# Executive Compensation Report

## *National Geography*

## Prepared for Nonprofit XYZ

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# Introduction

Establishing the compensation of a CEO is an essential responsibility for a Board of Directors of a nonprofit organization. If a CEO is underpaid, the nonprofit is likely to lose a qualified leader. If a CEO's pay is excessive, or unreasonable, then individuals may be subject to sanctions and fines from the IRS. Navigating between these two alternatives requires a detailed analysis of compensation data. In addition to other requirements, if an executive compensation study uses data "for similarly qualified persons in functionally comparable positions at similarly situated organizations", then a compensation agreement is presumed to be reasonable by the IRS.[1]

# Executive Summary

*Predicted Compensation for National Benchmarking, Adjusted for Cost of Living*

| Actual Compensation | Predicted Compensation | Absolute Difference | Percentile Ranking | Within 95% Confidence Interval? |
|---|---|---|---|---|
| $100,000 | $96,942 | $3,058 | 60th | Yes |

Nonprofit XYZ was benchmarked against a set of national peers. After controlling for the cost of living in the respective regions of the country, the compensation is in-line with prediction models. Nonprofit XYZ is paying slightly more than would be predicted given its characteristics; however, the amount of compensation is well within the confidence interval of the expected salary. Factors other than the organization's assets, revenue, size, and age can affect the amount of compensation. For example, if the current CEO of Nonprofit XYZ has been with the organization for a longer period of time, or the performance of the organization exceeds its peers, then the CEO should be compensated at a higher amount.

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[1] https://www.irs.gov/pub/irs-pdf/i990.pdf. IRS Instructions for Form 990

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# Overview of Nonprofit XYZ

**Mission**: The mission of Nonprofit XYZ is "….." The data below is obtained from the 2013 990 form that was filed with the IRS.

- **NTEE[2] Nonprofit Category:** P, Human Services

- **Employees**: 261

- **Revenue**: $4,362,748

- **Assets**: $5,538,786

- **Number of Years of IRS Tax-Exempt Status:** 52

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[2] National Taxonomy of Exempt Entities

# National Geography

The most similar twenty metropolitan regions (MSAs) to Cincinnati are listed below. These regions were identified based on the labor force, per capita income, and the local unemployment rate. The peer group of twenty nonprofits are selected from within these twenty regions.

*Table 1: Economics of Benchmark Regions*

| MSA | Labor Force | Per Capita Income | Unemployment Rate |
|---|---|---|---|
| Cincinnati, OH-KY-IN | 1,075,664 | $43,923 | 6.5% |
| Portland-Vancouver-Hillsboro, OR-WA | 1,184,538 | $43,728 | 6.6% |
| Indianapolis-Carmel-Anderson, IN | 986,603 | $42,542 | 6.2% |
| Jacksonville, FL | 712,446 | $43,149 | 6.4% |
| Charlotte-Concord-Gastonia, NC-SC | 1,183,047 | $41,645 | 6.7% |
| Cleveland-Elyria, OH | 1,045,657 | $45,747 | 6.9% |
| Kansas City, MO-KS | 1,081,171 | $45,558 | 5.9% |
| St. Louis, MO-IL | 1,441,135 | $45,992 | 6.9% |
| Columbus, OH | 1,021,942 | $43,867 | 5.8% |
| Virginia Beach-Norfolk-Newport News, VA-NC | 844,912 | $44,756 | 5.9% |
| Tampa-St. Petersburg-Clearwater, FL | 1,426,465 | $40,425 | 6.3% |
| Louisville/Jefferson County, KY-IN | 630,733 | $41,477 | 6.7% |
| Milwaukee-Waukesha-West Allis, WI | 823,044 | $47,688 | 6.8% |
| Buffalo-Cheektowaga-Niagara Falls, NY | 556,530 | $44,301 | 6.8% |
| Birmingham-Hoover, AL | 538,368 | $42,570 | 6.2% |
| Rochester, NY | 529,874 | $45,692 | 6.3% |
| Pittsburgh, PA | 1,209,533 | $49,049 | 6.3% |
| Richmond, VA | 652,639 | $46,118 | 5.7% |
| Allentown-Bethlehem-Easton, PA-NJ | 425,366 | $43,817 | 6.8% |
| New Orleans-Metairie, LA | 585,419 | $44,746 | 5.6% |
| **Minimum** | 425,366 | $40,425 | 5.6% |
| **Maximum** | 1,441,135 | $49,049 | 6.9% |

# National Geography – Peer Group Selection

After the twenty peer regions are identified, the most similar nonprofits within these regions are listed below. The compensation of the CEO is compared against twenty other nonprofits across the nation of a similar age that also employ a comparable number of employees, with comparable annual revenue and assets under management. Nonprofits were restricted to those in the Human Services Major Group according to NTEE classification.

*Table 2: Benchmark Regions*

| Organization | City | State |
|---|---|---|
| *Nonprofit XYZ* | *Cincinnati* | *OH* |
| Benchmark 1 | Cincinnati | OH |
| Benchmark 2 | Birmingham | AL |
| Benchmark 3 | Middletown | OH |
| Benchmark 4 | Miami | FL |
| Benchmark 5 | Pittsburgh | PA |
| Benchmark 6 | Jacksonville | FL |
| Benchmark 7 | Portsmouth | VA |
| Benchmark 8 | Independence | MO |
| Benchmark 9 | Milwaukee | WI |
| Benchmark 10 | Rochester | NY |
| Benchmark 11 | Mapaville | MO |
| Benchmark 12 | Pinellas Park | FL |
| Benchmark 13 | Pittsburgh | PA |
| Benchmark 14 | Milwaukee | WI |
| Benchmark 15 | Green Cove Springs | FL |
| Benchmark 16 | Cincinnati | OH |
| Benchmark 17 | Cincinnati | OH |
| Benchmark 18 | Kittanning | PA |
| Benchmark 19 | Kansas City | MO |
| Benchmark 20 | Boca Raton | FL |

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# National Geography – Peer Group Selection

*Table 3: Nonprofit Benchmark Characteristics*

| Organization | Employees | Revenue ($MM) | Assets ($MM) | Age |
|---|---|---|---|---|
| *Nonprofit XYZ* | *261* | *$4.36* | *$5.54* | *52* |
| Benchmark 1 | 231 | $4.99 | $5.68 | 62 |
| Benchmark 2 | 259 | $4.99 | $3.52 | 57 |
| Benchmark 3 | 188 | $6.27 | $4.67 | 54 |
| Benchmark 4 | 226 | $5.13 | $6.17 | 73 |
| Benchmark 5 | 190 | $6.58 | $5.54 | 64 |
| Benchmark 6 | 200 | $4.85 | $3.03 | 44 |
| Benchmark 7 | 220 | $2.55 | $7.80 | 57 |
| Benchmark 8 | 183 | $3.67 | $3.18 | 58 |
| Benchmark 9 | 168 | $6.30 | $4.19 | 50 |
| Benchmark 10 | 201 | $5.20 | $2.91 | 43 |
| Benchmark 11 | 247 | $5.60 | $5.08 | 35 |
| Benchmark 12 | 203 | $7.03 | $8.23 | 43 |
| Benchmark 13 | 368 | $6.05 | $3.16 | 63 |
| Benchmark 14 | 213 | $2.67 | $2.84 | 54 |
| Benchmark 15 | 344 | $7.77 | $5.09 | 40 |
| Benchmark 16 | 347 | $9.21 | $5.06 | 51 |
| Benchmark 17 | 196 | $7.67 | $8.02 | 41 |
| Benchmark 18 | 206 | $9.29 | $7.14 | 50 |
| Benchmark 19 | 167 | $4.75 | $4.37 | 35 |
| Benchmark 20 | 131 | $5.48 | $5.23 | 44 |
| **Minimum** | **131** | **$2.55** | **$2.84** | **35** |
| **Maximum** | **368** | **$9.29** | **$8.23** | **73** |

# National Compensation Analysis, Unadjusted

CEO Compensation: **$100,000**
CEO Compensation Percentile Ranking, Unadjusted: **35th percentile**

| 10th Percentile | 25th Percentile | Median | 75th Percentile | 90th Percentile |
|:---:|:---:|:---:|:---:|:---:|
| $70,827 | $94,063 | $106,016 | $130,259 | $155,057 |

Peer Group Mean: **$110,907**

*Figure 1: CEO Compensation Histogram, Unadjusted*



*Table 4: Highest CEO Compensation, Unadjusted*

| Nonprofit | CEO Comp. |
|:---|:---:|
| High Benchmark 1 | $192,229 |
| High Benchmark 2 | $163,235 |
| High Benchmark 3 | $155,057 |

# National Compensation Analysis, Cost of Living Adjusted

CEO Compensation: **$100,000**

CEO Compensation Percentile Ranking, Cost of Living Adjusted: **60th percentile**

| 10th Percentile | 25th Percentile | Median | 75th Percentile | 90th Percentile |
|:---:|:---:|:---:|:---:|:---:|
| $66,605 | $90,552 | $94,620 | $130,259 | $155,057 |

Peer Group Mean: **$110,907**

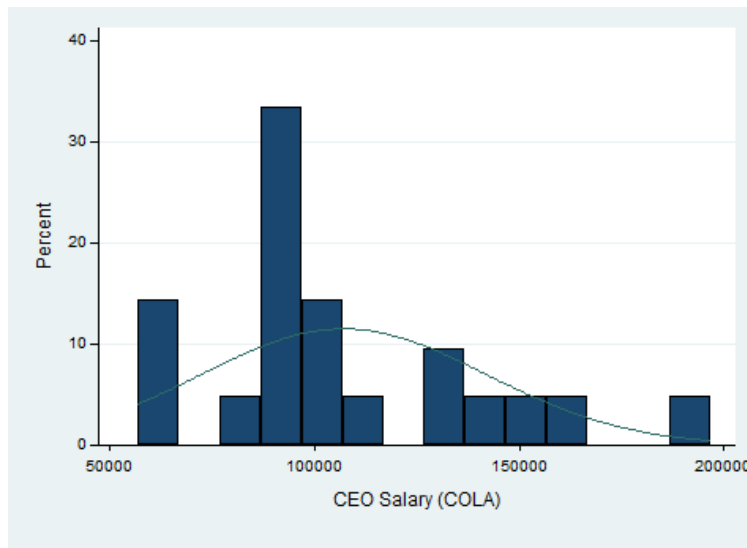*Figure 2: CEO Compensation Histogram, Cost of Living Adjusted*



*Table 5: Highest CEO Compensation, Cost of Living Adjusted*

| Nonprofit | CEO Comp. |
|:---|:---:|
| High Benchmark 1 | $196,513 |
| High Benchmark 2 | $163,235 |
| High Benchmark 3 | $155,057 |

*Table 6: Fair Market Value (4 Bedroom)*

| Cincinnati, OH- KY-IN | Minimum | Median | Maximum |
|:---:|:---:|:---:|:---:|
| $1,144 | $1,050 | $1,459 | $2,462 |

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# Predicted Compensation

The regression model predicts a CEO's compensation, controlling for the organization's number of employees, revenue, assets, and age. Details can be found in the methodology section.
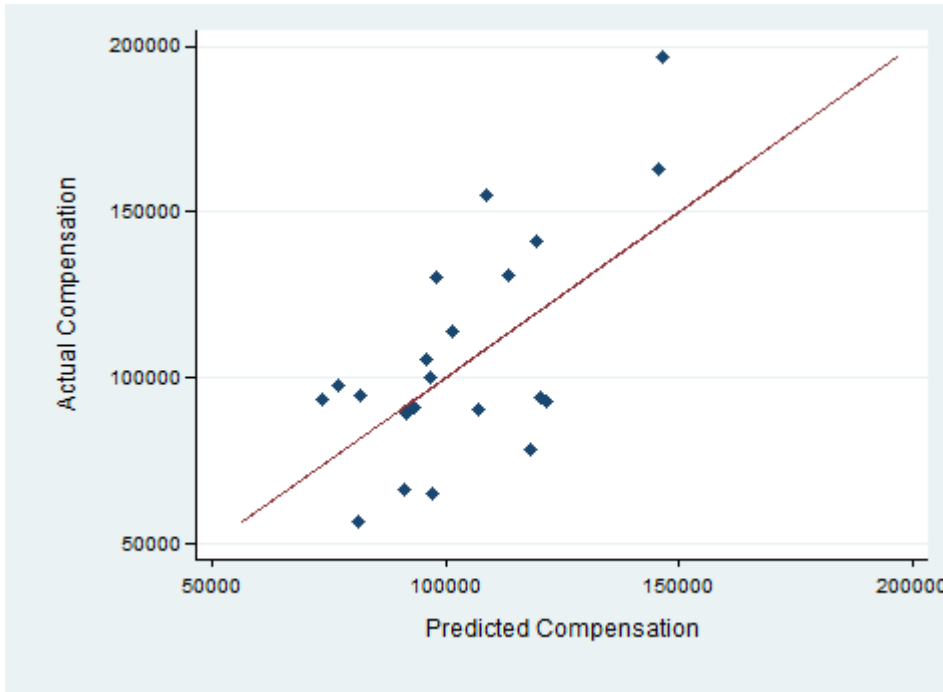
*Figure 3: Actual vs. Predicted Compensation*



*Table 7: Predicted Compensation*

| Organization | Actual Compensation | Predicted Compensation | Absolute Difference | Percentage Difference |
|---|---|---|---|---|
| Nonprofit XYZ | $100,000 | $96,942 | $3,058 | 3% |

*Table 8: Predicted Compensation with Confidence Intervals*

| Organization | Actual Compensation | Lower 95% CI | Predicted Compensation | Upper 95% CI |
|---|---|---|---|---|
| Nonprofit XYZ | $100,000 | $76,977 | $96,942 | $116,907 |

*Figure 4: Annual Percent Change in Compensation*
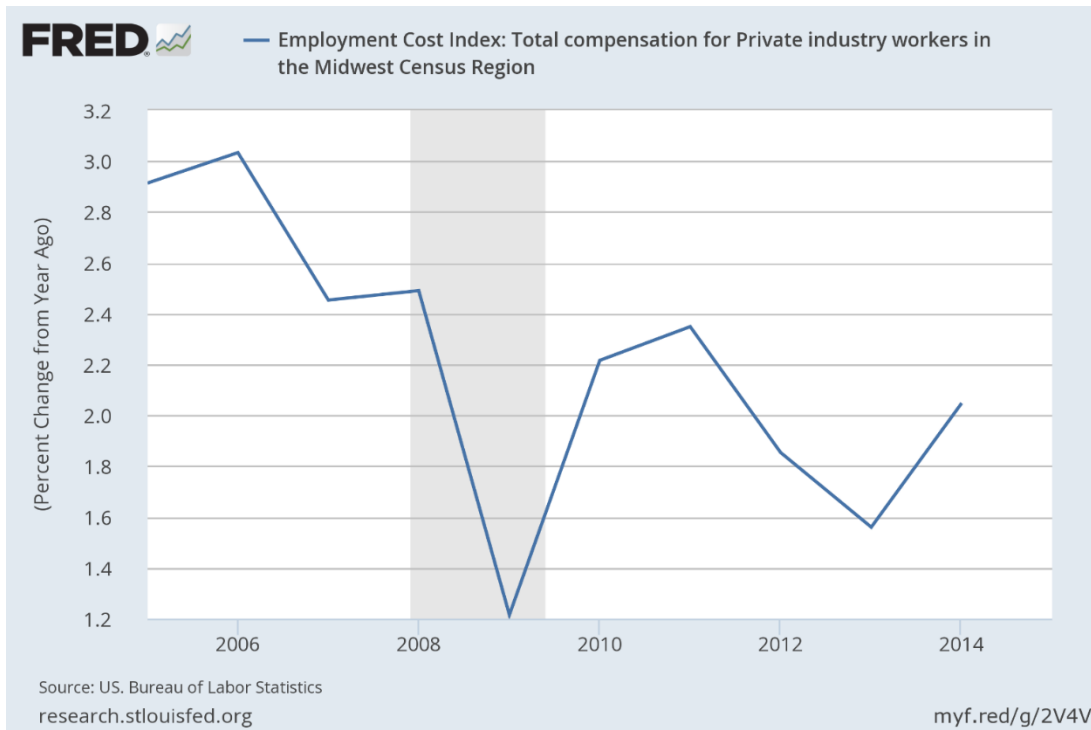


*Table 9: 5 Year Moving Average of Employment Cost Index*

| 2010 | 2011 | 2012 | 2013 | 2014 | 5 Year Average |
|------|------|------|------|------|----------------|
| 2.21% | 2.35% | 1.85% | 1.56% | 2.05% | 2.00% |

*Table 10: Forecast of CEO's Predicted Compensation*

|  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|--------|--------|--------|--------|--------|
| Lower 95% CI | $78,517 | $80,087 | $81,689 | $83,323 | $84,989 |
| **Predicted Compensation** | **$98,881** | **$100,859** | **$102,876** | **$104,933** | **$107,032** |
| Upper 95% CI | $119,245 | $121,630 | $124,063 | $126,544 | $129,075 |

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# Wages and Other Compensation

CEO compensation is generally defined by the IRS to be compensation reported on a CEO's Form W-2 or 1099-MISC. Organizations must also report compensation from related organizations such as subsidiaries and other supporting organizations. A CEO's total compensation in this report is calculated as the sum of the organization's compensation plus any related organization's compensation. This total compensation is the value that is benchmarked against other organizations' compensation packages. In addition, many organizations often provide other forms of compensation including: tuition assistance, employer contributions to qualified retirement plans, medical reimbursement and flexible spending programs, disability or long-term care insurance, etc. Many of these benefits are reported under Form 990, Part VII, Section A, column F under "Other Compensation." Because many of these items are not required to be reported if the total value is less than $10,000, "Other Compensation" is described as a separate category.

Nonprofit XYZ W-2 / 1099 Compensation: **$100,000**
Nonprofit XYZ Other Compensation: **$2615**
Nonprofit XYZ Other Compensation as a Percentage of Income: **2.6%**

*Table 9: Range of Other Compensation, National Benchmarks*

| 10th Percentile | 25th Percentile | Median | 75th Percentile | 90th Percentile |
|:---:|:---:|:---:|:---:|:---:|
| $0 | $0 | $2,615 | $9,211 | $14,777 |

# Methodology

## Data

Financial data for nonprofits is available through the IRS Statistics of Income (SOI) Tax Stats webpage. The annual extract file of tax-exempt organizations is based on an organization's Form 990 which is required to be filed the IRS.

https://www.irs.gov/uac/SOI-Tax-Stats-Annual-Extract-of-Tax-Exempt-Organization-Financial-Data

Benchmark peers are chosen only among those organizations who file the Form 990 "long form." An organization must file this document if its gross receipts exceed $200,000 or its assets are greater than $500,000. Unlike personal income tax returns, there is not a particular date by which an organization is required to file with the IRS. Each nonprofit must file its Form 990 by the 15th day in the 5th month after the fiscal year has ended. A benchmark peer is considered to be in the same filing year as the organization being analyzed if its fiscal year ends within six months of the analyzed organization. For example, if the fiscal year ends on December 31, another organization with a fiscal year end date of September 30 would be considered in the same year as the analyzed organization.

The county workforce data is obtained from the US Census' OnTheMap application.

http://onthemap.ces.census.gov/

The analyzed organization's laborshed, or region where workers work and live, is calculated at the county level. Because the IRS Master File does not indicate the county in which a non-profit is located, the organization's zip code is used to identify the county. The county-zip code crosswalk is available from the US Department of Housing and Urban Development (HUD) -

https://www.huduser.gov/portal/datasets/usps_crosswalk.html

When a zip code is located in more than one county, the organization is assigned to the county in which the county represents the majority of the zip code's geography. If the nonprofit is located within a Census Bureau Metropolitan Statistical Area (MSA), then the MSA is the organization's laborshed. If the nonprofit is not located in an MSA, then the organization's laborshed is the top 10 counties where workers live.

Compensation data is calculated from Part VII, Section A of the 990 Form by summing the reportable compensation from the organization, the reportable compensation from related

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organizations, and the estimated amount of other compensation from the organization and related organizations.  Unfortunately, the IRS annual extract file only contains data on the total amount of compensation paid to Officers, Directors, Trustees, Key Employees, and Highest Compensation Employees.  The file does not separately identify the compensation awarded to the CEO.  In order to identify this amount, the actual 990 forms are obtained from the Foundation Center's website.

http://www.foundationcenter.org/findfunders/990finder/

Each CEO's compensation among the benchmarked organizations is manually recorded.  If the CEO's compensation is missing or listed as zero, then the nonprofit is dropped from the analysis. If the CEO was new to the position during the year or worked less than 32 hours a week, then the nonprofit is also not included in the comparison set.  If a CEO's benefits represent more than 50 percent of the total compensation, then that organization is dropped.  Finally, if assets, employees, or revenue are listed as zero, then these nonprofits are also dropped from the analysis.  On rare occasions, there are human errors in the data (e.g. the *total* column is equal to the CEO's compensation except for two numbers which are reversed).  In these cases, a judgment is made regarding which number is correct.

## National Taxonomy of Exempt Entities (NTEE)

The NTEE is used by the IRS and the National Center for Charitable Statistics (NCSS) to classify nonprofits into one of 10 broad categories and 26 major groups.  The structure is described below with more details available at -

http://nccs.urban.org/classification/NTEE.cfm

I. Arts, Culture, and Humanities - A
II. Education - B
III. Environment and Animals - C, D
IV. Health - E, F, G, H
V. Human Services - I, J, K, L, M, N, O, P
VI. International, Foreign Affairs - Q
VII. Public, Societal Benefit - R, S, T, U, V, W
VIII. Religion Related - X
IX. Mutual/Membership Benefit - Y
X. Unknown, Unclassified – Z

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Interindustry wage differentials is a well-identified phenomenon. The same occupation can result in significantly different levels of earnings depending on the industry in which an individual works. For that reason, the potential set of peers for an analyzed nonprofit is restricted to one of the 26 major groups. For example, a nonprofit that addresses issues related to homelessness will only be compared to other nonprofits that are also identified in the Housing and Shelter (L) major group. If the number of potential peers is too small within a major group, then the analysis is expanded to one of the ten broad categories. In the previous example, the benchmark category would be expanded to Human Services – encompassing the following major groups: I, J, K, L, M, N, O, and P.

## Peer Group Selection

The identification of relevant benchmark peers for the analyzed organization is based on guidance from the IRS in its instructions for completing Part VI, Section, Line 15 of the 990 Form. This line asks "did the process for determining compensation of the following persons include a review and approval by independent persons, comparability data, and contemporaneous substantiation of the deliberation and decision?" Comparable compensation data must be identified "for similarly qualified persons in functionally comparable positions at similarly situated organizations." The National Council of Nonprofits recommends that the comparable nonprofit must be in the same or a nearby geographic area, in a similar or the same sub-sector, and of a similar budget size.

https://www.councilofnonprofits.org/tools-resources/executive-compensation

The IRS' College and Universities Compliance Project Report also lists these characteristics as considerations for determining an organization's peers.

https://www.irs.gov/pub/irs-tege/CUCP_FinalRpt_042513.pdf

The restriction of the analysis to the geographic laborshed and NTEE major group meets the first two of these requirements. The "similar budget size" requirement is satisfied by selecting nonprofits which are closest to the analyzed organization on the following dimensions: number of employees, annual revenue, and total assets. Prior to the analysis, the data is log-transformed in order to minimize the effect of outlier data and to give proper consideration to percentage differences relative to absolute differences. The data is then normalized by setting the mean equal to zero with a standard deviation of 1. As a result, each nonprofit can be fairly compared with any other nonprofit along these dimensions.

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The peer nonprofits are selected by being the "closest" to the analyzed organization in the previously identified dimensions. The nearest neighbor algorithm selects the twenty nonprofits with the shortest distance between themselves and the analyzed organization. Distance is calculated as follows

$$\text{Distance} = ((\text{Employees}_i - \text{Employees}_j)^2 + (\text{Rev}_i - \text{Rev}_j)^2 + (\text{Assets}_i - \text{Assets}_j)^2 + (\text{Age}_i - \text{Age}_j)^2)^{1/2}$$

where *employees, revenue, assets, and age* all have a mean of 0 and SD of 1.

When benchmarking is performed at the national level, the 20 most similar regions (either MSAs or counties) are calculated using the nearest neighbor algorithm with the following regional characteristics: labor force, per capita income, and the unemployment rate. Distance is calculated as follows

$$\text{Distance} = ((\text{Laborforce}_i - \text{Laborforce}_j)^2 + (\text{Income}_i - \text{Income}_j)^2 + (\text{UR}_i - \text{UR}_j)^2)^{1/2}$$

where *laborforce, per capita income*, and *unemployment rate* all have a mean of 0 and SD of 1.

The labor force indicates the size of the region in which a nonprofit operates, the per capita income measures the potential capacity for giving as well as poverty in a region, and the unemployment rate captures the current economic climate. The regional labor force is defined as the sum of employed and unemployed individuals in a region

The data source for the labor force and the unemployment rate is the Bureau of Labor Statistics' Current Population Survey (CPS). Per capita income is derived from the Bureau of Economic Analysis (BEA) Regional Income and Product Account Estimates.

## Cost of Living Adjustment (COLA)

The price level of the same goods and services can vary considerably across geographic regions. A salary of $100,000 in San Francisco, CA results in a lower standard of living compared to $100,000 in Cincinnati, OH. Under national benchmarking, a CEO's compensation should be adjusted for differences in the cost of living. Data on a household's consumer expenditures across various categories can be found at

http://www.bls.gov/news.release/cesan.htm

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At nearly 27 percent of consumer spending, housing represents the largest category of expenditures for an individual. Because housing is a local good (as compared to a tradable good)[3], the price of housing differs significantly across US regions. For example, the fair market rent for a 4 bedroom home in Cincinnati is $1,144 compared to $3,118 in San Francisco. A four bedroom home is chosen for a cost of living adjustment because a nonprofit CEO is more likely to like in a 4 bedroom home rather than a 2 or 3 bedroom home. Other cost of living adjustments may only consider the difference in housing costs for an average individual. Data on fair market rents can found at the US Department of Housing and Urban Development (HUD) website:

https://www.huduser.gov/portal/datasets/fmr.html

The compensation is adjusted for cost of living using the following formula

FMR4_Cola = FMR4_Analyzed + ((FMR4_PeerGroup – FMR4_Analyzed) * 0.27)
Compensation_Cola = Compensation / (FMR4_Cola / FMR4_Analyzed)

## Predicted Compensation

After restricting the data to a similar geography and industry, a regression model is used to predict the CEO's compensation controlling for the number of employees, revenue, assets, and age of the organization. The age of the organization is calculated from the date that the organization received its tax-exempt status from the IRS. The regression model is given below-

$\ln(\text{Compensation}_i) = \beta_0 + \beta_1 \ln(\text{employees}_i) + \beta_2 \ln(\text{revenue}_i) + \beta_3 \ln(\text{assets}_i) + \beta_4 \ln(\text{age}_i) + \varepsilon_i$

where epsilon is an idiosyncratic error term. The standard error of the prediction measures the accuracy of the predicted compensation. For each nonprofit, the regression model predicts the level of compensation for a particular organization's CEO. The formula for the standard error of the prediction is given below -

$$ s_{y_p} = s_e^2 \left( 1 + \frac{1}{n} + \frac{(x - \bar{x})^2}{\sum (x_i - \bar{x})^2} \right) $$

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[3] The price of a tradable good should converge to one price regardless of where the good is consumed or purchased (e.g. gold will sell for the same price to a person in Bozeman, MT as a person in San Francisco, CA.)

where *n* is equal to the number of nonprofits in the sample. The upper and lower limits for the 95% confidence interval for the standard error of the prediction are provided in the report. Often, the four characteristics in the model explain around fifty percent of a CEO's compensation. As a result, there may be legitimate reasons why the compensation of a nonprofit CEO lies outside of 95% confidence interval. An individual's tenure, previous experience, education, job performance, and several other factors can all determine compensation. While the regression model can help to identify the likely range of a CEO's compensation, if the compensation lies outside of the 95% confidence interval of the predicted value, then further research should be undertaken to understand and explain the difference.

# About

Michael Jones, Ph.D., is an Assistant Professor, Educator at the University of Cincinnati. He earned his Ph.D. in Economics at the University of Notre Dame and his MBA from the University of Cincinnati. He is the former Director of Research at the Economics Center; and prior to receiving his Ph.D., he worked as a Senior Research Analyst for the Nielsen Company and as a Senior Business Development Manager at Cincinnati Bell.

He has overseen the execution of dozens of economic studies. His clients have included municipal governments, economic developers, non-profits, trade associations, universities, hospitals, and private sector companies. He has served on the board of directors for the Association of Universities for Business and Economics Research (AUBER) and published in the Economics of Education Review and the IZA Journal of Labor of Economics. He has spoken with media and professional interest groups on economic topics such as the Great Recession, labor market dynamics, retail sales forecasting, and demographic trends.

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