RESEARCH NOTE

The influence of nonprofit financing and operations on the acquisition of unrestricted and restricted donations

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Abstract

Literature examining the impact of nonprofit financing and operational characteristics on donations is replete with studies that yield mixed and/or contradictory results. Contributing to this dearth of clarity are the limitations of relying on IRS Form 990 information as the primary data for this scholarship. Unlike audited financial statements or other types of financial reporting, Form 990 data do not discriminate between restricted and unrestricted donations. We address these limitations by exploring an underutilized database in the nonprofit literature that focuses on institutions of higher education to parse restricted and unrestricted donations. Results indicate that several financing and operational variables have disparate impacts on restricted and unrestricted donations, both absolutely and in relation to one another. Specifically, the proportion of revenue from government, leverage, age, and whether the university has a hospital or is a seminary show different relationships with total donations than they do with restricted and unrestricted donations separately. We also find that fundraising, program services revenue, prior year's donations, leverage, and whether the university has a hospital or is a seminary impacts

the ratio of restricted to unrestricted donations. Literature that only looks at these factors on total donations is failing to capture whether nonprofit managers pursue different donative revenue streams and the extent to which donors reward them. This research note offers an initial examination of the nuance in the different types of donative returns in one dataset, and serves as a call to other scholars to look beyond Form 990 data for this scholarship.

1 | INTRODUCTION

Contributions to nonprofit organizations totaled nearly $450 billion in 2019 (Giving USA, 2020), a revenue stream that accounts for roughly 13% of all nonprofit revenue (McKeever, 2018). Over $64 billion of these funds (14%) went to education nonprofits, a large group of entities that among other types includes institutions of higher education. According to the Council for Advancement and Support of Education, contributions to colleges and universities neared $50 billion in the 2019–2020 fiscal year (Kaplan, 2021). In this research note we explore two different types of donative revenue—restricted and unrestricted gifts—to further our understanding of the financing and operational factors that may impact their acquisition. The literature investigating the factors that influence total contributions to nonprofit organizations is well-established with some factors fairly consistent across subsectors and others mixed (see Table 1). Theoretically, decisions by both donors (Andreoni & Abigail Payne, 2003; Sargeant & Shang, 2017) and managers (Andreoni & Abigail Payne, 2011; Kim & Mason, 2020) impact the restricted and unrestricted donations to nonprofits. What is less well understood— and what could be contributing to the mixed results in these studies—is whether the factors that influence total donations impact restricted and unrestricted donations differently. This research note offers a glimpse into one subsector of nonprofit activity and adds to the conversation regarding the financing and operational factors that shape the receipt of restricted and unrestricted donations.

This research note contributes to the literature in four important ways: first, we introduce an underutilized repository of rich nonprofit financial data that can be used to investigate numerous questions of import to nonprofit management scholars; second, we investigate nonprofit donations at a more granular level than nonprofit scholarship based on Form 990 data allows and specifically explore differences in restricted versus unrestricted gifts; third, we explore the influence of financing and operational factors on different types of donations; and fourth, we explore whether these factors impact the ratio of restricted to unrestricted donations. Although colleges and universities differ in many ways from other types of nonprofits and one should exert caution in generalizing these findings to other subsectors, it is nonetheless

TABLE 1 Key IV literature sources.

Variable	Source	Operationalization	Impact on donations
Government Rev	Calabrese (2011)	Government contributions	Mixed, industry dependent effects
	Charles and Kim (2016)	Government support	No effect
	Nikolova (2015)	Government contributions/ total revenue	Curvilinear effect
	Calabrese and Grizzle (2012)	Government grants (ln)	Mixed, industry and sample construction dependent effects
Program Rev	Calabrese (2011)	Program service revenue (ln)	Negative effect
	Charles and Kim (2016)	Program service revenue (ln)	No effect
	Heutel (2014)	Program service revenue	Positive, sample construction dependent effect
	Calabrese and Grizzle (2012)	Program service revenue (ln)	Negative effect
Fundraising effort	Calabrese (2011)	Fundraising expenses	Positive effect
	Charles and Kim (2016)	Fundraising expenses/total donations (ln)	Positive effect
	Heutel (2014)	Fundraising expenses	Positive, sample construction dependent effect
	Nikolova (2015)	Fundraising expenses	Mixed, model specification dependent effects
	Yan and Sloan (2016)	Fundraising expenses/total expenses	Positive effect
	Calabrese and Grizzle (2012)	Fundraising expenses (ln)	Positive effect
Overhead	Calabrese (2011)	Administrative expenses/total expenses (ln)	Positive effect
	Charles and Kim (2016)	Administrative expenses/total expenses (ln)	No effect
Debt	Yan and Sloan (2016)	Long-term debt ratio ([bonds +mortgage +notes]/total liabilities)	No effect
	Calabrese and Grizzle (2012)	Secured debt: ln([total tax-exempt bond and mortgage liabilities]/total assets)	Generally negative with, industry and sample construction dependent effects
	Calabrese and Grizzle (2012)	Unsecured debt: ln(all other liabilities/total assets)	Generally positive with, industry and sample construction dependent effects

(Continues)

TABLE 1 (Continued)

Variable	Source	Operationalization	Impact on donations
Compensation	Galle and Walker (2014)	Total CEO compensation	Negative effect*
	Yan and Sloan (2016)	Total employee salaries & benefits (ln)	Negative effect
Size	Betzler and Gmür (2016)	Total revenue (ln)	Positive effect
	Calabrese (2011)	Total assets (ln)	Positive effect
	Charles and Kim (2016)	Total assets (ln)	Positive effect
	Yan and Sloan (2016)	Total assets (ln)	Positive effect
	Calabrese and Grizzle (2012)	Total assets (ln)	Positive effect
Age	Betzler and Gmür (2016)	Age (ln)	No effect
	Calabrese (2011)	Number of years since the nonprofit obtained tax-exempt status (ln)	Mixed, industry and sample construction dependent effects
	Charles and Kim (2016)	Number of years since the nonprofit obtained tax-exempt status (ln)	Negative effect
	Heutel (2014)	Number of years since the nonprofit obtained tax-exempt status	Positive effect
	Nikolova (2015)	Age	Positive effect
Religion	Nikolova (2015)	Religious affiliation (dichotomous)	Positive effect

Note: *In this study donations (operationalized as percent revenue from gifts) is the IV and CEO compensation is the DV, where greater reliance on donations decreases CEO salary.

important to study contributions to higher education nonprofits. After all, with contributions of $49.6 billion to these entities in 2019 they account for 11% of all giving to nonprofit organizations.

2 | DISAGGREGATING RESTRICTED AND UNRESTRICTED DONATIONS: INTEGRATED POSTSECONDARY EDUCATION DATA SYSTEM

Individuals account for 69% of all donations to nonprofit organizations (roughly $310 billion in 2019), with the balance coming from foundations (17%), bequests (10%), and corporations (5%) (Giving USA, 2020). However, not all donations are created equal; some donations come free of strings, while others have restrictions. Scholarly inquiry and practitioner experience tell us that nonprofits operate in a starvation cycle, with too little attention and money given for

infrastructure and operations (Gregory & Howard, 2009; Lecy & Searing, 2015). In this environment, unrestricted funds that can be deployed for any purpose are generally viewed more favorably than restricted funds (Starr, 2011). Restricted gifts limit managerial discretion, carry additional accounting burdens regarding the tracking and use of the funds, and introduce a range of other confounding complexities (Helms et al., 2005).

Much of the research exploring donations to nonprofits has treated unrestricted and restricted gifts as empirically equivalent, and little is known about the conditions that lead to donations of one type or the other. This gap in our understanding emerges from data limitations; most scholarly inquiry in this research stream relies on IRS Form 990. Nonprofits report financial donations in their tax returns as a lump sum and are not required to report what portion of those funds carry donor-imposed restrictions. To overcome this issue, we analyze data from the Integrated Postsecondary Education Data System that contain data on all institutions of higher education receiving federal funding including nonprofit colleges and universities. These files contain detailed financial data, and revenue from unrestricted and restricted gifts are itemized separately. We use these data to build on prior research and improve understanding of the factors that drive different types of donations to nonprofit organizations. Specifically, we model our dependent variables in four ways: total donations (how the literature typically models donations), unrestricted and restricted donations (to explore if there are differences between the types of donations), and restricted donations relative to unrestricted donations (to see if factors impact the mix of these types of donations).

3 | FINANCING AND OPERATIONAL FACTORS INFLUENCING NONPROFIT DONATIONS

In this research note, we draw on the robust stream of literature that has improved our understanding of the factors influencing nonprofit donations. This literature, built from a rational choice model, assumes that individuals make donations to maximize donor utility preferences. In particular, these preferences are influenced by nonprofit operations, financing, and other organizational characteristics as donors seek to make the biggest impact for their donation. This research note explores the following two research questions:

RQ1. Do financing and operational factors impact restricted and unrestricted donations differently than total donations?

RQ2. Do financing and operational factors impact the ratio of restricted to unrestricted donations?

3.1 | Financing and operational factors

Prior research shows that donations are influenced by the financing and operational characteristics of nonprofits. For example, nonprofits with lower administrative overhead, executive or other staff compensation, and fundraising costs are generally viewed as better stewards of their financial resources and are expected to attract more donative revenue (Charles & Kim, 2016; Calabrese, 2011; Galle and Walker, 2014; Hoang & Lee, 2022; Rossi et al., 2022). The effect of executive compensation on donations is typically negative, with multiple studies finding that

higher compensation reduces future donative returns (Galle and Walker, 2014, 2016; Yan & Sloan, 2016). Similarly, in the most comprehensive review of the crowding in/out literature, Hung (2020) performed a meta-analysis of 25 primary studies and finds a small, but significant crowding-out effect of program service revenue on donations. Hung (2021) and Andreoni and Abigail Payne (2011) convincingly demonstrate that at least some of the crowding-out occurs as a result of reducing fundraising activities and is not solely attributable to donors penalizing the organization for having higher levels of program revenue. In lieu of providing an exhaustive review of these studies, we highlight key articles informing our selection of independent variables and summarize the empirical results that show their relationship to total donations in Table 1.

Finally, many Table 1 studies use variables such as age or size as a proxy for organizational reputation (i.e., larger and older organizations by virtue of their age and size are more trustworthy than younger, smaller organizations). A benefit of performing our analyses in a sample of higher education institutions is the availability of widely-used rankings promulgated by U.S. News, WSJ/Times, and others for 100s of schools. These rankings align with social constructions of the quality and legitimacy of this subgroup of nonprofits and are used by students when deciding where to attend, administrators touting the quality of the institution to various stakeholders, and others. It stands to reason that schools ranked higher on the list attract more donors and donor dollars.

4 | DATA AND METHODOLOGY

IRS Form 990 data lump all contributions, gifts, and non-governmental grants together in the most recent filings and, additionally, do not include information about donor-restricted revenues. More recent research has expressed the importance of looking to other sources of data —for example, DataArts Cultural Data Profile (formerly Cultural Data Project)—to investigate these relationships (Charles, 2018; Charles & Kim, 2016; Krawczyk et al., 2017). Heeding their call, we explore an alternate source of information on nonprofit donations that are publicly available and offer an opportunity for more nuanced analyses.

4.1 | Data

Data for the empirical analyses come from two sources: Integrated Postsecondary Education Data System (IPEDS) and National Center for Charitable Statistics (NCCS). IPEDS contain institutional, programmatic, financial, and other information collected annually from all colleges, universities, and technical and vocational institutions that participate in federal financial aid programs (e.g., Pell grants, federal student loans). Data are collected through a series of interrelated annual surveys overseen by the U.S. Department of Education's National Center for Education Statistics, and all surveyed institutions of higher education are mandated to participate or risk losing access to federal student aid programs. We used fiscal year (FY) 2018 data for the dependent variables drawn from this source and FY 2017 for the lagged independent variables in our models. NCCS's data archive contains select organizational and financial information obtained through IRS Form 990 filings. We used these FY 2017 data to capture other lagged independent variables in the models.

We began with the population of nonprofit institutions of higher education participating in federal financial aid programs and performed several steps to prepare the data for analysis. First, we combined financial information for organizations that filed separate IPEDS reports

TABLE 2 Sample selection and data cleaning process.

Beginning sample size	1081
Less duplicate organizations	−16
Less organizations that did not file Form 990	−96
Less organizations with no reported donations or negative donations	−93
Less organizations with no reported assets or negative age	−3
Less organizations that do not offer baccalaureate degree or higher	−32
Less organizations with no reported compensation	−18
Less organizations with missing data for multiple variables	−27
Less organizations with no reported fundraising expenses	−11
Less organizations under 4 years of age	−2
Final sample size	783

despite maintaining the same employer identification number. Next, we removed organizations that did not file IRS Form 990 in FY 2017 and further reduced the sample to only capture institutions that offered a baccalaureate degree or higher. Finally, consistent with prior research, we removed organizations with obvious data errors, no reported donations or assets (e.g., Calabrese, 2011), no fundraising expenses, and organizations less than 4 years old (Tinkelman & Mankaney, 2017). The data-cleaning process is summarized in Table 2.

4.2 | Dependent variables

To explore the potentially differential effects of the explanatory variables on donor-restricted revenues, we selected four dependent variables for empirical analysis. All variables capture private donations from non-governmental sources (e.g., individual gifts, bequests, pledges, contributions in-kind), and do not include grants or contracts.[i] Consistent with nonprofit finance and financial management scholarship (e.g., Calabrese, 2011), we performed natural log transformation on financial variables with distributions that have a positive skew. The first dependent variable, $TOTAL_i$, is defined as the natural logarithm of total donations in FY 2018. The second dependent variable, $RESTRICT_i$, is defined as the natural logarithm of restricted donations in FY 2018. The third dependent variable, $UNRESTRICT_i$, is defined as the natural logarithm of unrestricted donations in FY 2018. And the final variable, $REOVERUN_i$, is defined as the natural logarithm of the ratio of restricted to unrestricted donations in FY 2018.

4.3 | Independent variables

The financing and operational variables used in this analysis are listed below. Consistent with previous donations research (e.g., Calabrese, 2011), all the independent variables are lagged by 1 year. The independent variables in this study are as follows:

- $COMP_i$: natural logarithm of total executive compensation (compensation of current officers, directors, trustees, and other key employees), FY 2017.

- $FUND_i$: natural log of the ratio of fundraising expenses to total private gifts, FY 2017.
- REP_i: natural logarithm of the nonprofit's overall score in the Wall Street Journal/Times 2017 publication of Colleges Rankings.
- AGE_i: natural logarithm of the number of years since the organization obtained IRS recognition of tax-exempt status, FY 2017.
- $ASSETS_i$: natural logarithm of total assets, FY 2017.
- $GOVT_i$: natural logarithm of the ratio of government contracts and grants to total revenue, FY 2017.
- $PROG_i$: natural logarithm of total program service revenue, FY 2017.
- DON_i: natural logarithm of the ratio of contributions to total revenue, FY 2017, captures the habit persistence/path dependence (Barrett et al., 1997) of how individuals donate to nonprofits.
- $LEVER_i$: natural logarithm of the sum of unsecured notes and loans payable, tax-exempt bond liabilities, and secured mortgages and notes payable divided by total assets, FY 2017.

As the research listed in Table 1 indicates, some mixed results are driven by differences between nonprofit subsectors. In IPEDS data we can readily identify universities that are theological seminaries and universities that have a hospital. Prior scholarship finds that appeals to religion can increase donations (Ressler et al., 2021). Thus, we control for the effects of being a seminary or having a hospital on nonprofit donations to control for potential subsector effects within universities. $HOSP_i$ is a binary variable defined as 1 if an institution has a hospital in FY 2017. SEM_i is a binary variable defined as 1 if it was a theological seminary in FY 2017. Table 3 presents variable calculations and descriptive statistics.

4.4 | Model specification

Consistent with the majority of the nonprofit donations literature (Calabrese, 2011; Charles & Kim, 2016; Marudas et al., 2012), we perform log–log linear regression. All continuous variables in the model were transformed via natural log, while binary variables remain untransformed per accepted convention. The dependent variables are modeled in the current year (2018), while the independent variables are lagged by 1 year (2017).

5 | RESULTS

Findings are organized into two parts. First, we present results from our bivariate analysis of the independent variables with the dependent variables. In the subsequent section, we present the results from our four regression models.

5.1 | Correlation analysis

Results from our bivariate analysis suggest a high degree of correlation between the independent variables and the different donation measures (Table 4 below). With the exception of AGE, all of the relationships achieve statistical significance with restricted, unrestricted, and total donations. Larger organizations and those that have a strong reputation tend to draw the most donations, while more highly levered organizations see declines in donations. The direction of

TABLE 3 Variable calculations and descriptive statistics.

Variable	Source	Operational measure	Mean	SD	Min–Max
RESTRICT	IPEDS	Temporarily restricted gifts + Permanently restricted gifts	16,276,998	58,521,657	10,000–953,477,000
UNRESTRICT	IPEDS	Unrestricted gifts	6,982,081	28,338,860	17,375–475,498,000
TOTAL	IPEDS	Total private gifts	23,259,078	81,355,379	99,054–1,133,273,000
REOVERUN	IPEDS	(Temporarily restricted gifts + Permanently restricted gifts) / Unrestricted gifts	5.49	34.64	0.01–961.09
COMP	990	Compensation of current officers, directors, trustees, and other key employees	2,122,505	3,030,826	18,797– 43,593,818
FUND	990/IPEDS	Fundraising expenses/total private gifts	0.34	0.37	0.01–4.83
REP	WSJ/Times	School rating	51.75	14.62	30–92
AGE	990	Number of years as tax-exempt entity	64.00	18.66	4–158
ASSETS	990	Total assets	816,428,208	3,369,154,192	1,611,208–52,078,749,000
GOVT	IPEDS	(Federal grants and contracts + State grants and contracts + Local grants and contracts)/Total revenues and investment return	0.03	0.05	0.00–0.45
PROG	990	Program service revenue	155,998,202	4,18,698,599	6,495–1,347,330
DON	990	Contributions, gifts, grants and other amounts/Total Revenue	0.13	0.11	0.00–0.98
LEVER	990	(Unsecured notes and loans payable + Tax-exempt bond liabilities + secured mortgages and notes payable) / total assets	0.22	0.14	0.00–1.12
HOSP	IPEDS	Institution has a hospital (binary)	0.01	0.12	0–1
SEM	IPEDS	Carnegie classification as theological seminary (binary)	0.03	0.17	0–1

Note: Values are presented before log transformation.

TABLE 4 Correlation results: organizational, operational, and financing variables with donation measures.

	Total	**Restrict**	**Unrestrict**	**Reoverun**
COMP	0.66***	0.66***	0.50***	0.29***
FUND	−0.43***	−0.33***	−0.36***	−0.03
REP	0.66***	0.66***	0.53***	0.25***
AGE	0.02	0.01	0.05	−0.03
ASSETS	0.81***	0.81***	0.63***	0.34***
GOVT	0.18***	0.18***	0.17***	0.04
PROG	0.69***	0.72***	0.49***	0.36***
DON	0.29***	0.18***	0.37***	−0.16***
LEVER	−0.14***	−0.14***	−0.10***	−0.07**
HOSP	0.27***	0.24***	0.27***	0.02
SEM	−0.19***	−0.28***	−0.07**	−0.26***

Note: Two-tailed: ***$p < 0.01$; **$p < 0.05$; *$p < 0.10$.

TABLE 5 Regression results: effects of organizational, operational, and financing variables on donation measures.

	Model 1: Total	**Model 2: Restrict**	**Model 3: Unrestrict**	**Model 4: Reoverun**
COMP	0.059 (0.036)	−0.019 (0.062)	0.075 (0.062)	−0.093 (0.098)
FUND	−0.509*** (0.044)	−0.496*** (0.055)	−0.349*** (0.052)	−0.147** (0.067)
REP	0.406*** (0.075)	0.465*** (0.120)	0.472*** (0.128)	−0.007 (0.191)
AGE	0.066 (0.042)	0.058 (0.060)	0.135** (0.067)	−0.077 (0.092)
ASSETS	0.335*** (0.037)	0.435*** (0.060)	0.296*** (0.058)	0.139 (0.088)
GOVT	−0.048*** (0.017)	−0.065** (0.026)	−0.019 (0.026)	−0.047 (0.037)
PROG	0.415*** (0.04)	0.503*** (0.064)	0.228*** (0.078)	0.275** (0.110)
DON	0.499*** (0.047)	0.591*** (0.059)	0.632*** (0.070)	−0.199** (0.090)
LEVER	−0.011 (0.021)	−0.074** (0.037)	0.054 (0.035)	−0.128** (0.058)
HOSP	−0.181 (0.185)	−0.431* (0.257)	0.487** (0.210)	−0.919** (0.383)
SEM	0.051 (0.158)	−0.752** (0.293)	0.418** (0.204)	−1.170*** (0.402)
Constant	−0.588 (0.404)	−4.100*** (0.628)	2.281*** (0.747)	−6.382*** (1.047)
F-test	480.70***	253.95***	111.35***	14.26***
Observations	783	783	783	783
R^2	0.87	0.78	0.61	0.17

Note: Robust standard errors in parentheses. ***$p < 0.01$; **$p < 0.05$; *$p < 0.10$. VIF is below 4 for all variables.

the coefficients remains consistent for all of the variables—for example, leverage has a negative relationship with restricted, unrestricted, and total donations. The independent variables are not as highly correlated with the ratio of restricted to unrestricted donations, suggesting other factors may influence this donation mix. Based on the initial analysis of bivariate relationships, we do not gain much additional insight into the relationship between our factors and donations by breaking total donations into its restricted and unrestricted components. In the next section,

we present multivariate analysis results to see if we observe any differences between these factors and restricted and unrestricted donations.

5.2 | Regression analysis

Table 5 presents the results of the four regression models. Almost half, five (GOVT, LEVER, HOSP, SEM, and AGE) out of 11, of our independent variables show different relationships with total donations (Model 1) than they do with restricted (Model 2) or unrestricted (Model 3) donations. This result answers our first research question of whether financing and operational factors impact restricted and unrestricted donations differently than total donations with a yes. In examining the relationship between our independent variables and the ratio of restricted to unrestricted donations (Model 4), we also observe numerous interesting effects. More than half, six (FUND, PROG, DON, LEVER, HOSP, and SEM) out of 11, of our independent variables achieve statistical significance. As with our first research question, this result answers our second research question of whether financing and operational factors impact the ratio of restricted to unrestricted donations with a yes. We now turn to discussing our findings in more detail.

6 | DISCUSSION

Overall, our models predicting total (Model 1), restricted (Model 2), and unrestricted (Model 3) donations explain a large amount of variance in these dependent variables (R^2 = 0.87, 0.78, and 0.61, respectively). The low R^2 (0.17) in Model 4 suggests the financing and operational variables modeled here only explain a small percentage of the variance in the relative mix of restricted and unrestricted donations to these organizations. Given our interest in uncovering the varying effects factors may have on different types of donations, we present our findings only for those variables that have differential effects across the models.

The coefficient on GOVT is negative and statistically significant for total donations and restricted donations, but not statistically significant for unrestricted donations. Results show a decrease in total donations as the proportion of revenue from government sources increases, lending support to the crowding-out hypothesis. However, the primary mechanism seems to be through reductions in restricted rather than unrestricted donations. Given that government grants and contracts are typically for specific projects (i.e., restricted revenues), this finding is not altogether surprising. If government is paying for specific projects, organizations may have less need to raise donations to accomplish those projects. Although we observe a statistically significant decrease in restricted donations, there is no impact on the ratio of restricted to unrestricted donations, presumably because the vast majority of donations to universities are restricted (see Table 2) and the reduction is relatively marginal.

The coefficient on LEVER for total donations and unrestricted donations is not statistically significant; however, the impact of LEVER on restricted donations is negative and statistically significant. The more levered a university is, the lower their level of restricted donations. This crowding-out effect may arise from similar roots as GOVT—that is, universities take on debt for specific, restricted purposes. Alternatively, universities may not be inclined to pursue more revenues with restriction while servicing existing debt, or perhaps they are unable to raise restricted donations and thus resorted to debt markets to finance those needs in the first place. Although the different effects of LEVER on restricted and unrestricted donations cancel each

other out when regressed on total donations, we do find a statistically significant and negative relationship with the ratio of restricted to unrestricted donations. The more levered a university becomes the lower the ratio, indicating that while LEVER does not impact the overall level of donations to a university, it does decrease the restricted portion of their portfolio.

The coefficient on AGE is not related to total or restricted donations; however, it is positively associated with unrestricted donations. Even controlling for REP, which is positively and significantly related to all three donation variables, older universities have an advantage over younger universities in raising unrestricted donations. Time may allow universities to build trusting relationships with their alums and other supporters to shift donations from restricted to unrestricted, but not so much that it changes their portfolio of restricted to unrestricted donations since there is no impact of AGE on REOVERUN.

Results for the two subsectors of universities—those with hospitals and those that are seminaries—show the importance of controlling for subsector in these analyses. We do not find a statistically significant impact of HOSP and SEM on the level of total donations to universities, but they both decrease restricted giving and increase unrestricted giving. This effect is reflected in universities with hospitals or seminaries also having lower ratios of restricted to unrestricted donations than other universities. Taken together, these findings could indicate universities with specialized features or components might have an easier time raising unrestricted donations than more general universities. Future research might extend this analysis and collect data to control for other features— for example, universities with law or veterinary schools.

We do not find differential impacts for three of our independent variables (FUND, PROG, and DON) on total, restricted, and unrestricted donations and yet they are statistically significantly related to the ratio of restricted to unrestricted giving. As fundraising expense ratio and last year's donations increase, the ratio of restricted to unrestricted donations decreases. Notably, while an increasing fundraising expense ratio decreases all three of our donation measures, it also shifts the portfolio of donations sources to be less reliant on restricted donations. Universities appear to be willing to bear the costs of losing some fundraising efficiency to gain flexibility in spending their donative revenues. Despite having a positive effect on our three donation variables, increasing DON decreases REOVERUN. It appears that as universities increase their giving year-over-year, they gain the trust of donors and are able to increase the growth of their unrestricted donations at a faster rate than their restricted donations. For PROG, we find the opposite relationship; as program revenues increase, the ratio of restricted to unrestricted also increases. To the extent that GOVT seems to crowd-out restricted giving, PROG seems to crowd-in restricted giving, potentially hinting at the symbiotic relationship of universities tapping donors to build named dorms, student unions, and gyms, but then relying on student fees to operate those facilities.

7 | CONCLUSION

In this study, we set out to explore whether financing and operational factors impact restricted and unrestricted donations differently than total donations, and whether these same factors impact the ratio of restricted to unrestricted donations. The answer to both of the research questions is yes. These findings illustrate that much of what we know from prior research conducted with IRS Form 990 data or other sources with limited data on contributions may be missing important information and could be contributing to many of the mixed results that appear in the literature. Our research indicates that some variables lead to greater unrestricted donations, while having no effect or negative influence on restricted donations. Likewise, certain types of financing

crowd-out restricted and total donations, while others crowd-in unrestricted donations. These varied insights suggest future research should look to additional data sources to investigate these questions more fully. The data we introduce here— IPEDS—is one potential source. Although time-consuming and labor-intensive, turning to nonprofit financial audits made freely available through some Secretaries of State (or similar) offices is another option. Audits offer detailed information about revenue source and restriction in the Statement of Activities.

Finally, our findings support the notion that researchers should consider both sides of the equation—donors and managers. Our results indicate that donors are likely rewarding established organizations with strong reputations and those committed to providing healthcare or furthering religion. Similarly, managers are likely making resourcing and financing decisions based on how highly levered they are and the extent to which they need to pursue unrestricted financing for flexibility and sustainability. This research offers a starting point for extending the discussion regarding the factors that influence donative returns. Extending our point-in-time study into a panel dataset could allow researchers to not only examine trends over time but look at how external shocks may differently impact restricted and unrestricted donations. Additional research in other sectors of nonprofit activity and through mixed-methods approaches that incorporate data from nonprofit practitioners will be key to establishing more nuanced academic understanding and improving our ability to offer useful practical implications.

CONFLICT OF INTEREST
We have no conflict of interest to disclose.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available in IPEDS & NCCS at https://nces.ed.gov/ipeds/use-the-data. These data were derived from the following resources available in the public domain: - Integrated Postsecondary Education Data System, https://nces.ed.gov/ipeds/use-the-data - National Center for Charitable Statistics Data Archive, https://nccs-data.urban.org.

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ENDNOTE
[i] Donations do not include revenue from auxiliary enterprises or affiliated entities–for example, gifts to support university athletic programs.

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