

LOSING GROUND

How Child Care Impacts
Louisiana's Workforce
Productivity and the
State Economy



A Stronger Louisiana Starts
with Successful Children



LSU

Public Policy Research Lab

Losing Ground: How Child Care Impacts Louisiana's Workforce Productivity and the State Economy

Authors

Belinda Davis, PhD

Louisiana State University
Public Policy Research Lab

Ali Bustamante, PhD

Loyola University New Orleans
Jesuit Social Research Institute

Melanie Bronfin, JD

Louisiana Policy Institute for Children

Monica Candal Rahim, PhD

Education Research Solutions

Acknowledgements

This report was made possible with generous support provided by Entergy.

An electronic copy of this report is available at www.policyinstitutela.org.

Executive Summary

Across the United States, Early Care and Education (ECE) is gaining increased attention. Numerous studies point to the academic and social benefits of ECE for young children, and several studies point to the long-term returns on investment for the community in terms of lower incarceration rates and higher high school graduation rates. Although a wealth of research has focused on benefits for young children and local communities, less attention has been given to the benefits of quality ECE for employers and working parents. To date, we have been unable to locate Louisiana-based studies of how child care instability affects the state's workforce productivity. This study attempts to address this gap.

This study was conducted in two phases. First, the Louisiana Policy Institute for Children worked with Louisiana State University's (LSU) Public Policy Research Lab, which conducted a statewide survey of households with children age 4 and under, asking these individuals a series of questions investigating the intersection between their workforce participation and child care issues. Second, the Policy Institute worked with an economist to estimate the economic impact of child care instability based on the results from the LSU survey conducted in phase one.

Results from the survey and economic impact analysis are the following:

- » Half of survey respondents rely on family members for child care.
- » One in 6 respondents quit a job due to child care issues.
- » One in 13 were fired due to recurring child care issues.
- » Over 40% of respondents reported missing work due to child care issues in the past 3 months.
- » Absences and employee turnover cost Louisiana employers \$816 million a year.
- » Child care issues result in a \$1.1 billion loss annually for Louisiana's economy.
- » Louisiana loses almost \$84 million annually in tax revenue due to child care issues.

This study – the first of its kind in the state of Louisiana – demonstrates that child care issues clearly affect a wide cross-section of Louisiana workers, resulting in major economic costs to employers and a large economic impact on the state.

Introduction

Across the United States, Early Care and Education (ECE) is gaining increased attention. Numerous studies point to the academic and social benefits of high quality ECE for young children, and several studies point to the long-term returns on investment for the community in terms of lower criminal justice rates and increased high school graduation rates. In fact, the newest research from economists finds up to a 13% return on investment for comprehensive, high-quality, birth-through-4 early education. This research analyzes a wide variety of life outcomes, such as health, crime, income, IQ, schooling, and the increase in a mother's income after returning to work due to high quality care.¹ Other studies point to the economic benefits of the child care industry itself. Most early childhood education programs in Louisiana are privately run small businesses that create jobs and infuse money into local economies. A 2015 economic analysis found that the Louisiana ECE sector generates \$830 million annually in direct and indirect economic activity.²

Although a wealth of research has focused on benefits for young children and local communities, less attention has been given to the benefits of quality ECE for employers and working parents. In Louisiana, 61% of mothers with infants return to work in their first year. Additionally, 67% of children birth through age five have both parents, or their single parent, in the workforce.³ Parents of older children are generally able to rely on Kindergarten through 12th grade schools to look after their children while they work. However, for those with children age 4 and under, ECE is an important component of their workforce productivity. To date, we have been unable to locate Louisiana-based studies of how child care instability affects the state's workforce. This study attempts to address this gap.

Overview

This study was conducted in two phases. First, the Louisiana Policy Institute for Children worked with Louisiana State University's (LSU) Public Policy Research Lab, which conducted a statewide survey of households with children age 4 and under, asking these individuals a series of questions investigating the intersection between their workforce participation and child care issues. Second, the Policy Institute worked with an economist to estimate the economic impact of child care instability based on the results from the LSU survey conducted in phase one.

Results: Statewide Survey

Comparing Louisiana to the Nation

Questions regarding how employment experiences and employment decisions are influenced by problems with child care are very rare in national surveys. In the 2011-2012 National Survey of Children's Health, respondents were asked the following question:

¹ García, J.L., Heckman, J.J., Leaf, D.E. Leaf, and Prados, M.J. (December 2016). The Life-Cycle Benefits of an Influential Early Childhood Program. The National Bureau of Economic Research: Cambridge, Massachusetts; Rolnick, A. and Grunewald, R. (2003). Early Childhood Development: Economic Development with a High Return. Minneapolis Federal Reserve Bank; Minneapolis, Minnesota; Schweinhart, L., Barnes, H., and Weikart, D. (1993). Significant Benefits: The High/Scope Perry Preschool Study through Age 27. High/Scope Press: Ypsilanti, Michigan.

² Committee for Economic Development. (2015). Child Care in State Economies: Key Findings in Louisiana. Committee for Economic Development: Arlington, VA.

³ Zero to Three. (April 2015). Louisiana State Baby Facts; Kids Count Data Center. (2015). Children Under Age 6 With All Available Parents In The Labor Force (Louisiana figures).

During the past 12 months/Since [subject child's birth] did you or anyone in the family have to quit a job, not take a job, or greatly change your job because of problems with child care for [subject child]?

Although a wealth of research has focused on benefits for young children and local communities, less attention has been given to the benefits of quality early care and education for employers and working parents.

According to the NSCH data, 14.4% of parents with children age 4 and under answered “yes” to this question. In particular, 12.2% of respondents living in Louisiana indicated that their employment decisions had been impacted by child care decisions over the past 12 months.

The survey of Louisiana residents found a much higher “yes” response to this question with 20.9% of respondents indicating child care problems had impacted their employment decisions. The larger number of respondents indicating child care problems may be due to increased recall or since the current survey is focused specifically on child care problems, the respondents in our survey were “primed” to remember their difficulties in a way that respondents in the NSCH survey, with an overall theme of children’s health, were not. Another reason for the difference may be that the current survey of Louisiana respondents did not specify a time period over which major job changes may have occurred.

Table 1

Percentage of Respondents Reporting Problems with Child Care Affecting Employment

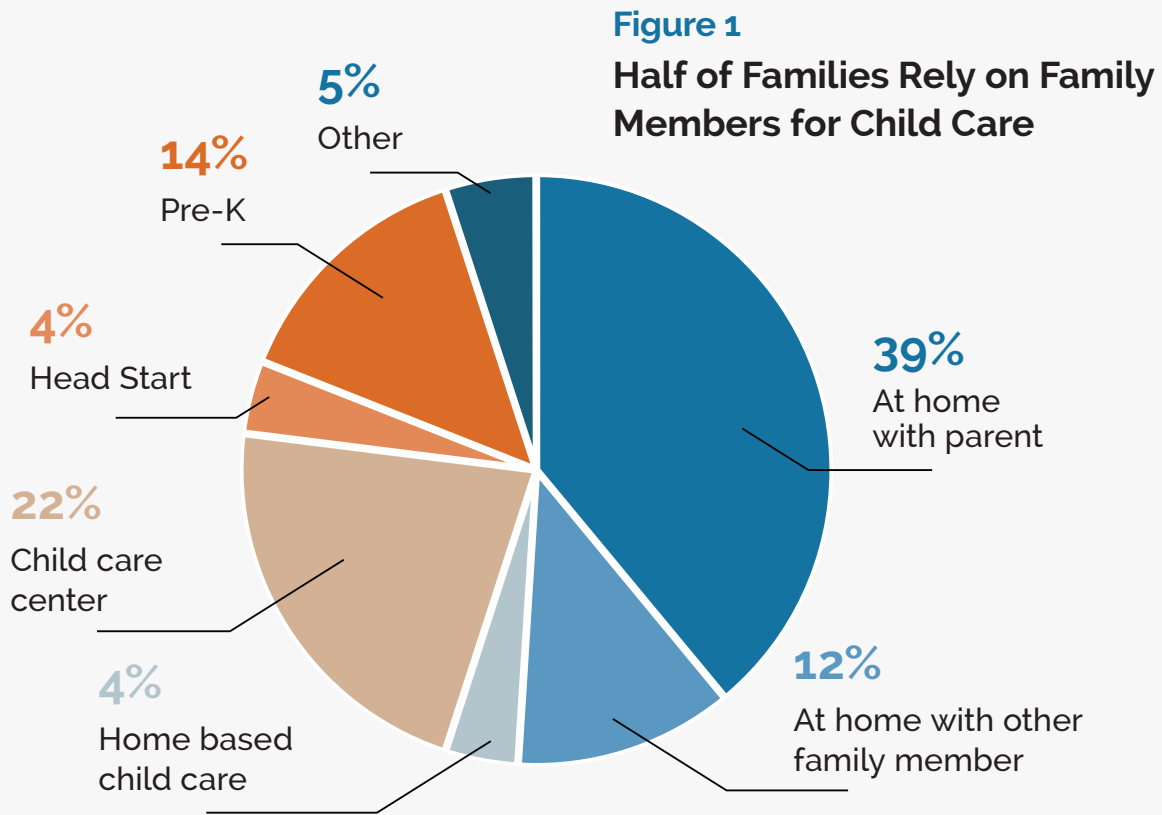
Survey	Percent	Number of Respondents
Nationwide (National Survey of Children’s Health)	14.1%	24,746
Louisiana (National Survey of Children’s Health)	12.2%	473
Louisiana (LSU Public Policy Research Lab)	20.9%	257

Half of Survey Respondents Rely on Family Members for Child Care

Half of households in Louisiana with young children use a family member for their child care. (See Figure 1.) Well over one-third of respondents (38.8%) indicated that their young child stays at home with a parent, while an additional 12.4% report that their child stays at home with another family member. These two options combined account for 50% of all child care arrangements.

Parents who used non-family-based arrangements were most likely to place their child in a child care center (22.0%) or Pre-K (13.6%), which usually includes school-based 4-year-old programs.

The number of respondents indicating the use of a Head Start center or child care in small, home-based centers was quite small at 4.2% and 4.5%, respectively.



The low percentage of children in Head Start is especially troubling since approximately 35% of the families in the sample have incomes (computed using income, marital status, and number of children) that would meet the eligibility requirements for Head Start programs. Limited federal funding has prevented the program's expansion. Nationally, only 4% of eligible families are able to access Early Head Start, which serves children age 2 and below, and only 42% of eligible families are able to access Head Start, which serves children ages 3 and 4.⁴ Similar issues exist for families who are eligible for the Child Care Assistance Program (CCAP), a federally funded, state administered program that subsidizes the cost of child care for low income families who are working, in school or in job training programs. Across the nation, only 10% of eligible families accessed their state's CCAP programs in 2012.⁵

Similar to issues with Early Head Start and Head Start, limited funding has prevented CCAP from being able to serve more eligible children nationwide. Louisiana used to supplement its federal CCAP funding with state general funds and the Temporary Assistance for Needy Families (TANF) block grant. However, due to state budget constraints, the state has now ceased this practice, resulting in a 70% reduction in CCAP funding in Louisiana since 2009.⁶

⁴Schmit, S., Matthews, H., Smith, S., and Robbins, T. (November 2013). Investing in Young Children: A Fact Sheet on Early Care and Education Participation, Access, and Quality. Center for Law and Social Policy: Washington, DC and National Center for Children in Poverty: New York City, New York.

⁵Department of Health and Human Services and Department of Education. (December 2016). Joint Interdepartmental Review of All Early Learning Programs for Children Less Than 6 Years of Age. USDHH: Washington, DC and USDOE Washington, DC.

Types of Child Care Arrangements Vary Slightly Based on Location

In order to better understand how child care arrangements and availability might vary across Louisiana, we examined regional differences. We collapsed parishes to create three geographical regions that included a large enough sample size to begin suggesting trends, though the sample size is too small to assess whether the differences across regions are statistically significant.

Table 2
Geographical Regions Used for Analysis

GEOGRAPHIC REGION	PARISHES
Southeast Louisiana	Jefferson, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John, St. Tammany, Assumption, Lafourche, Terrebonne
Acadiana and Southwest Louisiana	Ascension, East Baton Rouge, East Feliciana, Iberville, Livingston, Pointe Coupee, St. Helena, Tangipahoa, Washington, West Baton Rouge, West Feliciana, Acadia, Evangeline, Iberia, Lafayette, St. Landry, St. Martin, St. Mary, Vermilion, Allen, Beauregard, Calcasieu, Cameron, Jefferson Davis
Central and North Louisiana	Avoyelles, Catahoula, Concordia, Grant, LaSalle, Rapides, Vernon, Winn, Bienville, Bossier, Caddo, Claiborne, DeSoto, Lincoln, Natchitoches, Red River, Sabine, Webster, Caldwell, East Carroll, Franklin, Jackson, Madison, Morehouse, Ouachita, Richland, Tensas, Union, West Carroll

Figure Two contains the percentage of reported child care arrangements in each region. The Central and North Louisiana Region is much more likely than the other areas to rely on a family member for child care with 22% of respondents reporting this option. The Acadiana and Southwest Louisiana Region has the highest percentage of families in Pre-Kindergarten programs at 20%.

These slight differences across the various areas of the state are likely driven by urban and rural differences. For example, the Central and North Louisiana Region contains 34 parishes with only 7 parishes designated as urban parishes according to the U.S. Census Bureau. In contrast, 9 of the 11 parishes in the Southeast Louisiana Region are designated as urban. Figure Three illustrates the differences in child care arrangements based on urban and rural classifications. Parents in rural parishes are much more likely than urban parishes to rely on another family member to provide child care than urban parishes. On the other hand, urban parishes are much more likely to rely on child care centers.

⁹ Comparison of the fiscal year 2009-10 Louisiana Early Childhood Systems Integration Budget to the fiscal year 2016-17 Louisiana Early Childhood Systems Integration Budget. See the Louisiana Division of Administration website at http://www.doa.la.gov/Pages/opb/pub/other_budget_docs.aspx.

Figure 2

Some Child Care Arrangements Are Similar Across Geographical Regions

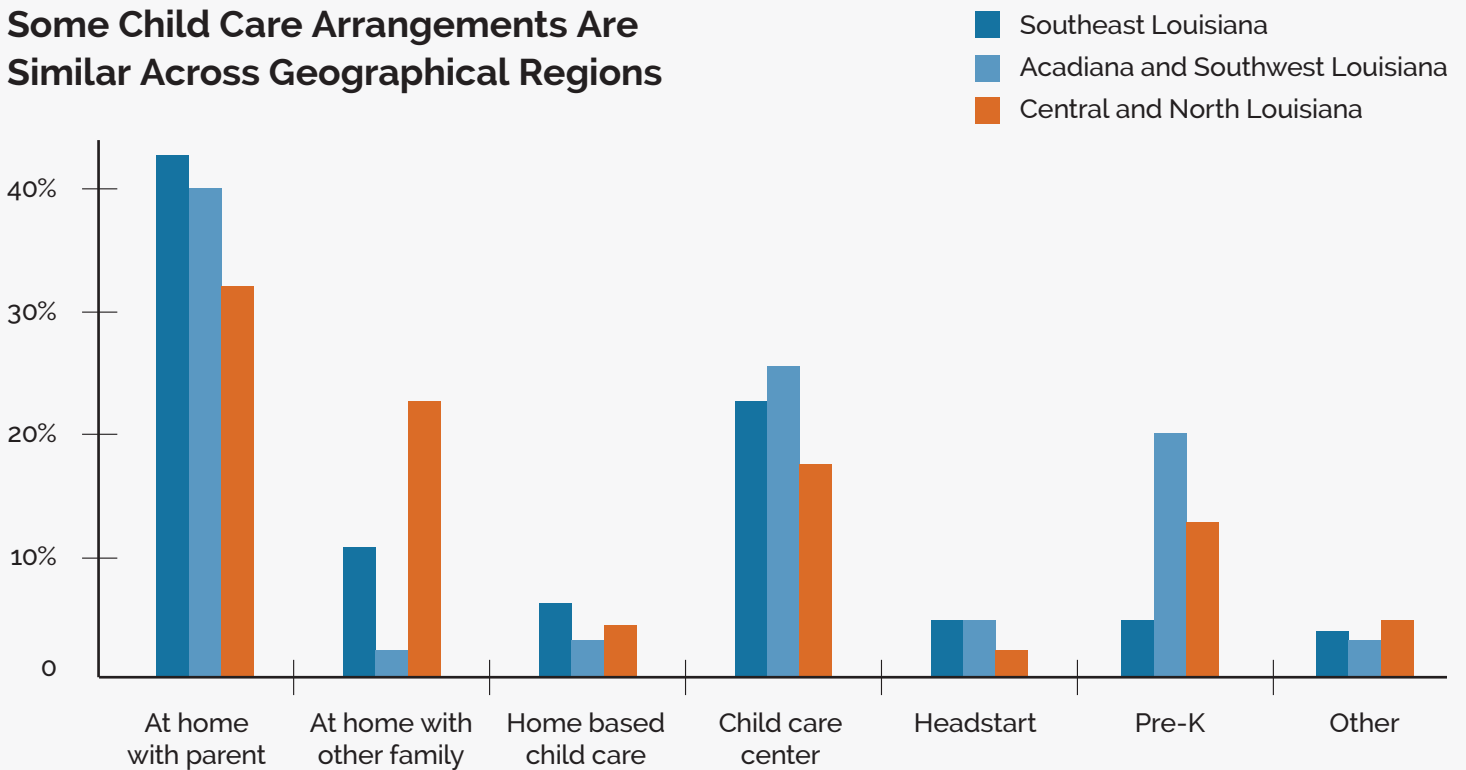
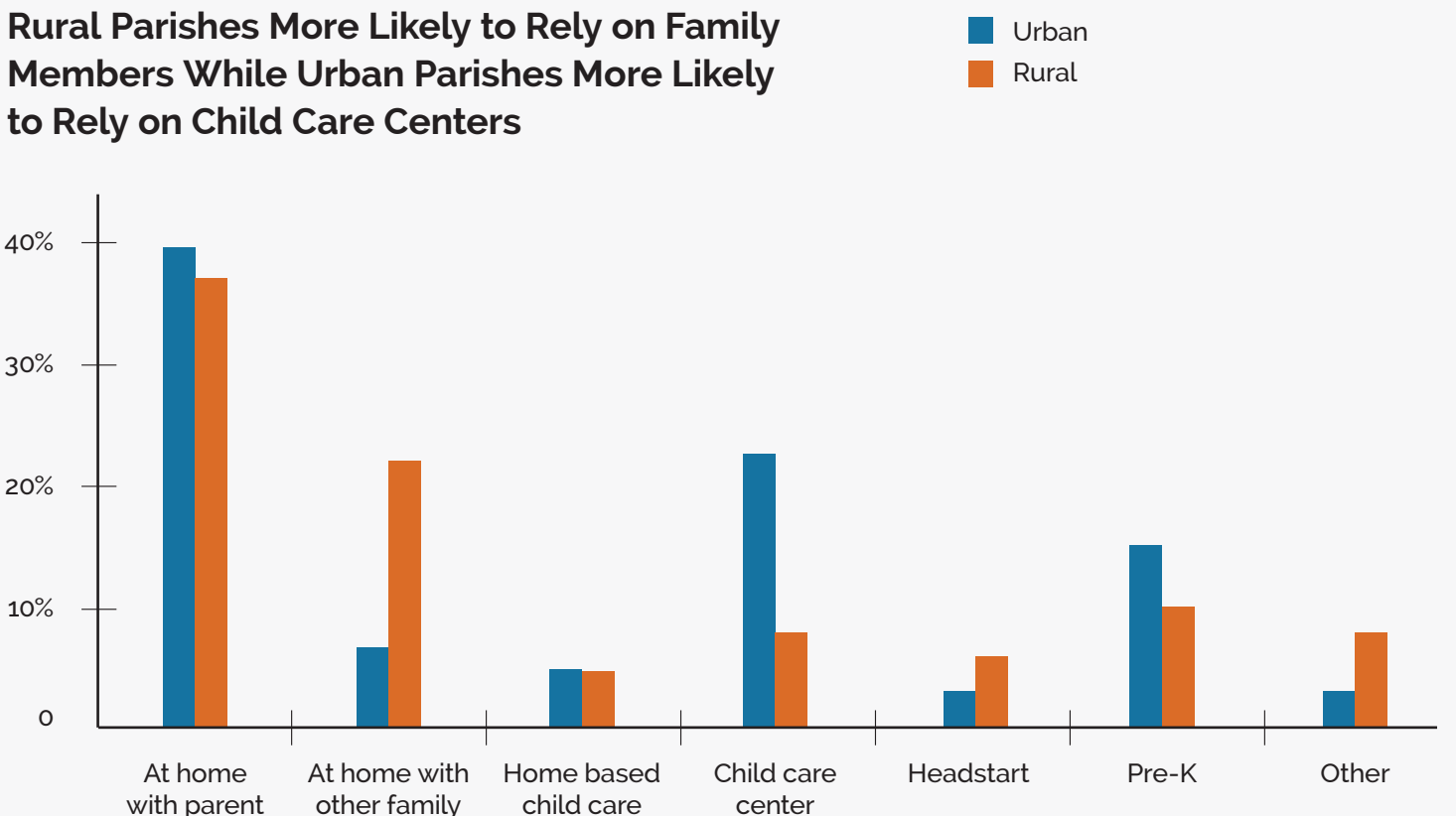


Figure 3

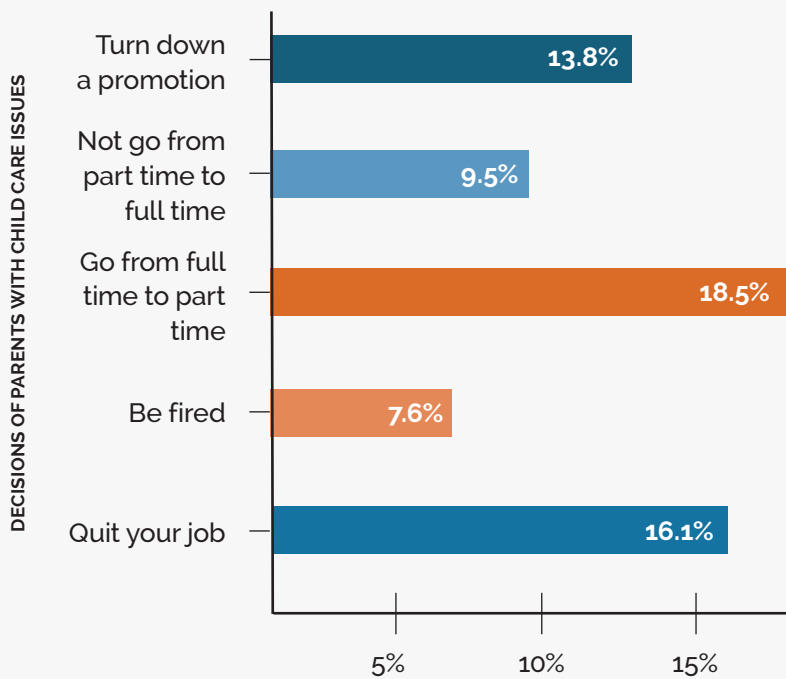
Rural Parishes More Likely to Rely on Family Members While Urban Parishes More Likely to Rely on Child Care Centers



Parents' Work Productivity Is Heavily Impacted by Child Care Issues

The primary focus of the survey was to determine how child care arrangements had impacted respondents' workforce participation and productivity. Just over 16% of respondents indicated that they had quit a job due to child care issues while another 7.6% reported being fired over child care issues. (See Figure 4.) Similarly, the impact of child care issues on hours of employment was substantial. Nearly 19% of respondents report that child care issues caused them to leave full-time employment in favor of part time employment. An additional 9.5% of respondents made the decision to remain part time due to child care concerns, and nearly 14% of respondents turned down a promotion at work because of child care issues. Respondents' employment decisions are thus clearly being impacted by challenges with child care.

Figure 4
Child Care Issues Have Greatly Impacted Parents' Workforce Participation



The reasons behind the impact of child care instability on employment decisions become quite clear in Table 3, which indicates that many parents have been absent, tardy, or had to leave work early due to problems with child care. Over 40% of respondents reported missing work due to child care issues over the past 3 months, and nearly one-third of respondents reported being late to work at least once over the past 3 months due to child care issues. Just over 42% of respondents reported that they left work early due to child care issues at least once during the past 3 months.

Table 3
Almost Half of Parents, Both Men and Women, Missed Work Regularly Due to Child Care Issues in the Last 3 Months

Percent	1-2 Days	3-4 Days	5-6 Days	7+ Days	Total
Missed Work	21.0%	9.2%	4.9%	5.7%	40.8%
Tardy	10.7%	11.0%	4.4%	6.8%	32.9%
Left early	21.6%	11.0%	5.7%	4.1%	42.4%



In order to better understand workforce participation and attendance trends, we examined differences by gender, marital status, and geographical region.

There were no statistically significant differences between men and women when it came to issues of missing work, arriving tardy, or leaving early due to child care issues. However, women were more likely than men to report that child care issues affected their employment decisions. (See Table 3.) Women were 7 times as likely to quit a job due to child care issues, and 5 times as likely to leave full-time work in favor of part-time work. Women were also 6 times as likely to turn down a promotion.

Table 4
Men's Workforce Participation
Less Affected by Child Care Issues

Decision	Women	Men
Quit your job	14.6%	1.5%
Be fired	5.1%	2.5%
Full to part-time	15.7%	2.8%
Remain part-time	8.7%	0.9%
Turn down a promotion	11.9%	1.9%

Table 5
Single Parents' Workforce Participation
More Affected by Child Care Issues

Decision	Single	Married
Quit your job	11.1%	5.0%
Be fired	3.7%	3.9%
Full to part-time	12.4%	6.2%
Remain part-time	6.3%	3.2%
Turn down a promotion	10.5%	3.3%

Survey results also indicate that single parents (i.e., never married, divorced, or widowed) were disproportionately impacted by child care issues (Table 5). Single parents were at least twice as likely to quit their job, cut their hours, or turn down a promotion due to child care problems.

Table 6

Parents in Region 2 More Likely to Be Fired Or Reduce Hours Due to Child Care Issues

Decision	Region 1	Region 2	Region 3
Quit your job	6.0%	5.2%	4.9%
Be fired	1.3%	5.1%	1.2%
Full to part-time	4.7%	8.4%	5.5%
Remain part-time	1.6%	3.3%	4.6%
Turn down a promotion	3.2%	5.8%	4.9%

Finally, parents in Region 2 (Acadiana and Southwest Louisiana) seem to be more likely to be fired over child care issues or more likely to reduce their hours from full-time to part-time than other areas of the state. This is particularly interesting given that some of the cities in this region (e.g., Lake Charles and Baton Rouge) have some of the most rapidly growing economies in the state and face more severe employee shortages. These numbers suggest that more research may be needed to explore these potential differences with a focus on increasing the sample size of the survey so that tests of statistical significance could be utilized.

Results: Economic Impact Analysis

According to data from the U.S. Bureau of Labor Statistics, Louisiana has 272,439 working parents with children age 4 and under, representing approximately 17% of the state’s nearly 1.6 million workers.⁷ This large number of parent workers with young children means that even minor child care issues can accumulate to create major economic costs for employers and the state.

Absences and Employee Turnover Cost Employers \$816 million

According to results from the LSU workforce survey, on average working parents are absent from work 14 days a year due to child care breakdowns. This absenteeism by workers leads employers to pay wages to absent employees, pay overtime, hire and pay temporary workers, or experience reductions in productivity.⁸ In 2015, absenteeism related to child care issues resulted in slightly over \$714 million per year in direct costs to employers in Louisiana.⁹

... absenteeism related to child care issues resulted in slightly over \$714 million per year in direct costs to employers in Louisiana.⁹

Similarly, voluntary separations by workers (quits) is a key component of worker turnover. Every time that an employee quits, employers spend considerable time and resources in hiring and training new workers. The same is true with employees who are parents of young children. Every time that an employee quits so as to better manage child care arrangements by pursuing

⁷ Author’s calculations using data from the U.S. Bureau of Labor Statistics. 2016. Current Population Survey - Annual Social and Economic Supplement for the employed population aged 18 to 64 working in the private sector.

⁸ Tang, Chiung-Ya, and Shelly MacDermind Wadsworth. 2010. National Study of the Changing Workforce 2008: Time and Workplace Flexibility. Families and Work Institute: New York City, New York.

⁹ Author’s calculations based on U.S. BLS CPS-ASEC 2016; LSU Survey 2017; Circadian. 2005. Absenteeism: The Bottom-Line Killer; Boushey, Heather and Sarah Jane Glynn. 2012. There Are Significant Business Costs to Replacing Employees. Center for American Progress.



home-based child care arrangements or transitioning to an employer with more flexible hours, employers incur significant costs to replace employees – over \$101 million annually.¹⁰

Child Care Issues Result in a \$1.1 Billion Dollar Loss for Louisiana’s Economy

Worker earnings fuel consumer spending at the local and state levels. However, child care breakdowns lead to income losses for working parents who earn hourly wages and for all working parents when they quit their jobs to address child care conflicts. The decline in income among working parents percolates throughout the state economy, impacting local businesses through decreased spending and consequent ripple effects (e.g., lower rates of hiring, need for fewer goods, etc.) and resulting in a \$1.1 billion annual loss to the state’s economy.¹¹

Almost \$84 Million Lost in Tax Revenue Due to Child Care Issues

Similar to declines in economic activity, tax revenue losses are caused by declines in the earnings of working parents because workers make tax contributions based on their total earnings. State and local governments depend on robust levels of tax revenues to provide essential public services. However, declines in earnings lead to lower state income tax rates and to lower sales tax contributions. Child care breakdowns lead to an annual tax revenue loss of almost \$84 million in Louisiana.¹²

Table 7
Child Care Issues Result in More Than \$1.1 Billion Loss for Louisiana’s Economy

	Losses
Absences	-\$292,287,280
Quits/Turnover	-\$875,289,218
Total	-\$1,167,576,498

Table 8
Almost \$84 Million Lost in Tax Revenue for Louisiana’s Economy Due to Child Care Issues

	Losses
Absences	-\$13,135,416
Quits/Turnover	-\$70,794,431
Total	-\$83,929,847

¹⁰ Ibid.

¹¹ Author’s calculations using U.S BLS CPS-ASEC 2016; LSU Survey 2017; Boushey, Heather and Sarah Jane Glynn. 2012. There Are Significant Business Costs to Replacing Employees. Center for American Progress.

¹² Author’s calculations using U.S BLS CPS-ASEC 2016; LSU Survey 2017; Boushey, Heather and Sarah Jane Glynn. 2012. There Are Significant Business Costs to Replacing Employees. Center for American Progress; Institute on Taxation and Economic Policy. 2015. Who Pays?: A Distributional Analysis of the Tax Systems in All 50 States.

Conclusion

This study – the first of its kind in the state of Louisiana – demonstrates that child care issues clearly affect a wide cross section of Louisiana workers, resulting in major economic costs to employers and a large, negative economic impact on the state. These costs can be ameliorated by increased investments that make reliable child care arrangements more accessible for working parents of young children. Child care in Louisiana, and across the nation, costs almost as much as a public college annual tuition.¹³ Child care arrangements that provide working parents with affordable, reliable child care will enable parents – mothers and fathers alike – to fully participate in the workforce at a time when some regions across Louisiana are struggling with employee shortages.

Investments can come in the form of public or private funds. An infusion of state or local funds in early care and education would ultimately have a high rate of return through reduced costs to employers, increased earnings and tax revenue from parents, the economic impact of the child care industry itself, and improved outcomes for children. In order to assist with workforce productivity efforts, individual businesses may opt to invest money into child care through direct subsidies to employees or investment in local child care agencies.

It should be noted that in order to achieve the highest return on investment, child care must also be high quality. Research from the national studies cited in the introduction indicate the academic and social benefits of early care and education – including lower criminal justice rates, higher high school graduation rates, and ultimately up to a 13% long term return on investment. These studies suggest, however, that child care programs must include components like qualified teachers, low student-teacher ratios, and the use of research-based curriculum in order to achieve the maximum cost effectiveness.

Given that this is the only study that examines how child care issues impact workforce productivity and the costs of those impacts to the state, further research is needed to fully understand how child care issues affect workers in Louisiana. We also suggest further research exploring the ways in which public and private dollars can help to offset these costs.

¹³ Parents and the High Cost of Child Care: 2016, Child Care Aware. Economic Policy Institute (2015). High Quality Child Care is Out of Reach for Working Families.

Appendix A: LSU Survey Methodology and Sample Characteristics

Survey Methodology

Data for this report are based on a sample of adult (18 years or older) residents of Louisiana who have at least one child four years old or younger residing in the household. Data were collected via telephone interviews conducted from October 7, 2016, through February 2, 2017. The total sample includes 257 respondents, of whom 30 percent were interviewed via landline telephone and 70 percent were interviewed via cellphone. The sample was selected in a two-step method. First, the Public Policy Research Lab acquired listed samples of consumer and voter files of Louisiana residents that include demographic and other background characteristics such as the presence of children in the household by child's age. This information was used to identify likely members of the target population. Because such lists are not 100 percent accurate, however, the script of the interview included a screening question to identify individuals who have a child four years or younger living in their household.

There are two limitations to this sampling methodology. First, the use of lists introduces coverage error by which certain members of the target population may not have appeared on the consumer and voter lists and therefore cannot be sampled in this manner. Second, the approach results in a non-probability sample of the target population. Nevertheless, the use of listed samples is common practice when targeting highly select populations.

Sample Characteristics

To approximate representativeness of the target population, the sample is weighted using an iterative procedure that matches race, education, household income, gender and age to the known population profile for adult Louisiana residents with children living in their household as found in the U.S. Census Bureau's American Community Survey. Weighting cannot eliminate every source of bias, but accepted weighting techniques have a strong record of yielding unbiased results.

The response rate is 19.7% of eligible respondents. This response rate is the percentage of eligible sampled residential households or personal cell phones for which an interview is completed. The rates are calculated using the American Association for Public Opinion Research's method for Response Rate 3 as published in their Standard Definitions. The response rates for this project are within the range of what national survey research organizations such as Gallup and the Pew Research Center have reported in recent years.

Because this is a non-probability sample, the standard formulas for calculating a margin of error do not apply. However, if applied, the margin of error for the overall sample would be +/- 6.1 percentage points. Readers should recognize that questions wording and practical difficulties in conducting surveys can introduce error or bias into the findings of opinion polls.

Appendix B: Economic Impact Methodology

All calculations and estimates were created using the U.S Bureau of Labor Statistics Current Population Survey Annual Social and Economic Supplement (CPS-ASEC) 2016 and child care conflict baselines from an LSU survey (2017).¹³ Economic simulations were conducted using deterministic modelling and a random sample of working parents in Louisiana during 2015. Child care conflict baselines for child care related absenteeism and turnover in Louisiana during 2016 were employed. A bootstrapping method was employed using 1,000 random sampling replacements in order to minimize sampling error. Estimates were adjusted to reflect the actual population of working parents in Louisiana whenever necessary.

A midrange baseline rate for child care breakdown related absenteeism of 40.6% was used from the LSU survey. This is in contrast to conservative estimates such as 21.4% from Montes et al. (2011) and more generous estimates such as 45% as presented in Bright Horizons Child (2002).¹⁴ The estimate for the average days of missed work due to child care breakdowns, 14 is distinct than more conservative estimates employed by Tang and Wadsworth (2010) four days and Bright Horizons (2002) nine days. It is very likely that the frequency of absenteeism related to child care breakdowns is greater in Louisiana than the national average.

The cost of absenteeism from wage workers stems having to replace workers during their absences at an effective payroll rate of 150 percent. For salary workers, the cost of absenteeism is from employers paying an employee's full salary, including benefits, when the employee is absent, assuming salary workers have paid time off benefits. Additionally, it is assumed that absenteeism causes revenue losses because salary workers are typically not replaced by temporary workers when absent (Circadian 2005).

A baseline rate for child care breakdown related turnover of 16.1 percent was obtained from LSU survey (2017). Montes et al. (2011) present evidence that 2.8 percent of working parents quit their jobs due to child care conflicts and that an additional 9.9 percent are actively considering quitting and moving to a different employer or out of the workforce altogether. It can be assumed that some share of the workforce considering quits will actually quit in the near future. This means that the LSU survey estimate does not differ greatly than the national average. Because the LSU survey estimate did not specify a 12-month time span, we employed a conservative turnover rate calculation, dividing the overall turnover rate (16.1%) by 4 years (because we surveyed parents whose children would be a maximum of 4 years old) to get an annual figure, resulting in a 4% annual turnover rate.

Furthermore, we employ a conservative estimate for the per worker cost of turnover from child care breakdowns. Our simulations are based on a per worker turnover cost that is equivalent to 20.7 percent of a workers annual wage or salary, including benefits (see Boushey and Glynn 2012). This is in contrast to some estimates that argue that the full cost of turnover workers is 1.5 times the annual salary, including benefits, of salaried workers and .75 times the annual salary

¹³ Louisiana State University. 2017. Child Care Breakdown Survey.

¹⁴ Bright Horizons. 2002. Child Care Trends.

of an hourly workers (see Phillips, J. Douglas. 1990. "The Price Tag on Turnover." *Personnel Journal* 69(12): 58-61).

The direct economic impact of child care breakdowns was based on a downward income multiplier effect of 2.0 for the Louisiana economy. The downward economic multiplier models the aggregate decline in spending at the state level from a withdrawal of income, as with the decline in earnings caused by child care breakdowns. Multipliers of 2.0 are commonly used as relatively conservative baselines (e.g. Smith, Eric N. 2014. *Louisiana –The Status of the State: A Report on the Economic Impact of Energy Activity on the State's Economy*. GNO Inc.).

Lastly, the direct tax revenue impact of child care breakdowns was modeled using estimates for state and local tax burdens by income levels for Louisiana from the Institute on Taxation and Economic Policy (2015). This simulation assumes that declines in earnings will lead to a decline in tax contributions from the existing tax burdens of working parents.