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The Question of Superstar Nonprofits

An Investigation into the Relationship Between Labor Share and Industry Concentration in the Nonprofit Sector

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Master Thesis: M.Sc. Economics and Business – International Economics

Abstract

This paper tests four predictions of the “superstar firms” model put forward in Autor, Dorn, Katz, Patterson, & Van Reenen (2019) against US nonprofit organization microdata from the Internal Revenue Service. These predictions are: i) there is increasing industry revenue concentration within broad nonprofit category groups; ii) increasing industry concentration is associated with decreasing labor share; iii) the decrease in aggregate labor share is mostly due to a reallocation of sales between organizations and not a decrease in labor share within organizations; iv) this reallocation effect is largest in industries that are experiencing larger increases in concentration. The second and fourth predictions were not supported in the data while there is some evidence for the first and third predictions in some categories. However, there does not appear to have been a large change in either industry concentration or labor share in most categories.

The views stated in this thesis are those of the author and not necessarily those of Erasmus School of Economics or Erasmus University Rotterdam.

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1. Introduction

Autor, Dorn, Katz, Patterson, & Van Reenen (2019) put forward an explanation for the decrease in labor's share of national income experienced by many countries since the 1980s. They use firm-level US Economic Census data to suggest that firms with higher markups and lower labor shares have experienced greater sales growth than other firms in recent decades so that these firms take up a larger share of the total industry sales. They refer to these large (as measured by sales) firms with low labor shares as "superstar firms." They argue that increased market share of these superstar firms, not a decrease of labor share for all firms, has caused most of the decrease in the aggregate labor share. In their model, they say this change could occur if consumers became more sensitive to prices, if the product market became more competitive due to increased global competition or technology changes that alter production, or if large incumbent firms established entry barriers to further increase their market share at the expense of smaller firms.

The purpose of this paper is to investigate whether the results in Autor et al (2019) hold for US tax-exempt organizations. Tax-exempt organizations are like firms in some ways and unlike firms in other ways, so that the existence or non-existence of superstar nonprofits could help explain the phenomenon. For example, if increasing superstar firm sales concentration is the result of information technology developments that allow a few firms to operate more productively than others and thus take a larger share of market revenue, then maybe information technology developments would have the same effect on tax-exempt organizations. However, if larger superstars are the result of consumers becoming more sensitive to prices, then we might not see the same results for nonprofits, because charitable contributions are often paid to nonprofits without reference to a market price. I attempt to recreate several of the empirical tests carried out by Autor et al. (2019) to see whether tax-exempt organizations exhibit similar results to for-profit organizations. My research relies on nonprofit organization entity-level data taken from annual Form 990 returns filed with the US Internal Revenue Service (IRS).

Since the early 1980s, the labor share of income has declined in many countries, including in the US (Karabarbounis & Neiman, 2014). Piketty, Saez, & Zucman (2018) find that the decline in labor share since 2000 is a key driver of the increase in income inequality over the period because individuals with less wealth rely more on labor income than wealthier individuals. Several possible explanations, other than the superstar firms model, for the downward trend of the labor share have been put forward. Koh, Santaaulàlia-Llopis, & Zeng, (2018) argue that accounting changes made to the US national income accounts to capitalize intellectual property have increased the measured non-labor share in the NIPA over

time as spending on intellectual property products has increased. While the results in Autor et al. (2019) are not related to the capitalization of intellectual property (because their measure of labor share is payroll expenses divided by sales or value-added) they also do not preclude intellectual property capitalization from being part of the explanation for aggregate labor share changes. Another possible explanation is that the labor share decline is mis-measured, because wage income of business owners is being characterized as capital income for tax reasons (Aghion, Akcigit, Bergeaud, Blundell, & Hemous, 2019).

De Loecker, Eeckhout, & Unger (2018) find, using COMPUSTAT data, that the average markups for firms have increased since 1980, and that the increase is largely due to changes at the top of the markup distribution, which supports the “superstar firm” hypothesis. They attribute this rise in markup to a rise in market power. Rognlie (2014) also finds evidence that the return to “pure profits” and the increased value of residential housing are the main drivers of the decline of the labor share. Karabarbounis & Neiman (2018) disagree with the measure of markups used by De Loecker, Eeckhout, & Unger (2018), arguing against an increase in economic profits as the cause of increased “factorless income.” They offer as alternative explanations either an increase in unmeasured capital or differences in the rental rate of capital from how it is usually measured. The argument made in Koh, Santaaulàlia-Llopis, & Zeng, (2018) is relevant to the measurement of markups in both De Loecker, Eeckhout, & Unger (2018) and Autor et al. (2019). Capital stock is included in the markup calculation, which would be affected by the method of capitalizing intangible capital in COMPUSTAT data and the U.S. Census of Manufactures.

Gutiérrez & Philippon (2017) argue that increasing market concentration is a result of a decrease in competition. They disagree with Autor et al’s (2017) argument that increased concentration among superstar firms is related to faster productivity growth among superstars. Gutiérrez & Philippon (2019), find that the top companies are not becoming more productive and are contributing less to GDP growth than in the past. They mention that productivity declines among superstars may result because it is harder now to find innovative ideas than it was in the past, as described in Bloom, Jones, Van Reenen, & Webb (2018), where the argument is that more research effort is required to produce the same gains in efficiency. Gutiérrez & Philippon (2019) also suggest that decreased productivity and increased concentration could result from excessive regulations as described in Davis (2017) increasing the barriers to entry.

Tax-Exempt Organizations

It is not clear at first glance how tax-exempt organization behavior should be modeled. Tax-exempt organizations are similar to firms in many ways, they have revenues and expenses, they have boards of trustees/directors who appoint managers to run operations of the entity, and they have assets, liabilities, and expenses related to their operations. But they are treated differently from for-profit firms by tax law and must meet stricter criteria to maintain their exempt status. Horwitz and Nichols (2007) state that there is currently no established theory of nonprofit behavior and they discuss several alternatives that have been put forward for such a theory. Some examples include that nonprofits maximize output, that they maximize social benefit, or that they attempt to maximize the compensation that they pay out to managers and key employees as a for-profit in disguise. If the disguised for-profit theory is correct, we could just model nonprofits as regular firms, but under the other theories, nonprofits would behave differently.

Autor et al. (2019) find evidence for superstar firms across multiple sectors of the economy and also find evidence for their model using COMPUSTAT data of publicly traded firms. Publicly traded firms operate under a different legal and institutional regime and face different incentives compared with owner-managed firms, so it is not out of the question that the model in Autor et al. (2019) could apply to nonprofits. The nonprofit sector was 10.2 percent of employment in the US in 2016 (BLS, 2018) and contributed to 5.4 percent of GDP in 2015 (McKeever, 2018) so while not a majority of the economy, it still has the potential to help explain some aggregate trends.

Whether or not there are nonprofit superstar firms could also shed light on some of the reasons that have been put forward for the phenomenon. As mentioned before, if the superstar firm phenomenon results from broad advances in production technology, then we would expect it to affect nonprofits as well, whereas if the phenomenon results from changes in consumer demand, it may not. This paper does not look at nonprofit productivity, but if ideas are becoming harder to find, as in Bloom et al. (2018), we would expect this to affect nonprofits too. Among the regulatory barriers to entry described in Davis (2017) is the complexity of the tax code and the increasing size of forms and instructions that companies must read and fill out. These barriers could also exist for nonprofits (anecdotally, the IRS nonprofit tax forms seem to have increased in size over the years, as I discovered when I needed to compare the forms between years for this paper).

This paper uses nonprofit tax data to test four predictions of the superstar firms model. First, that there is increasing industry concentration within broad nonprofit category groups. Second, that increasing industry concentration is associated with decreasing labor share. Third, that the decrease in aggregate labor share is mostly due to a reallocation of sales between organizations and not a decrease in labor share within organizations. Fourth, that this reallocation effect is largest in industries that are experiencing larger increases in concentration. The second and fourth predictions are tested using regression models specified in Section 4.

The next section of this paper lays out the superstar firms model from Autor et al. (2019) and discusses how it relates to nonprofit organizations. Section 3 describes the data sources. Section 4 describes the research methodology and Section 5 describes the results from the tests laid out in Section 4.

2. Model

Autor, Dorn, Katz, Patterson, & Van Reenen (2019) introduce what they call the “superstar firms” model. Using an illustrative Cobb-Douglas production function, they discuss a number of ways to get the result that larger firms will have a lower labor share. One example, from their 2017 NBER working paper (which is cited in their 2019 version), takes the form:

$Y_i = A_i V_i^{\gamma - \alpha} K_i^\alpha$, where Y_i is value-added for firm i , V_i is variable labor, K_i is capital, α is the output elasticity of capital, $\gamma - \alpha$ is the output elasticity of variable labor (γ is set to allow for constant or decreasing returns to scale; if γ is equal to 1, then there are constant returns to scale), and A_i is quantity based total factor productivity. A_i is assumed to be heterogeneous across firms. The total labor input of firm i is L_i , where $L_i = V_i + F$ (F is the fixed amount of labor needed for overhead). Assuming perfect competition in factor markets (so that all firms face the same wage, w , and cost of capital, r), and imperfect competition in product markets, the first order condition for variable labor provides the result that

$$(1) \quad w = \frac{c_i(\gamma - \alpha)Y_i}{V_i} \quad \text{and the labor share of firm } i (S_i) \text{ is}$$

$$(2) \quad S_i \equiv \frac{wL_i}{P_i Y_i} = \frac{c_i(\gamma - \alpha)}{P_i} + \frac{wF}{P_i Y_i}$$

Where c_i is marginal cost of firm i , and $P_i Y_i$ is nominal value-added. From (1) and the production function, we can say that, for a given wage rate, firms with a higher A_i (more productive firms) will use more capital and labor and will produce more. Equation (1) can be derived under the above assumptions by minimizing the cost function $C(L_i, K_i) = wL_i + rK_i$ subject to the production function constraint. Cost minimization seems like a reasonable assumption for nonprofits. It is conceivable that nonprofits do not always minimize costs, for example, if paying an above market wage rate to employees is part of the organization's mission, but if a nonprofit wants to maximize output or is a for-profit in disguise, then it would need to minimize costs. It also makes some sense to assume that nonprofits participate in the same factor markets as for-profit firms (or at least that nonprofit factor markets behave similarly to for-profit factor markets).

Equation (2) is derived by multiplying $\frac{L_i}{P_i Y_i}$ to both sides of equation (1). The second term in (2), $\frac{wF}{P_i Y_i}$, will necessarily be smaller when nominal revenue ($P_i Y_i$) is higher and the first term, $\frac{c_i(\gamma-\alpha)}{P_i}$, will be smaller when, P_i/c_i (price divided by marginal cost), is higher. In the updated 2019 version of their paper, Autor et al. refer to P_i/c_i as the markup. From (2), firms with larger revenue relative to fixed labor costs and firms with higher markups will have lower labor shares. Autor et al. (2019) provide a theoretical discussion for why larger organizations will tend to have larger markups. Their discussion covers a number of models of imperfect competition that would yield this result. Thus, they argue that firms with larger sales (from equation (1), the more productive, higher A_i firms) will have lower labor shares.

Unlike cost minimization, markups are less relevant to nonprofits. When consumers buy goods and services from for-profit firms, they typically pay a price for a specified quantity. With nonprofits, this is the case for some types of revenue, such as membership dues, hospital fees, and school tuition. It may be that markets for goods and services paid for by the consumer behave like regular markets, especially when nonprofits behave like for-profits in disguise. Charitable contributions, on the other hand, can be made to an organization without conditions attached, so there is not a market price for the goods or services funded by charitable revenue. It is often the case that people making the charitable donations are not the recipients of the goods or services provided by the nonprofit, so it is also not certain that demand can be modeled the same way with nonprofits as with firms.

The model in Autor et al (2019) relies on a negative relationship between an organization's share of revenue in its industry and its labor share. Equation (2) would need to be modified to deal with revenue from charitable contributions and ways that nonprofit behavior can differ from for-profit firms. If we

define nonprofit labor share (S_i^{NP}) instead as the total wage bill divided by total revenues (TR_i) received by a nonprofit in exchange for goods and services as well as charitable contributions paid to the nonprofit, then we get:

$$(3) S_i^{NP} \equiv \frac{wL_i}{TR_i} = \frac{wV_i}{TR_i} + \frac{wF}{TR_i}$$

The second term, $\frac{wF}{TR_i}$, will still be smaller for organizations with larger total revenue, because the fixed cost and the wage paid to labor are assumed to be the same for all organizations. If the goal of a nonprofit is to maximize output, then we would expect it to spend all of its revenue on production (so that $Y_i + wF = TR_i$). In this case, the relationship between total revenue and labor share would depend on the production function (under the Cobb-Douglas production function, variable labor is a constant share of Y_i , so that as total revenue increases, the labor share decreases, approaching variable labor's share of Y_i , and the relationship between revenue and labor share is negative). When the relationship is negative, this will not necessarily be driven by more productive (higher A_i) firms, unless productivity is defined as a nonprofit's ability to generate revenue relative to costs. There is an issue related to the timing of charitable contributions that should be noted. If a nonprofit maximizes output (so that it spends all revenue) but chooses to spend a large charitable donation in a future period, then this would also create a negative relationship between revenue and labor share, but would not be related to nonprofit productivity.

In the Autor et al. (2019) model of the industry, an increase in market toughness causes the least productive firms (low A_i , high marginal cost firms) to exit the market, which decreases average labor share, because less productive firms produce less and have higher labor share. At the same time, they say that the increase in market toughness causes labor share at the firm level to rise (because greater toughness tends to increase the elasticity of demand, which decreases markups), so that the overall effect on labor share is ambiguous and depends on the productivity distribution of A_i .

The superstar firms model predicts aggregate labor share changes that occur if some change makes the market tougher and increases market concentration among the superstar firms (firms with the highest A_i). Possible reasons for an increase in toughness that Autor et al. (2019) list include, an increase in globalization, an increased importance of network effects, scale-biased technological change, or weakening antitrust enforcement.

Autor et al. (2019) claim to provide evidence, using firm-level US Economic Census data, for seven major predictions of their model that result from an increase in market toughness.

- (i) A rise in sales concentration within industries.
- (ii) Industries with larger sales concentration experience larger labor share declines.
- (iii) This fall in labor share is mostly due to reallocation of sales/value-added between firms and not because individual firms decrease labor share on average.
- (iv) The reallocation portion of the labor share decrease is greatest in industries with the largest market concentration increases.
- (v) More concentrated industries have faster productivity growth.
- (vi) Markups will rise more for larger firms than for the average firm.
- (vii) These results also hold internationally.

The goal of this paper is to test whether these results hold for public charities in the US. Under prediction (vii), Autor et al. (2019) argue that the results hold internationally. They take this to imply that the factors driving this phenomenon are occurring under a number of different institutional regimes, citing Gutiérrez and Philippon (2018) who say that antitrust enforcement is stricter in the EU than in the US. However, it should be noted, that Gutiérrez and Philippon (2018) find evidence for more competition in Europe, which they argue results from the institutional differences they find. Autor et al. (2019) looks at census data of all firms, but in the US, they also argue that their results are supported in COMPUSTAT data of publicly traded companies. Publicly traded companies face different legal and institutional regimes from privately held for-profit firms. Typically, the managers and the owners are different people, causing principal-agent problems, so that assuming profit-maximization behavior or cost-minimization by publicly traded companies is not a perfect abstraction. In some ways, nonprofits are similar to publicly traded companies, as both types of organizations are run by managers officially selected by boards of directors. Testing these predictions against nonprofit data allows us to see if organizations that are even less similar to traditional firms will exhibit the same results.

This paper will test predictions (i), (ii), (iii), and (iv) to determine whether sales concentration has increased for nonprofits, whether that has led to a lower aggregate labor share, and if so, whether this is mainly due to reallocation between firms. Prediction (v) is not tested, because I was unable to find the relevant data, and prediction (vi) is not tested because it is not clear what a nonprofit markup would be. If the causes of market concentration are primarily due to things like technological changes that affect production, we might see a decrease in labor share among nonprofits. However if the four predictions do

not hold in the nonprofit data, this may suggest an explanation that would more likely apply to for-profit firms. A negative result could also suggest how nonprofits behave differently from for-profit firms.

3. Data

This research relies on two datasets. The first dataset, from the United States Internal Revenue Service (IRS) Statistics of Income (SOI) program (referred to in this paper as the SOI data) provides detailed income, expense, and asset account information for nonprofits (specifically organizations that are classified as 501(c)(3) that file IRS Form 990) over the period from 1985 to 2015. The SOI data comes from annual samples of tax forms filed with the IRS. The second dataset, which comes from the Core Fiscal Year Trend Files (referred to in this paper as the NCCS data) from the National Center for Charitable Statistics (NCCS) of the Urban Institute, covers the period from 1989 to 2013 and includes less detailed income, expense, and asset information for all 501(c)(3)s who file Form 990 or 990EZ during the period. The NCCS data is also based on information reported in nonprofit tax returns (either Form 990 or Form 990EZ).

3.1 SOI Data

The IRS SOI provides organization-level microdata sampled from tax exempt organizations. The data for each sampled organization comes from IRS Form 990, which is an annual information return filed by most tax-exempt organizations. The SOI Form 990 microdata is provided in a separate file for each year from 1985 to 2015. The definitions and codenames for different items on the income statement and balance sheet are not consistent from year to year, so some work was required before I could combine the 1985-2015 data into one file. Sample rates of tax-exempt organizations vary based on organization total assets, with lower sample rates for organizations with less assets and a sample rate of 100% for the organizations with the most assets.

All years in the SOI files contain samples of organizations who file Form 990 and are categorized as 501(c)(3). 501(c)(3)s are organizations that are eligible to receive charitable donations that are tax deductible for the donor. According to the IRS, the acceptable purposes for 501(c)(3)s are “charitable, religious, educational, scientific, literary, testing for public safety, fostering national or international amateur sports competition, and preventing cruelty to children or animals,” (Exempt Purposes – Internal Revenue Code Section 501(c)(3), Internal Revenue Service, 2019).

There are other types of tax-exempt organizations who file Form 990 and are not classified as 501(c)(3), such as labor organizations, business and trade organizations, social clubs, and employee benefit funds. Data on these other organizations are not consistently provided over the 1985-2015 period, so I have omitted them from my dataset. Charitable organizations with total assets and total revenue below a certain threshold are permitted by the IRS to file Form 990-EZ instead of Form 990 (Form 990-EZ is a simpler tax form). Sample data from 501(c)(3)s who file Form 990-EZ are also not always provided in the IRS SOI data over the 1985-2015 period, so these organizations have been omitted as well. Thus, my dataset contains information from sampled organizations who file Form 990 and are classified as 501(c)(3) over the period 1985-2015. Because the superstar firms model makes predictions about the largest organizations, the omission of the smallest organizations is hopefully not too important for the results.

There is one major issue that results from the exclusion of Form 990-EZ filers, however. The IRS redesigned Form 990 in 2008, causing between-year comparability issues with the data. The IRS changed the asset and income thresholds for filing Form 990-EZ to make filing easier for small organizations that were not yet familiar with the new format (2008 Instructions for Form 990, p.1). In 2007, an organization with total assets below \$250,000 and gross receipts below \$100,000 was allowed to file Form 990-EZ (2007 Instructions for Form 990, p.2). In 2008, the threshold jumped to total assets below \$2.5 million and gross receipts below \$1 million, in 2009, the threshold dropped to total assets below \$1.25 million and gross receipts below \$500,000, and finally in 2010, the threshold dropped to total assets below \$500,000 and gross receipts below \$200,000 (2008 Instructions for Form 990, p. 1). Especially in 2008 and 2009, the population of 501(c)(3)s filing Form 990 is much smaller than in preceding and subsequent years. As of 2015, the threshold for filing Form 990-EZ was the same as it was in 2010 (2008 Instructions for Form 990, p.2). I have limited my analysis of the SOI data to only those organizations with real total assets above \$2,651,430 in constant 2012 USD (based on the Gross Domestic Product Implicit Price Deflator from the Federal Reserve Economic Data (FRED) provided by the Federal Reserve Bank of St Louis). At this limit, all organizations in all years were required to file Form 990 instead of Form 990-EZ and are part of the population sampled in the SOI data.

As mentioned above, the SOI sample data from each year is provided by the IRS in a separate data file so I needed to combine the years to create one dataset for the whole 1985-2015 period. The first step was to create a chart that maps the code in the IRS SOI data to the corresponding line on Form 990. Appendix Figure D.3 shows the mapping for the period 1985-2007 and Appendix Figure D.4 shows the mapping for the period 2008-2015 (as described above, Form 990 was redesigned in 2008, which is why

there are two different mapping charts). The next step of the data combination was to create income statement and balance sheet line items that could be used for all years. These are shown in Appendix Figures D.1 and D.2. From this I developed a common code list for the whole 1985-2015 period and converted each year's data file into a common format and combined all of the files into one.

The SOI data includes totals of assets and liabilities measured at book value as well as revenues and expenses. Expense accounts are further broken down into Program Services Expense, Management and General Expense, and Fundraising Expense. Program services are programs related to the exempt purpose of the organization (for example, providing education when the organization is a school). Revenue from program services is also reported separately, and is one of the measures of revenue that I use in my results.

Each charitable organization is classified using the National Taxonomy of Exempt Entities (NTEE). I use the NTEE code in place of the industry categorizations used by Autor et al. The SOI data provides NTEE codes starting in 1994 at the 3- and 4-digit level. To make the codes more manageable, I assigned the organizations into nine larger groupings based on the first letter code, following the categorization set out by the National Center for Charitable Statistics (NCCS) of the Urban Institute (Jones, 2019). These nine categories are: i) Arts, Culture, and Humanities; ii) Education; iii) Environment and Animals; iv) Health; v) Human Services; vi) International, Foreign Affairs; vii) Mutual/Membership Benefit; viii) Public, Societal Benefit; and ix) Religion.

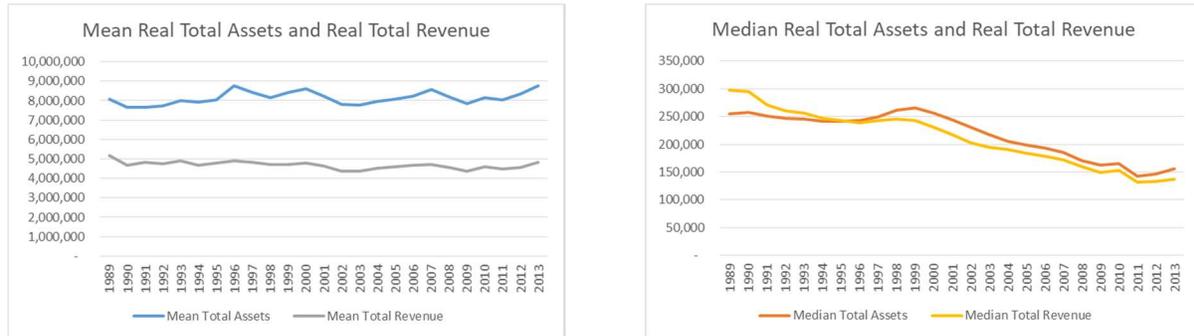
3.2 NCCS Data

The NCCS data covers a shorter time period than the SOI data (1989-2013 instead of 1985-2015) and provides less detailed revenue and expense information (there are fewer revenue accounts and only total expenses are reported). The advantage of the NCCS data is that it provides tax return data for all 501(c)(3) organizations during the period, whether they filed Form 990-EZ or Form 990, whereas the SOI data only provides a sample of Form 990 filers. For this reason, I use the NCCS data to calculate market concentration within each NTEE group.

From the NCCS data, we can get a picture of some trends and characteristics of public charities in the US. First, in Figure 1, we see that 501(C)(3) real mean total assets have fluctuated between just under \$8 million and just under \$9 million over the 1989-2013 period, ending at a higher value in 2013 than in 1989. Mean real total revenue has fluctuated between just above \$4 million and just above \$5 million over the period, and ended the period lower than it started. Median real total assets and median real total

revenue, on the other hand, are much lower than the means and have decreased over the period. This indicates that assets and revenues are both concentrated at the top of the distribution. The total number of organizations filing returns increased from 93,051 in 1989 to 348,067 in 2013.

Figure 1: Mean and Median Real Total Assets and Real Total Revenue of 501(c)(3) Organizations



Reported in constant 2012 USD

(Inflation Adjustment based on Gross Domestic Product Implicit Price Deflator from FRED)

Figure 2: Breakdown of Charitable Organizations by Category



Figure 2 shows the relative size of each category of charitable organizations. The largest group in terms of number of organizations is Human Services, with several others (Health; Education; Public, Societal Benefit; and Arts, Culture, and Humanities) at roughly even shares as well. When we look at how assets are split between categories, we see that more than half of charitable organization assets are held by Health organizations. Health and Education are the two largest categories based on revenue, receiving between 60% and 75% of total revenues depending on the year. Program service revenue is very concentrated in Health organizations (roughly 70% of PSR) and contributions are spread relatively evenly between categories.

4. Methodology

4.1 Labor Share

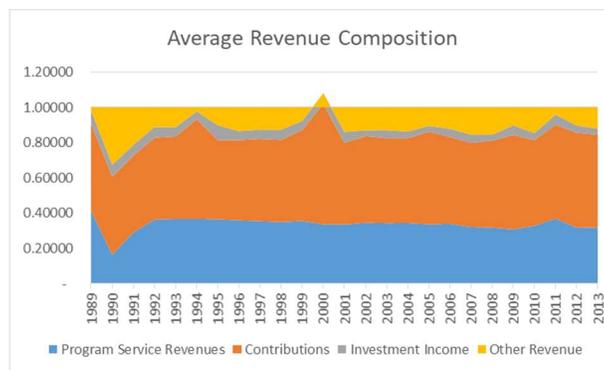
In order to calculate labor share, I use the SOI data, because the NCCS data does not provide payroll information. In Autor et al. (2019), the labor share of firm i is $S_i = (wL_i)/(P_iY_i)$, where wL_i is the total wage bill paid by firm i and P_iY_i is total value-added or total sales when value-added data is not available. In the SOI data, I use the total expense paid by the charitable organization for Salaries and Wages, Pension and Benefits, and Officer Compensation as the total wage bill (wL_i). The choice of P_iY_i is a bit more complicated for charitable organizations, because they receive charitable contributions.

Charitable contributions are not typically direct payments in exchange for some quantity of goods and services, but many organizations are funded by them, so contributions are relevant for determining the share of revenue spent on labor. Program service revenues (including membership fees/dues), on the other hand, are amounts received directly in compensation for the official tax-exempt activities of the organization. These are the revenues that most closely resemble sales of for-profit organizations. If consumers who pay for the goods and services that they consume are driving the superstar firm phenomenon, then program service revenues could be the best measure of P_iY_i . On the other hand, payroll expenditures divided by program service revenues could swing wildly from year to year depending on contributions. To deal with this, I provide three calculations of the labor share (S_i). The first is total payroll expense divided by the sum of total contributions and program service revenue, the second is total payroll expense divided by contributions, and the third is total payroll expenses that were categorized as being for program services divided by program service revenue (the third calculation matches program

service revenue and program service expense on the assumption that these form a more relevant category, excluding fundraising, and management and general payroll expenses).

Figure 3 displays the average revenue composition of charitable organizations (calculated with the NCCS data) each year. This is the share of total charitable organization revenue that is received as program service revenues, contributions, investment income, and other revenues. Typically, over 80% of revenues are received as either contributions or program service revenues, so focusing on those two categories for my measures of labor share seems reasonable. From Section 3, we know that Health and Education organizations will be the largest groups in terms of total revenue amounts, with Health organizations receiving the largest share of program service revenues. For this reason, I will focus on the Health and Education categories when looking at labor share calculated as program service related payroll expense divided by program service revenue.

Figure 3: Average Revenue Composition of Charitable Organizations



Autor et al. (2019) define the aggregate labor share in an industry (or broad sector) as $S = \sum \omega_i S_i$, where ω_i is a weight, representing firm i 's share of revenues in an industry (or broad sector). They find an overall decrease in broad sector aggregate labor share in every sector (except finance) between 1982 and 2012. I use the 4-digit NTEE classification as the definition of nonprofit industries and I use the nine larger categories (Health, Education, Human Services, etc.) for the broad sectors. In the SOI data, these categories are only available from 1994 onward, so I calculate the trend of each broad category labor share from 1994 to 2015 using the three methods of calculating labor share that I described above.

As revenue approaches zero, the labor share of an organization can become quite large. These large observations do not make much of a difference for industry level results when organizations are weighted by their share of sales in the industry, but can greatly affect unweighted results. Autor et al. (2019) discuss several methods they use to deal with this. The main method that I follow in my

specifications is to drop all observations for which labor share is greater than the 99th percentile. Other methods discussed in Autor et al. (2019) include winsorizing the labor share at the 99th percentile or top-coding the labor share at a value of 1.

Sometimes in the nonprofit data, there are negative values for revenue. The nonprofit data is based on self-reported informational tax returns, so there are a number of possible reasons why this could occur. I chose a few organizations with negative revenue to look at more closely in order to get an idea of some of the reasons (it is often possible to find online copies of a nonprofit's filed return at its website or on the Propublica Nonprofit Explorer because nonprofits are required to provide a copy of Form 990 to anyone who requests it). The reason for negative program service revenue, in the organizations I investigated, is because the nonprofit held an interest in a subsidiary and categorized a negative adjustment to the subsidiary's value under "program service revenue." There are likely other possible reasons as well. However, there are not many of these negative values. In instances where I drop the top 1 percentile of labor share, I also drop observations where labor share is negative. In instances where I winsorize or top-code the labor share at 1, I replace the negative values of the labor share with a value of zero.

The theory in Autor et al. (2019) relies on a negative relationship between firm size and labor share. They demonstrate this relationship with a bivariate regression for each broad sector with an organization's labor share as the dependent variable and its share of sales in the industry as the independent variable. The regression model is:

$$S_{it} = SalesShare_{it} + \tau_t + u_{it}$$

Where S_{it} is an organization's labor share at time t , $SalesShare_{it}$ is its share of sales in its industry (NTEE group), τ_t is the set of year dummies, and u_{it} is the error term.

I perform the regression separately for each nonprofit category and also separately for each way of calculating the labor share (program service revenue, contributions, and both). When I use the program service revenue labor share calculation as the dependent variable, then the industry program service revenue share is the independent variable. Similarly, the contributions labor share is regressed against the share of industry contributions and the combined contributions/PSR labor share is regressed against the share of industry combined contributions/PSR.

4.2 First Prediction: Industry Concentration

Again, based on Autor et al. (2019), I calculate three measures of industry concentration using the NCCS data for the period 1989-2013. The first measure is the share of total industry (NTEE group) revenues received by the top four organizations in the industry (CR4). The second is the share of total industry revenues received by the top twenty organizations in the industry (CR20). The third measure is the Herfindahl-Hirschman Index (HHI) of each industry. Each of these measures, I calculate three times, once for each definition of revenues that I use (just program service revenue, just contributions, and contributions plus program service revenues). I also calculate aggregate CR4, CR20, and HHI for each broad category of nonprofit by taking the weighted average of industry CR4, CR20, and HHI within the broad category, with industry revenue as the weight (each of these is calculated for each revenue measure, so there are nine aggregate concentration measures for each broad category). One issue with measuring industry concentration using just nonprofit data is that nonprofits sometimes compete with for-profit companies and also with government-run organizations so that this measure is not always the correct measure of industry concentration. The first prediction of the superstar firms model is that industry revenue concentration increases.

4.3 Second Prediction: Regression Model

The second prediction of the model is that industries with larger revenue concentration experience larger labor share declines. This is tested by combining the SOI data with the NCCS data after calculating industry level concentrations and industry level labor shares. The unit of observation of the combined data is an NTEE-year pair. Autor et al. (2019) test the second prediction with the following model:

$$\Delta S_{jt} = \beta \Delta Conc_{jt} + \tau_t + u_{jt}$$

ΔS_{jt} is the five-year change in aggregate labor share of industry j , $\Delta Conc_{jt}$ is the five-year change in the market concentration measure, τ_t is the set of period dummies, and u_{jt} is the error term. In order to match the predictions of the model, β should be negative.

This regression specification is carried out separately for each of the nine nonprofit categories. With three different calculated labor shares and three different concentration measures, that makes nine separate regressions for each nonprofit category. The revenue definition for the industry concentration measure is matched with the revenue definition of the labor share measure (for example, if the dependent variable is the change in labor share measured as payroll expenses divided by contributions, then the

independent variable could be the change in CR4 measured as the share of contributions received by the four organizations with the largest contributions in the industry).

Although the SOI data provides enough information to calculate labor share from 1985-2015, it only provides category information from 1994 onward and five year lags are not possible to calculate for the 1994-1999 period (to calculate lags, I identify organizations by their Employer Identification Number (EIN) and postal code, but in 1999, some EIN-postal code pairs appear multiple times). The NCCS data covers 1989-2013, thus the combined NCCS-SOI data for this regression covers the period 1995-2013. The regression relates five year changes in market concentration to five year changes in labor share for overlapping periods starting with 1995-2000 and ending with 2008-2013.

4.4 Third Prediction: Decomposition Analysis

The third prediction of the model is that the drop in labor share is mostly due to the reallocation of sales between firms and not because of an overall decrease of labor share within firms. In fact, the model predicts that labor share could increase for individual firms, but that the largest firms with the smallest labor shares will receive an increased share of sales, decreasing the overall labor share in an industry.

In Autor et al. (2019), they test the third prediction using a decomposition method originating in Melitz & Polanec (2015) used to decompose productivity. They note that the aggregate labor share (S) can be expressed with the following equation:

$$S = \sum \omega_i S_i = \bar{S} + \sum (\omega_i - \bar{\omega})(S_i - \bar{S})$$

And the change in aggregate labor share is thus:

$$\begin{aligned} \Delta S &= S_2 - S_1 = \Delta \bar{S} + \Delta [\sum (\omega_i - \bar{\omega})(S_i - \bar{S})] \\ &= \Delta \bar{S}_S + \Delta [\sum (\omega_i - \bar{\omega})(S_i - \bar{S})]_S + \omega_{X,1}(S_{S,1} - S_{X,1}) + \omega_{E,2}(S_{E,2} - S_{S,2}) \end{aligned}$$

The subscript S is for period 1 firms that survived to period 2, the subscript X is for period 1 firms that exited, and the subscript E is for firms that entered in period 2. Autor et al. (2019), call $\Delta \bar{S}_S$ the within-firm component of the change in labor share of survivors and $\Delta [\sum (\omega_i - \bar{\omega})(S_i - \bar{S})]_S$ the reallocation component between surviving firms. The expression $\omega_{X,1}(S_{S,1} - S_{X,1})$ measures the change due to exiting firms, and $\omega_{E,2}(S_{E,2} - S_{S,2})$ measures the change in labor share due to newly entering firms. To match the results in Autor et al. (2019), the within-firm component should be positive and the reallocation component should be negative. This is because the reallocation component can be interpreted as the

change in the covariance between sales share within an industry and the labor share. If the superstar firms with low labor share increase their share of industry sales, we would expect the covariance to decrease.

This decomposition analysis relies only on the SOI data because the unit of observation is an individual nonprofit organization. The decomposition is calculated for each five-year change in the labor share over the period 1995-2015. One problem with looking at individual organizations is that the SOI data is only a sample of charitable organizations but the decomposition analysis requires separating organizations into survivors, exiting organizations, and entering organizations, meaning that the same firms have to be compared between years. For most of the observations in the SOI data, there is no guarantee that an organization will be sampled in the next period, even if it is still in operation. However, the sample rate in the SOI data is 100% for charitable organizations with assets above a certain threshold (the threshold is not the same in every year). Because the predictions of this model are mainly about the largest organizations, I can limit the decomposition analysis to the group of 100% sampled organizations, and hopefully, still have meaningful results. After consulting the 100% sampling thresholds (listed in Guide to Using NCCS Data, p. 6-7), I discarded all organizations with real total assets below \$60,600,000 (in constant 2012 dollars using the GDP Implicit Price Deflator from FRED). If you compare the aggregate labor shares calculated for each category in this smaller group of organizations (see Figures 13 & 14 in section 5.5) to the aggregate broad category labor shares calculated for the full sample (Appendix A, Figure A.3), they are very similar when labor share is measured as payroll divided by the sum of contributions and program service revenue. This is not the case for other measures of labor share, so the decomposition analysis is probably less informative for the other measures.

In my analysis, an entering organization is one that did not have assets above the threshold in period 1 but did in period 2, an exiting organization is one that did have assets above the threshold in period 1 but did not in period 2, and a surviving organization is one that had assets above the threshold in both periods. An organization could only be categorized as entering if it was created in that period or if it grew in that period above the threshold. Similarly, the reasons to classify an organization as an exiter are if the organization actually shut down during the period or if it shrunk below the threshold during the period. This is not the same as actual organization entrance or exit, but it does create a group of survivors that includes the nonprofits with the most assets. Because the prediction is that an increasing share of revenue held by the largest organizations causes a decrease in the aggregate labor share, the surviving nonprofit reallocation component of the decomposition may still allow me to test this. I also chose to categorize an organization that changed NTEE code between years as exiting the old industry and entering

the new one. This decision may overstate the number of entering and exiting firms if the code change was unrelated to a change in operations by the organization.

This decomposition analysis was carried out separately for each broad nonprofit category and for each of the three calculations of labor share. Once again, the definition of revenue used to calculate labor share is the revenue definition used to measure share of industry revenue.

4.5 Fourth Prediction: Regression Analysis

The fourth prediction of the model is that the reallocation portion of the labor share decrease is largest in industries that saw the largest increase in market concentration. This is tested using a regression similar to the one used for the second prediction (see Section 4.3), except with the industry reallocation term as the independent variable and the change in industry concentration as the dependent variable. The industry-level reallocation term is calculated using the decomposition method described in Section 4.4, but it is calculated for an NTEE group, instead of the broader category. The unit of observation is the industry. The regression model relates the five-year change in the incumbent reallocation component to the five-year change in the industry concentration measure over three periods (1995-2000, 2000-2005, 2005-2010). There is a separate regression for each broad category, and each concentration measure and labor share measure are tested separately. Once again, the revenue definition for the concentration measure is the same as the revenue definition for the labor share measure. Because the SOI sample was restricted to organizations with real total assets above \$60,600,000 in constant 2012 dollars, there are fewer industry-year observations in these regressions than with the regressions for the second prediction (described in Section 4.3).

5. Results

5.1 Aggregate Labor Share Over Time

Figure 4 shows the aggregate labor share of each broad category over the 1994-2015 period calculated from the SOI data. Specifically, it shows the aggregate labor share calculated as total payroll expenditures divided by the sum of contributions and program service revenue. The labor share does not fluctuate much in most of the categories. The Health, and Human Services categories experienced steady labor share decreases since around 2000, but the overall change is less than 0.05 for both. To be consistent with the superstar firms model, we would expect to see the aggregate labor share decrease across broad

categories. As discussed in Section 2, the theory that nonprofits maximize output and spend all of their revenue could result in relatively constant labor shares depending on the shape of the production function.

Figure 4: (PSR + Contributions) Labor Share for All Nine Categories

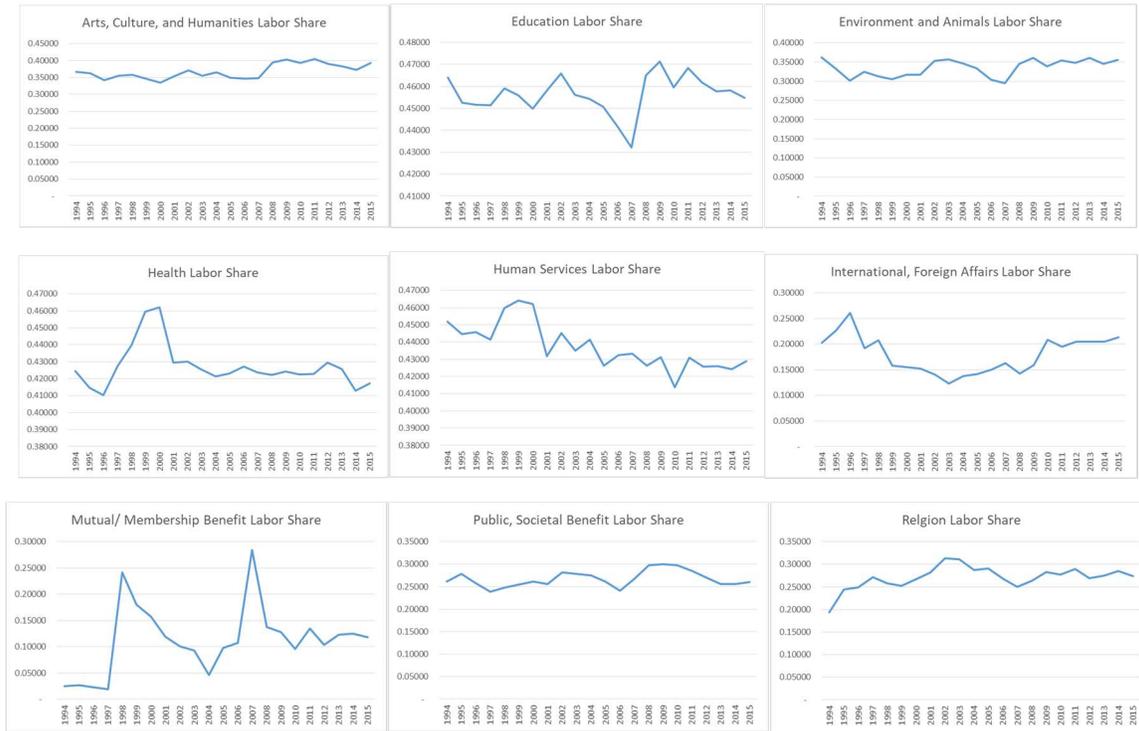
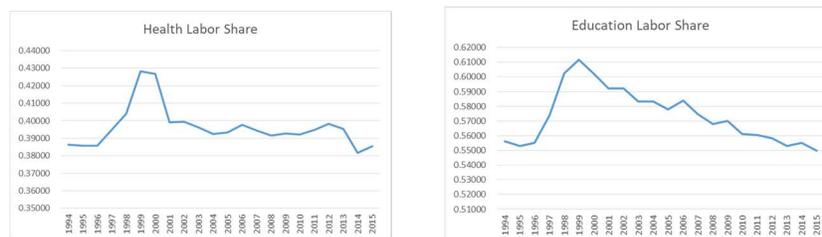


Figure 5 shows the aggregate labor share calculated as total payroll expenditures that were categorized as program service expense divided by program service revenue for just the Health and Education categories. These are the two categories that rely most on program service revenue, so these are the categories where this measure would be relevant. The rest of the program service revenue labor share calculations can be found in Appendix A, Figure A.4.

Figure 5: Program Service Labor Share for Health and Education



Both Education and Health display an increase from 1994 to 1999, and then a decrease from 1999 onward in Figure 5. This is interesting, because in Autor et al. (2019), they find a similar pattern in several categories, with a peak labor share in 1999. They state that this may be due to the strong labor market in the US during the late 1990s. The change in aggregate labor share in Figure 5 for both categories is larger than the change for both categories in Figure 4.

As discussed in Section 4.1, it is not clear whether Figure 4 or Figure 5 is more relevant for the Education and Health categories. Figure 4 includes both program service revenue and contributions in the labor share calculation, which measures more accurately what a nonprofit could afford to pay as payroll expense. However, we might expect the labor share in Figure 5 to be more relevant in comparing nonprofits to for-profits if something related to market price was causing the results in Autor et al. (2019). For example, in the case of a private school, the labor share in Figure 5 would be calculated by dividing the payroll expense related to its primary educational mission by tuition and other fees. Figure 5 would indicate, in this example, that since roughly 1998, the share of tuition revenue spent on labor related to the primary educational mission has decreased. If the school in our example sets tuition based primarily on the costs of carrying out its educational mission, then this could mean we are seeing a labor share decrease similar to what we see in for-profit organizations. Figure 5 could be more relevant than Figure 4 if the results in Autor et al. (2019) were driven by something like changing consumer sensitivity to prices.

The labor share for each category calculated as total payroll expense divided by contributions can be found in Appendix A, Figure A.5. This measure of labor share is the least likely to be relevant, because it can exclude a large source of revenue that could also be spent on payroll (program service revenue) and contributions typically are made without reference to a market price. The contributions calculated labor shares do not follow the same patterns as the ones in Figures 4 or 5, and for most categories, there is not a clear trend, although in many categories, the labor share ends the period at a lower value than it started. Figures A.1-A.3 in Appendix A display tables of the broad sector aggregate labor share calculated using each of the three methods for dealing with labor share outliers (dropping extreme values, winsorizing extreme values, and top coding extreme values at 1). The aggregate labor share calculations are pretty much the same regardless of method used.

Figure 6: Regressions with Labor Share as Dependent Variable and Share of Industry Revenue as Independent Variable (whole sample)

Revenue Definition	Labor Share Outliers Dropped			Labor Share Outliers Winzorized			Labor Share Outliers Top-Coded at 1		
	PSR (1)	Contributions (2)	Both (3)	PSR (4)	Contributions (5)	Both (6)	PSR (7)	Contributions (8)	Both (9)
Share of Industry Revenue	-0.458 (0.51)	-42.373*** (10.49)	-0.063** (0.02)	-61.800*** (5.74)	-262.585*** (22.57)	-0.397*** (0.09)	0.781 (0.43)	-30.287*** (8.27)	-0.144*** (0.03)
Arts, Culture, and Humanities	2.085*** (0.33)	-16.405** (5.08)	0.172*** (0.02)	-55.344*** (9.12)	-203.021** (70.40)	-0.574* (0.27)	1.505*** (0.29)	-9.602* (3.79)	-0.025 (0.07)
Education	0.924* (0.39)	-13.256* (5.17)	0.140** (0.04)	-50.928*** (11.63)	-173.625* (71.47)	-0.582* (0.27)	0.527 (0.30)	-6.665 (3.90)	-0.051 (0.08)
Environment and Animals	3.817*** (0.72)	-16.026** (5.12)	0.148*** (0.03)	-43.220*** (10.23)	-205.691** (70.22)	-0.618* (0.27)	2.645*** (0.43)	-9.501* (3.85)	-0.053 (0.08)
Health	0.525 (0.28)	53.307** (19.05)	0.201*** (0.02)	-59.043*** (10.84)	-25.427 (70.65)	-0.541* (0.27)	0.216 (0.24)	42.943** (14.36)	0.003 (0.07)
Human Services	1.802*** (0.49)	1.067 (8.24)	0.173*** (0.03)	-57.166*** (8.96)	-103.872 (72.42)	-0.613* (0.27)	1.294** (0.40)	4.529 (6.47)	-0.033 (0.07)
International, Foreign Affairs	6.778*** (1.22)	-12.962* (5.44)	0.035 (0.03)	-13.183 (9.60)	-176.602* (71.59)	-0.726** (0.27)	3.395*** (0.49)	-7.262 (4.07)	-0.163* (0.08)
Public, Societal Benefit	3.562*** (0.39)	-13.195* (5.25)	-0.000 (0.03)	-13.001 (10.71)	-101.331 (80.86)	-0.457 (0.32)	1.641*** (0.21)	-7.591* (3.82)	-0.118 (0.09)
Religion	2.906*** (0.61)	-14.350** (5.27)	0.061* (0.03)	-11.817 (9.60)	-137.166 (78.87)	-0.440 (0.29)	1.272*** (0.36)	-8.100* (4.05)	-0.074 (0.07)
Mutual/ Membership Benefit	-0.205 (0.21)	-4.307 (6.44)	-0.117*** (0.03)	-33.380*** (8.59)	249.044** (88.40)	-0.358 (0.27)	-0.358* (0.15)	-8.253* (3.64)	-0.163* (0.07)
Constant	0.804*** (0.14)	23.377*** (4.00)	0.281*** (0.00)	66.968*** (6.41)	228.822*** (54.07)	0.985*** (0.21)	0.989*** (0.11)	16.267*** (2.98)	0.461*** (0.05)
N	317,444	333,375	386,447	402,977	406,273	407,263	402,977	406,273	407,263
adj. R-sq	0.016	0.098	0.032	0.077	0.065	0.008	0.009	0.067	0.014

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a nonprofit organization-year pair. Each column is a separate regression with a different labor share calculation as the dependent variable. The whole sample from the SOI data is included with dummy variables for each category. In each regression, the revenue definition used to calculate labor share matches the industry revenue share definition.

5.2 Regression Results: Nonprofit Labor Share and Share of Industry Revenue

Figure 6 shows the results of regressions with nonprofit labor share as the dependent variable and nonprofit share of revenues in its industry as the independent variable. Each column is a separate regression with a different measure of revenue and a different treatment of labor share outliers. The regressions are performed using the whole SOI dataset and each observation is an organization-year pair. There are dummy variables for each category. The regression tests whether organizations with more revenue tend to have lower labor shares. As discussed in Section 2, the relationship needs to be negative for the superstar firms model to hold. A negative relationship implies that firms with larger shares of industry revenue have smaller labor shares. In Figure 6, the coefficient when revenue is measured as contributions (columns 2, 5, & 8) or the sum of contributions and program service revenue (columns 3, 6, & 9) is negative and significant under all three treatments of outliers. When revenue is measured using just program service revenue, the relationship is only negative and significant when outlier labor share values are winsorized.

Figure 7 provides the results of nine separate regressions (one for each broad category) with the same specification as in Figure 6, but carried out separately for each category, instead of all together. It uses contributions plus program service revenue as the revenue definition.

Figure 7: Regressions with Labor Share as Dependent Variable and Share of Industry **PSR + Contributions** as Independent Variable (*outlier labor shares dropped*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-0.185** (0.07)	-0.107 (0.10)	-0.171* (0.08)	-0.146*** (0.04)	-0.188** (0.06)	-0.032 (0.06)	0.162* (0.07)	0.144** (0.05)	-0.189* (0.08)
N	19,246	61,872	7,975	95,140	79,567	3,709	1,435	25,852	5,442

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share is calculated by dividing contributions + psr from total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension).

Each column is a separate regression carried out for a broad category. Extreme values of labor share above 99th percentile were dropped.

The results of the bivariate regressions in Figure 7 are mixed in terms of support for the model's predictions. The coefficient in five of the nine regressions are significant and negative and two of them

are significant and positive. Interestingly, when you recreate Figure 10 with extreme values of labor share winsorized or top-coded at 1 (shown in Appendix B, Figures B.6 & B.9), then the coefficients in more of the columns become negative and significant, and none of them are positive and significant. Thus, there is some evidence for a negative relationship, although it may be driven somewhat by higher labor share outliers.

Figure 8: Regressions with Labor Share as Dependent Variable and Share of Industry Program Service Revenue as Independent Variable (outlier labor shares dropped)

	Education	Health
Share of Industry Sales	-0.130 (1.58)	3.472*** (0.94)
N	50,822	83,729
	* p<0.05	** p<0.01
		*** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share calculated as program service revenue divided by total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a different broad category. Extreme values of labor share above 99th percentile were dropped.

In Figure 8, the same regressions are carried out again with revenue defined as program service revenue. The coefficient from the regression in the Health category is significant and positive, which is the opposite result from what we would expect and the coefficient is not significant for the Education category. When the regressions in Figure 8 are carried out with outlier labor share values winsorized (Appendix B, Figure B.4), the coefficient for the Health category is no longer significant and the coefficient for the Education category is significant and negative. When outlier labor share values are top coded at 1 (Appendix B, Figure B.7), the relationship for the Health category is positive and significant, and the relationship for the Education category is not significant. This may suggest that program service revenue is a less relevant revenue measure when testing the nonprofit results against Autor et al. (2019), either because combined revenue (program service revenue + contributions) is a more relevant measure or just because nonprofits are different from for-profits. One possible reason there could be a positive relationship between nonprofit share of industry revenue and labor share is if organizations with higher program service revenues also received large amounts of contributions which are spent on program

service related payroll (an organization that spent large contribution revenues on program services would increase program service payroll, the numerator of the labor share calculation, without changing program service revenue, the denominator of the labor share calculation).

The relationship between labor share and share of industry revenue when contributions is the revenue definition can be found in Appendix B, Figures B.2, B.5, & B.8. Some the coefficient for some of the categories under some of the specifications are negative and significant and none are positive and significant. Once again, this is a less relevant measure for the labor share than the other two revenue definitions.

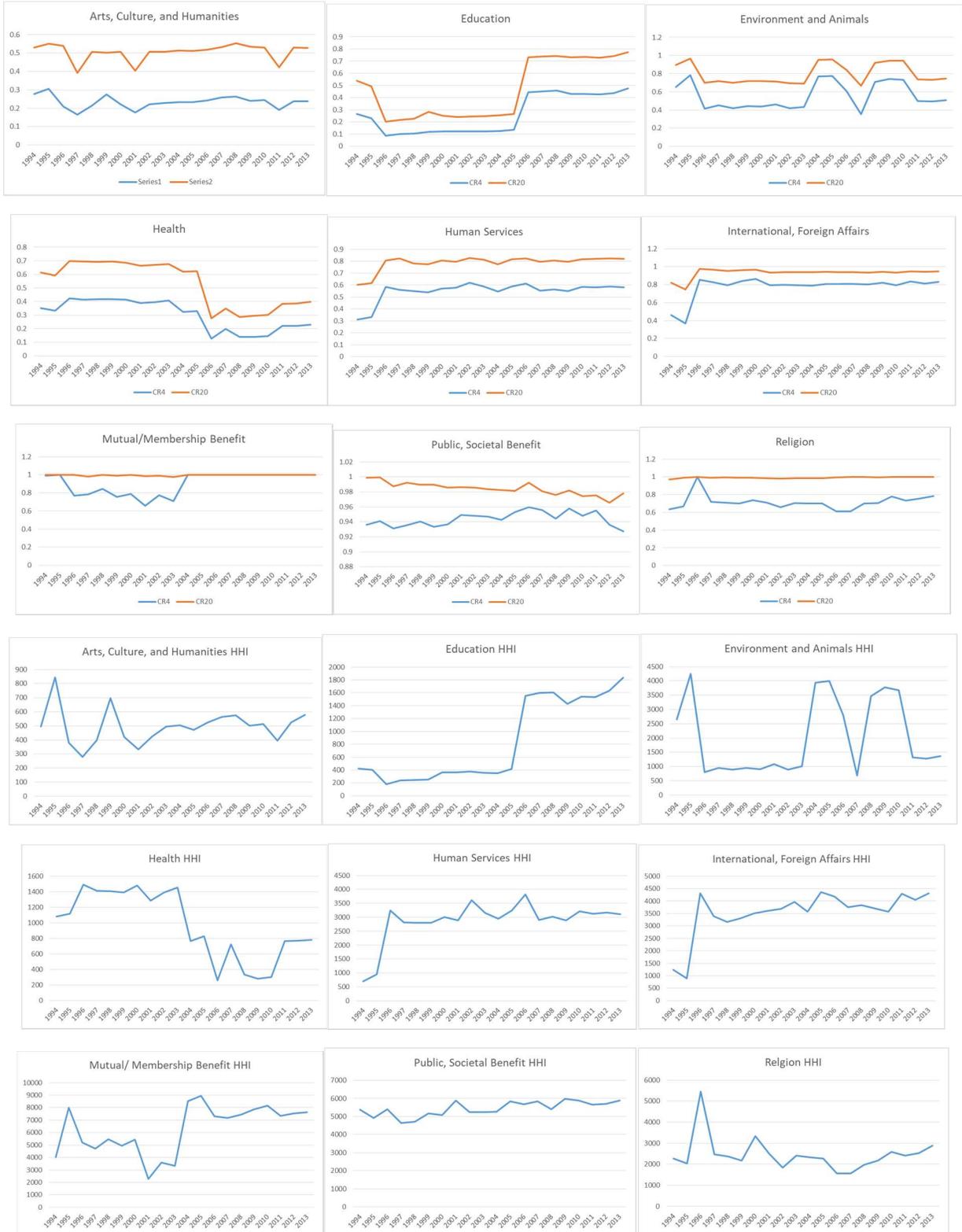
5.3 Industry Concentration Over Time (prediction one)

The fact that we see labor share not changing much in some of the categories suggests that the predictions of the superstar firms model are not going to hold for all of the nonprofit categories. However, the model makes predictions based on a response to increased market concentration, thus it is important to see what happened to market concentration to determine whether a labor share decrease would be expected.

The average industry revenue concentration, when revenue is measured as the sum of contributions and program service revenue is shown in Figure 9, under all three concentration measures (CR4, CR20, and HHI). Industry concentration increased over the period for the Education; Human Services; International, Foreign Affairs; Mutual/Membership Benefit; and Public, Societal Benefit categories (for Public, Societal Benefit, the increase is just based on HHI, not CR4 or CR20). Industry concentration decreased over the period for the Health category.

There does not appear to be a particular relationship between the concentration trend in Figure 9 and the labor share trend in Figure 4, even when you take into account the regression coefficient in Figure 7. For example, compare the results for the Education and Health categories. The aggregate labor share decreased for the Education category in Figure 4. Consistent with this negative relationship, all three industry revenue concentration measures for Education in Figure 9 increased over the period. In the case of the Health category, labor share also decreased over the period (Figure 4), the regression coefficient is negative in Figure 7 (which is not the case for Education), indicating a negative relationship between an organization's share of industry and its labor share, but the three measures of industry concentration in Figure 9 decreased over the period.

Figure 9: (Contributions + Program Service Revenue) CR4, CR20, and HHI for all nine categories



Apart from large jumps in industry concentration between 1995 and 1996 in many categories and large jumps between 2005 and 2006 in the Health and Education categories, it is hard to spot any persistent change in revenue concentration in Figure 9. Because these large jumps occurred between two years only, and concentration in the relevant categories was flat otherwise, the jumps may not actually represent a change in concentration. It is possible that they indicate something unrelated, such as changes to the NTEE coding system or large outliers. In any case, revenue concentration appears flat since 1995 for all of the categories except Education and Health, possibly suggesting that the cause of increased industry concentration among for-profits is a result of something that does not affect nonprofits or at least does not affect nonprofits in the same way.

Figure 10: (Program Service Revenue) CR4, CR20, and HHI for all nine categories

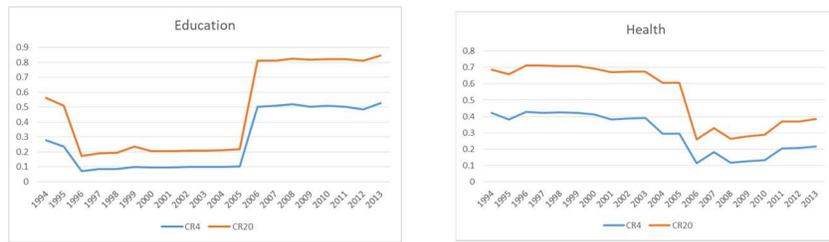


Figure 10 shows industry program service revenue concentration for the Education and Health categories. They look a lot like the graphs in Figure 9, which makes sense, because program service revenue is more important to these two categories than contributions are. Like in Figure 9, industry revenue concentration increased steeply for Education between 2005 and 2006 based on all concentration measures and decreased steeply between 2005 and 2006 for Health. Education saw a steady decrease in labor share (using program service revenue to calculate labor share) since 1999 (see Figure 5), but this timing does not match the timing for the increase in program service revenue industry concentration. Once again, because the large jumps occurred only between two years, and because they occurred at the same time, Figure 10 may not actually indicate a change in industry concentration.

See Appendix E for all of the concentration measures not included above, including Appendix Figure E.2, which shows contributions concentration for each category. We see a higher average share in 2013 than in 1994 of industry contributions received by the top four and top 20 organizations in most categories (although, the CR20 measure hits the ceiling in several of the graphs, so it stays constant after it reaches a value of 1). In the HHI graphs, contribution concentration is higher at the end of the period in seven out of the nine graphs. Figure 6 indicated that the relationship between nonprofit labor share, calculated with contributions as revenue, and nonprofit share of industry contributions is negative,

however the categories with increasing concentration (in Appendix Figure E.2) do not appear to have any shared trend for labor share (see Appendix A, Figure A.5 for labor share with contributions as the revenue definition).

5.4 Regression Results: Change in Industry Concentration and Change in Industry Aggregate Labor Share (prediction two)

The regressions in Figure 11 tests more explicitly whether there is any relationship between industries that saw an increase in concentration and industries that saw a decrease in labor share. Each column lists the coefficient from a separate regression for each category relating the five-year change in labor share to the five-year change in CR20 industry concentration. The revenue definition in Figure 11 includes both contributions and program service revenue. None of the coefficients are significant.

Figure 11: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (**Contributions + PSR**) (*outlier labor shares dropped*) (**CR20**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR20	0.130 (0.11)	-0.196 (0.10)	0.045 (0.09)	-0.005 (0.04)	-0.004 (0.08)	-0.040 (0.61)	-0.032 (0.04)	-0.072 (0.09)	-1.665 (1.12)
N	1525	1287	578	1700	1511	129	87	556	121

* p<0.05 ** p<0.01 *** p<0.001

Labor share and industry concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions + psr from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Appendix B, Figures B.22-B.27 show the results when the regressions in Figure 11 are carried out using the other industry concentration measures and also includes tables where outlier labor share values are winsorized (in Figures B.22-B.27, the revenue definition is still combined contributions and program service revenue). The coefficients in most of the regressions are not significant, and the few that are significant are not significant under all specifications. Thus there is not sufficient evidence to conclude a

negative relationship between the change in industry concentration and the change in industry aggregate labor share. This agrees with the observation made in the last section that changes in broad category average revenue concentration (Figure 9) did not appear to occur at the same time as changes in broad category aggregate labor share (Figure 4). The lack of a significant relationship may also be related to the fact that the average revenue concentration of many of the broad categories did not change very much over time and the same was true for the aggregate labor share.

Figure 12 shows the regression results for Education and Health when the revenue definition excludes contributions (program service revenue only), the measure of industry concentration is HHI, and outlier labor share values are dropped. The regression coefficient for the Health category is significant and negative, which agrees with the second prediction in Autor et al. (2019). However, Appendix B, Figures B.10-B.15 show the results from these regressions carried out using other specifications (but using the same revenue definition). When outlier labor shares are winsorized or if any of the other industry concentration measures are used (CR4, CR20), the regression coefficient for the Health category is no longer significant. In Appendix Figures B.10-B.18, the coefficient for the Education category is never significant. Thus, again, there is not sufficient evidence for a relationship between nonprofit industry aggregate labor share and nonprofit industry concentration.

Figure 12: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (**PSR**) (*outlier labor shares dropped*) (**HHI**)

	Education	Health
Change in HHI	-0.091 (2.58)	-0.009*** (0.00)
N	1071	1397

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing program service revenue from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a broad category. Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Appendix B, Figures B.16-B.21 show the regression results under a number of specifications when contributions are used as the revenue definition (so program service revenue is excluded from the revenue definition). None of the results are significant under any of the specifications.

5.5 Decomposition Results: Incumbent Reallocation (prediction three)

The model predicts that increased market concentration towards superstar firms will push down the aggregate labor share because superstar firms have lower labor shares than smaller firms. It also predicts that surviving firms will see increasing labor share at the entity level. In the decomposition analysis described in Section 4.4, the incumbent reallocation term should be negative and the within-firm unweighted mean term should be positive to match the results in Autor et al (2019).

Figure 13 shows the decomposition analysis for four of the broad categories and Figure 14 shows it for the other five. The decomposition analysis uses labor share calculated as total payroll expenses divided by the sum of contributions and program service revenue for the period 1995-2015. As described in Section 4.4, the organizations included in this decomposition analysis are a subset of the total SOI data, because only the organizations with the most assets were sampled at a 100% rate, however, the aggregate labor share values in Figures 13 & 14 are pretty close to the values calculated for the whole SOI sample in Appendix A, Figure A.3 (Figure A.3 labor shares are the same labor share values displayed in Figure 4, Section 5.1).

In Figures 13 & 14, the overall within-firm component (unweighted mean) is positive for all categories and the overall incumbent reallocation component (covariance term) is negative for all categories except Human Services. In many of the categories, the within-firm component is larger than the incumbent reallocation component, which goes against the idea that the reallocation component is driving an overall decrease in the labor share. It is not clear how important any of the components are, though, as the labor share changed by less than 0.05 between 1995 and 2015 for all categories except for Mutual/Membership Benefit and Religion.

We see relatively large organization exit and entrance components in Figures 13 & 14 (compared to the within-firm and incumbent reallocation components), which is likely exaggerated due to the fact that many entering and exiting organizations were in operation over the periods that they supposedly exited or entered, but have had their real assets decrease below the threshold (exit) or increase above the threshold (enter) between the two periods. Still, we see a positive overall effect from exit in a majority of the categories and an overall negative effect from entry in a majority of categories, which is the

opposite of what we would expect if the contracting organizations had higher labor shares and the expanding organizations had lower labor shares.

Figure 13: Decomposition of five-year labor share change by category (**psr + contributions**)
(*Extreme outlier labor shares dropped*) (1 of 2)

<u>Arts, Culture, and Humanities</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.3820319
2000	-0.0615162	0.0221759	0.0041324	-0.013657	0.333167
2005	0.0773264	-0.0357419	-0.0063559	-0.0135938	0.3548019
2010	0.0664958	0.0029715	0.0013521	-0.0177089	0.4079123
2015	0.0087661	0.0044047	0.004891	-0.0176998	0.4082744
	0.0910721	-0.0061898	0.0040196	-0.0626595	

<u>Education</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.4595071
2000	0.0148268	-0.0152527	0.0024938	-0.0058075	0.4557675
2005	0.0050219	-0.0015429	-0.0008065	-0.0016708	0.4567692
2010	0.0128696	-0.0043628	-0.0027055	0.0014942	0.4640647
2015	-0.0081726	0.0022213	0.0013374	-0.0057818	0.453669
	0.0245457	-0.0189371	0.0003192	-0.0117659	

<u>Environment and Animals</u>					
Year[Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.3849194
2000	0.0601866	-0.1217895	0.0041676	-0.0319851	0.295499
2005	-0.0049804	0.0500435	-0.0001503	-0.0093857	0.3310261
2010	0.0805065	-0.0499671	-0.0053603	-0.0172552	0.33895
2015	-0.009748	0.0230074	0.0040554	-0.009993	0.3462718
	0.1259647	-0.0987057	0.0027124	-0.068619	

<u>Health</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.4069915
2000	0.0473031	-0.0093489	-0.0049247	0.0058672	0.4458882
2005	-0.0224246	-0.0139348	0.0016791	-0.0042501	0.4069578
2010	-0.0006522	-0.0018262	-0.0019232	0.0029126	0.4054688
2015	-0.0008859	-0.0140578	-0.0006396	-0.0004267	0.3894588
	0.0233404	-0.0391677	-0.0058084	0.004103	

Figure 14: Decomposition of five-year labor share change by category (**psr + contributions**)
(Extreme outlier labor shares dropped) (2 of 2)

<u>Human Services</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.4328238
2000	-0.0068793	0.0807689	-0.01325	-0.0169291	0.4765343
2005	0.0008062	-0.0835959	0.0005582	-0.0165761	0.3777267
2010	0.0011728	0.0559425	0.0014372	-0.0249559	0.4113233
2015	0.006169	-0.0081381	0.0040026	-0.0116309	0.4017259
	0.0012687	0.0449774	-0.007252	-0.070092	
<u>International, Foreign Affairs</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.217114
2000	0.0840952	-0.0982359	-0.1365108	0.0206664	0.0871289
2005	0.0485345	-0.0282319	-0.0058923	0.0107118	0.112251
2010	0.0484157	0.001213	0.0220818	-0.0166823	0.1672792
2015	0.0444088	-0.034457	0.0087556	0.0098829	0.1958695
	0.2254542	-0.1597118	-0.1115657	0.0245788	
<u>Mutual/ Membership Benefit</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.0211931
2000	0.1867591	-0.0232051	0.0345657	-0.0044222	0.2148906
2005	0.0544766	-0.0491463	0.0229968	-0.0992477	0.14397
2010	-0.1320703	0.0680703	-0.0016931	-0.0040361	0.0742408
2015	0.0815218	-0.0032997	0.002089	-0.0055984	0.1489535
	0.1906872	-0.0075808	0.0579584	-0.1133044	
<u>Public, Societal Benefit</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.2907072
2000	0.0148421	-0.0007334	-0.0358506	-0.0220838	0.2468815
2005	0.0159642	-0.0309238	0.0242437	0.0103121	0.2664777
2010	0.0294917	0.0217093	0.0252496	-0.0246632	0.3182651
2015	-0.0123586	-0.0501652	0.0100124	-0.01506	0.2506937
	0.0479394	-0.0601131	0.0236551	-0.0514949	
<u>Religion</u>					
Year	Within-firm	Reallocation	Exit	Entrance	Average L-share
1995	-	-	-	-	0.3407436
2000	0.0265979	-0.0283147	-0.0661451	-0.0416793	0.2312024
2005	0.0779224	-0.059879	0.011861	-0.0637334	0.1973734
2010	-0.0039524	0.0401736	0.0730539	-0.0843329	0.2223156
2015	-0.0545148	0.0285905	0.0267549	0.0119656	0.2351118
	0.0460531	-0.0194296	0.0455247	-0.17778	

Figure 15 displays the program service labor share decomposition for Education and Health with extreme values of labor share (above the 99th percentile) dropped. These values are not very different from the aggregate labor shares calculated using the whole SOI sample (Appendix A, Figure A.2). The incumbent reallocation term is positive for Education and negative for Health, while the within-firm term is negative for Education and positive for Health, so Health follows the third prediction in Autor et al. (2019) and Education goes against it when labor share is calculated using program service revenue (although aggregate labor share does not change very much for either category). Another treatment of outliers (winsorizing extreme values at the 99th percentile) is used to calculate the decompositions in Figure 16. The comparison between Figure 15 and Figure 16 shows that while aggregate labor share and the exit and entrance components are pretty much the same under both treatments of outliers, the incumbent reallocation component and the within-firm component are very sensitive to different treatments. Under both treatments, the incumbent reallocation component and the within-firm component almost cancel each other out.

Figure 15: Decomposition of five-year labor share change by category (**PSR**) (*Extreme outlier labor shares dropped*)

Year	<u>Education</u>				Aggregate L-Share
	Within-firm	Reallocation	Exit	Entrance	
1995	-	-	-	-	0.5823138
2000	-0.0076689	0.0428652	0.019953	-0.01104	0.6264224
2005	-0.0393124	0.0134096	0.003215	-0.00829	0.5954493
2010	-0.1106789	0.0726216	-0.00106	0.009148	0.5654777
2015	0.0810309	-0.1044317	0.003436	-0.00769	0.5378265
	-0.0766293	0.0244647	0.025541	-0.01786	

Year	<u>Health</u>				Aggregate L-Share
	Within-firm	Reallocation	Exit	Entrance	
1995	-	-	-	-	0.3600145
2000	0.1829741	-0.1486587	-0.00456	0.009994	0.399761
2005	-0.0007511	-0.0285794	0.001068	-0.0021	0.3693968
2010	0.0050229	-0.0070817	-0.00472	0.005157	0.3677785
2015	-0.024554	0.0054058	-0.00085	0.003031	0.3508104
	0.1626919	-0.178914	-0.00906	0.01608	

Figure 16: Decomposition of five-year labor share change by category (**PSR**) (*Extreme outlier labor shares winsorized*)

Year	<u>Education</u>				Aggregate L-Share
	Within-firm	Reallocation	Exit	Entrance	
1995	-	-	-	-	0.58262
2000	0.6285219	-0.5928135	0.0199868	-0.0111441	0.6271711
2005	-1.809378	1.78268	0.0032727	-0.0082757	0.5954701
2010	-0.9389944	0.9015913	-0.0010606	0.0092978	0.5663042
2015	-0.7902632	0.7668562	0.0034624	-0.0076783	0.5386813
	-2.9101137	2.858314	0.0256613	-0.0178003	

Year	<u>Health</u>				Aggregate L-Share
	Within-firm	Reallocation	Exit	Entrance	
1995	-	-	-	-	0.3600215
2000	0.1025438	-0.0680857	-0.0045616	0.0099835	0.3999015
2005	-0.788415	0.7594786	0.001083	-0.0021284	0.3699197
2010	-1.01722	1.014928	-0.0047161	0.0051633	0.3680749
2015	-0.7598953	0.740839	-0.0008504	0.0030061	0.3511743
	-2.4629865	2.4471599	-0.0090451	0.0160245	

Figures 15 & 16 demonstrate another reason to be cautious about interpreting the results from the decomposition analysis (including in Figures 13 & 14). Consider the example of the Education category, we can see how outliers affect the analysis. In Figure 15, where extreme values of the labor share are dropped, the total incumbent reallocation component over the period is 0.024 and the within-firm component is -0.077. In Figure 16, where extreme values of labor share are not dropped, but instead are top-coded at the 99th percentile, the reallocation term becomes 2.858 and the within-firm term becomes -2.910. Choosing to include the high labor share outliers does not drastically change the aggregate labor share, indicating that outlier organizations tend to have a low weighting due to low revenue. An organization with negligible revenue will tend to have an unusually high labor share, because revenue is the denominator of the labor share calculation. These extreme high values will push up the within-firm labor share but will also push down the covariance between an organization's labor share and its share of sales in the industry (because of the relatively low revenue). With low revenue, small changes in payroll expense will create large changes in an organization's labor share, which will show up in the reallocation component and the within-firm component of the aggregate labor share change, in relatively equal amounts of opposite sign from each other (one is positive, one is negative). The decomposition results in

this section may be driven more by outlier organizations at the bottom of the revenue distribution than by superstar firms at the top.

Appendix C displays tables with the results from the decompositions using each of the revenue definitions to calculate labor share. When labor share is calculated as payroll expense divided by contributions (Appendix Figure C.3), the incumbent reallocation component is negative and the within-firm component is positive for most categories (the only exception is International, Foreign Affairs, where the signs of the two components are the opposite), which is what we expect to see based on the third prediction of Autor et al. (2019). The problem with the numbers in Appendix Figure C.3, though, is that the aggregate labor shares calculated for the decomposition analysis often differ greatly from the corresponding labor shares calculated using the whole SOI sample (see Appendix A, Figure A.1).

5.6 Regression Results: Change in Industry Concentration and Incumbent Reallocation Component of Change in Aggregate Industry Labor Share (prediction four)

As with the regression results that tested the second prediction of Autor et al. (2019) (Section 5.4), the results testing the fourth prediction (that the incumbent reallocation component of an industry's aggregate labor share change is negatively related to the change in market concentration within the industry) are mostly not significant. Figure 17 shows the results from a series of regressions with the five year change in industry concentration of the top twenty organizations (CR20) as the dependent variable and labor share (calculated as total payroll expense divided by the sum of program service revenue and contributions) as the independent variable. Each column shows a separate regression for a different broad category. The only significant result is that the coefficient calculated for the Human Services categories is negative. This coefficient is still negative and the only significant result when CR4 is the concentration measure used as the dependent variable (see Appendix B, Figure B.37) but it is not significant when HHI is the concentration measure used as the dependent variable (see Appendix B, Figure B.39). When HHI is the dependent variable, the coefficients from the regressions for the Mutual/Membership Benefit and Public, Societal Benefit categories are positive and significant.

Even in the case of the Human Services category (where the significant result is not robust to all specifications of industry concentration), the negative relationship between the incumbent reallocation component of the labor share change and industry revenue concentration does not seem to be a result of the process described in Autor et al. (2019). If we look at the decomposition analysis for Human Services in the previous section (Figure 14, Section 5.5), this is the only category which had an overall positive

incumbent reallocation component between 1995 and 2015, while the aggregate labor share for Human Services decreased slightly from 0.43 to 0.40. If we compare this to the graph of average industry concentration measured as CR4 and CR20 (Figure 9, Section 5.3) we see that it is mostly unchanged during the period. Thus, we can not say that the negative and significant result in Figure 17 implies that shifting industry revenue composition towards superstars is driving a decrease in labor share in the Human Services category.

Figure 17: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (PSR + Contributions)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	-2.357 (3.62)	-5.090 (3.61)	0.485 (27.01)	2.082 (3.88)	-0.783*** (0.14)	0.099 (2.10)	-0.000 (0.00)	-3.581 (3.38)	0.000 (.)
N	332	253	85	296	183	30	14	91	14

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is CR20. Labor share is calculated by dividing psr + contributions by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure 18 provides the regression results that test the fourth prediction for Education and Health using program service revenue as the revenue definition and CR20 as the industry concentration measure. Neither result is significant. Appendix B, Figures B.28-B.33 show the same results under a number of other specifications. The result for the Health category is not significant in any of the tables and the regression coefficient for the Education category is only significant when CR4 is the concentration measure (see Appendix B, Figure B.28). In this case, the coefficient is negative, which is what we would expect based on the fourth prediction of the model, but this result is not robust to other treatments of outlier labor share

values (see Appendix B, Figure B.31) so there is not enough evidence to conclude that the relationship is negative for the Education category.

Figure 18: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR**) (*outlier labor shares dropped*) (**CR20**)

	Education	Health
Incumbent Reallocation Component	-0.040 (0.09)	-0.073 (0.06)
N	242	266

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is CR20. Labor share is calculated by dividing psr by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) that were categorized as program service expense. Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Appendix B, Figures B.34, B.35, and B.36 display the regression results when contributions are used as the revenue definition. The Human Services and Mutual/Membership Benefit categories are negative and significant when HHI is the concentration measure (Figure B.36), but none of the results for any of the categories are significant and negative using the other concentration measures and none of the other categories are significant and negative using HHI. So here, again, there is not enough evidence to support the fourth prediction.

6. Conclusion

This paper followed and adapted the research methodology put forward in Autor et al. (2019) to determine whether the first four predictions in their “superstar firms” model applied to US nonprofit organizations. The first prediction that revenue concentration would increase within categories was true for some categories but not for all. The regressions testing the second and fourth predictions that increasing revenue concentration within an industry would be associated with decreasing labor share and

larger (negative) incumbent reallocation did not yield significant results. The third prediction that reallocation of revenue share between organizations would provide a downward force on aggregate labor share appeared to hold for many categories, although this may be a result of low revenue, high labor share outliers in the data. It was also not found that aggregate labor share was decreasing in all categories.

It is not clear, from the results presented in this paper, why the predictions of the superstar firms model did not hold for nonprofit organizations. In the categories that rely primarily on program service revenue (Education and Health), there was an increase in the share of program service revenue spent on payroll related to program services until around 2000 and then this share decreased afterwards. This was similar to the path taken by the labor share in many broad sectors analyzed in Autor et al. (2019). Perhaps the labor share trend identified in Autor et al. (2019) and in these categories of nonprofits was determined more by conditions in the US labor market than by product market concentration. However, some of the results in this paper seem to support another explanation. The aggregate labor shares and average industry concentration in most categories fluctuated little between years. Thus, the failure to confirm the second and fourth predictions may be a result of the lack of variation between years in both indicators.

This introduces the question of why industry concentration did not increase among nonprofits while it did among for-profits in Autor et al. (2019). There are a number of possible explanations. One possibility is the fact that nonprofits may have a different objective function than for-profits firms, for example, maybe nonprofits try to maximize social benefit and this makes their behavior different. Another possibility relates to the fact that nonprofits receive much of their funding through contributions unrelated to a market price so that consumer preferences and market dynamics affect them differently than they affect for-profit firms (for example, this might make markups above marginal cost less relevant). A third possibility is that entry barriers put up to limit competition among firms in more recent years have not affected nonprofits. Other research may also find different results if a different industry definition is used to measure concentration. In constructing the industry concentration indicators, I did not take into account geographic area or the fact that some nonprofits also compete against for-profits.

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Appendix A: Aggregate Labor Share Tables and Figures

Figure A.1: Aggregate Labor Share (Payroll/Contributions) Calculated With Different Treatments of Outliers (top percentile dropped, Winsorizing, top-coded at 1) [Page 1/2]

Arts, Culture, and Humanities				Education				Environment and Animals			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.62185	0.62226	0.62185	1994	1.45230	1.45647	1.45231	1994	0.55867	0.55867	0.55867
1995	0.60218	0.60229	0.60218	1995	1.35852	1.35980	1.35852	1995	0.55532	0.55532	0.55532
1996	0.51657	0.51657	0.51657	1996	1.34350	1.34996	1.34351	1996	0.44432	0.44432	0.44432
1997	0.55220	0.55412	0.55220	1997	1.27389	1.27627	1.27389	1997	0.46364	0.46366	0.46364
1998	0.55387	0.55406	0.55387	1998	1.23333	1.23362	1.23333	1998	0.41992	0.41992	0.41992
1999	0.53036	0.53036	0.53036	1999	1.17852	1.18105	1.17852	1999	0.40557	0.40557	0.40557
2000	0.49353	0.49371	0.49353	2000	1.13754	1.14052	1.13755	2000	0.42256	0.42256	0.42256
2001	0.54419	0.54436	0.54419	2001	1.21841	1.22308	1.21842	2001	0.42563	0.42563	0.42563
2002	0.57671	0.57671	0.57671	2002	1.28610	1.28837	1.28611	2002	0.49985	0.49985	0.49985
2003	0.54029	0.54029	0.54029	2003	1.24900	1.25193	1.24900	2003	0.51847	0.51847	0.51847
2004	0.54805	0.54807	0.54805	2004	1.25218	1.25344	1.25218	2004	0.49109	0.49109	0.49109
2005	0.52378	0.52383	0.52378	2005	1.23619	1.24205	1.23620	2005	0.46429	0.46429	0.46429
2006	0.51037	0.51041	0.51037	2006	1.15584	1.15700	1.15584	2006	0.40323	0.40323	0.40323
2007	0.51919	0.51919	0.51919	2007	1.11467	1.11647	1.11468	2007	0.39341	0.39343	0.39341
2008	0.60269	0.60269	0.60269	2008	1.40603	1.40832	1.40603	2008	0.46709	0.46709	0.46709
2009	0.62470	0.62473	0.62470	2009	1.44185	1.44361	1.44185	2009	0.49925	0.49925	0.49925
2010	0.59329	0.59537	0.59330	2010	1.37915	1.38327	1.37916	2010	0.46304	0.46304	0.46304
2011	0.61583	0.61645	0.61583	2011	1.45600	1.45918	1.45600	2011	0.48289	0.48289	0.48289
2012	0.58725	0.58726	0.58725	2012	1.39005	1.39419	1.39005	2012	0.47883	0.47883	0.47883
2013	0.57268	0.57316	0.57268	2013	1.38257	1.38412	1.38257	2013	0.49925	0.49925	0.49925
2014	0.55622	0.55622	0.55622	2014	1.35019	1.35242	1.35020	2014	0.47283	0.47283	0.47283
2015	0.58957	0.59024	0.58957	2015	1.35216	1.35470	1.35217	2015	0.48363	0.48363	0.48363

Health				Human Services				International, Foreign Affairs			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	5.29725	5.56467	5.29765	1994	0.89464	0.90900	0.89466	1994	0.22518	0.22641	0.22518
1995	3.93570	4.12211	3.93597	1995	0.85502	0.86692	0.85504	1995	0.23871	0.23910	0.23871
1996	3.47431	3.61488	3.47452	1996	0.90366	0.91133	0.90367	1996	0.27930	0.27930	0.27930
1997	4.21535	4.44506	4.21569	1997	0.88017	0.89118	0.88019	1997	0.20448	0.20634	0.20448
1998	4.71156	4.94521	4.71191	1998	0.90599	0.91482	0.90600	1998	0.21476	0.21580	0.21477
1999	4.28999	4.48287	4.29028	1999	0.91560	0.92403	0.91562	1999	0.15348	0.15433	0.15348
2000	4.53422	4.71603	4.53448	2000	0.89162	0.90032	0.89164	2000	0.15457	0.15538	0.15457
2001	4.28758	4.46314	4.28784	2001	0.85635	0.86497	0.85636	2001	0.15725	0.15741	0.15725
2002	4.57969	4.76566	4.57996	2002	0.91720	0.92947	0.91722	2002	0.14205	0.14209	0.14205
2003	4.63350	4.80213	4.63375	2003	0.96768	0.97602	0.96769	2003	0.12563	0.12563	0.12563
2004	4.60273	4.84503	4.60309	2004	0.94098	0.95506	0.94100	2004	0.13709	0.13709	0.13709
2005	4.42448	4.63535	4.42479	2005	0.87208	0.88641	0.87210	2005	0.14305	0.14305	0.14305
2006	4.63368	4.75589	4.63386	2006	0.92304	0.93541	0.92306	2006	0.15273	0.15341	0.15273
2007	4.49207	4.66604	4.49232	2007	0.93919	0.95426	0.93922	2007	0.16580	0.16718	0.16580
2008	4.71570	4.84955	4.71590	2008	0.93906	0.95487	0.93908	2008	0.14166	0.14276	0.14166
2009	5.03401	5.18190	5.03423	2009	0.90214	0.91518	0.90216	2009	0.15928	0.16072	0.15929
2010	4.87125	5.01984	4.87147	2010	0.84138	0.85818	0.84140	2010	0.21822	0.21828	0.21822
2011	4.76039	4.90830	4.76061	2011	0.90234	0.91753	0.90236	2011	0.21262	0.21262	0.21262
2012	5.13750	5.29160	5.13772	2012	0.87899	0.89893	0.87902	2012	0.22652	0.23007	0.22653
2013	4.84511	4.99681	4.84533	2013	0.86629	0.87631	0.86631	2013	0.23414	0.23414	0.23414
2014	4.72621	4.90713	4.72647	2014	0.85041	0.86519	0.85043	2014	0.22664	0.22664	0.22664
2015	5.04198	5.20169	5.04221	2015	0.87874	0.88929	0.87876	2015	0.23474	0.23474	0.23474

Figure A.1: Aggregate Labor Share (Payroll/Contributions) Calculated With Different Treatments of Outliers (top percentile dropped, Winsorizing, top-coded at 1) [Page 2/2]

Mutual/ Membership Benefit				Public, Societal Benefit				Religion			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.14198	0.15797	0.14200	1994	0.31296	0.31829	0.31297	1994	0.21272	0.21350	0.21273
1995	0.13164	0.14821	0.13166	1995	0.35330	0.37346	0.35333	1995	0.25596	0.26737	0.25598
1996	0.16770	0.18724	0.16773	1996	0.32004	0.32690	0.32005	1996	0.29098	0.29098	0.29098
1997	0.21754	0.23160	0.21756	1997	0.30271	0.30330	0.30271	1997	0.33578	0.33578	0.33578
1998	0.80599	0.81570	0.80601	1998	0.29232	0.29599	0.29233	1998	0.31838	0.31838	0.31838
1999	0.15971	0.18196	0.15975	1999	0.30099	0.31175	0.30100	1999	0.30474	0.30474	0.30474
2000	0.17780	0.20156	0.17784	2000	0.30297	0.31025	0.30299	2000	0.32550	0.32550	0.32550
2001	0.03895	0.05055	0.03896	2001	0.31164	0.31435	0.31165	2001	0.34508	0.34508	0.34508
2002	0.08709	0.08709	0.08709	2002	0.34450	0.34597	0.34450	2002	0.38074	0.38146	0.38074
2003	0.07314	0.07314	0.07314	2003	0.33809	0.33969	0.33809	2003	0.37645	0.37718	0.37645
2004	0.09876	0.09876	0.09876	2004	0.33935	0.34035	0.33935	2004	0.35695	0.35695	0.35695
2005	0.23217	0.23217	0.23217	2005	0.33060	0.33106	0.33060	2005	0.36391	0.36474	0.36391
2006	0.22078	0.22078	0.22078	2006	0.29159	0.29503	0.29160	2006	0.33623	0.33623	0.33623
2007	1.96807	1.96807	1.96807	2007	0.33089	0.33353	0.33089	2007	0.30977	0.30977	0.30977
2008	0.46959	0.46959	0.46959	2008	0.36307	0.36632	0.36307	2008	0.31496	0.31496	0.31496
2009	0.20171	0.20171	0.20171	2009	0.36143	0.36621	0.36144	2009	0.35463	0.35463	0.35463
2010	0.69349	0.69349	0.69349	2010	0.36741	0.37096	0.36742	2010	0.33939	0.33939	0.33939
2011	0.49230	0.49230	0.49230	2011	0.35266	0.35691	0.35267	2011	0.35024	0.35064	0.35024
2012	0.33244	0.33244	0.33244	2012	0.32758	0.32992	0.32759	2012	0.35224	0.35261	0.35224
2013	0.27227	0.27227	0.27227	2013	0.29937	0.30032	0.29937	2013	0.35700	0.35705	0.35700
2014	0.48818	0.48818	0.48818	2014	0.29364	0.29893	0.29365	2014	0.36569	0.36913	0.36570
2015	0.15381	0.15381	0.15381	2015	0.30766	0.31140	0.30766	2015	0.30587	0.30718	0.30588

Figure A.2: Aggregate Labor Share (PSR Payroll/PSR) Calculated With Different Treatments of Outliers (top percentile dropped, Winsorizing, top-coded at 1) [Page 1/2]

Arts, Culture, and Humanities				Education				Environment and Animals			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.59274	0.59484	0.59276	1994	0.55623	0.55730	0.55624	1994	0.68708	0.70729	0.68725
1995	0.61474	0.61477	0.61474	1995	0.55306	0.55343	0.55306	1995	0.57563	0.57571	0.57563
1996	0.66232	0.66563	0.66235	1996	0.55511	0.55533	0.55512	1996	0.62029	0.62995	0.62037
1997	0.65763	0.65979	0.65765	1997	0.57403	0.57408	0.57403	1997	0.65645	0.66975	0.65656
1998	0.67090	0.67430	0.67093	1998	0.60252	0.60294	0.60252	1998	0.73350	0.73523	0.73351
1999	0.67463	0.67700	0.67465	1999	0.61154	0.61350	0.61156	1999	0.73943	0.74474	0.73947
2000	0.71402	0.71579	0.71404	2000	0.60198	0.60292	0.60199	2000	0.77035	0.77669	0.77040
2001	0.67422	0.67444	0.67422	2001	0.59213	0.59328	0.59213	2001	0.75849	0.77942	0.75867
2002	0.71152	0.71384	0.71154	2002	0.59212	0.59297	0.59212	2002	0.76499	0.77332	0.76506
2003	0.72690	0.72728	0.72690	2003	0.58326	0.58396	0.58327	2003	0.79143	0.80446	0.79154
2004	0.76022	0.76064	0.76023	2004	0.58330	0.58405	0.58331	2004	0.79714	0.80273	0.79718
2005	0.74862	0.74862	0.74862	2005	0.57806	0.57894	0.57806	2005	0.78187	0.78810	0.78192
2006	0.74287	0.74394	0.74288	2006	0.58386	0.58413	0.58386	2006	0.80697	0.81042	0.80699
2007	0.72290	0.72523	0.72291	2007	0.57477	0.57568	0.57477	2007	0.76025	0.76836	0.76032
2008	0.78796	0.78905	0.78797	2008	0.56796	0.56958	0.56797	2008	0.85230	0.86205	0.85238
2009	0.77516	0.77583	0.77516	2009	0.57027	0.57147	0.57028	2009	0.84642	0.85422	0.84649
2010	0.78306	0.78524	0.78308	2010	0.56106	0.56295	0.56107	2010	0.76384	0.77766	0.76396
2011	0.81059	0.81134	0.81059	2011	0.56041	0.56195	0.56042	2011	0.83078	0.84006	0.83086
2012	0.79766	0.79819	0.79766	2012	0.55829	0.56113	0.55831	2012	0.80837	0.81365	0.80841
2013	0.78938	0.79257	0.78941	2013	0.55305	0.55491	0.55306	2013	0.78976	0.80042	0.78985
2014	0.78080	0.78109	0.78080	2014	0.55523	0.55700	0.55524	2014	0.76988	0.77463	0.76991
2015	0.79018	0.79464	0.79021	2015	0.54967	0.55177	0.54969	2015	0.80890	0.80996	0.80891

Figure A.2: Aggregate Labor Share (PSR Payroll/PSR) Calculated With Different Treatments of Outliers (top percentile dropped, Winsorizing, top-coded at 1) [Page 2/2]

Health				Human Services				International, Foreign Affairs			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.38626	0.38654	0.38626	1994	0.62158	0.62392	0.62160	1994	0.78266	0.79799	0.78279
1995	0.38576	0.38578	0.38576	1995	0.63659	0.64514	0.63667	1995	0.74946	0.77338	0.74966
1996	0.38566	0.38569	0.38566	1996	0.60081	0.60714	0.60086	1996	1.02619	1.02777	1.02620
1997	0.39509	0.39523	0.39509	1997	0.61174	0.61460	0.61176	1997	0.55836	0.55882	0.55836
1998	0.40396	0.40411	0.40396	1998	0.64793	0.65291	0.64797	1998	0.74502	0.74942	0.74505
1999	0.42809	0.42838	0.42809	1999	0.65795	0.66424	0.65800	1999	0.73639	0.73775	0.73640
2000	0.42689	0.42717	0.42689	2000	0.65639	0.66304	0.65644	2000	0.71913	0.72858	0.71921
2001	0.39912	0.39934	0.39912	2001	0.60344	0.60826	0.60348	2001	0.77577	0.77704	0.77579
2002	0.39941	0.39960	0.39941	2002	0.60287	0.60608	0.60289	2002	0.77087	0.77471	0.77090
2003	0.39621	0.39649	0.39621	2003	0.56030	0.56317	0.56033	2003	0.86600	0.87176	0.86605
2004	0.39241	0.39260	0.39241	2004	0.58099	0.58388	0.58102	2004	0.86937	0.88566	0.86951
2005	0.39341	0.39401	0.39341	2005	0.57975	0.58360	0.57978	2005	0.73558	0.74249	0.73564
2006	0.39761	0.39815	0.39761	2006	0.57752	0.58109	0.57755	2006	0.71812	0.73476	0.71826
2007	0.39450	0.39517	0.39450	2007	0.56726	0.57226	0.56730	2007	0.82788	0.83708	0.82796
2008	0.39157	0.39185	0.39158	2008	0.56362	0.56672	0.56365	2008	0.69893	0.73263	0.69921
2009	0.39282	0.39303	0.39283	2009	0.58322	0.58713	0.58325	2009	0.76715	0.78583	0.76730
2010	0.39226	0.39269	0.39226	2010	0.55637	0.56401	0.55643	2010	0.89353	0.90574	0.89363
2011	0.39461	0.39498	0.39461	2011	0.57721	0.58162	0.57724	2011	0.76036	0.77935	0.76052
2012	0.39836	0.39879	0.39836	2012	0.57015	0.57499	0.57019	2012	0.62907	0.65476	0.62928
2013	0.39526	0.39573	0.39527	2013	0.58400	0.58925	0.58405	2013	0.55697	0.58016	0.55716
2014	0.38158	0.38201	0.38158	2014	0.58834	0.59362	0.58838	2014	0.69444	0.71119	0.69458
2015	0.38555	0.38593	0.38555	2015	0.58432	0.59013	0.58437	2015	0.68236	0.68683	0.68240

Mutual/ Membership Benefit				Public, Societal Benefit				Religion			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.01676	0.01676	0.01676	1994	0.47392	0.47407	0.47392	1994	0.76776	0.76969	0.76777
1995	0.01883	0.01883	0.01883	1995	0.50406	0.50633	0.50407	1995	0.69553	0.69553	0.69553
1996	0.01674	0.01674	0.01674	1996	0.49054	0.49171	0.49055	1996	0.47363	0.47363	0.47363
1997	0.01312	0.01312	0.01312	1997	0.45781	0.45951	0.45782	1997	0.58198	0.58198	0.58198
1998	0.28306	0.28306	0.28306	1998	0.48400	0.48851	0.48404	1998	0.76680	0.76704	0.76680
1999	0.18789	0.18789	0.18789	1999	0.48275	0.48551	0.48277	1999	0.68769	0.70052	0.68780
2000	0.16368	0.16368	0.16368	2000	0.50614	0.50723	0.50615	2000	0.60865	0.61757	0.60872
2001	0.13631	0.13631	0.13631	2001	0.49923	0.50202	0.49926	2001	0.58389	0.58655	0.58391
2002	0.10020	0.10020	0.10020	2002	0.53015	0.53309	0.53018	2002	0.64841	0.65010	0.64843
2003	0.09050	0.09050	0.09050	2003	0.53908	0.54372	0.53911	2003	0.72010	0.73596	0.72023
2004	0.03839	0.03839	0.03839	2004	0.55167	0.55397	0.55169	2004	0.68051	0.70329	0.68070
2005	0.08512	0.08512	0.08512	2005	0.51007	0.51349	0.51010	2005	0.66235	0.66979	0.66241
2006	0.09724	0.09724	0.09724	2006	0.50427	0.50862	0.50431	2006	0.63517	0.65002	0.63529
2007	0.27738	0.27738	0.27738	2007	0.57816	0.58334	0.57821	2007	0.68716	0.68716	0.68716
2008	0.12686	0.12686	0.12686	2008	0.66285	0.66850	0.66290	2008	0.71629	0.71935	0.71631
2009	0.13189	0.13189	0.13189	2009	0.64055	0.64918	0.64062	2009	0.71060	0.72454	0.71072
2010	0.08079	0.08079	0.08079	2010	0.62241	0.62630	0.62244	2010	0.82983	0.84957	0.82999
2011	0.11712	0.11712	0.11712	2011	0.59879	0.60924	0.59887	2011	0.83361	0.91427	0.83428
2012	0.08909	0.08909	0.08909	2012	0.58187	0.58868	0.58193	2012	0.64996	0.67334	0.65016
2013	0.11652	0.11652	0.11652	2013	0.61726	0.62971	0.61736	2013	0.64065	0.69136	0.64107
2014	0.10896	0.10896	0.10896	2014	0.64436	0.65108	0.64441	2014	0.62415	0.65699	0.62442
2015	0.11630	0.11630	0.11630	2015	0.58013	0.59427	0.58025	2015	0.61521	0.63650	0.61539

Figure A.3: Aggregate Labor Share (Payroll/[PSR + Contributions]) Calculated With Different Treatments of Outliers (top percentile dropped, Winsorizing, top-coded at 1)
 [Page 1/2]

Arts, Culture, and Humanities				Education				Environment and Animals			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.36633	0.36771	0.36677	1994	0.46411	0.46481	0.46433	1994	0.36178	0.36184	0.36180
1995	0.36165	0.36277	0.36200	1995	0.45245	0.45318	0.45268	1995	0.33280	0.33324	0.33294
1996	0.34126	0.34255	0.34167	1996	0.45164	0.45248	0.45190	1996	0.30164	0.30196	0.30174
1997	0.35466	0.35618	0.35514	1997	0.45136	0.45206	0.45158	1997	0.32408	0.32605	0.32470
1998	0.35844	0.35922	0.35869	1998	0.45906	0.45933	0.45914	1998	0.31338	0.31411	0.31361
1999	0.34650	0.34744	0.34680	1999	0.45600	0.45645	0.45614	1999	0.30547	0.30588	0.30560
2000	0.33508	0.33731	0.33578	2000	0.44972	0.45029	0.44990	2000	0.31740	0.31781	0.31753
2001	0.35320	0.35443	0.35359	2001	0.45790	0.45833	0.45803	2001	0.31720	0.31824	0.31753
2002	0.37096	0.37360	0.37180	2002	0.46598	0.46634	0.46610	2002	0.35252	0.35274	0.35259
2003	0.35542	0.35838	0.35635	2003	0.45622	0.45665	0.45636	2003	0.35751	0.35832	0.35776
2004	0.36500	0.36731	0.36573	2004	0.45437	0.45466	0.45446	2004	0.34624	0.34661	0.34636
2005	0.34923	0.35220	0.35016	2005	0.45077	0.45139	0.45097	2005	0.33391	0.33393	0.33392
2006	0.34582	0.34741	0.34632	2006	0.44161	0.44231	0.44183	2006	0.30340	0.30349	0.30343
2007	0.34741	0.35012	0.34826	2007	0.43226	0.43271	0.43240	2007	0.29491	0.29520	0.29500
2008	0.39500	0.39751	0.39579	2008	0.46509	0.46572	0.46529	2008	0.34522	0.34524	0.34523
2009	0.40366	0.40514	0.40413	2009	0.47141	0.47188	0.47156	2009	0.36091	0.36155	0.36111
2010	0.39328	0.39431	0.39360	2010	0.45946	0.45996	0.45962	2010	0.33912	0.33913	0.33912
2011	0.40442	0.40508	0.40463	2011	0.46844	0.46898	0.46861	2011	0.35394	0.35406	0.35397
2012	0.38990	0.39134	0.39036	2012	0.46193	0.46236	0.46206	2012	0.34803	0.34815	0.34807
2013	0.38290	0.38380	0.38318	2013	0.45778	0.45820	0.45791	2013	0.36122	0.36137	0.36127
2014	0.37295	0.37350	0.37313	2014	0.45816	0.45865	0.45832	2014	0.34511	0.34511	0.34511
2015	0.39253	0.39285	0.39263	2015	0.45482	0.45525	0.45495	2015	0.35507	0.35508	0.35508

Health				Human Services				International, Foreign Affairs			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.42465	0.42479	0.42469	1994	0.45179	0.45228	0.45194	1994	0.20287	0.20409	0.20325
1995	0.41449	0.41498	0.41464	1995	0.44462	0.44501	0.44474	1995	0.22667	0.22747	0.22692
1996	0.41038	0.41063	0.41046	1996	0.44565	0.44707	0.44610	1996	0.26130	0.26147	0.26136
1997	0.42732	0.42751	0.42738	1997	0.44145	0.44201	0.44163	1997	0.19178	0.19282	0.19211
1998	0.43960	0.43981	0.43967	1998	0.45973	0.46066	0.46002	1998	0.20744	0.20746	0.20745
1999	0.45954	0.45969	0.45959	1999	0.46419	0.46514	0.46449	1999	0.15826	0.15826	0.15826
2000	0.46197	0.46215	0.46202	2000	0.46219	0.46283	0.46239	2000	0.15529	0.15530	0.15529
2001	0.42944	0.42960	0.42949	2001	0.43170	0.43235	0.43191	2001	0.15237	0.15237	0.15237
2002	0.43006	0.43028	0.43013	2002	0.44519	0.44552	0.44529	2002	0.14050	0.14060	0.14053
2003	0.42530	0.42548	0.42536	2003	0.43487	0.43521	0.43498	2003	0.12300	0.12300	0.12300
2004	0.42121	0.42151	0.42131	2004	0.44136	0.44203	0.44157	2004	0.13764	0.13764	0.13764
2005	0.42308	0.42335	0.42317	2005	0.42637	0.42690	0.42654	2005	0.14164	0.14268	0.14197
2006	0.42728	0.42763	0.42739	2006	0.43251	0.43297	0.43265	2006	0.15072	0.15078	0.15074
2007	0.42369	0.42436	0.42390	2007	0.43315	0.43347	0.43325	2007	0.16281	0.16375	0.16311
2008	0.42214	0.42228	0.42219	2008	0.42613	0.42656	0.42626	2008	0.14218	0.14218	0.14218
2009	0.42435	0.42459	0.42443	2009	0.43129	0.43216	0.43156	2009	0.15899	0.15910	0.15903
2010	0.42247	0.42260	0.42251	2010	0.41378	0.41424	0.41392	2010	0.20882	0.20882	0.20882
2011	0.42284	0.42301	0.42289	2011	0.43096	0.43162	0.43117	2011	0.19488	0.19488	0.19488
2012	0.42939	0.42947	0.42941	2012	0.42577	0.42635	0.42595	2012	0.20441	0.20455	0.20446
2013	0.42573	0.42586	0.42577	2013	0.42586	0.42676	0.42614	2013	0.20454	0.20454	0.20454
2014	0.41277	0.41298	0.41283	2014	0.42412	0.42451	0.42424	2014	0.20457	0.20460	0.20458
2015	0.41733	0.41758	0.41741	2015	0.42886	0.42907	0.42892	2015	0.21342	0.21342	0.21342

Figure A.3: Aggregate Labor Share (Payroll/[PSR + Contributions]) Calculated With Different Treatments of Outliers (top percentile dropped, Winsorizing, top-coded at 1)
 [Page 2/2]

Mutual/ Membership Benefit				Public, Societal Benefit				Religion			
Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded	Year	Drop	Winsorized	Top-coded
1994	0.02467	0.02485	0.02473	1994	0.26132	0.26177	0.26146	1994	0.19337	0.19383	0.19351
1995	0.02730	0.02746	0.02735	1995	0.27792	0.27809	0.27797	1995	0.24474	0.24517	0.24488
1996	0.02304	0.02304	0.02304	1996	0.25756	0.25769	0.25760	1996	0.24925	0.24961	0.24936
1997	0.01916	0.01918	0.01916	1997	0.23926	0.23956	0.23936	1997	0.27128	0.27141	0.27132
1998	0.24106	0.24125	0.24112	1998	0.24736	0.24801	0.24756	1998	0.25846	0.26186	0.25953
1999	0.18059	0.18068	0.18062	1999	0.25483	0.25532	0.25499	1999	0.25266	0.25426	0.25316
2000	0.15678	0.15786	0.15712	2000	0.26177	0.26227	0.26193	2000	0.26647	0.26678	0.26657
2001	0.11908	0.11909	0.11908	2001	0.25537	0.25561	0.25545	2001	0.28190	0.28231	0.28203
2002	0.10060	0.10083	0.10067	2002	0.28136	0.28285	0.28183	2002	0.31338	0.31350	0.31342
2003	0.09254	0.09255	0.09254	2003	0.27892	0.27933	0.27905	2003	0.31082	0.31115	0.31092
2004	0.04653	0.04657	0.04654	2004	0.27518	0.27545	0.27527	2004	0.28770	0.29032	0.28853
2005	0.09774	0.09786	0.09778	2005	0.26143	0.26166	0.26150	2005	0.29029	0.29245	0.29098
2006	0.10738	0.10742	0.10739	2006	0.24048	0.24073	0.24056	2006	0.26778	0.27037	0.26860
2007	0.28428	0.28453	0.28436	2007	0.26718	0.26773	0.26736	2007	0.24997	0.25168	0.25051
2008	0.13775	0.14054	0.13863	2008	0.29741	0.29780	0.29753	2008	0.26368	0.26469	0.26400
2009	0.12741	0.12901	0.12791	2009	0.29969	0.30010	0.29982	2009	0.28279	0.28373	0.28309
2010	0.09569	0.09585	0.09574	2010	0.29731	0.29762	0.29740	2010	0.27681	0.28100	0.27813
2011	0.13459	0.13902	0.13598	2011	0.28538	0.28571	0.28548	2011	0.28946	0.29210	0.29029
2012	0.10329	0.10353	0.10337	2012	0.27096	0.27118	0.27103	2012	0.26970	0.27211	0.27046
2013	0.12277	0.12312	0.12288	2013	0.25597	0.25615	0.25603	2013	0.27490	0.27697	0.27555
2014	0.12445	0.12453	0.12448	2014	0.25611	0.25638	0.25620	2014	0.28510	0.28709	0.28573
2015	0.11768	0.11769	0.11768	2015	0.26012	0.26029	0.26017	2015	0.27326	0.27889	0.27504

Figure A.4: Program Service Labor Share for All Nine Categories

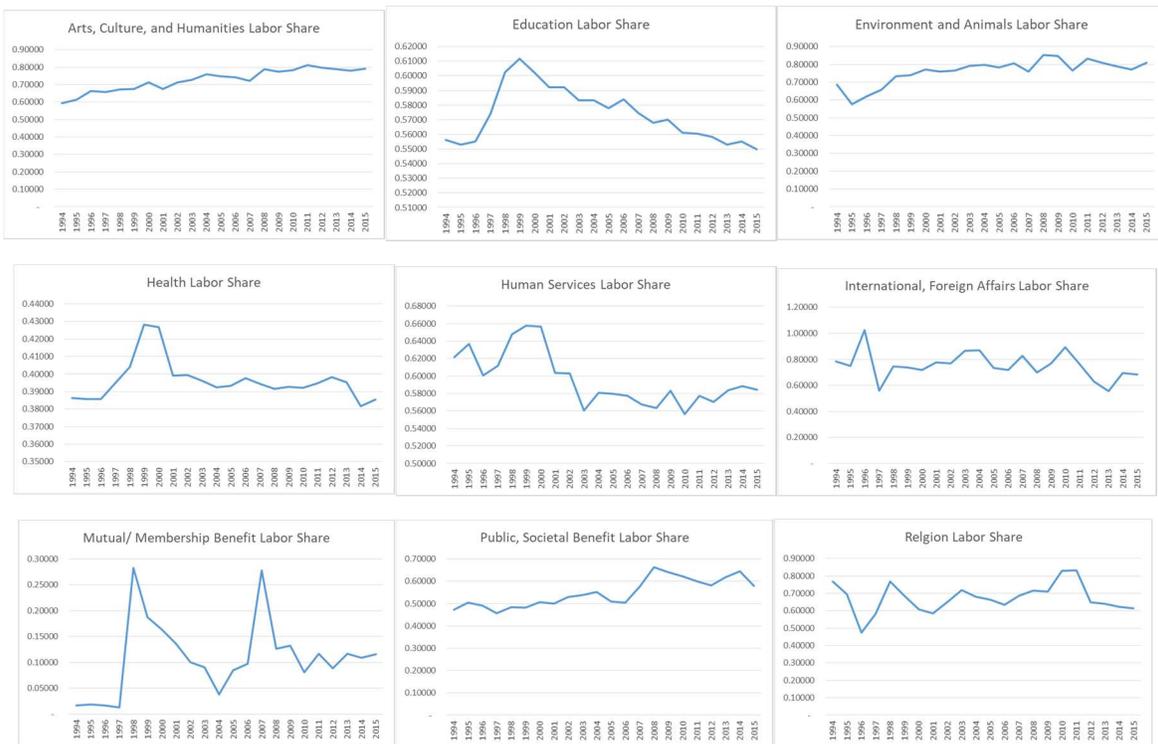


Figure A.5: Contributions Labor Share for All Nine Categories



Figure A.6: (PSR + Contributions) Labor Share for All Nine Categories



Appendix B: Regression Tables

Section 5.2: Relationship between Labor Share and Share of Industry Revenue (B.1 - B.9)

Figure B.1: Regressions with Labor Share as Dependent Variable and Share of Industry Program Service Revenue as Independent Variable (*outlier labor shares dropped*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-2.827* (1.18)	-0.130 (1.58)	-2.912 (2.24)	3.472*** (0.94)	0.387 (1.52)	-3.486 (3.30)	0.019 (0.24)	-3.474*** (0.67)	-5.464*** (1.44)
N	16,585	50,822	5,932	83,729	67,648	1,926	1,140	14,334	2,826
	* p<0.05	** p<0.01	*** p<0.001						

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share calculated as program service revenue divided by total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a different broad category. Extreme values of labor share above 99th percentile were dropped.

Figure B.2: Regressions with Labor Share as Dependent Variable and Share of Industry Contributions as Independent Variable (*outlier labor shares dropped*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-2.370 (1.46)	-3.998 (4.10)	-0.462 (1.11)	-125.451*** (35.41)	-35.482* (15.28)	-5.109 (3.03)	2.659 (4.62)	2.214 (2.54)	-3.804 (4.46)
N	18,966	58,632	7,866	75,115	66,564	3,531	496	23,841	5,284
	* p<0.05	** p<0.01	*** p<0.001						

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share is calculated by dividing contributions from total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension).

Each column is a separate regression carried out for a broad category. Extreme values of labor share above 99th percentile were dropped.

Figure B.3: Regressions with Labor Share as Dependent Variable and Share of Industry PSR + Contributions as Independent Variable (*outlier labor shares dropped*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-0.185** (0.07)	-0.107 (0.10)	-0.171* (0.08)	-0.146*** (0.04)	-0.188** (0.06)	-0.032 (0.06)	0.162* (0.07)	0.144** (0.05)	-0.189* (0.08)
N	19,246	61,872	7,975	95,140	79,567	3,709	1,435	25,852	5,442

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share is calculated by dividing contributions + psr by total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension).

Each column is a separate regression carried out for a broad category. Extreme values of labor share above 99th percentile were dropped.

Figure B.4: Regressions with Labor Share as Dependent Variable and Share of Industry Program Service Revenue as Independent Variable (*outlier labor shares winsorized*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	Internation al, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-53.233*** (9.26)	-65.106** (21.21)	-59.197*** (12.27)	-28.842 (15.31)	-35.921*** (7.17)	-88.753*** (9.99)	-74.633*** (6.50)	-100.577*** (11.70)	-154.374*** (21.83)
N	19,847	64,830	7,894	98,294	80,269	3,639	1,707	28,953	6,023

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share calculated as program service revenue divided by total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a different broad category. Extreme values of labor share were winsorized above the 99th percentile.

Figure B.5: Regressions with Labor Share as Dependent Variable and Share of Industry Contributions as Independent Variable (*outlier labor shares winsorized*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-99.946*** (23.37)	-169.879*** (36.54)	-64.407*** (13.89)	-387.651*** (28.63)	-266.118*** (47.91)	-94.204*** (25.50)	-748.789*** (119.59)	-217.842** (68.15)	-224.611** (80.83)
N	20,004	64,903	8,193	99,045	81,415	3,771	1,706	29,509	6,199

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share is calculated by dividing contributions from total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension).

Each column is a separate regression carried out for a broad category. Extreme values of labor share were winsorized above the 99th percentile

Figure B.6: Regressions with Labor Share as Dependent Variable and Share of Industry PSR + Contributions as Independent Variable (*outlier labor shares winsorized*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-0.450*** (0.10)	-0.446*** (0.08)	-0.285** (0.10)	-0.308*** (0.08)	-0.264*** (0.08)	-0.147 (0.08)	-0.916*** (0.18)	-0.525 (0.31)	-0.978** (0.33)
N	20,016	64,975	8,205	99,300	81,672	3,796	1,782	29,784	6,202

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share is calculated by dividing contributions + psr from total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension).

Each column is a separate regression carried out for a broad category. Extreme values of labor share were winsorized at the 99th percentile.

Figure B.7: Regressions with Labor Share as Dependent Variable and Share of Industry Program Service Revenue as Independent Variable (*outlier labor shares top-coded at 1*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-2.099 (1.08)	0.128 (1.45)	-1.088 (1.84)	3.465*** (0.89)	0.803 (1.37)	1.751 (2.74)	-0.428** (0.16)	-0.610 (0.40)	-1.900* (0.83)
N	19,847	64,830	7,894	98,294	80,269	3,639	1,707	28,953	6,023

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share calculated as program service revenue divided by total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a different broad category. Extreme values of labor share were top-coded to a value of 1.

Figure B.8: Regressions with Labor Share as Dependent Variable and Share of Industry Contributions as Independent Variable (*outlier labor shares top-coded at 1*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-2.176 (1.43)	-2.644 (4.00)	-0.392 (1.10)	-90.917** (28.74)	-27.172* (12.10)	-4.768 (2.72)	7.931 (5.71)	3.241 (2.21)	-2.622 (4.32)
N	20,004	64,903	8,193	99,045	81,415	3,771	1,706	29,509	6,199

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share is calculated by dividing contributions from total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension). Each column is a separate regression carried out for a broad category. Extreme values of labor share were top-coded at a value of 1.

Figure B.9: Regressions with Labor Share as Dependent Variable and Share of Industry PSR + Contributions as Independent Variable (*outlier labor shares top-coded at 1*)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Share of Industry Revenue	-0.239*** (0.07)	-0.181* (0.07)	-0.193* (0.08)	-0.177*** (0.03)	-0.200*** (0.06)	-0.060 (0.06)	-0.155* (0.07)	-0.033 (0.10)	-0.378*** (0.10)
N	20,016	64,975	8,205	99,300	81,672	3,796	1,782	29,784	6,202

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a nonprofit organization-year pair. Labor share is calculated by dividing contributions + psr

from total payroll amounts to employees and officers (salary & wages, officer compensation, benefits and pension).

Each column is a separate regression carried out for a broad category. Extreme values of labor share were top-coded at a value of

1.

Section 5.4: Prediction 2 (B.10 - B.27)

Figure B.10: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (PSR) (*outlier labor shares dropped*) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR4	-0.104** (0.04)	-0.963 (1.12)	-12.781 (8.09)	-0.191 (0.71)	1.657 (1.81)	-16.227 (16.50)	1.481 (3.36)	-3.329 (3.28)	-6.113 (4.32)
N	1316	1046	471	1306	1206	85	62	381	84

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing program service revenue

from total amounts paid to employees and officers (salary & wages, officer compensation, benefits

and pension) categorized as program service expenses. Each column is a separate regression carried out for a

broad category. Extreme values of labor share above the 99th percentile were dropped before calculating aggregate

industry labor share.

Figure B.11: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (PSR) (outlier labor shares dropped) (CR20)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR20	1.566 (1.51)	-1.676 (1.66)	-0.760 (1.56)	0.090 (0.93)	-0.599 (1.54)	-12.196 (18.53)	-1.203* (0.38)	-37.778 (20.53)	62.683 (67.42)
N	1316	1046	471	1306	1206	85	62	381	84

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing program service revenue from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a broad category. Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.12: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (PSR) (outlier labor shares dropped) (HHI)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in HHI	0.001*** (0.00)	-0.091 (2.58)	-4.536 (2.69)	-0.009*** (0.00)	0.946 (1.31)	2.494 (6.59)	-0.292 (0.28)	-2.591 (1.69)	-6.134 (6.41)
N	1340	1071	473	1397	1254	86	68	423	89

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing program service revenue from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a broad category. Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.13: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (PSR) (outlier labor shares winsorized) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR4	-0.068 (0.10)	0.200 (1.77)	-11.667 (8.07)	-0.008 (0.01)	5.554 (3.57)	-17.559 (15.37)	1.409 (2.00)	-7.910 (7.88)	3.766 (12.49)
N	1519	1263	581	1559	1422	117	80	501	109

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013. Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing program service revenue from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a broad category. Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.14: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (PSR) (outlier labor shares winsorized) (CR20)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR20	1.017 (1.67)	0.206 (2.07)	6.151 (12.43)	-0.048 (0.56)	0.768 (2.93)	5.675 (24.84)	-0.533 (1.23)	-125.584 (64.09)	192.325 (211.42)
N	1519	1263	581	1559	1422	117	80	501	109

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013. Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing program service revenue from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a broad category. Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.15: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (PSR) (outlier labor shares winsorized) (HHI)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in HHI	0.001*** (0.00)	0.441 (2.20)	-6.462* (3.15)	-0.000 (0.00)	3.557 (3.21)	-0.997 (4.77)	-0.193 (0.18)	0.019 (1.53)	-1.583 (2.24)
N	1568	1315	587	1749	1546	132	88	589	124

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013. Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing program service revenue from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) categorized as program service expenses. Each column is a separate regression carried out for a broad category. Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.16: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions) (outlier labor shares dropped) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR4	2.198 (2.88)	-5.686 (6.16)	4.151 (2.63)	-1.532 (4.38)	-8.539 (10.44)	-0.241 (0.57)	-36.803 (42.25)	-2.362 (6.42)	15.138 (18.68)
N	1495	1226	574	1557	1408	115	66	463	118

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.17: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions) (outlier labor shares dropped) (CR20)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR20	7.750 (8.90)	-5.640 (3.48)	16.656 (15.86)	-5.544 (6.63)	3.675 (4.78)	-2.340 (1.88)	-80.092 (83.08)	-19.254 (29.05)	-428.099 (447.16)
N	1495	1226	574	1557	1408	115	66	463	118

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.18: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions) (outlier labor shares dropped) (HHI)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in HHI	-0.252 (1.30)	-3.842 (4.23)	1.907 (1.43)	0.995 (4.08)	-3.312 (3.65)	0.392 (0.32)	1.269 (5.33)	0.143 (2.06)	-11.264 (14.32)
N	1511	1247	577	1615	1423	115	71	505	118

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.19: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions) (outlier labor shares winsorized) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR4	3.284 (3.06)	-1.773 (7.15)	3.863 (2.75)	5.445 (12.95)	-2.283 (29.43)	-0.618 (0.56)	-42.840 (46.92)	-33.569 (31.66)	16.711 (22.79)
N	1548	1292	584	1677	1516	131	78	520	124

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.20: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions) (outlier labor shares winsorized) (CR20)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR20	11.523 (9.14)	-7.026 (4.28)	16.779 (15.83)	-5.443 (6.18)	22.345 (20.30)	-1.683 (1.78)	-80.092 (81.36)	-84.781 (79.23)	-428.149 (444.66)
N	1548	1292	584	1677	1516	131	78	520	124

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.21: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions) (outlier labor shares winsorized) (HHI)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in HHI	-0.659 (1.87)	-4.409 (3.65)	1.938 (1.44)	3.073 (6.52)	-12.064 (7.99)	0.101 (0.28)	-0.427 (2.19)	-29.131 (23.69)	-6.076 (14.47)
N	1568	1315	587	1749	1546	132	88	589	124

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013. Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.22: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions + PSR) (outlier labor shares dropped) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR4	0.098 (0.06)	0.017 (0.06)	0.000 (0.10)	-0.042 (0.04)	0.059 (0.08)	0.220 (0.21)	0.218 (0.21)	-0.005 (0.08)	0.470* (0.22)
N	1525	1287	578	1700	1511	129	87	556	121

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013. Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions + psr from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.23: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions + PSR) (outlier labor shares dropped) (CR20)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR20	0.130 (0.11)	-0.196 (0.10)	0.045 (0.09)	-0.005 (0.04)	-0.004 (0.08)	-0.040 (0.61)	-0.032 (0.04)	-0.072 (0.09)	-1.665 (1.12)
N	1525	1287	578	1700	1511	129	87	556	121

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions + psr from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.24: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions + PSR) (outlier labor shares dropped) (HHI)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in HHI	-0.058 (0.09)	-0.000 (0.06)	-0.003 (0.13)	-0.068 (0.04)	-0.007 (0.04)	-0.019 (0.09)	0.104 (0.16)	0.117 (0.11)	0.105 (0.08)
N	1525	1287	578	1700	1511	129	87	556	121

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions + psr from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share above the 99th percentile were dropped before calculating aggregate industry labor share.

Figure B.25: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions + PSR) (outlier labor shares winsorized) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR4	0.266 (0.17)	-0.001 (0.10)	0.055 (0.12)	-0.060 (0.06)	0.103 (0.07)	1.885* (0.73)	0.243 (0.20)	-0.020 (0.07)	0.534* (0.24)
N	1568	1315	587	1749	1546	132	88	589	124

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions + psr from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.26: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions + PSR) (outlier labor shares winsorized) (CR20)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in CR20	0.562 (0.36)	-0.146 (0.13)	0.044 (0.09)	-0.013 (0.04)	0.059 (0.08)	2.618*** (0.46)	-0.030 (0.04)	-0.079 (0.07)	-1.749 (1.14)
N	1568	1315	587	1749	1546	132	88	589	124

* p<0.05 ** p<0.01 *** p<0.001

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions + psr from total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Figure B.27: Regressions Relating 5-Year Change in Labor Share as Dependent Variable and 5-year Change of Industry Concentration as Independent Variable (Contributions + PSR) (outlier labor shares winsorized) (HHI)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Change in HHI	0.056 (0.13)	0.041 (0.08)	0.027 (0.13)	-0.062 (0.04)	0.016 (0.05)	0.605 (0.52)	0.061 (0.15)	0.122 (0.11)	0.100 (0.08)
N	1568	1315	587	1749	1546	132	88	589	124

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Labor share and concentration 5-year changes are calculated for overlapping periods starting with 1995-2000 and ending with 2008-2013.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Labor share is calculated by dividing contributions + psr from

total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension).

Extreme values of labor share were winsorized above the 99th percentile before calculating aggregate industry labor share.

Section 5.6: Prediction 4 (B.28 - B.39)

Figure B.28: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (PSR) (outlier labor shares dropped) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	0.027 (0.11)	-0.345* (0.14)	0.090 (0.25)	-0.065 (0.14)	0.040 (0.04)	0.331* (0.15)	0.000 (.)	-0.111 (0.15)	0.000 (.)
N	323	242	84	266	172	26	12	78	14

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Concentration measure is CR4. Labor share is calculated by dividing psr by

total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension)

that were categorized as program service expense. Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values

of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.29: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR**) (*outlier labor shares dropped*) (**CR20**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	0.025 (0.09)	-0.040 (0.09)	0.066 (0.11)	-0.073 (0.06)	0.071* (0.03)	0.028 (0.03)	0.000 (.)	-0.078 (0.11)	0.000 (.)
N	323	242	84	266	172	26	12	78	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is CR20. Labor share is calculated by dividing psr by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) that were categorized as program service expense. Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.30: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR**) (*outlier labor shares dropped*) (**HHI**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	43.329* (18.33)	18.669 (41.21)	33.861 (30.01)	-11.027 (30.54)	-22.436 (19.00)	-257.059* (92.62)	-2290.248** (541.85)	-424.492 (218.49)	0.000 (.)
N	332	253	85	296	183	30	14	91	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is HHI. Labor share is calculated by dividing psr by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) that were categorized as program service expense. Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.31: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR**) (*outlier labor shares winsorized*) (**CR4**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	0.017 (0.05)	0.047 (0.06)	0.679 (0.41)	0.100 (0.08)	0.017 (0.03)	0.331* (0.15)	0.000 (.)	-0.111 (0.15)	0.000 (.)
N	323	242	84	266	172	26	12	78	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Concentration measure is CR4. Labor share is calculated by dividing psr by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) that were categorized as program service expense. Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.32: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR**) (*outlier labor shares winsorized*) (**CR20**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	0.046 (0.04)	0.026 (0.03)	0.370* (0.17)	0.038 (0.03)	0.031 (0.03)	0.028 (0.03)	0.000 (.)	-0.078 (0.11)	0.000 (.)
N	323	242	84	266	172	26	12	78	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Concentration measure is CR20. Labor share is calculated by dividing psr by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) that were categorized as program service expense. Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.33: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (PSR) (outlier labor shares winsorized) (HHI)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	-9.929 (7.91)	-27.633 (14.62)	63.473 (32.91)	22.638 (14.48)	0.561 (4.31)	-257.059* (92.62)	-19.233** (4.43)	-424.492 (218.49)	0.000 (.)
N	332	253	85	296	183	30	14	91	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Concentration measure is HHI. Labor share is calculated by dividing psr by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension) that were categorized as program service expense. Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.34: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (Contributions) (outlier labor shares dropped) (CR4)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	0.044 (0.11)	0.004 (0.02)	-0.014 (0.01)	0.003 (0.02)	-0.033 (0.11)	-0.047 (0.03)	0.000 (0.00)	0.018 (0.01)	0.000 (.)
N	329	248	85	283	179	29	13	81	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification.

Each observation is a 4-digit NTEE-year pair. Concentration measure is CR4. Labor share is calculated by dividing contributions by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.35: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (Contributions**) (*outlier labor shares dropped*) (**CR20**)**

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	-0.035 (0.07)	-0.001 (0.01)	-0.007 (0.01)	0.011 (0.01)	-0.012 (0.03)	0.003* (0.00)	0.000 (.)	-0.000 (0.00)	0.000 (.)
N	329	248	85	283	179	29	13	81	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is CR20. Labor share is calculated by dividing contributions by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.36: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (Contributions**) (*outlier labor shares dropped*) (**HHI**)**

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	1.871 (4.70)	5.877* (2.91)	2.935 (1.77)	7.475 (5.79)	-100.885* (48.20)	12.554* (4.92)	-206.092*** (7.85)	-56.299 (67.19)	0.000 (.)
N	332	253	85	296	183	30	14	91	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is HHI. Labor share is calculated by dividing contributions by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.37: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR + Contributions**) (*outlier labor shares dropped*) (**CR4**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	-2.022 (7.37)	-19.113 (17.82)	18.396 (35.93)	15.323 (14.22)	-2.377*** (0.31)	4.725 (4.76)	-0.000 (0.00)	-2.727 (3.46)	0.000 (.)
N	332	253	85	296	183	30	14	91	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is CR4. Labor share is calculated by dividing psr + contributions by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.38: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR + Contributions**) (*outlier labor shares dropped*) (**CR20**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	-2.357 (3.62)	-5.090 (3.61)	0.485 (27.01)	2.082 (3.88)	-0.783*** (0.14)	0.099 (2.10)	-0.000 (0.00)	-3.581 (3.38)	0.000 (.)
N	332	253	85	296	183	30	14	91	14

Regression coefficients and std. errors reported at 100x the actual value.

* p<0.05 ** p<0.01 *** p<0.001

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is CR20. Labor share is calculated by dividing psr + contributions by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.39: Regressions Relating 5-Year Change of Industry Concentration as Dependent Variable and 5-year Incumbent Reallocation Component of Labor Share Change as Independent Variable (**PSR + Contributions**) (*outlier labor shares dropped*) (**HHI**)

	Arts, Culture, and Humanities	Education	Environment and Animals	Health	Human Services	International, Foreign Affairs	Mutual/ Membership Benefit	Public, Societal Benefit	Religion
Incumbent Reallocation Component	-1203.090 (749.30)	-1471.736 (1334.23)	286.010 (1235.51)	1352.339 (975.96)	-263.665 (184.30)	4672.799 (5866.07)	3100.623** (655.77)	2441.027*** (567.44)	0.000 (.)
N	332	253	85	296	183	30	14	91	14

* p<0.05 ** p<0.01 *** p<0.001 Regression coefficients and std. errors reported at 100x the actual value.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a 4-digit NTEE-year pair. Concentration measure is HHI. Labor share is calculated by dividing psr + contributions by total amounts paid to employees and officers (salary & wages, officer compensation, benefits and pension). Time periods are 1995-2000, 2000-2005, 2005-2010. Extreme values of labor share were dropped above the 99th percentile before calculating aggregate industry labor share.

Figure B.40: Regressions with Labor Share as Dependent Variable and Share of Industry Revenue as Independent Variable (whole sample)

Revenue Definition	Labor Share Outliers Dropped			Labor Share Outliers Winzorized			Labor Share Outliers Top-Coded at 1		
	PSR (1)	Contributions (2)	Both (3)	PSR (4)	Contributions (5)	Both (6)	PSR (7)	Contributions (8)	Both (9)
Share of Industry Revenue	-0.458 (0.51)	-42.373*** (10.49)	-0.063** (0.02)	-61.800*** (5.74)	-262.585*** (22.57)	-0.397*** (0.09)	0.781 (0.43)	-30.287*** (8.27)	-0.144*** (0.03)
Arts, Culture, and Humanities	2.085*** (0.33)	-16.405** (5.08)	0.172*** (0.02)	-55.344*** (9.12)	-203.021** (70.40)	-0.574* (0.27)	1.505*** (0.29)	-9.602* (3.79)	-0.025 (0.07)
Education	0.924* (0.39)	-13.256* (5.17)	0.140** (0.04)	-50.928*** (11.63)	-173.625* (71.47)	-0.582* (0.27)	0.527 (0.30)	-6.665 (3.90)	-0.051 (0.08)
Environment and Animals	3.817*** (0.72)	-16.026** (5.12)	0.148*** (0.03)	-43.220*** (10.23)	-205.691** (70.22)	-0.618* (0.27)	2.645*** (0.43)	-9.501* (3.85)	-0.053 (0.08)
Health	0.525 (0.28)	53.307** (19.05)	0.201*** (0.02)	-59.043*** (10.84)	-25.427 (70.65)	-0.541* (0.27)	0.216 (0.24)	42.943** (14.36)	0.003 (0.07)
Human Services	1.802*** (0.49)	1.067 (8.24)	0.173*** (0.03)	-57.166*** (8.96)	-103.872 (72.42)	-0.613* (0.27)	1.294** (0.40)	4.529 (6.47)	-0.033 (0.07)
International, Foreign Affairs	6.778*** (1.22)	-12.962* (5.44)	0.035 (0.03)	-13.183 (9.60)	-176.602* (71.59)	-0.726** (0.27)	3.395*** (0.49)	-7.262 (4.07)	-0.163* (0.08)
Public, Societal Benefit	3.562*** (0.39)	-13.195* (5.25)	-0.000 (0.03)	-13.001 (10.71)	-101.331 (80.86)	-0.457 (0.32)	1.641*** (0.21)	-7.591* (3.82)	-0.118 (0.09)
Religion	2.906*** (0.61)	-14.350** (5.27)	0.061* (0.03)	-11.817 (9.60)	-137.166 (78.87)	-0.440 (0.29)	1.272*** (0.36)	-8.100* (4.05)	-0.074 (0.07)
Mutual/ Membership Benefit	-0.205 (0.21)	-4.307 (6.44)	-0.117*** (0.03)	-33.380*** (8.59)	249.044** (88.40)	-0.358 (0.27)	-0.358* (0.15)	-8.253* (3.64)	-0.163* (0.07)
Constant	0.804*** (0.14)	23.377*** (4.00)	0.281*** (0.00)	66.968*** (6.41)	228.822*** (54.07)	0.985*** (0.21)	0.989*** (0.11)	16.267*** (2.98)	0.461*** (0.05)
N	317,444	333,375	386,447	402,977	406,273	407,263	402,977	406,273	407,263
adj. R-sq	0.016	0.098	0.032	0.077	0.065	0.008	0.009	0.067	0.014

* p<0.05 ** p<0.01 *** p<0.001

Regression period is 1994-2015.

Regression includes dummy variables for each year. Standard errors are clustered at 4-digit NTEE classification. Each observation is a nonprofit organization-year pair. Each column is a separate regression with a different labor share calculation as the dependent variable. The whole sample from the SOI data is included with dummy variables for each category. In each regression, the revenue definition used to calculate labor share matches the industry revenue share definition.

Appendix C: Decomposition Tables

Figure C.1: Decomposition (PSR) (*extreme values of labor share dropped*)

Arts, Culture, and Humanities						International, Foreign Affairs					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.7174618	1995	-	-	-	-	0.723724
2000	-0.9393291	1.035278	0.14842	-0.01887	0.9429618	2000	1.630641	-1.373307	-0.111948	0.6019158	1.4710258
2005	0.216938	-0.1098075	-0.01753	-0.02563	1.0069367	2005	5.801607	-5.232399	0.0841638	-0.8367432	1.2876544
2010	0.4073858	-0.3145821	0.001495	-0.06885	1.0323902	2010	-3.532334	3.396908	0.0898895	-0.4006322	0.8414857
2015	0.0630758	-0.1133236	0.031438	-0.05041	0.9631743	2015	2.445422	-2.449748	-0.0124623	-0.3179313	0.5067661
	-0.2519295	0.4975648	0.163823	-0.16375			6.345336	-5.658546	0.049643	-0.95339	
Education						Mutual/ Membership Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.5823138	1995	-	-	-	-	0.0141353
2000	-0.0076689	0.0428652	0.019953	-0.01104	0.6264224	2000	0.1365089	0.0310761	0.0370198	-0.0178926	0.2008475
2005	-0.0393124	0.0134096	0.003215	-0.00829	0.5954493	2005	0.0276643	-0.0323154	0.0181971	-0.0833085	0.131085
2010	-0.1106789	0.0726216	-0.00106	0.009148	0.5654777	2010	-0.0960469	0.0326861	-0.0038149	-0.003915	0.0599943
2015	0.0810309	-0.1044317	0.003436	-0.00769	0.5378265	2015	0.0547786	0.0151714	0.0015011	-0.0037063	0.1277391
	-0.0766293	0.0244647	0.025541	-0.01786			0.1229049	0.0466182	0.0529031	-0.10882	
Environment and Animals						Public, Societal Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.8111535	1995	-	-	-	-	0.4669126
2000	-1.901853	1.935892	0.071813	0.045283	0.9622888	2000	1.285659	-1.209821	-0.0238991	-0.0724451	0.4464064
2005	-0.1929021	0.1818948	0.009809	-0.01284	0.9482539	2005	0.3389611	-0.3948152	0.0805647	0.0433409	0.5144579
2010	-3.38087	3.373646	0.045649	-0.02147	0.9652076	2010	-0.3696859	0.4620936	0.1090708	-0.0463939	0.6695425
2015	0.4929361	-0.486891	-0.009	-0.04433	0.9179214	2015	0.3167598	-0.3601816	0.0439797	-0.0485392	0.6215612
	-4.982689	5.0045418	0.118267	-0.03335			1.571694	-1.5027242	0.2097161	-0.12404	
Health						Religion					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.3600145	1995	-	-	-	-	0.7116333
2000	0.1829741	-0.1486587	-0.00456	0.009994	0.399761	2000	-0.5782614	-0.1046394	1.164369	-0.5412307	0.6518708
2005	-0.0007511	-0.0285794	0.001068	-0.0021	0.3693968	2005	2.734072	-2.632309	0.1417385	-0.0010083	0.894364
2010	0.0050229	-0.0070817	-0.00472	0.005157	0.3677785	2010	0.6781235	-0.8223369	0.0927696	0.0479162	0.8908364
2015	-0.024554	0.0054058	-0.00085	0.003031	0.3508104	2015	-3.179132	2.947953	-0.1356999	0.1752944	0.6992519
	0.1626919	-0.178914	-0.00906	0.01608			-0.3451979	-0.6113323	1.2631772	-0.31903	
Human Services											
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.5645252						
2000	0.2515459	-0.2210059	-0.01796	-0.01977	0.5573402						
2005	0.0958451	-0.1668603	0.004259	-0.01397	0.4766098						
2010	-0.0244197	0.0273974	0.003883	-0.00553	0.4779407						
2015	0.1733027	-0.1654885	0.019057	-0.02828	0.4765344						
	0.496274	-0.5259573	0.009242	-0.06755							

Figure C.2: Decomposition (PSR) (extreme values of labor share winsorized)

Arts, Culture, and Humanities						International, Foreign Affairs					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.7174618	1995	-	-	-	-	0.745864
2000	-3.685633	3.781581	0.1484202	-0.0182065	0.9436235	2000	-8.362854	8.570454	-0.0843554	0.6254214	1.49453
2005	-1.628015	1.735146	-0.018193	-0.0256252	1.0069363	2005	-1.935291	2.504498	0.0606582	-0.8360438	1.2883514
2010	-1.130075	1.222879	0.0014953	-0.0688455	1.0323901	2010	5.350765	-5.447525	0.08919	-0.4203314	0.86045
2015	-0.8738146	0.8331671	0.0314381	-0.0516334	0.9715473	2015	-0.8857422	0.8674889	-0.0102154	-0.3215066	0.5104747
	-7.3175376	7.5727731	0.1631606	-0.1643106			-5.8331222	6.4949159	0.0552774	-0.9524604	
Education						Mutual/ Membership Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.58262	1995	-	-	-	-	0.0141353
2000	0.6285219	-0.5928135	0.0199868	-0.0111441	0.6271711	2000	10.13	-9.962416	0.0370198	-0.0178926	0.2008465
2005	-1.809378	1.78268	0.0032727	-0.0082757	0.5954701	2005	0.0276661	-0.0323143	0.0181971	-0.0833085	0.1310869
2010	-0.9389944	0.9015913	-0.0010606	0.0092978	0.5663042	2010	-8.366524	8.30316	-0.0038149	-0.003915	0.059993
2015	-0.7902632	0.7668562	0.0034624	-0.0076783	0.5386813	2015	0.0547791	0.015172	0.0015011	-0.0037063	0.1277389
	-2.9101137	2.858314	0.0256613	-0.0178003			1.8459212	-1.6763983	0.0529031	-0.1088224	
Environment and Animals						Public, Societal Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.8111535	1995	-	-	-	-	0.4694338
2000	1.845707	-1.811668	0.0718129	0.0452834	0.9622888	2000	-4.52874	4.600723	-0.0225595	-0.0721252	0.4467321
2005	-2.009901	1.999023	0.0098094	-0.0075575	0.59536627	2005	-7.821407	7.766319	0.0803981	0.0440548	0.516097
2010	-1.6677	1.654509	0.0462766	-0.0214795	0.9652688	2010	-3.195072	3.290119	0.1085318	-0.0460344	0.6736414
2015	0.4929371	-0.4869537	-0.0090039	-0.0443268	0.9179215	2015	-2.448734	2.404942	0.0444316	-0.0491757	0.6251053
	-1.3389569	1.3549103	0.118895	-0.0280804			-17.993953	18.062103	0.210802	-0.1232805	
Health						Religion					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.3600215	1995	-	-	-	-	0.7116333
2000	0.1025438	-0.0680857	-0.0045616	0.0099835	0.3999015	2000	-0.5782623	-0.1046448	1.164369	-0.5412307	0.6518645
2005	-0.788415	0.7594786	0.001083	-0.0021284	0.3699197	2005	2.73407	-2.632309	0.1417385	-0.0010083	0.8943557
2010	-1.01722	1.014928	-0.0047161	0.0051633	0.3680749	2010	-9.903221	9.759007	0.0927696	0.0479162	0.8908275
2015	-0.7598953	0.740839	-0.0008504	0.0030061	0.3511743	2015	0.2472076	-0.4063492	-0.1356999	0.156794	0.75278
	-2.4629865	2.4471599	-0.0090451	0.0160245			-7.5002057	6.615704	1.2631772	-0.3375288	
Human Services											
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.5652739						
2000	-0.4708748	0.5027771	-0.0182863	-0.0170873	0.5618026						
2005	-0.6095781	0.5375071	0.0012345	-0.0140805	0.4768856						
2010	-0.7708216	0.7734823	0.003924	-0.0039896	0.4794807						
2015	-1.008194	1.01606	0.0193139	-0.0271066	0.479554						
	-2.8594685	2.8298265	0.0061861	-0.062264							

Figure C.3: Decomposition (Contributions) (extreme values of labor share dropped)

Arts, Culture, and Humanities						International, Foreign Affairs					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.6334201	1995	-	-	-	-	0.2014134
2000	0.5199484	-0.621813	-0.06093	-0.02388	0.4467387	2000	0.0913695	-0.0966339	-0.1294245	0.0216206	0.0883451
2005	0.0174371	0.0509242	-0.00716	-0.02224	0.4857007	2005	12.42311	-12.40188	-0.0063544	0.0014437	0.1046644
2010	0.6692274	-0.5630877	0.003094	-0.02551	0.5694271	2010	-13.14799	13.19879	0.0191202	-0.0079998	0.1665848
2015	0.0555395	-0.0181097	-0.00402	-0.02331	0.5795272	2015	-0.0640235	0.078727	0.008058	0.023869	0.2132153
	1.2621524	-1.1520862	-0.06902	-0.09494			-0.697534	0.7790031	-0.1086007	0.0389335	
Education						Mutual/ Membership Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	1.401124	1995	-	-	-	-	0.0300221
2000	0.4094806	-0.573586	-0.01005	-0.03523	1.1917447	2000	2.716472	-2.060351	-0.0300205	-0.2663713	0.3897513
2005	0.0541935	0.0498726	-0.00203	0.017003	1.310786	2005	-1.57011	1.193427	0.2663713	0.070804	0.3502436
2010	0.8233993	-0.5280552	-0.02034	-0.04018	1.5456078	2010	3.150113	-2.789539	-0.2240765	-0.004896	0.4818451
2015	0.5458913	-0.4791298	0.001116	-0.03942	1.5740643	2015	6.102107	-5.94637	0.3283254	-0.1754971	0.7904104
	1.8329647	-1.5308984	-0.0313	-0.09783			10.398582	-9.602833	0.3405997	-0.3759604	
Environment and Animals						Public, Societal Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	0.5961246	1995	-	-	-	-	0.4085381
2000	-0.1178718	-0.0243303	-0.00704	-0.06971	0.377172	2000	-1.222415	1.185449	-0.132103	0.0325243	0.2719934
2005	3.055833	-2.974075	0.000139	-0.01871	0.4403576	2005	1.946236	-1.931408	0.0221295	0.0326978	0.3416487
2010	-2.236764	2.287112	-0.01406	-0.0266	0.450048	2010	5.354502	-5.272788	0.0073018	-0.0377431	0.3929214
2015	-0.0407147	0.0580353	0.00827	-0.02561	0.4500244	2015	-2.360623	2.240302	0.0125107	-0.0105409	0.2745702
	0.6604825	-0.653258	-0.01269	-0.14063			3.7177	-3.778445	-0.090161	0.0169381	
Health						Religion					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	10.90069	1995	-	-	-	-	0.2276812
2000	-8.449104	7.267746	0.384997	-2.16652	7.9378068	2000	-5.160507	5.164561	0.0752863	-0.0251675	0.281854
2005	3.644508	-3.62056	0.110104	-0.94287	7.1289906	2005	2.068355	-2.03975	0.0060563	-0.0844606	0.2320547
2010	4.723862	-3.961536	1.295839	-1.4633	7.7238596	2010	4.852459	-4.801336	0.0997629	-0.1241473	0.2587933
2015	4.335358	-3.209564	0.283046	-1.67921	7.4534938	2015	0.2572248	-0.3432665	0.0466244	0.0486577	0.2680337
	4.254624	-3.523914	2.073986	-6.25189			2.0175318	-2.0197915	0.2277299	-0.1851177	
Human Services											
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Aggregate L-Share
1995	-	-	-	-	1.137557						
2000	11.27054	-10.85102	0.026972	-0.07607	1.5079768						
2005	1.06641	-1.506067	0.01764	-0.08417	1.0017867						
2010	12.65022	-12.1897	0.007628	-0.28609	1.1838438						
2015	1.191051	-1.23242	0.003994	0.004807	1.1512753						
	26.178221	-25.779207	0.056234	-0.44153							

Figure C.4: Decomposition (PSR + Contributions) (extreme values of labor share dropped)

Arts, Culture, and Humanities						International, Foreign Affairs					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share
1995	-	-	-	-	0.3820319	1995	-	-	-	-	0.217114
2000	-0.0615162	0.0221759	0.0041324	-0.013657	0.333167	2000	0.0840952	-0.0982359	-0.1365108	0.020666	0.0871289
2005	0.0773264	-0.0357419	-0.0063559	-0.0135938	0.3548019	2005	0.0485345	-0.0282319	-0.0058923	0.010712	0.112251
2010	0.0664958	0.0029715	0.0013521	-0.0177089	0.4079123	2010	0.0484157	0.001213	0.0220818	-0.01668	0.1672792
2015	0.0087661	0.0044047	0.004891	-0.0176998	0.4082744	2015	0.0444088	-0.034457	0.0087556	0.009883	0.1958695
	0.0910721	-0.0061898	0.0040196	-0.0626595			0.2254542	-0.1597118	-0.1115657	0.024579	
Education						Mutual/ Membership Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share
1995	-	-	-	-	0.4595071	1995	-	-	-	-	0.0211931
2000	0.0148268	-0.0152527	0.0024938	-0.0058075	0.4557675	2000	0.1867591	-0.0232051	0.0345657	-0.00442	0.2148906
2005	0.0050219	-0.0015429	-0.0008065	-0.0016708	0.4567692	2005	0.0544766	-0.0491463	0.0229968	-0.09925	0.14397
2010	0.0128696	-0.0043628	-0.0027055	0.0014942	0.4640647	2010	-0.1320703	0.0680703	-0.0016931	-0.00404	0.0742408
2015	-0.0081726	0.0022213	0.0013374	-0.0057818	0.453669	2015	0.0815218	-0.0032997	0.002089	-0.0056	0.1489535
	0.0245457	-0.0189371	0.0003192	-0.0117659			0.1906872	-0.0075808	0.0579584	-0.1133	
Environment and Animals						Public, Societal Benefit					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share
1995	-	-	-	-	0.3849194	1995	-	-	-	-	0.2907072
2000	0.0601866	-0.1217895	0.0041676	-0.0319851	0.295499	2000	0.0148421	-0.0007334	-0.0358506	-0.02208	0.2468815
2005	-0.0049804	0.0500435	-0.0001503	-0.0093857	0.3310261	2005	0.0159642	-0.0309238	0.0242437	0.010312	0.2664777
2010	0.0805065	-0.0499671	-0.0053603	-0.0172552	0.33895	2010	0.0294917	0.0217093	0.0252496	-0.02466	0.3182651
2015	-0.009748	0.0230074	0.0040554	-0.009993	0.3462718	2015	-0.0123586	-0.0501652	0.0100124	-0.01506	0.2506937
	0.1259647	-0.0987057	0.0027124	-0.068619			0.0479394	-0.0601131	0.0236551	-0.05149	
Health						Religion					
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share
1995	-	-	-	-	0.4069915	1995	-	-	-	-	0.3407436
2000	0.0473031	-0.0093489	-0.0049247	0.0058672	0.4458882	2000	0.0265979	-0.0283147	-0.0661451	-0.04168	0.2312024
2005	-0.0224246	-0.0139348	0.0016791	-0.0042501	0.4069578	2005	0.0779224	-0.059879	0.011861	-0.06373	0.1973734
2010	-0.0006522	-0.0018262	-0.0019232	0.0029126	0.4054688	2010	-0.0039524	0.0401736	0.0730539	-0.08433	0.2223156
2015	-0.0008859	-0.0140578	-0.0006396	-0.0004267	0.3894588	2015	-0.0545148	0.0285905	0.0267549	0.011966	0.2351118
	0.0233404	-0.0391677	-0.0058084	0.004103			0.0460531	-0.0194296	0.0455247	-0.17778	
Human Services											
Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share	Year	Unweighted Mean	Covariance Term	Exit	Entrance	Average L-share
1995	-	-	-	-	0.4328238						
2000	-0.0068793	0.0807689	-0.01325	-0.0169291	0.4765343						
2005	0.0008062	-0.0835959	0.0005582	-0.0165761	0.3777267						
2010	0.0011728	0.0559425	0.0014372	-0.0249559	0.4113233						
2015	0.006169	-0.0081381	0.0040026	-0.0116309	0.4017259						
	0.0012687	0.0449774	-0.007252	-0.070092							

Appendix D: SOI Data (Notes on Combining Years)

Figure D.1: Combined SOI Data Income Statement

Revenue

Contributions
Program Service Revenue
Investment Income
Rental Income
Sales of Securities (net)
Sales of Other Assets (net)
Fundraising Events and
Games
Sales of Inventory

Total Revenue

Expenses

Grants
Compensation to Officers
Other Salaries
Benefits and Pension Plans
Total Payroll Expense
Fundraising
Outside Legal Fees
Outside Accounting Fees
Travel Expense
Occupancy
Conferences, Conventions,
and Meetings
Interest Expense
Depreciation Expense
Office Expense
Other Expense

Total Expense

Net Income

Total Revenue
- Total Expense

Net Income

Figure D.2: Combined SOI Data Balance Sheet

Assets

Cash
Savings
Accounts Receivable
Pledges & Grants Receivable
Receivable from officers and other Disqualified
Other loans and notes receivable
Inventory
Prepaid Expenses and Deferred Charges
Securities (investment)
Land, Buildings, Equipment (investment)
Land, Buildings, Equipment (non investment)
Other Assets

Total Assets

Liabilities

Accounts Payable
Grants Payable
Deferred Revenue
Loans from Officers
Mortgages and other notes payable (including tax-exempt)
Other Liabilities

Total Liabilities

Net Fund Balance

Total Assets
- Total Liabilities

Net Fund Balance

Appendix Figure D.4

Name	2008	2009	2010	2011	2012	2013	2014	2015
Page 1								
Service Center Cyle Page Line	scpl							
Employer Identification Number	ein							
Accounting period	taxpd							
Name of Organization	name							
State	state	state	state	state	state	state	state	state
Zip Code	zip							
Exempt subsection	subcd							
Group return for affiliates?	grp_ret_for_afflts							
All affiliates included?	all_afflts_incld							
Group exemption number	grp_exmpt_num							
Termination or contraction	term_or_cntrct							
Total number employees	tot_num_empls							
Statement of Revenue								
Federated campaigns	federated_campaigns							
Membership dues	memshp_dues							
Fundraising events	fnfrsng_events							
Related organizations	rtdt_orgs							
Government grants (contributions)	govt_grnts							
All other contributions, gifts, etc.	all_oth_contri							
Noncash contributions	ncnsh_contri							
Total contributions	tot_contri							
Program service revenue -- Total	psr_tot							
Investment income -- Total	inv_incmt_tot_rev							
Tax-exempt bond proceeds -- Total	bonds_tot_rev							
Royalties -- Total	roylrev_tot_rev							
Gross rents -- Real estate	gro_rents_real							
Rental expense -- Real estate	less_rent_expns_real							
Net rent -- Real estate	rental_incmt_or_loss_real							
Gross rents -- Personal property	gro_rents_prsn							
Rental expense -- Personal property	less_rent_expns_prsn							
Net rent -- Personal property	rental_incmt_or_loss_prsnl							
Net rental income -- Total	net_rent_tot_rev							
Gross sales -- Securities	gro_amt_sl_sls_astc_sec							
Sales expense -- Securities	less_cst_sl_sls_exp_sec							
Net gain from sales -- Securities	gain_or_loss_sec							
Gross sales -- Other assets	gro_amt_sl_sls_astc_oth							
Sales expense -- Other assets	less_cst_sl_sls_exp_oth							
Net gain from sales -- Other assets	gain_or_loss_oth							
Sales of assets -- Total	sale_astc_tot_rev							
Gross fundraising	gro_inc_fnfrsng_evnts							
Fundraising expenses	fnfrsng_drct_expns							
Fundraising income -- Total	fnfrsng_tot_rev							
Gross income from gaming	gro_inc_gaming							
Gaming expenses	gaming_drct_expns							
Gaming income -- Total	gaming_tot_rev							
Gross sales of inventory	gro_sl_sls_of_invntry							
Cost of goods sold (inventory)	cost_of_gds_sold							
Income from sales of inventory -- Total	invntry_tot_rev							
Other revenue -- Total	oth_rev_tot							
Total revenue	tot_rev							
Program service revenue -- Related or exempt	psr_rtdt_amt							
Investment income -- Related or exempt	inv_incmt_rtdt_amt							
Tax-exempt bond proceeds -- Related or exempt	bonds_rtdt_amt							
Royalties -- Related or exempt	roylrev_rtdt_amt							
Net rental income -- Related or exempt	net_rent_rtdt_amt							
Sales of assets -- Related or exempt	sale_astc_rtdt_amt							
Fundraising income -- Related or exempt	fnfrsng_rtdt_amt							
Gaming income -- Related or exempt	gaming_rtdt_amt							
Income from sales of inventory -- Related/exempt	invntry_rtdt_amt							
Other revenue -- Related or exempt	oth_rev_rtdt_amt							
Total revenue -- Related or exempt	tot_rev_rtdt_amt							
Program service revenue -- Unrelated	psr_unrtdt_bus_rev							
Investment income -- Unrelated	inv_incmt_unrtdt_bus							
Tax-exempt bond proceeds -- Unrelated	bonds_unrtdt_bus_rev							
Royalties -- Unrelated	roylrev_unrtdt_bus_rev							
Net rental income -- Unrelated	net_rent_unrtdt_bus_rev							
Sales of assets -- Unrelated	sale_astc_unrtdt_bus							
Fundraising income -- Unrelated	fnfrsng_unrtdt_bus_rev							
Gaming income -- Unrelated	gaming_unrtdt_bus_rev							
Income from sales of inventory -- Unrelated	invntry_unrtdt_bus_rev							
Other revenue -- Unrelated	oth_rev_unrtdt_bus_rev							
Total revenue -- Unrelated	tot_rev_unrtdt_bus_rev							
Program service revenue -- Excluded	psr_excl_amt							
Investment income -- Excluded	inv_incmt_excl_amt							
Tax-exempt bond proceeds -- Excluded	bonds_excl_amt							
Royalties -- Excluded	roylrev_excl_amt							
Net rental income -- Excluded	net_rent_excl_amt							
Sales of assets -- Excluded	sale_astc_excl_amt							
Fundraising income -- Excluded	fnfrsng_excl_amt							
Gaming income -- Excluded	gaming_excl_amt							

Appendix Figure D.4

Additions during the year (escrow)	addn_during_yr								
Distributions during the year (escrow)	distri_during_yr								
Ending balance (escrow)	endng_bal								
Include an amount on Form 990, Part X, line 21?	inclcd_on_fs								
Endowment									
Beginning of year balance	cy_begng_yr_bal								
Contributions	cy_contri								
Investment earnings or losses	cy_invst_earn_or_loss								
Grants or scholarships	cy_grnt_or_schlr								
Other expenditures	cy_oth_expnd								
Administrative expenses	cy_admin_expns								
End of year balance	cy_end_yr_bal								
Board designated EOY balance	brd_desg_eoy_bal								
Permanent endowment EOY balance	perm_endwmt_eoy_bal								
Term endowment EOY balance	term_endwmt_eoy_bal								
Investments - Land, Buildings, and Equipment									
Investments -- Land	land_bk_vl								
Investments -- Buildings	blgd_bk_vl								
Investments -- Leasehold improvements	lshld Imprv_bk_vl								
Investments -- Equipment	equip_bk_vl								
Investments -- Other	oth_lnd_bldg_bk_vl								
Investments									
Total book value of investments	d_tot_bk_vl_land_bldg								
Net Income (Rev & Expense) Reconciliation to Financial Statements									
Total revenue - Schedule D reconciliation	d_tot_rev								
Total expenses - Schedule D reconciliation	d_tot_expns								
Excess or deficit - Schedule D reconciliation	d_excss_or_dftct								
Net Unrealized gains (losses) on investments	net_unrlzd_gl_invst								
Donated services and use of facilities	dnt_srcv_and_fclts								
Investment expenses	invst_expns								
Prior period adjustments	pr_pd_adj								
Other changes amount	d_oth_amt								
Total adjustments (net) (add lines 4-8)	d_tot_adj								
Excess for the year per financial statements	excss_or_dftct_per_fs								
Total revenue per audited financial statements	tot_rev_etc_aud_fincl_stmt								
Net unrealized gains on investments	net_unrlzd_gns_invst								
Donated services and use of facilities	dnt_srcv_and_use_of_fclts								
Recoveries of prior year grants	rcrvy_of_py_grnts								
Other revenues - Schedule D reconciliation	d_oth_revs								
Total amounts - Schedule D reconciliation	rev_not_rptd_990								
Revenue subtotal - Schedule D reconciliation	rev_subtotal								
Investment expenses not included on Form 990	invst_expns_not_inclcd								
Other revenue not included - Sch D reconciliation	oth_rev_not_inclcd								
Total revenue not included - Sch D reconciliation	rev_not_rptd_on_fincl_stmt								
Total revenue - Sch D reconciliation	tot_rev_per_990								
Total Expenses, and Losses per financial stmts	tot_expns_etc_aud_fincl_stmt								
Donated Services and Use of Facilities	dnt_srcv_use_of_fclts								
Prior year adjustments - Sch D reconciliation	py_adj								
Losses reported - Sch D reconciliation	loss_rptd								
Other expenses included - Sch D reconciliation	oth_expns_inclcd								
Expenses not reported on Form 990	expns_not_rptd_990								
Expenses subtotal - Sch D reconciliation	expns_subtotal								
Investment expenses not included on Form 990	invst_expns_not_inclcd2								
Other expenses - Sch D reconciliation	oth_expns_not_inclcd								
Expenses not reported on financial statements	expns_not_rptd_on_fincl_stmt								
Total expenses per Form 990 - Sch D reconciliation	tot_expns_per_990								
Fundraising Revenues/Expenses									
Gross receipts, total - Schedule G	evnts_info_gro_rcpt_tot								
Charitable contributions, total - Schedule G	evnts_info_chrtbl_contri_tot								
Gross revenue, total	evnts_info_gro_rev_tot								
Cash prizes, total	evnts_info_csh_prz_tot								
Non-cash prizes, total	evnts_info_ncsh_prz_tot								
Rent or facility costs, total	evnts_info_rnt_fclty_cst_tot								
Food and beverage expenses, other events	evnts_info_evt_fd_bev_tot								
Entertainment expenses, other events	evnts_info_ent_entrtn_tot								
Other direct expenses, total	evnts_info_oth_drct_exp_tot								
Direct expense summary	evnts_info_drct_exp_sum								
Net income summary	evnts_info_net_incsm_sum								
Gaming Rev/Exp									
Gross revenue, total	gam_info_gro_rev_tot								
Cash prizes, total	gam_info_csh_prz_tot								
Non-cash prizes, total	gam_info_ncsh_prz_tot								
Rent or facility costs, total	gam_info_rnt_fclt_cst_tot								
Other direct expenses, total	gam_info_oth_drct_exp_tot								
Direct expense summary	gam_info_drct_exp_sum								
Net gaming income summary	gam_info_net_gam_incsm_sum								
Non-Cash Contributions									
Works of art -- number	works_num_of_contri								
Historical treasures -- number	arth_num_of_contri								
Fractional interests -- number	artf_num_of_contri								
Books -- number	books_ncsh_contri_rptd_990								

Appendix E: Industry Concentration Graphs

Figure E.1: (Program Service Revenue) CR4, CR20, and HHI for all nine categories

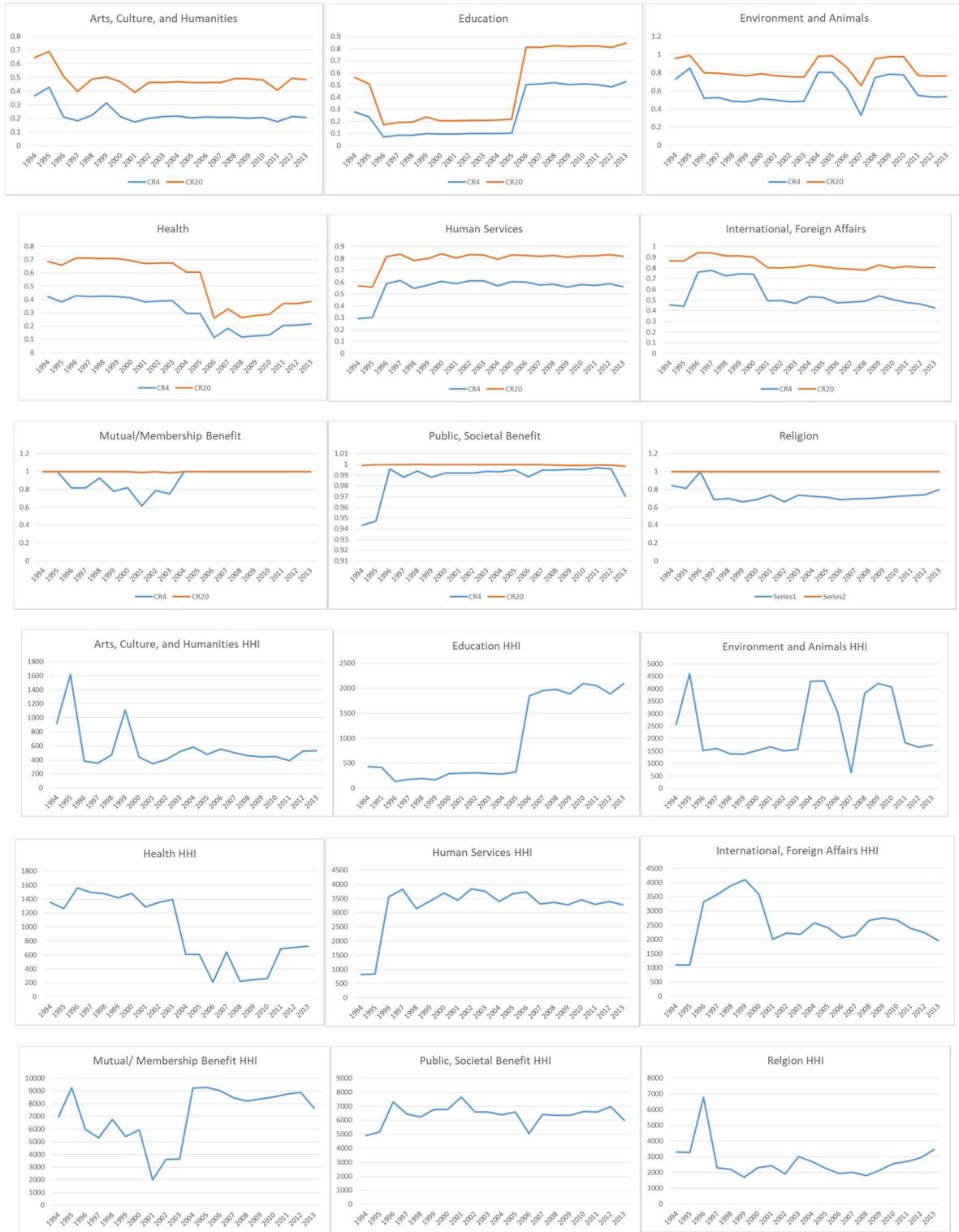


Figure E.2: (Contributions) CR4, CR20, and HHI for all nine categories

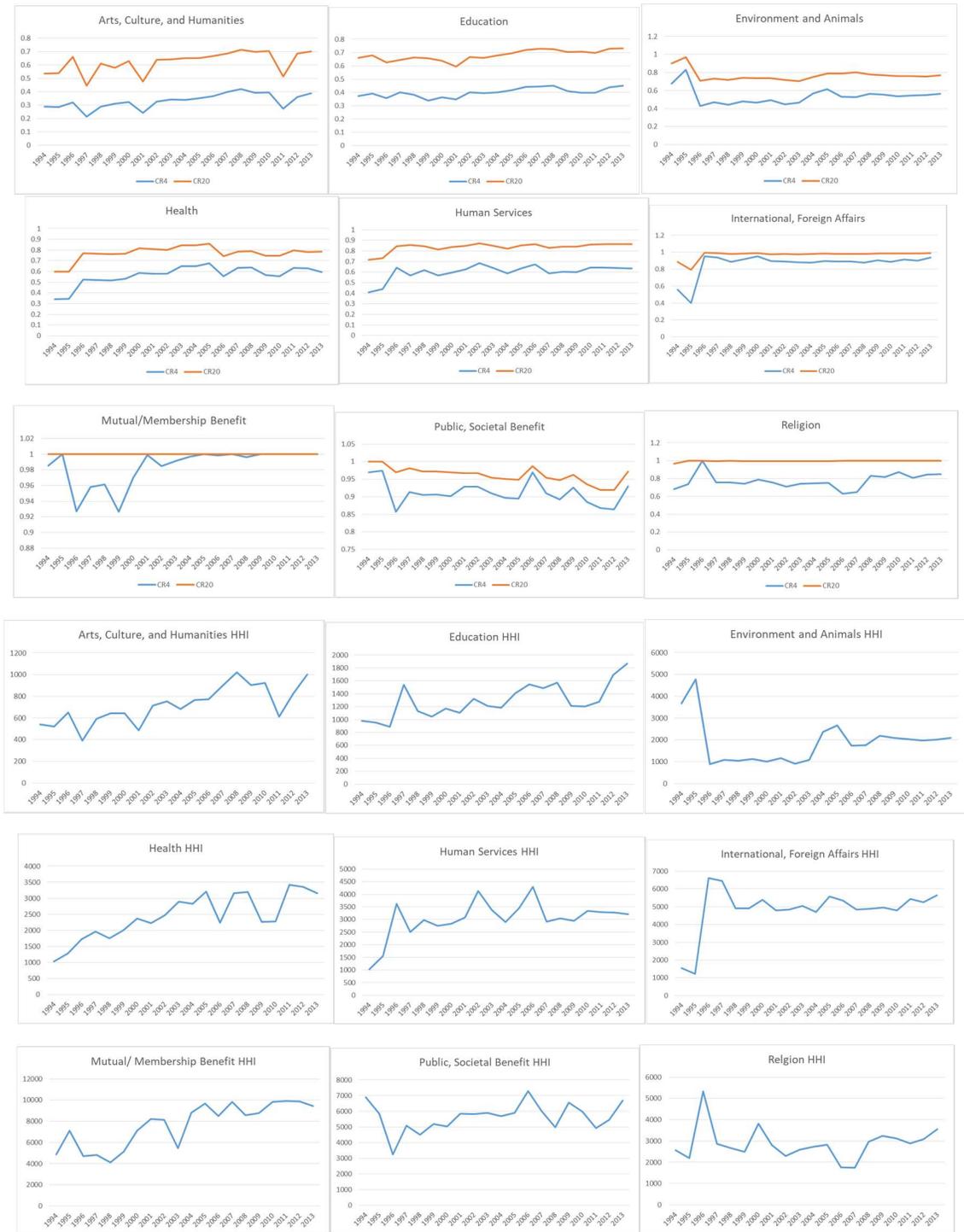


Figure E.3: (Contributions + Program Service Revenue) CR4, CR20, and HHI for all nine categories

