The Impact of COVID-19 on Nonprofit and For-Profit Employment in Indiana: Selected Industries, 2020

April 2023

A joint product of
The O’Neill School of Public & Environmental Affairs at Indiana University and The IU Lilly Family School of Philanthropy

Prepared by
KIRSTEN A. GRØNBJERG
Project Director
Distinguished Professor
O’Neill School of Public and Environmental Affairs at Indiana University

Efroymson Chair in Philanthropy (2001-2020)
Lilly Family School of Philanthropy at Indiana University

LESLIE KUTSENKOW
O’Neill School of Public and Environmental Affairs at Indiana University
Acknowledgments

This report was prepared as part of an ongoing project on the **Indiana Nonprofit Sector: Scope and Community Dimensions**, which was made possible by the support for the Efroymson Chair in Philanthropy (2001-2020) by the Efroymson Fund at the Central Indiana Community Foundation and the Lilly Family School of Philanthropy’s Indiana Research Fund (supported in part by Lilly Endowment Inc.). The analysis conducted for this report was funded in part by a Faculty Research grant from the Lilly Family School of Philanthropy and by research funding available to Professor Grønbjerg in her capacity as Distinguished Professor at Indiana University. Additional funding and in-kind support have been provided by the O’Neill School of Public and Environmental Affairs at Indiana University Bloomington.

An abbreviated version of the analysis presented in this report was included in “The Impact of COVID-19 on Nonprofit Employment in Indiana” by Kirsten A. Grønbjerg and David Kovarik with A. John Marion and Leslie Kutsenkow, presented at the annual ARNOVA Conference, November 17-18, 2022, Raleigh, NC.

We are grateful to Carol O. Rogers and Victoria Nelson at the Indiana Business Research Center for making the data on which this report is based available to us and for very helpful comments on the draft. We thank the many research assistants working on the Indiana Nonprofit Sector project for their contributions to developing the data series and prior reports on which this report is based: Tyler Abbott, Andrea (Lewis) Appeltranger, Anjali Bhatt, Rachel Breck, Pauline Campbell, Anthony Colombo, Kristen Dmytryk, Lauren Dula, Erich Eschmann, Apurva Gadde, Jessica Hilton, David Kovarik. Jacob Knight, A. John Marion, Hannah Martin, Kellie McGiverin-Bohan, Weston Merrick, Rachel Miller, Kathleen Novakosky, Hun Myoung Park, Deb (Oonk) Seltzer, Lauren Shaman, Virginia Simpson, Alexandra (Buck) Toledo, and Kathleen Zilvinskis. Finally, we thank members of the Advisory Board for the Indiana Nonprofit Sector: Scope and Community Dimensions project for helpful comments and suggestions.

Copies of this and all other published project reports are available on the Indiana Nonprofit Sector Website: [https://nonprofit.indiana.edu](https://nonprofit.indiana.edu).

**Suggested Citation**

The Impact of COVID-19 on Nonprofit and For-profit Employment in Indiana: Selected Industries, 2020

TABLE OF CONTENTS

List of Figures ................................................................. 4
Project Advisory Board .................................................. 5
Key Findings ................................................................. 6
Introduction ................................................................. 7
Tracking the Impact of COVID-19 on key service providers. 8
Comparing Indiana Nonprofit and For-profit Employment During 2020 ................................................................. 9

Employment and Payroll by Quarter ................................ 11
Healthcare .................................................................. 11
Social Assistance ....................................................... 12
Education .................................................................. 12
Arts, Entertainment and Recreation (AER) ..................... 13
Recap: Comparing Nonprofit and For-profit Employment Trends ................................................................. 14

Estimating nonprofit employment from private sector data ................................................................. 16

Estimating Nonprofit Employment by Industry .............. 17
Health Care Subindustries ............................................ 18
Social Assistance Subindustries .................................. 21
Education Subindustries .............................................. 21
Arts, Entertainment and Recreation (AER) Subindustries. 22
Recap: Estimation Effort ................................................ 22

Summary and Discussion ............................................... 23

Appendix A Quarterly Covered Employment and Wages (QCEW) Data .................................................. 27
Appendix B Estimation Data ............................................. 28
LIST OF FIGURES

Figure 1. Annual percent change in paid employment by sector for Indiana, 1995-2020 ......................... 10
Figure 2. Annual percent change in payroll by sector ($2020) for Indiana, 1995-2020 .......................... 10
Figure 3. Percent change in total NP and FP employment and payroll by quarter, 2020 ....................... 11
Figure 4. Percent change in NP and FP healthcare employment and payroll by quarter, 2020 ............. 12
Figure 5. Percent change in NP and FP social assistance employment and payroll by quarter, 2020 ...... 12
Figure 6. Percent change in NP and FP education employment and payroll by quarter, 2020 ............. 13
Figure 7. Percent change in NP and FP AER employment and payroll by quarter, 2020 ..................... 13
Figure 8. Ratio of nonprofit and for-profit payroll per employee by industry and quarter, 2020 .......... 15
Figure 9. Actual vs. estimated nonprofit job loss by industry, 2019-2020 ............................................. 17
Figure 10. Estimated nonprofit job loss 2019-2020 as % of actual job loss, by industry ....................... 18
Figure 11. Actual vs. estimated NP job changes, 2019-2020, by major health care subindustries ........ 19
Figure 12. Actual vs. estimated NP job changes, 2019-2020, by hospital subindustries ....................... 20
Figure 13. Actual vs. estimated NP job changes, 2019-2020,
by selected ambulatory care subindustries ................................................................. 20
Figure 14. Actual vs. estimated NP job changes, 2019-2020, by social assistance subindustries ........ 21
Figure 15. Actual vs. estimated NP job changes, 2019-2020, by selected education subindustries .... 21
Figure 16. Actual vs. estimated NP job changes, 2019-2020, by AER subindustries ......................... 22
Figure 17. Scatterplot of estimated NP jobs as % of actual NP jobs in 2020
by NP % of private jobs in 2017 ................................................................. 23
PROJECT ADVISORY BOARD

Keira Amstutz
President & CEO, Indiana Humanities

Jerold Bonnet
Chief Legal Counsel, Office of the Indiana Secretary of State

Michael Budd
CEO, Indiana United Ways

Laurie Burns
Community Impact Officer, Central Indiana Community Foundation

Betsy Denardi
Director of Complex Litigation, Office of Indiana Attorney General

Angela Espada
Executive Director, Indiana Catholic Conference

Amy Haacker
Vice President of Community Foundations Programs, Indiana Philanthropy Alliance

Jane Henegar
Executive Director, American Civil Liberties Union of Indiana

Mark Lindenlaub
Executive Director, Thrive Alliance

Shannon M. Linker
Vice President, Arts Council of Indianapolis

Miah Michaelsen
Executive Director, Indiana Arts Commission

Thomas P. Miller
President & CEO, Thomas P. Miller, and Associates

Ellen Quigley
Vice President of Programs, Richard M. Fairbanks Foundation

Fran Quigley
Clinical Professor of Law, IUPUI Health & Human Rights Clinic

Carol O. Rogers
Co-Director, Indiana Business Research Center

Patrick Rooney
Executive Associate Dean for Academic Programs, Lilly Family School of Philanthropy at Indiana University

Rev. Timothy Shapiro
President, Indianapolis Center for Congregations

Tami Silverman
President and CEO Indiana Youth Institute

Bill Stanczykiewicz
Director, The Fund Raising School, Lilly Family School of Philanthropy at Indiana University

Sara VanSlambrook
Chief Impact Officer, United Way of Central Indiana

Pamela Velo
Principal, Velo Philanthropic Advising

Jo Yocum
Vice President of Field Operations, Playworks; Vice Chair, Serve Indiana Commission
**KEY FINDINGS**

- **Both nonprofit and for-profit establishments lost jobs in Indiana between 2019 and 2020 due to the pandemic-induced recession.** This is the first time since 1995 – and the first of the three recessions during those 25 years – that the number of nonprofit jobs has declined, while for-profits lost jobs in each of the prior recessions. However, both nonprofits and for-profits gained in total payroll in 2020 compared to 2019. The payroll gain is consistent with prior recessions for nonprofit payroll; however, this was the first recession when for-profits also gained payroll, albeit by a very small percentage. Overall, the differences between nonprofit and for-profit employment were more subtle than in prior recessions, presumably because the pandemic-induced recession of 2020 differed significantly from prior recessions in its cause and economic impact.

- **The broad quarterly trends in employment and payroll over the four quarters in 2020 are fairly consistent for nonprofits and for-profits.** If nonprofit employment or payroll increased or decreased in a particular industry, for-profit jobs and payroll did as well. The Arts, Entertainment and Recreation (AER) industry deviates from this pattern where nonprofits saw declines in payroll, while for-profits gained in payroll, despite the fact that both nonprofits and for-profits declined in employment.

- **Nonprofits generally were more successful in protecting jobs from one quarter to the next in most industries but did not maintain or grow payroll.** Nonprofits saw proportionately smaller losses of jobs in health and AER compared to for-profits, but not in social assistance or education. Health, AER, and education nonprofits fared worse than for-profits in maintaining or increasing total payroll. As a result, nonprofits lost some, but not all, of their advantages in average annual wages per employees in several industries. AER was the only industry where average annual nonprofit wages already were lower than for-profit employees at the start of 2020, when AER employees earned only 84 cents on the dollar in average annual wages compared to for-profit employees. By the end of 2020, the ratio was only 61 cents on the dollar.

- **The pandemic highlighted the absence of timely data on nonprofit activities, particularly nonprofit employment, and service capacities in key support industries.** We applied an estimation methodology, pioneered by the Center for Civil Society Studies (CCSS) at Johns Hopkins University, designed to overcome the lack of timely data on nonprofit employment. The approach assumes nonprofit employment tracks the weighted average of nonprofit and for-profit employment in each industry and subindustry.

- **The approach did quite well in estimating the change in nonprofit jobs overall, but when for-profit job percentages are higher in industries, so are the variances.** The nonprofit dominated education and social assistance subindustries had the closest actual job loss numbers to the estimations. However, for general medical and surgical hospitals, which are predominately nonprofits in Indiana, the approach overestimated job losses considerably. In AER, the estimated job loss compared to actual losses varied by subindustry, with amusement, gambling, and recreation having the largest variance.

- **Overall, the findings suggest that Indiana’s nonprofit employers responded somewhat differently to the pandemic than for-profit employers, most likely reflecting at least in part structural and legal differences between the two types of institutions.** Nonprofits that provided essential services, such as social assistance and health care, fared better than those in industries that were shut down, such as AER and membership organizations.
INTRODUCTION

The arrival of COVID-19 in early 2020 and the subsequent rapid spread of serious infections and deaths had a devastating impact on people and institutions everywhere. The pandemic directly impacted health care institutions suddenly faced with an avalanche of highly contagious serious illnesses and deaths. However, closely related efforts to contain and limit infections had ripple effects across all industries and disrupted the production and delivery of goods and services of all types.

The economic disruptions raised key questions about how essential services were impacted by the pandemic. Of particular importance were health care, social assistance, education, and other supportive services that help individuals get through major life challenges – illness, unemployment, homelessness, family tragedies, childcare, poverty, lack of job skills, etc.

In the U.S., most such services are provided by a mix of for-profit and nonprofit institutions. However, there are good reasons to think these two types of sectors differ in how they approach challenges. For-profits are expected to provide their owners with a return on investments by distributing profits to them; indeed, owners are entitled to and may demand such payments.

By contrast, nonprofit institutions do not have owners and U.S. tax laws require them to retain any surplus for furthering their missions. This includes public charities, whose eligibility for receiving tax-deductible donations is predicated on their commitments to public and community benefits. Their access to philanthropic support, as well as government grants and contracts, allow them to provide services at low (or no cost) to people who cannot afford to pay market rates. Importantly, many public charities provide the types of essential services that became particularly important when the COVID-19 pandemic struck. Indeed, more than three-fourths of all paid nonprofit employees in Indiana (81 percent) work in health care, social assistance, and education.¹

These structural and legal differences between nonprofit and for-profit institutions raise key questions about whether and how they differed in their response to the pandemic, given different incentive systems. Assessing that question, however, is severely limited because of the absence of systematic, and especially timely, data distinguishing between the two institutions.

In this report, we examine two key questions posed by this analytical challenge. First, using actual quarterly employment data for Indiana we examine whether nonprofit and for-profit institutions in fact responded differently to the pandemic in terms of losses or gains in jobs and payroll – or whether these response patterns were similar in scope, magnitude, and timing. Second, we partially replicate a widely cited estimation technique designed to overcome the data limitation. The estimation approach assumes that nonprofit employment tracks the weighted average of nonprofit and for-profit employment in particular industries, with weights based on the number of nonprofit employees in the given industry in 2017 – the last year for which official U.S. nonprofit employment data are currently available.

TRACKING THE IMPACT OF COVID-19 ON KEY SERVICE PROVIDERS

When the pandemic hit, public and philanthropic policy makers quickly recognized the importance of tracking its impact on essential services as part of their overall efforts to respond to the impact of the pandemic on families and communities. Because most such services are provided by nonprofits, many policy makers undertook or supported quick surveys of nonprofit institutions, usually relying on easily available nonprofit listings. While such surveys provided valuable snapshots, they were neither comprehensive nor able to track impact over time.

The usual “go-to” source for data on U.S. nonprofits – financial information filed with the IRS on Form 990 by recognized exempt entities – is also inadequate. Not only are churches and small charities not required to register or report, but financial information is only available for a subset of registered exempt entities with annual revenues above $50,000 (about 25 percent of IRS-registered nonprofits). In addition, the type of information also varies by size of revenues for those that do file financial information. And – more importantly – the financial information is far from timely, usually only available at least 1-2 years after the end of the entity’s fiscal year. (In recent years, there have been further delays in obtaining access to these data because of large IRS backlogs.)

In the absence of systematic data on the nonprofit sector in major national reporting systems, particularly timely data, it was very difficult to fully assess the impact of the pandemic on nonprofits providing essential services. Fortunately, the Center for Civil Society Studies (CCSS), directed by Lester Salamon at The Johns Hopkins University, was able to undertake a widely cited effort to estimate changes in nonprofit employment beginning in mid-2020.

The CCSS has long produced occasional reports on trends in nonprofit employment in the U.S. (and for some states) based on the Quarterly Covered Employment and Wage (QCEW) data. These data are produced by the U.S. Bureau of Labor Statistics (BLS) and the U.S. Department of Labor in collaboration with State Employment Security Agencies. The data have much industry detail by location of jobs and cover almost all employers in the U.S. However, they do not distinguish between for-profit and nonprofit establishments.

The CCSS pioneered using the IRS listing of exempt entities to distinguish between nonprofit and for-project employers in the QCEW data in collaboration with the BLS. (Our own analysis of annual trends in Indiana nonprofit employment, 1995-2020, is modelled on the methodology developed by Lester Salamon and his colleagues at the CCSS.)

Because of its close working relationship with the BLS, CCSS was in a unique position to

---

3 The same applies to online data on U.S. nonprofits available by subscription from GuideStar (now Candid) since these data come from the IRS.
5 For a list of publications detailing estimated impact of COVID-19 on nonprofit employment, see reports available here: http://ccss.jhu.edu/category/u-s-focused-projects/ned/covid-19/. The CCSS nonprofit employment project has recently moved to the Schar School at George Mason University (https://nonprofitcenter.schar.gmu.edu/nonprofit-employment-data-project/).
estimate the impact of COVID-19 on nonprofit employment. CCSS published its first report on this topic in June of 2020, estimating that the nonprofit sector had lost 1.64 million nonprofit jobs nationwide during March, April, and May of 2020, or about 13 percent of total estimated nonprofit jobs since 2017.

Subsequent reports updated these estimates regularly until the end of 2021, when the series was discontinued after Salamon’s death. These were estimates only, however, and it will be several years before actual data on how nonprofit employment changed during the COVID-19 pandemic is likely to become available, at least on the national level.\(^6\)

The CCSS estimates were developed from monthly jobs data collected by the U.S. Department of Labor on private sector jobs by industry as part of its Current Employment Statistics (CES) program.\(^7\) The CES data provide a great deal of industry detail, but unfortunately – like the QCEW data – do not distinguish between nonprofit and for-profit jobs. CCSS therefore had to rely on the most recent national data on nonprofit employment produced by the BLS for 2017.

The CCSS used the nonprofit share of total private jobs in key industries in 2017 to estimate nonprofit in March 2020 and each month after that. This approach was based on two assumptions: that the number of nonprofit jobs and the nonprofit shares of all private sector jobs in each industry and subindustry had remained unchanged since 2017, and that nonprofits and for-profits lost jobs at the same rate as all employers in that industry.\(^8\)

In this report, we examine first whether nonprofit and for-profit employment changes directly tracked one another in key nonprofit industries during 2020. If they do, there would appear to be few differences in how nonprofits and for-profits were affected by and/or responded to the pandemic.

Second, we examine whether job losses or gains in Indiana nonprofit employment by industry between 2019 and 2020 tracked corresponding trends in total private employment, as the CCSS estimation technique did. This is a more conservative approach to comparing nonprofit and for-profit employment, since it assumes nonprofit employment tracks the weighted average of nonprofit and for-profit employment in a particular industry. This analysis also allows us to assess whether the CCSS estimation approach provides good approximations to estimating trends in nonprofit employment, given the absence of timely data on such trends.

**COMPARING INDIANA NONPROFIT AND FOR-PROFIT EMPLOYMENT DURING 2020**

In prior recessions, nonprofits (NPs) overall did much better than for-profits (FPs) in protecting jobs and payroll. That was still the case in 2020, but the nonprofit margin was much smaller.

---

\(^6\) The BLS is scheduled to release nonprofit employment and wage data covering 2018-2022. Personal communication, Chelsea Newhouse, April 11, 2023.


\(^8\) Our previous analysis of paid nonprofit employment in Indiana suggests both assumptions are problematic, although mainly for earlier years. For example, the nonprofit share of total social assistance jobs has declined from a high of more than 70 percent between 1995 and 2007 to less than half since 2015 but has remained fairly stable since then (Figure 4, https://nonprofit.indiana.edu/doc/publications/employment/educationupdateresport.pdf).
Indeed, as Figure 1 shows, 2020 was the first time since 1995 (when our data series began), that nonprofits lost jobs (blue bars) and the loss was only slightly smaller (-5.1 percent) than the job loss of for-profit employees (-5.5 percent, green bars).

Figure 1. Annual percent change in paid employment by sector for Indiana, 1995-2020

While nonprofits (blue bars in Figure 2) gained more in total payroll than for-profits (green bars in Figure 2) between 2019 and 2020 (3.2 percent vs. 0.3 percent), this was also the first recession when for-profits did not lose payroll. In short, the annual changes were notably more similar for NPs and FPs in 2020 than during prior recessions. This suggests that using total private sector trends for estimating what happened to nonprofit employment in 2020, as the CCSS methodology did, might provide reasonable estimates.

Figure 2. Annual percent change in payroll by sector for Indiana, 1995-2020
Employment and Payroll by Quarter

While nonprofits and for-profits appear to have experienced broadly similar overall annual changes in employment and payroll from 2019 to 2020, they had quite different trends from one quarter to the next in 2020. For-profits lost more jobs (left half of Figure 3) than nonprofits between Q1 and Q2 (first set of bars) but saw greater gains between Q2 and Q3 (second set of bars) – enough to leave nonprofits with a greater loss overall between Q1 and Q4 than for-profits (last set of bars). For-profits saw much greater losses in payroll (right half of Figure 3) between Q1 and Q2, but greater gains in each of the next two quarters, although not enough to equal nonprofit growth in payroll between Q1 and Q4 (last set of bars).

Figure 3. Percent change in total NP and FP employment and payroll by quarter, 2020

These trends are for total nonprofit and for-profit jobs and payroll across all industries. However, 92 percent of all nonprofits jobs, but only 11 percent of all for-profit jobs, are concentrated in just five industries – health care, social assistance, education, membership associations, and arts, entertainment and recreation (AER). We therefore undertook a similar analysis for the three essential nonprofit industries: health care, social assistance, and education, as well as AER.

Healthcare — Healthcare accounts for most of all nonprofit jobs (59 percent) and payroll (69 percent) in Indiana (but only 8 percent of for-profit jobs and payroll). Consequently, health care drives the overall nonprofit trends described above but is much less important for overall trends in for-profit employment (or payroll).

As Figure 4 shows, nonprofit healthcare establishments lost a much smaller percent of jobs between Q1 and Q2 (down 2 percent) than for-profits in the industry (down 8 percent) but lagged for-profits in jobs gained between Q2 and Q3. By Q4, nonprofit jobs were almost back to the level in Q1, slightly better than was the case for for-profits. Nonprofits also lost less payroll between Q1 and Q2, but during the rest of the year had lower growth in payroll than for-profits as well as when comparing Q4 to Q1 (up 13 percent vs. 23 percent).

9 We compute annual employment as the average quarterly employment and annual payroll as the sum of quarterly payrolls for a given year.
10 We do not present separate details on one industry dominated by nonprofits – membership associations, officially referred to as “religious, grantmaking, civic, professional, and similar organizations.” The data on these establishments are very incomplete, since only a small fraction of congregations is included. For more details, see Appendix A.
Social Assistance — Nonprofit social assistance consistently trailed for-profits jobs (see Figure 5) with greater losses in employees between Q1 to Q2 and smaller gains each of the following quarters as well as overall – down 7 percent between Q1 and Q4 for nonprofits, compared to a loss of only 3 percent for for-profits. Despite their greater loss in jobs between Q1 and Q2 compared to for-profit social assistance establishments, nonprofits lost less in payroll during that period but trailed for-profits in each of the succeeding quarters. Nonprofits ended 2020 with a payroll in Q4 that was 11 percent higher than in Q1, while for-profits ended the year with a payroll that was 15 percent higher than in Q1.

Education — The education industry saw large losses in jobs after the start of the pandemic, down 18 percent between Q1 and Q2 for nonprofits and down 19 percent for for-profits (Figure 6); however, the for-profit education industry is tiny. By Q4, nonprofit jobs were down 7 percent over Q1, but only 4 percent for for-profits. Nonprofits did better than for-profits in payroll between Q1 and Q2 – actually gaining slightly in payroll despite the loss of jobs, while for-profits lost payroll. However, although both nonprofit and for-profit payroll grew in the subsequent quarters, nonprofit payroll trailed for-profit payroll for the rest of the year and by Q4 total nonprofit payroll was 6 percent higher than in Q1, while the for-profit gain was more than twice as large (14 percent).
Arts, Entertainment and Recreation (AER) — In AER, the initial job losses were substantial for for-profits (see Figure 7) – down 37 percent from Q1 to Q2, compared to a loss of only 5 percent for nonprofits. The trends differed also over the remaining quarters. Nonprofits gained 12 percent in jobs between Q2 and Q3, but for-profit jobs rose by a massive 50 percent in the same period. Both nonprofits and for-profits lost jobs between Q3 and Q4, but nonprofits lost more jobs (down 19 percent) than for-profits (down 11 percent). By Q4, nonprofit jobs were down by 14 percent from Q1 and for-profits by 16 percent.

In terms of payroll, nonprofits lost less payroll than for-profits in AER between Q1 and Q2, down 12 percent vs. 39 percent, but then trailed for-profits over the two remaining quarters and by substantial margins. Nonprofit payroll was up only 6 percent between Q2 and Q3, compared to a massive 45 percent increase in for-profit payroll, and nonprofits lost payroll between Q3 and Q4 (down 8 percent), while for-profits saw another substantial increase (30 percent) in payroll. By Q4, nonprofit payroll in AER was down 14 percent compared to Q1, while for-profit payroll was up by 15 percent, despite having lost 16 percent of employees.
Recap: Comparing Nonprofit and For-profit Employment Trends

Several patterns stand out from this analysis. First, the broad annual trends in employment and payroll and over the four quarters for 2020 are roughly consistent for nonprofits and for-profits – if one increased or decreased, so did the other, although the magnitudes differ. There is one exception to that pattern: in AER nonprofits saw declines in payroll between Q3 and Q4 and overall, while for-profits gained payroll in both periods.

Second, nonprofits generally did better than for-profits in protecting the number jobs in health and AER, but not in social assistance or education. However, nonprofits always did worse than for-profits in maintaining or growing payroll, especially in health, AER, and education. These patterns are consistent with our analysis of the distribution of Payroll Protection Program loans to Indiana employers, where we found that nonprofits overall appeared to benefit less from the PPP loans than for-profits.11

Third, the magnitude of percent changes from one quarter to the next, as well as overall from the first to the fourth quarter differs greatly between nonprofits and for-profits, sometimes by a factor of 3-4. The gaps were particularly prevalent in health care, social assistance, and AER. Overall, these findings suggest that the pandemic-induced recession saw greater similarities between nonprofit and for-profit employment and payroll patterns than had been the case in prior recessions. However, there were notable differences in how the two sectors responded to the pandemic during 2020, even within the same industries. For the most part, nonprofits were better able to keep people employed, but for-profits were better able to increase pay for their employees.

It is important to note, however, that nonprofits generally pay higher average annual wages per worker than for-profits when examined at the industry and subindustry levels. We therefore checked to see whether and how much average annual payroll per employee converged for nonprofit and for-profit employees over the course of 2020.

As Figure 8 shows, nonprofit workers overall received slightly higher average annual wages than all for-profit workers combined (ratio of 1.01 at the start of the pandemic) and that ratio had increased to 1.06 by Q4 (light blue solid line). However, as noted earlier, nonprofit workers are largely concentrated in the four key industries examined above – health care, social assistance, education, and AER. Those four industries accounted for 83 percent of all Indiana nonprofit workers in 2020, compared to only 11 percent of for-profit workers. For-profit workers dominate relatively well-paying industries, such as manufacturing and construction.

When we look at average annual wages for just the four key nonprofit industries examined here, nonprofit workers received higher average pay than for-profit workers in all four industries combined, as well as in three of these industries. However, there was no pay advantage for those working in AER (bottom dashed line). Those workers began the year earning only 84 cents on the dollar compared to for-profit AER workers. By Q4, the pay disadvantage was even greater – with workers earning an average of only 61 cents on the dollar.

Among the remaining industries nonprofit workers in social assistance maintained their

comparative pay advantage of about 25 percent higher pay throughout 2020 (see dotted red line). However, nonprofit workers in two other industries lost some of their pay advantage. For nonprofit workers in health care (solid red line), the average pay per worker declined from 32 percent to 18 percent above the average pay of for-profit workers between Q1 and Q4. There was a much more modest decline for nonprofit workers in education (dark blue line at top), down from 45 percent to 40 percent higher than average pay for for-profit workers by Q4.

Figure 8. Ratio of nonprofit and for-profit payroll per employee by industry and quarter, 2020

We plan to examine these questions in more detail when we obtain access to Indiana employment and payroll data for 2021. This will allow us to determine whether the nonprofit pay advantage continued through 2021, given tight labor market conditions that year. We will also explore pay levels at subindustry levels, since our previous detailed industry analyses\(^{12}\) shows considerable differences at that level, especially for healthcare, education, and AER.

The finding of some level of divergence in nonprofit and for-profit employment and payroll trends during 2020, also raises questions about the methodology developed by the CCSS to estimate the impact of the pandemic on nonprofit employment.\(^{13}\) This methodology assumed nonprofits and for-profits would shed and gain jobs at the rate same rate as the overall private sector in a particular industry over the course of 2020. Our findings suggest that was not the case, at least not for the broad industries examined so far.

We turn now to a more direct examination of the CCSS estimates. For this part of our analysis, we seek to determine whether Indiana nonprofits lost – or gained – as many jobs between 2019 and 2020 as they would have done if they simply mirrored trends for all private sector employers – nonprofits and for-profits combined.

Even if nonprofits were responding differently to the pandemic than for-profits, we would expect trends in private sector employment to be dominated by data from nonprofit institutions for industries dominated by nonprofits. Correspondingly, for industries dominated by for-profits, we would expect overall private sector trends to align with for-profit trends. We examine the expected and actual changes in jobs for nonprofits overall and for the four key industries

---

\(^{12}\) See industry reports available here: [https://nonprofit.indiana.edu/research-results/employment-by-industry.html](https://nonprofit.indiana.edu/research-results/employment-by-industry.html).

examined above – health care, social assistance, education, and AER. However, we also include some detailed industry categories. Doing so allows for more useful analysis of institutions engaged in similar work\textsuperscript{14} and aligns with details included in the CCSS estimates.

**ESTIMATING NONPROFIT EMPLOYMENT FROM PRIVATE SECTOR DATA**

As noted earlier, the CCSS estimates were developed from monthly jobs data collected by the U.S. Department of Labor on private sector jobs by industry. This data provides a great deal of industry detail, but unfortunately – like the QCEW data – do not distinguish between nonprofit and for-profit jobs. CCSS therefore had to rely on the 2017 national estimates of nonprofit employment developed by the BLS, the most recent data available at the national level.

The CCSS used the nonprofit share of total private jobs in key industries in 2017 as developed from the QCEW data and applied this share to the count of private sector jobs at the start of the pandemic and in subsequent periods in order to estimate total nonprofit jobs at each point in time. Because the QCEW data for 2020 would not be available for some time, CCSS instead relied on much more timely monthly jobs data collected by the U.S. Department of Labor on private sector jobs by industry from the Current Employment Statistics (CES) program. The two data systems are closely related, although there are some differences.\textsuperscript{15} The estimation approach assumes that nonprofit employment in the CES tracks the weighted average of nonprofit and for-profit employment in particular industries, with weights based on the number of nonprofit employees in the given industry in 2017 in the QCEW data.

We decided not to use monthly CES jobs data for Indiana, since those data are based on only a fairly small sample of private sector establishments in the state – just 2,000 establishments with about 12,400 employees.\textsuperscript{16} By comparison, there were almost 150,000 private sector establishments with about 2.7 million employees in Indiana in 2020 and CES sampling errors are quite high, particularly at the industry level.

We rely therefore entirely on data available from the closely related QCEW system to examine how well the CCSS estimating techniques worked. To replicate the CCSS methodology as closely as possible, we assumed we had actual nonprofit shares of private sector jobs by industry for 2017, but only total private sector jobs by industry for Indiana in 2019 and for 2020 for the QCEW data, not actual nonprofit and for-profit jobs.

We considered two approaches: (1) Applying CCSS’ national estimates of nonprofit share of total private jobs in 2017 directly to Indiana. This approach assumes the nonprofit shares of total

\textsuperscript{14} For example, the health care field includes large institutions with well-paid employees such as hospitals, as well as much smaller establishments with many low-wage workers, such as nursing homes and residential care facilities. These two types of institutions were likely affected differently by the pandemic, and importantly, also differ in their composition. In Indiana, private hospitals are dominated by nonprofit institutions, while nursing and residential care facilities are more evenly split between the two sectors.


private jobs by industry is identical for Indiana and the U.S. From previous analysis, we know there are broad similarities between Indiana and the U.S. in the nonprofit shares of jobs by industry, but also notable differences.\textsuperscript{17} Or (2) Applying only the core element of the CCSS methodology and use the Indiana nonprofit share of private sector jobs in 2017 by industry.

**Estimating Nonprofit Employment by Industry**

We used the second approach since it reflects the actual nonprofit share of private sector jobs in Indiana for each industry as it was in 2017. We applied the 2017 nonprofit shares of private jobs by industry for Indiana to estimate nonprofit jobs by industry for 2019, using actual private sector jobs in 2019 as the base. We did the same for 2020 – using the Indiana nonprofit share of private sector jobs by industry for 2017 to estimate nonprofit jobs by industry for 2020, using the actual private sector employment in 2020 as the base.

Next, we computed the estimated changes from 2019 to 2020 in the number of jobs by industry for Indiana and compared these to the actual changes from 2019 to 2020. As Figure 8 shows, the actual net loss of nonprofit jobs between 2019 and 2020 was 15,400 (dark blue bar on far right), while our adaptation of the CCCS estimation yielded a net loss of 16,000 nonprofit jobs (grey shadow bar on far right), suggesting that the estimation was very close at this aggregate level.

![Figure 9. Actual vs. estimated nonprofit job loss by industry, 2019-2020](image)

However, there are notable differences in how well the estimated losses of jobs matched actual job losses across key nonprofit industries (as noted above, we combined membership associations with “all other” jobs because of incomplete data in that industry as described in Appendix A). A comparison of the dark blue bars (actual changes) in Figure 9 shows that “all other industries” (including membership associations) accounted for the largest share of the actual losses (41 percent), followed by education (28 percent) and social assistance (17 percent) with AER (8 percent) health care (5 percent) trailing notably behind. The estimates (grey shadow bars) split the job losses much more evenly between education (26 percent), health care (20

\textsuperscript{17} See Appendix C (pp. 39-42) in *Recessions and Indiana’s Nonprofit Employment*, by Kirsten A. Grønbjerg and Alexandra Toledo with Deb Seltzer (Bloomington, IN: Indiana University School of Public and Environmental Affairs, February 2014). Online at [https://nonprofit.indiana.edu/doc/publications/employment/innonprofemploytrendsrecession.pdf](https://nonprofit.indiana.edu/doc/publications/employment/innonprofemploytrendsrecession.pdf).
percent) and “all other” industries (19 percent), with social assistance and AER each accounting for 10-11 percent of total nonprofit job losses.

Overall, as Figure 10 shows, we find that the estimate of nonprofit job losses between 2019 and 2020 was very close to the actual loss overall (an overestimate of only 4 percent) and for education (an underestimate of just 5 percent). However, the estimation technique significantly overestimated (blue bars) nonprofit job losses in health care (estimated to be almost four times larger than was the actual losses and to a lesser extent in AER (by about a quarter), but also notably underestimated (red bars) nonprofit job losses in social assistance (by one-third) and in “all other” industries by about half.

Figure 10. Estimated nonprofit job loss 2019-2020 as % of actual job loss, by industry

Detailed analysis of how well the estimation methodology worked for specific subindustries reveals greater differences. We use the same subindustries presented in the CCSS analysis, but caution that the methodology has built in uncertainties, particularly for subindustries with very few nonprofit employees. In the analysis below, we omit three subindustries included in the CCSS analysis that have less than an estimated 50 nonprofit jobs in Indiana in 2019 and 2020 under the CCSS estimation methodology. Those three – junior colleges in the education industry, and dentist offices and other health practitioner offices in the health care industry – also had less than 100 actual nonprofit jobs in both 2019 and 2020.

Health Care Subindustries — In health care, the estimated job changes are close to actual job changes only for nursing and residential care – off by only 10 percent (see Figure 11). However, the methodology significantly overestimated nonprofit job losses in hospitals (by a factor of almost three). The size of this discrepancy is surprising, since nonprofits account for almost 90 percent of total private sector jobs in the hospital industry, suggesting that nonprofit and for-profit hospitals diverged considerably in how they responded to the pandemic.

We thought this divergence in the estimated and actual impact of the pandemic on hospitals might reflect differences between types of hospitals and how they were impacted by the pandemic. Thus, general medical and surgical hospitals bore the brunt of the direct health impact of the pandemic. Nonprofits dominate this particular subindustry, accounting for almost 90 percent of all private sector jobs in these types of hospitals. By contrast, nonprofits account for only about half of all private sector jobs in psychiatric and substance abuse hospitals and
about 40 percent of all private sector jobs in specialty hospitals (e.g., heart disease, orthopedic or surgical centers). Specialty hospitals (as well as ambulatory services) were less directly affected by the pandemic itself and more directly affected by Governor’s executive order 20-04 on March 16 banning all elective and non-essential surgeries.18

Consequently, we expected the estimated nonprofit job losses to diverge mainly for the latter two types of hospital subindustries, but to be close to the actual job losses for general medical and surgical hospitals, since this subindustry is dominated by nonprofits. However, this is not the case. As Figure 12 shows, the methodology slightly underestimated the small job losses for psychiatric and substance abuse hospitals and slightly overestimated the gains for other specialty hospitals. Overall, the estimated total nonprofit jobs for each of these two types of hospitals were within 2-4 percentage points of the actual nonprofit jobs.

Instead, as Figure 12 shows, the divergence for hospitals between estimated and actual job changes was driven almost entirely by general medical and surgical hospitals. They lost about 330 jobs between 2019 and 2020 but were estimated to have lost almost 1,100 jobs if they had followed the overall loss in private employment for nonprofits and for-profits combined.

Closer analysis shows that for-profit general medical and surgical hospitals did indeed lose a disproportionate number of jobs. For-profit hospitals accounted for only 10 percent of all private sector jobs in general medical and surgical hospitals in both 2019 and 2020, so should have accounted for only 10 percent of the lost jobs. However, the actual percentage was more than seven times larger – 72 percent of all jobs lost in these types of hospitals between 2019 and 2020 were lost by for-profits (a loss of 885 jobs out of 1,224 total lost jobs).

Certainly, the relatively few for-profit general medical and surgical hospitals in Indiana are much smaller – averaging less than 450 employees compared to almost 1,300 employees for non-profit general medical and surgical hospitals in 2019.19 Given their smaller size, perhaps they were less able to manage the sudden influx of very ill COVID-19 patients, especially if they are less likely to operate trauma centers (and other unprofitable services) as other research suggests.20

---

In Indiana, at least, for-profit general medical and surgical hospitals also paid smaller average annual wages than their nonprofit counterparts ($49,000 vs. $57,000 per employee) in 2019. As a result, they were likely less able to compete effectively for medical personnel as the pandemic dramatically increased the demand for highly trained medical personnel to treat the influx of very sick patients.

The CCSS methodology estimated a net loss in nonprofit ambulatory care services of almost 500 jobs, while the subindustry actually gained roughly the same number of employees. A closer analysis of the ambulatory health care services subindustries in Figure 13, shows that the CCSS methodology overestimated gains of nonprofit jobs in outpatient care centers (by a factor of almost two).

The methodology suggested small jobs losses in the two remaining minor ambulatory care subindustries included in Figure 13 – nonprofit physician offices and other ambulatory services. However, actual nonprofit jobs in physician offices were notably higher in 2020 than in 2019 and notably lower in other ambulatory services. We do not have more detailed sub-industry data to examine these discrepancies to determine whether the discrepancies were aligned with particular ambulatory specialty services.

---

21 As noted above, we do not include two other ambulatory care subindustries used the CCSS analysis – dentists’ offices and other health practitioners’ office – because there are very few nonprofit employees in each in Indiana.
Social Assistance Subindustries — The underestimate of overall nonprofit job losses in social assistance (See Figure 10 and first set of bars in Figure 14) by a factor of three was of the same relative magnitude as for individual and family services, the largest subindustry. The estimated job losses in the remaining three subindustries are close to the actual job losses. The methodology slightly underestimated nonprofit job losses in vocational rehabilitation services and slightly overestimated losses in child day care services. The methodology was right on target for the very small food, housing, and relief services. The latter is not surprising, since this subindustry is almost entirely nonprofit, so using changes in total “private” jobs as the baseline estimate will closely approximate nonprofit job losses.

![Figure 14. Actual vs. estimated NP job changes, 2019-2020, by social assistance subindustries](image)

Education Subindustries — As Figure 10 showed earlier, the overall estimates of nonprofit job losses in education were very close to the actual job losses. That is what we would expect, since more than three-fourths of all private sector workers in education work for nonprofits, so the overall nonprofit job changes would likely follow closely changes in total private sector jobs in the industry (this, this excludes public schools and universities). This holds also for the largest of the major subindustries shown separately in Figure 15 – nonprofit colleges, universities, and professional schools, which is almost entirely nonprofit in Indiana (97 percent).

The estimated job losses are also very close to the actual job losses in the two other education subindustries included in Figure 15 – the fairly large elementary and secondary schools and the very small educational support services. As noted above, we do not include junior colleges in this figure because of the very few nonprofit workers in this subindustry in Indiana.

![Figure 15. Actual vs. estimated NP job changes, 2019-2020, by selected education subindustries](image)
Arts, Entertainment and Recreation (AER) Subindustries — As Figure 10 showed earlier, the CCSS estimation methodology overestimated actual nonprofit job losses in the Indiana arts, entertainment and recreation industry by almost a quarter (see also first bar in Figure 16). The methodology also overestimated nonprofit job losses in all AER subindustries, although the degree of overestimation varied.

The overestimate of nonprofit job losses was greatest in the amusement, gambling, and recreation subindustry (by almost half), followed by museums and historical sites (by more than a quarter). The overestimated job losses were closer in the performing arts and spectator sports subindustry (by about 15 percent) and in its minor subindustry, performing arts companies (by 10 percent). The latter (lighter blue bar in Figure 16) accounts for most of nonprofit employees in the performing arts and spectator industry (about two-thirds).

Recap: Estimation Effort
In this part of our report, we focused on whether changes in nonprofit employment in Indiana between 2019 and 2020 could have been estimated by using total private employment (nonprofit plus for-profit). Our analysis partially replicated an estimation technique developed by the Center for Civil Society Studies (CCSS) at Johns Hopkins University designed to provide a timely estimate of the impact of COVID-19 on nonprofit employment.

Comparing these estimates to actual changes between 2019 and 2020 in nonprofit jobs by detailed industry confirms that the CCSS estimation technique provided a reasonable approach to estimating the impact of COVID-19 on nonprofit job losses in real time. Given the lack of timely data on nonprofit jobs during 2020 (there is at least a 9-month delay obtaining the QCEW data), this is an important finding.

We have focused this part of our analysis on the estimated vs. actual job losses or gains between 2019 and 2020 for essential industries and subindustries. Those changes were of greatest relevance to policy makers concerned about the ability of high priority service sectors to respond adequately to challenges posed by the pandemic. We note that for most of the industries and subindustries we have examined, the total number of estimated nonprofit jobs as a percent of actual nonprofit jobs is usually 95 percent or better.

Of course, these were estimates only and they were based on nonprofit shares of private employment that were in place in 2017, five years earlier. We know from previous analysis of
nonprofit employment in Indiana that those nonprofit shares change over time – increasing in some industries and subindustries and declining in others. It is not surprising, therefore, that while the estimates appear to be close at the aggregate level and for some key industries, particularly education where nonprofits account for most of the private sector jobs, estimates of job losses (or gains) for other industries and subindustries were off by a considerable margin.

Indeed, as expected, the methodology works best in estimating nonprofit jobs in industries or subindustries dominated by nonprofits. If nonprofits account for about 80 percent or more of private sector jobs in 2017, the estimated as a percent of actual nonprofit jobs in 2020 is very close to 100 percent (see right segment of Figure 17 and Appendix A). The more for-profits dominate a particular industry or subindustry (left segment of Figure 17), the greater is likely to be the discrepancy between estimated and actual nonprofit jobs.²²

Figure 17. Scatterplot of estimated NP jobs as % of actual NP jobs in 2020 by NP % of private jobs in 2017

It is worth noting also, that the estimation approach is more likely to underestimate nonprofits jobs than overestimate them – 13 of the scatterplot points are below the 100 percent line in Figure 17 compared to only 7 points above the line. When looking at how far from the 100 percent line the deviations are, there is a slight tendency for the underestimates to be greater than the overestimates. The average deviation for estimates below the 100 percent line is 5 percentage points, compared to an average of 3 percentage points for those above that line. The difference is small but does suggest nonprofits did better in holding on to jobs than estimated if they had followed overall private sector trends.

SUMMARY AND DISCUSSION

In this report we have addressed key questions about how the COVID-19 pandemic impacted the ability of Indiana community institutions to deliver essential services – capacities that

²² The high outlier in Figure 17 is educational support services (estimated nonprofit jobs as percent of actual jobs of 112 percent) and the low outliers (90 percent or less) include two ambulatory subindustries. The graph includes only subindustries to avoid double-counting particular industries.
became a major concern to policy makers as the pandemic evolved and spread over the course of 2020. We pay particular attention to employment patterns in institutions providing health care, social assistance, and education. These are services that help individuals, families and communities deal with major life challenges – illness, loss of income, unemployment, stress, child-care responsibilities – challenges either brought about by the pandemic or severely aggravated by it. We also examined the impact on the arts, entertainment, and recreation (AER) industry, an industry more associated with enhancing the quality of life for Hoosiers.

We have examined trends in employment patterns – changes in the number of employees and total payroll between 2019 and 2020 and by quarter during 2020. By doing so, we implicitly assume that employment trends align with changes in the capacity of institutions to deliver services. We recognize that some services may be provided by unpaid volunteers. However, the use of volunteers was severely restricted after the middle of March 2020 by health and safety protocols imposed by Governor Holcomb to limit the spread of infections. We also recognize that some employers may be able to invest in labor-saving technology or structure work in ways that allow for greater service capacity per employee than others. We are not able to take those factors into account in this analysis.

We focus particularly on nonprofit institutions and how they appear to have been impacted by and/or responded to the pandemic compared to for-profit employers. There are important structural and legal differences between nonprofit and for-profit institutions which suggests they might respond differently. For-profits have owners with the right to make decisions about how the institution should respond to challenges and opportunities. They also have access to equity capital, allowing them fairly quickly to make investments in the company. Their easier access to and familiarity with financial institutions may help account for findings in our previous report on the Payroll Protection Program loan program in Indiana – that for-profits appeared to have had some advantages over nonprofits in accessing the loan program.

Nonprofit institutions do not have owners and therefore cannot raise capital by selling equity in the organizations. Instead, they can raise charitable donations or borrow funds, but both options are potentially problematic. Capital fund-raising campaigns are likely to involve costly and multi-year fund-raising efforts and even so, may be feasible only for large, well-established charities such as universities or major cultural institutions. Moreover, such campaigns would have been very challenging during the pandemic, since individuals and businesses faced major uncertainties about their own futures and likely would have responded primarily to requests for immediate support. Traditional lenders, such as banks, may not be comfortable with the diverse and uncertain revenues streams nonprofits use and may see them as riskier loan customers, unless they have personal connections to them. Nonprofits must also rely on their fairly complex board governance structures to keep the organization aligned with their community and public benefit mission if they are to keep its IRS-recognized tax-exempt status.

---


Several key findings stand out from our analysis:

First, the pandemic-induced recession of 2020 was the first time since 1995 that nonprofit employment in Indiana declined from one year to the next. In two prior recessions, 2008-09 and 2001, only for-profits lost employment. That different pattern for 2020 is undoubtedly related to the fact that it is also the first recession that impacted virtually all segments of the economy, not primarily a particular industry, such as the housing crisis in 2008-09, or industries dependent on consumer’s discretionary spending.

Second, nonprofits maintained their comparative advantage over for-profits at the aggregate level. They lost proportionately fewer jobs and gained more in total payroll between 2019 and 2020 than the for-profit sector.

Third, despite the loss of jobs, nonprofit and for-profit payroll both increased, especially during the fourth quarter of the year. In a separate report, we have examined how the massive volume of loans issued under the Payroll Projection Program (PPP) – $9.5 billion in more than 84,000 loans – were distributed to Indiana nonprofit and for-profit employers in 2020. That report showed that nonprofits received higher loan amounts (mainly because they have more employees) than for-profits, but a lower share of loans compared to their share of jobs or payroll.

Fourth, when focusing on key nonprofit industries – health care, social assistance, education, and AER – we find that the broad trends in employment and payroll over the four quarters for 2020 are roughly consistent for nonprofits and for-profits. However, nonprofits did better than for-profits in protecting the number jobs in some industries but did worse than for-profits in maintaining or growing payroll, sometimes by a factor of 3-4. Nevertheless, nonprofit workers generally maintained their long-standing average pay advantage over for-profit workers, except in AER. The pay advantage diminished some in health care and education but remained unchanged in social assistance.

Finally, we partially replicated an estimation methodology that the Center for Civil Society Studies at Johns Hopkins pioneered in order to overcome the lack of timely data on nonprofit employment in real time as the pandemic unfolded. The methodology assumes that trends in nonprofit employment follow trends in total private employment in each industry of interest and that these patterns were unchanged between 2017 and 2020.

Rather than compare nonprofit directly to for-profit employment trends, this more conservative approach compares nonprofit employment to the weighted average of the two sectors in a particular industry at one point in time. Even if nonprofits were responding differently to the pandemic than for-profits, for industry groups dominated by nonprofits, data on trends in private sector employment would be dominated by data from nonprofit institutions. Correspondingly, for industries dominated by for-profits, overall private sector trends would align with for-profit trends.

As expected, we find that this approach does quite well in estimating nonprofit job losses overall and for some industries dominated by nonprofits. However, the estimated losses were significantly off for other industries, including some dominated by nonprofits. This is most notably the case for general medical and surgical hospitals where nonprofits account for 90 percent of all private sector jobs. When faced with the major health emergency caused by the pandemic, for-profit hospitals shed jobs at a much higher rate than their nonprofit counterparts.
Overall, these findings suggest that Indiana’s nonprofit employers responded somewhat differently to the pandemic than did for-profit employers. However, these differences appear to have been more muted than in prior recessions. Certainly, the pandemic-induced recession of 2020 also differed significantly from prior recessions in its cause, rapid spread, and scope of impact. Under those unusual conditions, it is not surprising that nonprofit and for-profit differences in operations and in legal incentive structures also were largely subdued.
APPENDIX A
QUARTERLY COVERED EMPLOYMENT AND WAGES (QCEW) DATA

Most of the data we present here comes from the Covered Employment and Wage data system. The QCEW is a cooperation between the U.S. Bureau of Labor Statistics, the U.S. Department of Labor, and State Employment Security Agencies – for Indiana, which is the Department of Workforce Development. The data covers an estimated 95 percent of all paid employment in the U.S. and contains information on the detailed industry of each establishment participating in the reporting system, its location, the number of paid jobs on a particular date each quarter, and total quarterly payroll, and whether the establishment is private or government.

The Indiana Business Research Center (IBRC) at Indiana University prepares the Indiana data for our analysis. Most importantly, this includes distinguishing nonprofit establishments from other private establishments by cross-referencing employer identification numbers (EINs) between the QCEW records and the IRS Business Master File (BMF) of tax-exempt entities. The IBRC also aggregates the data to meet formal disclosure requirements.

There are important limitations to the QCEW data. First, the data only becomes available about 9-10 months after it was collected, and the IBRC data process and our analysis takes additional time. Second, we only have access to aggregated data, not data at the establishment level. Third, we have only the count of paid employees on a particular date each quarter, not how many are working full-time or part-time. Fourth, only establishments registered with the IRS as exempt entities are identified as nonprofits in the QCEW data. The rest are classified as for-profits. Unfortunately, a non-trivial number of nonprofits are not registered with the IRS, particularly churches which are not required to be registered. We adjust for this and other known problems.

Finally, the QCEW system does not cover all employees. One omission is particularly important – churches are not required to participate in the QCEW system either, although a small fraction do. As a result, the membership association industry to which churches belong is significantly underestimated. A second omission is less important and holds only for some states, including Indiana – charities with less than four employees are also not required to participate in the QCEW system.²⁵

²⁵ For a fuller description of the methodology used in our analysis of nonprofit employment see Appendix A in any of our employment reports available here: https://nonprofit.indiana.edu/research-results/indiana-nonprofit-employment.html
## APPENDIX B
### ESTIMATION DATA

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All private non-farm</strong></td>
<td>2,627,775 288,095 11%</td>
<td>2,683,367 294,190 300,660 2,537,052 278,149 285,259</td>
<td>-16,041 -15,401</td>
<td>98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Prof., Scientific, Tech</strong></td>
<td>114,720 1,652 1%</td>
<td>122,441 1,763 1,780 123,550 1,782 16 2 100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td>50,864 38,854 77%</td>
<td>51,689 39,876 39,906 46,307 35,724 35,537 -4,152 -4,368 101%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elem &amp; second sch</td>
<td>14,047 11,264 80%</td>
<td>14,378 11,529 11,335 13,771 11,043 10,848 -483 -487 102%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colleges, univ, prof sch</td>
<td>25,782 25,058 97%</td>
<td>26,165 25,430 25,571 22,525 21,892 21,940 -3,538 -3,622 100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educ. support serv</td>
<td>10,226 2,421 24%</td>
<td>11,014 2,607 2,913 9,875 2,337 2,648 -269 -266 88%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Health Care (no SA)</strong></td>
<td>342,686 160,458 47%</td>
<td>355,683 166,543 169,544 348,836 163,337 168,711 -3,206 -833 97%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambulatory hth</td>
<td>142,981 34,960 24%</td>
<td>150,936 36,905 39,972 148,987 36,428 40,405 -476 433 90%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physician offices</td>
<td>52,884 20,408 39%</td>
<td>55,415 21,385 23,348 55,043 21,241 24,330 -1,431 982 87%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient care cts</td>
<td>17,146 9,393 55%</td>
<td>18,618 10,199 11,148 19,202 10,568 11,366 369 218 53%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Ambulatory serv</td>
<td>72,951 5,159 7%</td>
<td>76,904 5,438 5,476 74,653 5,279 4,708 -159 767 112%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospitals</td>
<td>120,753 104,037 86%</td>
<td>124,622 107,370 108,747 123,587 106,479 108,434 -891 -313 98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gen. medical/surg hosp</td>
<td>113,438 100,813 89%</td>
<td>117,268 104,217 105,348 116,045 103,130 105,009 -1,087 -338 98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pscych. &amp; subs abuse hosp</td>
<td>2,822 1,406 50%</td>
<td>2,895 1,442 1,513 2,741 1,365 1,409 -77 -104 97%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other specialty hosp</td>
<td>4,493 1,818 40%</td>
<td>4,458 1,804 1,886 4,802 1,943 2,015 139 129 96%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurs &amp; resd care</td>
<td>78,952 21,461 27%</td>
<td>80,126 21,780 20,825 76,262 20,730 19,872 -1,050 -973 104%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Social Assistance</strong></td>
<td>59,610 28,610 48%</td>
<td>60,043 28,818 29,025 56,533 27,134 26,455 -1,685 -2,570 103%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indiv/family serv</td>
<td>31,214 11,205 36%</td>
<td>31,571 11,333 11,413 30,997 11,127 10,776 -206 -638 103%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child day care cts</td>
<td>13,296 4,451 33%</td>
<td>13,184 4,414 4,283 11,859 3,970 3,913 -43 -370 101%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food, housing, relief serv.</td>
<td>2,534 2,402 95%</td>
<td>2,797 2,651 2,649 2,659 2,521 2,517 -130 -132 100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocat rehab serv</td>
<td>12,567 10,552 84%</td>
<td>12,492 10,489 10,680 11,018 9,252 9,250 -1,237 -1,430 100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>AER</strong></td>
<td>41,962 6,652 16%</td>
<td>43,221 6,848 6,886 33,223 5,264 5,577 -1,584 -1,292 94%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perform. arts, spect sports</td>
<td>7,526 1,557 21%</td>
<td>8,153 1,687 1,632 5,272 1,091 1,115 -596 -516 98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performing arts co.</td>
<td>1,849 1,134 61%</td>
<td>1,928 1,182 1,202 1,141 700 759 -483 -443 92%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Museums, hist sites</td>
<td>2,305 2,204 96%</td>
<td>2,390 2,285 2,279 2,001 1,913 1,992 -372 -287 96%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amusement, gambl, recreat.</td>
<td>32,151 2,891 9%</td>
<td>32,678 2,938 2,958 25,949 2,333 2,550 -605 -408 92%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assoc &amp; oth fields of interest</td>
<td>1,668,189 41,488 2%</td>
<td>1,695,499 42,167 42,951 1,600,046 39,793 37,070 -2,374 -5,880 107%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rest (all other, no assoc)</td>
<td>350,223 10,383 3%</td>
<td>354,790 10,518 10,585 367,495 10,895 10,127 377 -2,161 108%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,627,774 288,095 11%</td>
<td>2,683,367 294,190 300,660 2,537,052 278,149 285,259 -16,041 -15,401 98%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>