). This fact suggests additional philanthropic failures and other principal-agent problems could occur if decisions are made by nonprofit boards representing coproducers of a public service but who are not actually representative of the communities consuming a service.

Principal limitations to this study include its cross-sectional nature and the limited efforts at characterizing communities using census data. Further, other explanations for parks charity activity may not have been captured. For example, differences in parks amenities and features have not been included. Nor has this study included the psychological dimensions of co-productive activity that might be measured through a study of the parks charity donors and volunteers themselves. Other studies have found both public-serving and self-serving motivations to play a role in public service provision. Finally, the historical legacies of each state park are not captured, although these might shape present user patterns. Under Jim Crow, some Florida parks were not accessible to Black citizens until court-ordered desegregation occurred (O'Brien 2015).

The public administration implications of the study could also be extended. Economic measures of fiscal stress do not always align with the perceptions of policymakers. If so, parks might be especially prone to under-funding depending on the type of parks management under which they fall. If so, parks outcomes may be more dependent on managerial discretion than on private sector activity. The social equity aspects of this inquiry should be bolstered by exploring other ways in which economic inequalities shape parks decision-making, such as through advisory boards, councils, and other forms of citizen representation and oversight. In other words, public managers also have the choice to organize, directly and without the participation of parks charities, a means of including the voices of economically disadvantaged community members. Last and importantly, we do not measure visitor satisfaction with parks amenities, so we are only making indirect assumptions about the overall quality of experience a parks charity adds for a visitor.

## Conclusion

Nonprofit-government research and a good amount of coproduction research has focused more on causes than outcomes, more on demand- than supply-side considerations. The public may therefore be ignoring crucial distributional consequences of current public policy related to nonprofit activity. Guy and McCandless (2012, p. S11) remind us that social equity discussions have not kept up with the “global interconnectedness of institutions” that deliver public services.

This study finds small but troubling implications for wealth’s impact on access and service quality. The findings mirror the concerns of public parks advocate Margaret Walls (2014) who wrote that while parks philanthropy has produced real benefits in rallying citizen support for improved public spaces, it also introduces some troubling possibilities that policymakers (governors, state legislators, and parks managers) need to take more seriously. These circumstances deserve more attention from practitioners and more research. Even in light of the evidence of unequal funding streams and selective funding choices, will state governments be tempted to reduce parks budgets further? What happens to other community needs and to general community philanthropic capacity when donors turn their attention to supporting public services? And given its need to divert some funding for internal support, is philanthropy even the most efficient producer of public services?

More (2005, 18-19) argues that the best way to understand if privatization of public resources generates benefits or problems is to focus on the consequences. He points out that questions of access and service quality have real implications for natural resources, because parks are “part of [US] national identity, ...[supporting the idea that if ] everyone is created equal ... on public land at least, there is no need to tip your hat to anyone—you are an owner, not a customer.”

According to dominant nonprofit theories, these consequences may be troubling. For example, Salamon (1987, 39) used the word “inherent” to describe philanthropic failures, suggesting these problems are permanent. Whether these problems remain predictable or deterministic for essential public services like education or access to nature that are increasingly co-created through joint government and charitable action remains to be seen. But certainly, both practical and scholarly efforts to assess the downstream effects of coproduction should continue.

## References

Abercrombie, Lauren C., James F. Sallis, Terry L. Conway, Lawrence D. Frank, Brian E. Saelens, and James E. Chapman. 2008. Income and racial disparities in access to public parks and private recreation facilities. *American Journal of Preventive Medicine*, 34(1): 9-15.

Atkinson, Scott. 2016. "This City Runs on Donations" In Nextcity.org, <https://nextcity.org/features/view/philanthropy-money-foundations-city-funded>

Bekkers, René and Pamala Wiepking. 2011. A literature review of empirical studies of philanthropy: Eight mechanisms that drive charitable giving. *Nonprofit and Voluntary Sector Quarterly* 40(5): 924-973.

Boone, Christopher G., Geoffrey L. Buckley, J. Morgan Grove, and Chona Sister. 2009. Parks and people: An environmental justice inquiry in Baltimore, Maryland. *Annals of the Association of American Geographers*, 99(4):767-787.

Brecher, Charles and Oliver Wise 2008. Looking a Gift Horse in the Mouth: Challenges in Managing Philanthropic Support for Public Services. *Public Administration Review*, 68:S146-S161.

Brudney, Jeffrey L. and Richard E. England. 1983. Toward a definition of the coproduction concept. *Public Administration Review* 43(1): 59-65.

Byrne, Jason, Jennifer Wolch, and Jin Zhang. Planning for environmental justice in an urban

national park. *Journal of Environmental Planning and Management* 52, no. 3 (2009): 365-392.

Cheng, Yuan. 2019a. Nonprofit Spending and Government Provision of Public Services: Testing Theories of Government–Nonprofit Relationships. *Journal of Public Administration Research and Theory* 29(2): 238-254.

Cheng, Yuan. 2019b. Exploring the Role of Nonprofits in Public Service Provision: Moving from Coproduction to Cogovernance. *Public Administration Review*, 79(2): 203-214

Chitwood, Stephen R. Social equity and social service productivity. *Public Administration Review* 34, no. 1 (1974): 29-35.

Cohen, Rick. 2012. Philanthropy funding government work? There's a foundation for that—several, actually. *Nonprofit Quarterly*, 13.

Denhardt, Robert B. 2004. *Theories of Public Organization, 4th ed.* Belmont, CA: Thomson/Wadsworth.

Eagles, Paul FJ. 2009. Governance of recreation and tourism partnerships in parks and protected areas. *Journal of Sustainable Tourism* 17(2): 231-248.

Floyd, Myron F. and Cassandra Y. Johnson. 2002. Coming to terms with environmental justice in outdoor recreation: A conceptual discussion with research implications. *Leisure Sciences*, 24(1):59-77.

Fortwangler, Crystal. 2007. Friends with money: Private support for a National Park in the US Virgin Islands. *Conservation and Society* 5(4): 504–533.

Frederickson, H. George. 1990. Public administration and social equity. *Public Administration Review*, 50(2): 228-37.

Friends of the Earth International. 2005. *Privatization: Nature for Sale, the Impacts of Privatizing Water and Biodiversity*. Issue 107. Friends of the Earth International, Amsterdam, Netherlands.

Gazley, Beth. 2010. Why not partner with local government? Nonprofit managerial perceptions of collaborative disadvantage. *Nonprofit and Voluntary Sector Quarterly*, 39(1):51-76.

Gazley, Beth. 2015. How philanthropy props up public services and why we should care. *Nonprofit Quarterly*, 1-6.

Gazley, Beth, Daniel Yuan Cheng, and Chantalle LaFontant 2018. Charitable support for US national and state parks through the lens of coproduction and government failure theories. *Nonprofit Policy Forum* 9(4).

Gooden, Susan T. 2015. PAR's social equity footprint. *Public Administration Review* 75, no. 3: 372-381.

Havens, John J., Mary A. O'Herlihy, and Paul G. Schervish. 2006. Charitable giving: How much, by whom, to what, and how. *The nonprofit sector: A research handbook, 2<sup>nd</sup> Edition*, 542-

567.

Johnson, Norman J., and James H. Svara. 2015. *Justice for All: Promoting Social Equity in Public Administration*. Routledge.

Kaczynski, Andrew T., and John L. Crompton. 2006. Financing priorities in local governments: Where do park and recreation services rank? *Journal of Park and Recreation Administration*, 24(1).

Kiewiet, D. Roderick, and Mathew D. McCubbins. 2014. State and local government finance: The new fiscal ice age. *Annual Review of Political Science* 17: 105-122.

Kim, Mirae. 2015. Socioeconomic diversity, political engagement, and the density of nonprofit organizations in US counties. *The American Review of Public Administration*, 45(4): 402-416.

Kleiman, Kelly. September 29, 2004. "Open access vs. donors' influence". *Christian Science Monitor*. <https://www.csmonitor.com/2004/0929/p14s02-lihc.html>

Le, Lena. 2012. Hispanic and White Visitors in US National Parks: Meta-Analysis of Visitor Use Survey. *Journal of Park and Recreation Administration*, 30(4).

Lecy, Jesse D., and David M. Van Slyke. 2012. Nonprofit sector growth and density: Testing theories of government support. *Journal of Public Administration Research and Theory*, 23(1):189-214.

Lucy, William H., Dennis Gilbert, and Guthrie S. Birkhead. 1977. Equity in local service distribution. *Public Administration Review*, 687-697.

Marwell, Nicole P. 2004. Privatizing the welfare state: Nonprofit community-based organizations as political actors. *American Sociological Review*, 69(2):265-291.

More, Thomas A. 2005. From public to private: Five concepts of park management and their consequences. In *The George Wright Forum*, 22(2): 12-20. George Wright Society,

Murray, Michael. 2010. Private Management of Public Spaces: Nonprofit Organizations and Urban Parks. *Harvard Environmental Law Review*, 34(1):179-255.

National Association of State Park Directors. 2015. Annual Information Exchange and Reports. <https://research.cnr.ncsu.edu/ern/aix/> and <https://www.stateparks.org/about-us/state-park-facts/>

National Park Service. 2015. NPS Deferred Maintenance Reports. <https://www.nps.gov/subjects/plandesignconstruct/defermain.htm>

Neal, Zachary. 2010. Seeking common ground: three perspectives on public space. *Proceedings of the Institution of Civil Engineers-Urban Design and Planning*, 163(2): 59-66.

Nelson, Ashlyn Aiko, and Beth Gazley. 2014. The rise of school-supporting nonprofits. *Education Finance and Policy*, 9(4):541-566.

O'Brien, William E. 2015. *Landscapes of Exclusion: State Parks and Jim Crow in the American*

*South*. University of Massachusetts Press.

Paarlberg, Laurie E. and Sheldon Gen. 2009. Exploring the determinants of nonprofit coproduction of public service delivery: The case of K-12 public education. *The American Review of Public Administration*, 39(4): 391-408.

Paarlberg, Laurie E., Rebecca Nesbit, Richard Clerkin, and Robert Christensen. 2014. Leading, following or complementing in economic crisis: A conceptual model illustrating nonprofit relationships with public schools. *Administrative Sciences*, 4(2): 120-136.

Parks, Roger B., Paula C. Baker, Larry Kiser, Ronald Oakerson, Elinor Ostrom, Vincent Ostrom, Stephen L. Percy, Martha B. Vandivort, Gordon P. Whitaker, and Rick Wilson. 1981. Consumers as coproducers of public services: Some economic and institutional considerations. *Policy Studies Journal* 9(7): 1001-1011.

Pease, James L. 2011. Parks and under-served audiences: An annotated literature review. Iowa State University, Ames, IA. Available online at <http://www.nps.gov/hfc/services/interp/interp-Planning/literatureReview.pdf>.

Pestoff, Victor. 2006. Citizens and co-production of welfare services: Childcare in eight European countries. *Public Management Review*, 8(4): 503-519.

Salamon, Lester M. 1987. Of market failure, voluntary failure, and third-party government: Toward a theory of government-nonprofit relations in the modern welfare state. *Journal of*

*Voluntary Action Research*, 16(1-2): 29-49.

Schatteman, Alicia and Ben Bingle. 2015. Philanthropy supporting government: An analysis of local library funding. *Journal of Public and Nonprofit Affairs*, 1(2): 74-86.

Smith, Jordan W. and Yu-Fai Leung. 2016. "2015 Outlook and Analysis Letter: Prepared for the National Association of State Park Directors."

[https://research.cnr.ncsu.edu/ern/aix/aix2015\\_outlook\\_letter.pdf](https://research.cnr.ncsu.edu/ern/aix/aix2015_outlook_letter.pdf)

Steinberg, Richard. 2003. Economic theories of nonprofit organizations. In *The study of the nonprofit enterprise* (pp. 277-309). Springer, Boston, MA.

Strife, Susan and Liam Downey. 2009. Childhood development and access to nature: A new direction for environmental inequality research. *Organization and environment*, 22(1): 99-122.

Suslova, Svetlana. 2018. The determinants of collective coproduction: The case of secondary schools in Russia. *International Journal of Public Administration*, 41(5-6): 401-413.

Uzochukwu, Kelechi and John Clayton Thomas. 2018. Who engages in the coproduction of local public services and why? The case of Atlanta, Georgia. *Public Administration Review*, 78(4): 514-526.

Verschuere, Bram, Taco Brandsen and Victor Pestoff. 2012. Co-production: The state of the art in research and the future agenda. *Voluntas: International Journal of Voluntary and Nonprofit*

*Organizations*, 23(4): 1083-1101.

Wade, Bill. 2005. A new tragedy for the commons: the threat of privatization to National Parks (and other Public Lands). *The George Wright Forum* 22(2): 61–67.

Walls, Margaret M., Sarah Darley, and Juha Siikamäki. 2009. *The State of the Great Outdoors: America's Parks, Public Lands, and Recreation Resources*. Washington, DC: Resources for the Future. <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-RPT-ORRG-State-of-Outdoors.pdf>

Walls, Margaret M. 2014. *Private Funding of Public Parks: Assessing the Role of Philanthropy*. Washington, DC: Resources for the Future.  
<http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-IB-14-01.pdf>

Wolpert, Julian. 1993a. *Patterns of generosity in America: who's holding the safety net?*. Twentieth Century Fund.

Wolpert, Julian. 1993b. Decentralization and equity in public and nonprofit sectors. *Nonprofit and Voluntary Sector Quarterly* 22(4): 281-296.

Wooldridge, Blue, and Susan Gooden. 2009. The epic of social equity: Evolution, essence, and emergence. *Administrative Theory & Praxis* 31, no. 2: 222-234.

Yandle, Tracy, Douglas S. Noonan, and Beth Gazley. 2016. Philanthropic support of national

parks: analysis using the social-ecological systems framework. *Nonprofit and Voluntary Sector Quarterly*, 45(4\_suppl): 134S-155S.

**Table 1.** Comparative and Descriptive Statistics

	CA state parks with a “friends of the park” charity		CA state parks without a supporting charity		FL state parks with a “friends of the park” charity		FL state parks without a supporting charity	
	Obs	Percentage of Total	Obs	Percentage of Total	Obs	Percentage of Total	Obs	Percentage of Total
Presence of a parks charity (1=yes)	164	58.571	116	41.429	107	59.777	72	40.223
	Obs	Mean (SD)	Obs	Mean (SD)	Obs	Mean (SD)	Obs	Mean (SD)
Charitable dollars spent per capita (county)	277	5.309869 (54.93575)	113	0	174	0.2996472 (1.804799)	66	0
Charitable dollars spent per visitor (park unit)	229	10.24043 (94.78287)	82	0	159	0.5547189 (2.23314)	52	0
Percent White	167	.766 (.120)	113	.753 (.126)	109	.799 (.092)	66	.809 (.087)
Percent Seniors	167	.139 (.032)	113	.135 (.025)	109	.799 (.092)	66	.204 (.069)
Median household Income	167	\$30,118.87 (9137.615)	113	\$29,386.47 (6831.977)	109	\$46,035.08 (7399.673)	66	\$45,487.29 (7078.937)
Income Inequality (Gini)	167	.4647102 (.0235959)	113	.4631929 (.0190691)	109	.4691743 (.0295599)	66	.4611318 (.0316905)
Park Unit Expenditures (per capita)	154	8.656949 (21.4044)	104	22.30057 (195.6199)	87	8.370506 (17.52097)	38	17.95984 (54.6623)
Park Unit Expenditures (Per Visitor)	137	\$32.713 (163.5908)	78	\$30.418 (132.8321)	87	\$7.6392 (22.39035)	36	\$20.371 (51.32981)
Park Acreage	162	7904 (46821.27)	109	2598 (7393.09)	114	4845 (10950.08)	60	3663 (11268.73)
Park Age	167	57.9 (23.89)	113	49.9 (21.24)	114	42.1 (19.97)	64	33.1 (18.3)

**Table 2.** Dependent variable = a parks charity (Logit, odds ratios)

	CA/FL parks	CA/FL parks with state dummy	CA parks	FL parks
<i>County socio-demographics</i>				
Percent White	-0.140 (-0.11)	-0.0805 (-0.06)	-1.477 (-0.86)	-0.516 (-0.15)
Percent Seniors	4.453 (1.49)	3.357 (1.07)	8.564 (1.33)	6.251 (1.30)
Median Income (logged)	0.875* (2.12)	0.461 (0.88)	0.0434 (0.07)	3.402* (2.02)
Income Inequality	6.656 (1.28)	7.669 (1.46)	0.589 (0.08)	18.68* (2.13)
<i>Park characteristics</i>				
Park Unit Expenditures (Per Capita)	-0.000771 (-0.59)	-0.000744 (-0.56)	-0.00125 (-0.85)	0.0178 (0.88)
Park Acreage	0.0000525* (2.51)	0.0000508* (2.44)	0.0000356 (1.62)	0.000111 (1.71)
Park Age	0.0165** (3.21)	0.0184*** (3.42)	0.0155* (2.53)	0.0259* (2.08)
State dummy (FL=1)		0.474 (1.28)		
Constant	-13.16* (-2.56)	-9.451 (-1.62)	-1.330 (-0.20)	-46.14* (-2.42)
Observations	374	374	251	123

**Table 3.** Dependent variable = charitable expenditures per capita based on county population

(Tobit)

	CA/FL parks	CA/FL parks with state dummy	CA parks	FL parks
<i>County socio-demographics</i>				
Percent White	44.06 (1.09)	40.97 (1.02)	-38.30 (-0.59)	-6.651* (-2.02)
Percent Seniors	119.5 (1.49)	165.9* (1.97)	617.9** (2.60)	13.21** (3.35)
Median Income (logged)	0.130 (0.01)	15.70 (1.02)	11.09 (0.51)	3.250* (2.11)
Income Inequality	90.45 (0.59)	48.72 (0.32)	-269.4 (-1.03)	11.68 (1.48)
<i>Park characteristics</i>				
Park Unit Expenditures (Per Capita)	0.00305 (0.08)	0.00204 (0.05)	-0.0304 (-0.59)	0.106*** (7.62)
Park Acreage	0.0000854 (0.90)	0.000102 (1.07)	0.000104 (0.92)	0.00000220 (0.12)
Park Age	0.435** (2.89)	0.349* (2.22)	0.505* (2.29)	-0.0116 (-1.05)
State=FL		-19.72 (-1.77)		
Constant	-149.4 (-1.01)	-286.2 (-1.71)	-108.0 (-0.45)	-38.60* (-2.34)
var(e.sumexpspcp)	3171.1*** (8.94)	3144.0*** (8.96)	4356.4*** (7.42)	3.680*** (4.90)
Observations	374	374	251	123

*t* statistics in parentheses\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 4.** Dependent variable = charitable expenditures per visitor based on parks visitorship records (Tobit)

	CA/FL parks	CA/FL parks with state dummy	CA parks	FL parks
<i>County socio-demographics</i>				
Percent White	-1.312 (-0.03)	-2.998 (-0.06)	-40.07 (-0.49)	-4.383 (-0.80)
Percent Seniors	102.6 (1.13)	138.1 (1.46)	244.9 (0.86)	11.38 (1.77)
Median Income (logged)	11.89 (0.82)	26.29 (1.45)	31.98 (1.20)	2.602 (1.07)
Income Inequality	86.30 (0.50)	54.09 (0.31)	-199.8 (-0.64)	18.35 (1.43)
<i>Park characteristics</i>				
Park Unit Expenditures (Per Capita)	0.546*** (19.22)	0.545*** (19.22)	0.556*** (15.78)	-0.0284 (-0.42)
Park Acreage	0.000104 (1.00)	0.000118 (1.13)	0.000121 (0.92)	0.00000769 (0.25)
Park Age	0.262 (1.48)	0.169 (0.89)	0.352 (1.22)	-0.00368 (-0.21)
State=FL		-17.46 (-1.33)		
Constant	-234.0 (-1.39)	-362.3 (-1.86)	-308.2 (-1.04)	-36.14 (-1.39)
var(e.sumexpspvt)	3852.6*** (8.67)	3844.8*** (8.67)	5747.6*** (7.07)	10.21*** (4.77)
Observations	334	334	212	122

*t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

<sup>i</sup> The U.S. Bureau of the Census describes the Gini Coefficient as “a summary measure of income inequality” which reflects “the dispersion of income across the entire income distribution.” A coefficient of 0 would reflect a geographic area’s perfect income equality and 1 would reflect “perfect inequality where only one recipient or group of recipients receives all the income”. <https://www.census.gov/topics/income-poverty/income-inequality/about/metrics/gini-index.html>