

*Working Title: Edifice Complex: Building Ownership and Financial Strength of  
Nonprofit Theaters*

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Abstract

This paper explores factors contributing to the financial capacity of nonprofit performing arts theaters. The analysis explains profitability and liquidity of 3,642 U.S. nonprofit theaters that filed IRS Form 990s from 1998-2007. Independent variables include measures developed by previous research on the financial health of nonprofit organizations, variables for different revenue streams as shares of total revenue, and exposure to real estate and mortgage debt. Findings show that controlling for organization age, size, and financial health measures, mortgage debt has a significant negative impact on theater profitability and negatively impacts liquidity for theaters with more than \$1 million expenses. Contrary to common recommendations, revenue concentration, not diversification, and particularly having higher ratios of unearned, rather than earned, revenues correlate with greater financial capacity.

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### Introduction

To nonprofit organizations, mission success is the bottom-line, as the financial bottom-line is to for-profit organizations. However, financial stability still critically impacts nonprofit managers' ability to achieve mission-related goals. Indeed, the dual charges of nonprofit managers to maximize mission impact and keep their organizations financially afloat are not wholly incompatible. Financial strength allows managers to make decisions that maximize mission impact. Conversely, a lack of financial capacity can force managers to increase short-term profitable activities in the place of mission-focused programming. However, even though financial capacity is central to mission success, few studies empirically test assumptions posited by general finance theorists or "best practice" consultants which often guide nonprofit managers in their particular fields of practice. With an aim to help bridge this gap in the literature, this paper tests general finance theory and commonly held finance recommendations with empirical evidence, with a particular emphasis on the nonprofit theater industry.

In particular, this analysis explores factors contributing to profitability and liquidity in U.S. nonprofit performing arts theaters. Using panel regression analysis on financial 990 data from 1998 to 2007, I estimate fixed effects of financial health variables developed by previous research as well as measures more specifically developed for the nonprofit theater context on dependent variables of net income and months spending. I particularly test the impact of revenue concentration, administrative and fundraising expense ratios, reliance on earned vs. unearned revenues, and exposure to real estate and mortgage debt. I also compare models and effects across nonprofit theaters size categories, measured by total expenditures.

Findings indicate that excessive exposure to real estate and mortgage debt has a significant negative impact on theater financial capacity. Revenue concentration, rather than the commonly recommended revenue diversification, positively relates to financial capacity, with strong evidence indicating that theaters with higher concentrations of unearned revenues have significantly greater financial capacity over time. Maximizing unearned philanthropic

revenues as opposed to earned revenues significantly increases financial capacity for nonprofit theaters.

### Background

The nonprofit theater industry is a particularly interesting case for research in the area of nonprofit finance. With roughly half of all theaters and roughly two-thirds of all theater revenues in the U.S. being for-profit (DiMaggio, 2006), nonprofit theater managers must compete among themselves as well as with for-profit theaters for audiences. Also, this implies that a substantial proportion of performing arts theaters in the country are profit-making, or at least profit-oriented, and that it is common for performing arts theaters to remain profitable through earned revenue alone.

However, while for-profit theaters have clear financial objectives, seeking profitable returns for their stakeholders, nonprofit theaters' goals are not profit-maximizing (Hansmann, 1981). As Cherbo explains,

The nonprofit theater movement was fueled by the desire to move theater beyond Broadway. Its goals were to replace the unrealized subsidized national theater in America; to present classic, esoteric, and socially critical pieces in communities around the country; to broaden audiences; and to maintain responsible ticket prices... They consider presenting such offerings essential to their artistic mission. (1998, 2, 13)

So although in some respects nonprofits compete with for-profit theaters for ticket revenue, nonprofit theaters have different motives for choosing performances and pricing tickets. Instead of relying on popular shows to drive demand and prices up, nonprofit theaters rely heavily on other sources and streams of income to bolster their financial bottom-line, structuring their ticket prices and choosing their performances not to make money but an impact. In order to maintain sustainable margins, 501(c)(3) nonprofits nonprofit theaters raise charitable, tax-deductible contributions. Many also generate money through memberships, investments, rentals, sales, and special event fundraisers.

Based on the data from 1998 to 2007 used in this paper, only 51 percent of IRS Form 990 filing nonprofit theaters' revenues, on average, came from program revenue, which mostly comprises ticket sales. Meanwhile, contributions made up 38 percent and dues and special events income together generated another 6.5 percent. Each of the other streams accounted for trivial proportions of total revenue.

These summary statistics themselves reveal the vulnerability of the nonprofit theater subsector. If ticket sales or contributions were to fall, other revenue sources would not be able to balance the average organization's expenses. This may deserve special caution, since as Hansmann (1980) indicates, most contributions to nonprofit performing arts groups come directly from ticket buyers and subscribers, potentially placing over 90 percent of the average nonprofit theater's revenue in one income stream from the ticketholder-donor.

Another important financial consideration with the theater subsector in particular is the effect of owning, building, or renovating theater real estate. In practice, many theater companies, especially medium to large companies, either own or want to own theater space. This is primarily driven by artistic or mission-oriented objectives of being able to maximize the impact of their shows with theaters that are specifically tailored to their theater style. The emphasis on owning real estate is also financial since a new or tailored theater space can attract more ticket sales, subscribers, or donors. Additionally, capital projects are incentivized for nonprofit theaters due to tax exemption and fundraising potential during capital campaigns (Drummond 2005).

However, owning, building, or renovating real estate entails risks for nonprofit theaters. In particular, the costs of ownership in the form of fixed costs of the building and the potential lingering debt from construction or purchase may be higher than future revenues, creating significant barriers to financial capacity. Drummond (2005) explains that "although arts companies make significant investments in facilities, they often rely on architects, capital campaign consultants, and board members for advice,

they underestimate the time and sophistication needed to find or build a facility, and they use in-house staff with little real estate experience as project developers.” As a result, many capital building or renovation projects run over-budget (Drummond, 2005), resulting in a theater space that has the potential to enhance artistic impact but places a significant financial strain on theater companies, especially if theaters overdraw their capital campaigns and are required to tap into other assets or acquire mortgage debt to cover the building costs.

Thirty-four percent of all theaters that filed Form 990s in 2005 reported land, building, and equipment (LBE) assets from 1998-2003, indicating that around one third of reporting theaters in this sample owned real estate over that time.<sup>i</sup> While only 11 percent of theaters reporting under \$100,000 expenses owned theater space, 52 percent of medium sized theaters and 81 percent of theaters with over \$1,000,000 reported owning real estate. Of real estate owning theaters, 38 percent carried mortgage debt in 2005, with an average mortgage of \$359,121<sup>ii</sup>. For large theaters, this debt is particularly significant, with 53 percent of theater owning companies carrying mortgage debt, with a median debt of \$489,054.

Surprisingly, the average theater that carries a mortgage relies slightly more on contributions and program revenue, suggesting that many theaters with the high fixed costs associated with owning and financing facilities do not have large sources of fixed revenue, such as endowments. Based on these data, 75 percent of theaters with mortgages in 2004 report investments, but the average investment income is only \$2,480 once the top five organizations making over \$100,000 on investments are trimmed. Even at a very favorable interest rate of 2 percent, 71 percent of theaters with mortgages in 2004 would not have generated enough investment income to cover interest-only payments on their loans, let alone other building and maintenance costs.<sup>iii</sup>

### Predicting Financial Capacity in Nonprofit Theaters

A successful nonprofit theater will not necessarily generate high profits. In fact, as nonprofits, high profits are likely discouraged (Miller, 2003). Because nonprofits have both mission and financial goals, successful organizations may sacrifice financial return for mission-related output. The financial goal may be “breaking even,” instead of maximizing profits. However, all organizations will retain financial goals to signal success to stakeholders and remain sustainable into the future, and regardless of a nonprofit’s mission-related priorities, the financial bottom line is still important for both long-term sustainability and short-term capacity to achieve its mission. Furthermore, nonprofits may generate profits, as long as they are not distributed to stakeholders; margins can be cycled back into the program or invested in assets such as funds or endowments without tax or other penalty. A nonprofit organization may prefer to run profits, particularly if it is undergoing a capital, major gift, or endowment building campaign. For nonprofit theaters, year-end profits, or positive margins, indicate financial capacity leading into the next fiscal year and performance season.

Especially in difficult times, such as economic recessions, an operating reserve developed through positive margins over time can ensure the continued existence and maintain operations of a nonprofit (Blackwood and Pollak, 2009). Margins and operating reserves are particularly important in subsectors such as nonprofit performing arts where the marginal costs of production are expected to increase at a faster rate than marginal revenues over time (Baumol and Bowen, 1965). Positive margins and operating reserves provide financial capacity for theater managers to focus on the artistic impact of performances and season schedules which can be both capital intensive and include substantial variable costs in production. Given the general uncertainty of revenues from show to show, yearly margins or an operating reserve in a theater company can be the deciding factor in whether to schedule shows with high mission impact vs. more popular or iconic shows that can ensure more certain attendance even though

they may have little relation to the core mission of the company. In this way, profitability and liquidity are strongly connected to mission output in the nonprofit theater context. Not only does such financial capacity allow a nonprofit theater company to sustain itself over time, it also allows its managers to more successfully, or at least more daringly, approach the organization's unique mission, its reason for being.

While all theater groups strive to maintain financial capacity, achieving this goal is elusive for many managers. Financial management practices, such as keeping a diverse revenue portfolio or maximizing earned income are commonly recommended, but such recommendations have received little empirical testing. Tuckman and Chang (1991) argue that organizations with higher equity balances, administrative costs, revenue diversification and operating margins have more stable or slack resources to draw on in times of need and are therefore more financially stable over time. Hager (2001) empirically tests the Tuckman and Chang (1991) model explaining why nonprofit arts organizations may fail financially. He finds that while the measures do not predict staying in business for all arts subsectors, they are particularly relevant and significant for nonprofit theaters and music ensembles (Hager 2001).

Higher management and fundraising ratios will indicate higher administrative expenses, which are associated with financially healthier organizations, and (H1) organizations with higher management and fundraising expense ratios are therefore expected to experience greater financial capacity. Likewise, the less concentrated revenues are (i.e., the more diversified they are), the more financially healthy a theater will be, all else equal, which will lead to greater financial strength over time. However, there are benefits to revenue concentration, as opposed to revenue diversification, for organizations since specializing on one revenue stream can lead to greater administrative efficiency and higher income returns over time through more established relationships with donors or clients or by developing more substantial gifts or transactions (Chang and Tuckman, 2010; Gronbjerg, 1993; Frumkin and Keating, 2002). While diversified

revenue portfolios protect against unforeseen drops in any particular revenue stream, leading to greater financial stability over time, organizations that grow the fastest are the ones that focus, and excel, in one revenue area (Foster and Fine, 2007). Still, the common recommendation, drawing on general finance theory, is for organizations to diversify their revenues, and therefore I test the hypothesis (H2) that greater revenue concentration will lead to lower theater financial capacity.

As discussed above, theaters that build their own performance space tend to go over-budget in capital building projects. This over-exposure to real estate often results in higher fixed costs and mortgage debt than what theaters can readily afford while maintaining stable levels of performances and productions without generating new revenues. Therefore, even though capital building projects in the theater industry have broad general appeal to theater managers and are commonly undertaken in this nonprofit subsector, the lingering debt such projects often produce can lead to significant constraints to mission-related activities over time in these organizations. This is particularly manifested through negative impacts on financial capacity and production constraints, but also through the need for managers to replace mission-related performances with those that generate greater amounts of earned revenues. Performances may otherwise be scaled back or cut, and resources may be redirected to profit generating activities that are not mission-related. Therefore, (H3) over-exposure to real estate is expected to lead to lower theater financial capacity over time.

Additionally, theater groups, like other nonprofits, are commonly advised to increase earned revenues to be more self-sufficient and to have greater access to unrestricted revenue. Earned revenues are generally considered more stable and predictable than revenues from charitable donations (Gronbjerg, 1993). Furthermore, increases in earned revenues have been found to lead to greater self-sufficiency in some nonprofit subsectors (Guo, 2006), leading to the expectation (H4) that greater

proportions of earned to total revenues will lead to greater financial capacity in nonprofit theaters.

However, boosting earned revenues requires human capital or other resource investments in marketing, building client relationships, and mastering a niche in the market for similar goods or services (Gronbjerg, 1993). Therefore, increasing the proportion of earned revenues in nonprofit theaters requires branching out from mission-related revenues, such as ticket sales, into more diverse product offerings, such as leasing real estate, contracting back office and ticket office services, and capitalizing on other economies of scope. This requires non-mission related management and is also unlikely to generate enough revenues to be truly sustainable over time without considerable investment. Therefore, high proportions of earned revenues may provide a stable base of unrestricted income, but shifting organizational competencies toward this goal will be costly if the activities divert staff time and other resources from the artistic mission, the success of which will drive the bulk of nonprofit revenues through ticket sales and donations. Indeed, increases in commercial revenues have been found to crowd-out donations in the arts subsector (Yetman and Yetman, 2003; Tuckman and Chang, 2006). Therefore, even though the common advice is for theater managers to boost earned revenues, I also test the alternative hypothesis (H5) that greater proportions of unearned to total revenues will lead to lower financial capacity over time.

### Data and Methodology

For the analysis, I combine National Center for Charitable Statistics Form 990 Core Data from 1998 to 2007 with digitized data from 1998 to 2003 on U.S. nonprofit performing arts theater organizations (i.e., NTEE-CC “A65” industry category organizations). These databases are directly transferred from organizations’ IRS Form 990, the annual tax filing for tax exempt charitable organizations. There are several limitations to the data. Primarily, these data

generally only include formalized organizations with over \$25,000 in total revenue since smaller organizations and informal theater groups are exempt from filing the Form 990. Additionally, several researchers have demonstrated inconsistencies in the 990 data either from nonprofit managers misreporting to the IRS or because of human error entering the data into the NCCS database (see Urban Institute and the Center on Philanthropy at Indiana University 2004; Krishnan, Yetman, and Yetman 2006). However, these data otherwise include comprehensive financial information on these organizations that would otherwise be unavailable.

For my analysis, I use a panel of 3,642 nonprofit theaters reporting the variables in the models during the ten years. Due to potential endogeneity and spurious effects from unobserved characteristics of theaters, their communities, or other factors, I use fixed effects. By lagging the key independent variables and because the average theater in the sample reporting six years of data, there are 17,596 organization-year observations in the models. All independent variables, discussed below, are measured as three-year rolling averages and lagged one year. Controls for size, measured as the natural logarithm of total expenses, age, measured as the number of years since gaining recognition of exemption by the IRS, and year are included in all models.

I measure financial capacity with two separate dependent variables for profitability and liquidity. Profitability is net income, measured as total revenues minus total expenses. Liquidity is operationalized as months spending. Following Bowman (2010), months spending are calculated by  $12 * (\text{net assets} - \text{land, building, and equipment less depreciation})$ . Both of these dependent variables are measured as three-year rolling averages to reduce volatility from year to year (Bowman, 2010), and months spending are adjusted for the value of land, building, and equipment to compare theaters that own real estate with those that do not, under the assumption that managers will not sell owned theater space to balance revenues and expenses (Bowman, 2010).<sup>iv</sup>

To predict profitability and liquidity, I primarily use financial health measures discussed above, particularly those developed by Tuckman and Chang (1991) and later used by others, including Greenlee and Trussel (2000) and Hager (2001). These variables include equity balance, operating margins, administrative expenses, and revenue diversification. Because equity balance and operating margins are very nearly the same as the dependent variables, I omit them from the models and focus on the financial health indicators of administrative expenses and revenue diversification. Administrative expenses are represented by ratios of management expenses to total expenses and the ratio of fundraising expenses to total expenses.<sup>v</sup>

Following previous studies, revenue diversification is measured by the Herfindahl-Hirschman Index of Revenue Concentration, calculated as the sum of the squares of the ratios of each revenue stream as proportions of total revenues (including program revenue, contributions and grants, dues, rental income, special events income, investment income, income from sales of assets, income from sales of inventory, income from sales of securities, and other income). For revenue concentration, lower values represent greater revenue diversification and higher values indicate greater revenue concentration.

To measure a comparable indicator of over-exposure to real estate across theaters of varying sizes, I include a variable for year-end mortgage liabilities divided by total revenues, with higher values representing greater financial constraints imposed by theater mortgage debt. The final hypotheses on the impacts of ratios of earned versus unearned revenues to total revenues are tested with alternative models including program revenue reliance, measured by the ratio of program to total revenues, and contribution revenue reliance, measured by the ratio of charitable contributions<sup>vi</sup> to total revenues.

I run models for all theaters and separate models by small, medium, and large theater size categories to better understand different effects by theater size. Small theaters report average annual expenses of less than \$100,000, medium report from \$100,000 to \$1,000,000, and large theaters report expenses of over \$1,000,000 on average over the 10 years of data. Out

of all theaters in the sample in 2005, small theaters represent 49 percent, medium represent 42 percent, and large theaters represent 9 percent.

As can be seen in the summary statistics in Table 1, the average theater in the sample had positive net income and months spending. The average mortgage debt was 9 percent of total revenues, and the average revenue concentration index showed somewhat concentrated revenues at 0.62. Management and fundraising expense ratios were 11 and 6 percent, respectively. Revenue concentration and administrative expenses are near what Hager (2001) found for arts organizations. The average theater was a medium sized theater with \$600,000 in expenses and was 23 years old.

Table 1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Net Income	22844	55266.66	512533.4	-4785621	2.27e+07
Months Spending	22844	85.482	4837.258	-2231.683	663204.8
Mortgage/Total Rev.	22844	0.092	0.499	0.000	26.854
Rev. Concentration	22844	0.624	0.177	0.054	1.000
Mgmt. Exp. Ratio	22844	0.106	0.144	0.000	1.000
FR Exp. Ratio	22844	0.061	0.134	0.000	1.000
Total Expenses	22844	599625.20	2519488	0	7.68e+07
Age	22844	22.548	14.541	0	81
Contributions Ratio	22844	0.384	0.277	0	1.000
Program Rev. Ratio	22844	0.504	0.292	0	1.000

Multicollinearity was tested with a correlation matrix (not shown) and does not pose a threat to this analysis. No correlations are over 0.2 with most much lower. Fundraising expense ratio and management expense ratio are weakly correlated ( $r < 0.2$ ), and age is weakly correlated with revenue concentration, management and fundraising expense ratios, and expenses.

### Results

The first two hypotheses are not supported in these models. Revenue diversification and administrative cost ratios do not predict greater financial capacity for nonprofit theaters. Administrative cost ratios are generally insignificant across models, except for fundraising

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expense ratios for small theaters on net income. Interestingly, and contrary to common advice and general finance theory, higher revenue concentration is expected to lead to significantly higher net income for all theater groups, with an average increase of \$2,100 in net income with each percentage increase in revenue concentration, holding the other variables constant. Higher revenue concentration is also expected to lead to greater months spending capacity for large theaters at the  $p < 0.1$  significance level. Size and age, controlling for the other variables, are not expected to impact profitability or liquidity.

**Table 2: Dependent Variable: Three-Year Rolling Average of Net Income**

VARIABLES	(1) All Theaters	(2) Small Theaters	(3) Medium Theaters	(4) Large Theaters
Mortgage / Total Revenues	-227.7** (77.87)	-18.53 (28.78)	-229.9*** (40.38)	-1,481 (1,021)
Revenue Concentration (HHI)	2,081*** (480.1)	254.5* (102.2)	1,100*** (287.1)	23,984*** (6,848)
Management Expense Ratio	512.4 (299.1)	123.0 (63.97)	108.7 (204.6)	6,222 (4,846)
Fundraising Expense Ratio	456.1 (372.0)	125.2* (60.55)	250.3 (145.3)	2,736 (2,966)
Size	20,723 (13,193)	-842.4 (1,765)	-1,991 (5,558)	280,592 (155,960)
Age	-1,383 (2,454)	-77.05 (79.62)	784.7 (650.8)	150.8 (3,544)
Constant	-278,947 (180,317)	3,234 (20,290)	-28,014 (67,202)	-5.030e+06* (2.481e+06)
Observations	17,596	7,591	8,116	1,889
R-squared	0.004	0.019	0.030	0.026
Number of theaters	3,642	1,911	1,451	280

Independent variables other than size and age are three-year rolling averages, lagged, and divided by 100

All models include controls for year

Robust standard errors in parentheses

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

As hypothesized, mortgage exposure, holding constant the financial health measures, age and size, leads to lower profitability across all theaters, on average, and particularly in medium sized theaters. Mortgage exposure also significantly and negatively impacts months spending

for theaters with over \$1,000,000 in expenses. For each percentage increase in mortgage debt to total revenues, theaters are expected to lose around \$230 in net income, holding the other variables constant. A standard deviation increase in mortgages to total revenues leads to an estimated \$11,500 drop in annual net income. For large theaters, an increase in the mortgage to total revenues ratio by 24 percent is expected to lead to one less month spending reserves, holding the other variables constant, or about a 2 month drop in months spending for each standard deviation increase in mortgages to total revenues.

**Table 3: Dependent Variable: Three-Year Rolling Average Months Spending**

VARIABLES	(1) All Theaters	(2) Small Theaters	(3) Medium Theaters	(4) Large Theaters
Mortgage / Total Revenues	0.0635 (0.0899)	0.0538 (0.0508)	0.104 (0.149)	-0.0421* (0.0171)
Revenue Concentration (HHI)	-0.0952 (0.548)	0.188 (0.145)	-0.543 (1.279)	0.419 <sup>+</sup> (0.251)
Management Expense Ratio	1.234 (0.794)	0.0711 (0.0997)	2.219 (1.445)	0.235 (0.150)
Fundraising Expense Ratio	-1.137 (1.012)	0.592 (0.467)	-2.183 (1.499)	0.0182 (0.0482)
Size	-220.2 (180.7)	-62.06 (41.94)	-380.2 (348.8)	1.644 (3.414)
Age	-1.693 (1.245)	-0.618 (0.652)	-4.799 (5.438)	-0.193 (0.153)
Constant	2,762 (2,258)	718.5 (468.6)	4,981 (4,579)	-32.56 (44.64)
Observations	17,596	7,591	8,116	1,889
R-squared	0.007	0.072	0.011	0.107
Number of theaters	3,642	1,911	1,451	280

Independent variables other than size and age are three-year rolling averages, lagged, and divided by 100

All models include controls for year

Robust standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05, <sup>+</sup> p<0.1

As seen in Table 4, contrary to hypothesis 4, higher theater reliance on earned revenues, holding the other variables constant, is significantly related to losses in net income. Instead, the alternative expectation (H5) is supported, with higher proportions

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of contributions revenue instead of earned revenues leading to significantly greater financial capacity in both profitability and liquidity.<sup>vii</sup> Holding the other variables constant, a one percentage increase in program revenues to total revenues is expected to lead to a \$3,200 profit loss, while a one percentage increase in contributions to total revenues is expected to lead to an additional \$3,450 in profits, on average.

**Table 4:**

VARIABLES	(1) Net Income	(2) Net Income	(3) Months Spending	(4) Months Spending
Mortgage/Revenues	-235.5** (81.50)	-253.2** (79.18)	0.0627 (0.0890)	0.0622 (0.0907)
Rev. Concentration (HHI)	1,554*** (435.1)	2,529*** (517.9)	-0.155 (0.546)	-0.0721 (0.571)
Contributions/Revenue	3,450*** (478.0)		0.388* (0.162)	
Program Rev./Revenue		-3,183*** (388.9)		-0.164 (0.212)
Mgmt Exps Ratio	194.9 (293.1)	162.1 (293.7)	1.198 (0.791)	1.215 (0.798)
FR Exps Ratio	413.6 (367.0)	454.1 (367.7)	-1.142 (1.012)	-1.137 (1.012)
Size	19,889 (13,092)	22,286 (13,210)	-220.3 (180.7)	-220.1 (180.8)
Age	-1,117 (2,170)	-904.2 (2,183)	-1.664 (1.247)	-1.669 (1.269)
Constant	-369,482* (184,381)	-168,449 (172,915)	2,752 (2,258)	2,768 (2,253)
Observations	17,596	17,596	17,596	17,596
R-squared	0.010	0.010	0.007	0.007
Number of theaters	3,642	3,642	3,642	3,642

Independent variables other than size and age are three-year rolling averages, lagged, and divided by 100

All models include controls for year

Robust standard errors in parentheses

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

While negative, the impact of earned revenue reliance is not significant for months spending except for large theaters where a one percentage point increase in earned revenues to total revenues is expected to lower months spending by roughly a third of a

month, holding the other variables constant. On average for all theaters across size categories, a gain of around an additional month spending is expected for every 2.5 percentage point increase in contributions to total revenues.

### Discussion

Based on these findings, even though financial health measures have been shown to significantly predict financial failure in nonprofit theater organizations (Hager 2001), the measures do not significantly predict financial capacity in the hypothesized directions. In particular, although revenue diversification is often recommended in order to maintain greater financial stability over time, these findings suggest that, instead, focusing on particular revenue streams is more likely to have financial capacity payoffs in nonprofit theaters. As Gronbjerg (1993) discusses, revenue diversification can also include other potential costs to the organization, and by extension to the core mission, since developing alternative revenue streams requires more complex management and considerable investment in human resources and other capital. In the context of nonprofit theaters, developing alternative revenues streams such as facility rental or back office contracting may be particularly appealing, especially in order to capitalize on economies of scope. However, managers should critically evaluate entering such arrangements since they would require human resource skills and management systems which may not be currently in place and since these findings show evidence that developing diverse revenue streams could actually harm financial capacity.

Also contrary to common practice, this analysis reveals particular concerns regarding theater building ownership and development. Even though many nonprofit theater groups would like to own or renovate their theater space, these findings suggest that theater boards and leaders should exercise caution and due diligence when deciding to purchase or develop their own facilities. Building projects commonly go over-budget,

which often leads to debt financing, and which in turn critically threatens the financial capacity of theaters as the ratio of mortgages to total revenues increases. This threat particularly impacts the financial capacity of medium and large theaters with more than \$100,000 in average total expenses, which are more likely to pursue theater ownership and engage in debt financing to cover capital development costs. For medium sized theaters the threat appears more concentrated on profitability, while liquidity is significantly impacted in theaters with over \$1 million in total expenses. Therefore, managers who are considering buying, building, or redeveloping theater property should consider the very real probability that the project will cost more than budgeted. These findings suggest that unless theaters hold substantial operating reserves in addition to the savings budgeted for buying or building, managers should reconsider entering the project.

Additionally, despite common recommendations to increase theaters' reliance on earned rather than charitable revenues, higher dependence on earned revenues greatly threatens profitability across theater size categories and significantly threatens liquidity for large theater groups. Given these findings and considering income interactions highlighted by Young (2007, 360-1), in which program revenue may crowd-out contributions, as well as evidence of this crowd-out effect in arts organizations (Yetman and Yetman, 2003; Tuckman and Chang, 2006) theater managers should be wary and critical of recommendations to increase their theaters' financial self-reliance through focusing more heavily on earned revenue operations. Instead, theater managers would be well-advised to develop their theaters' charitable fundraising operations and reliance on contributions revenue in order to increase their financial capacity over time.

As Gronbjerg (1993) points out, private and individual donations are generally unrestricted, but stability in donations and contributions requires investment in fundraising, development, and maintaining relationships with donors over time. Since

donors receive less immediate feedback than clients in market transactions on the quality or impact of their contributions, relationships with donors require more consistent feedback than relationships with paying clients (Gronbjerg, 1993). However, with greater investment in and scrutiny of fundraising operations, managers can improve their theaters' appeal to individual donors, institutional grantmakers, and government funders through diverse fundraising strategies, developing a more stable and productive donative income stream over time.

Overall, this study tests some common approaches to finance decisions in the nonprofit theater subsector, and the findings caution theater managers against following some of the conventional wisdom in the field. While these findings focus on the impacts on financial capacity, the ultimate impacts of these effects are on nonprofit theater productions and the mission-impact of their performances. Financial management decisions which lead to lower financial capacity force managers to prefer performance schedules and operational decisions based on financial return rather than core mission impact and ultimately lower the quality of the arts in their communities.

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<sup>i</sup> This is similar to the 41 percent of nonprofit theater groups that own their own facilities found by Drummond (2005).

<sup>ii</sup> Average and median mortgage values are the average and median end-of-year mortgage liabilities in 2005 reported by mortgage reporting organizations that also report land, buildings, and equipment from 1998-2003.

<sup>iii</sup> Calculated by generating a variable for investment income covering mortgage ratio = investment income 04/mortgage beginning of year 04 and summing the number of theaters with mortgages whose ratio is below 0.02

<sup>iv</sup> Because land, building, and equipment was not reported in all years, the average across years it was reported is used to calculate this variable for each organization.

<sup>v</sup> Management expenses are either the compensation of key employees or the management expenses line, depending on whether the data were from the core or digitized 990 files.

<sup>vi</sup> Charitable contributions include private contributions, foundation and government grants.

<sup>vii</sup> For brevity, separate models for theater size groups are not shown, but across models, the results for earned versus contributions reliance variables are consistent with the models shown in terms of direction and significance, with the

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exception of large theaters for which program revenue to total revenue ratios negatively and significantly predict months spending ( $p < 0.001$ ) as well as net income.