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Economic Decline and the Foster Care System: Evidence from The Great Recession

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Economic Decline and the Foster Care System: Evidence from The Great Recession

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Abstract

This paper examines the effects of the Great Recession of 2007 to 2009 on the number of children entering foster care due to maltreatment using data¹ for 2004 to 2015. I use standard OLS regressions with heteroskedastic robust standard errors in order to examine the impact of the Great Recession, measured by the yearly unemployment rate, on children entering foster care due to physical abuse or neglect. Overall, I find little evidence that there was an impact of the unemployment rate on entry into foster care. However, when looking across racial and ethnic groups, I find that Black children and Asian children were more or less susceptible, respectively, to entering foster care due to maltreatment when there were increases in the unemployment rate during and after the Great Recession.

Advisor: Heather Royer

March 15, 2021

¹ The data used in this publication were made available by the National Data Archive on Child Abuse and Neglect, Cornell University, Ithaca, NY, and have been used with permission. Data from the Adoption and Foster Care Analysis and Reporting System (AFCARS) were originally reported to the Children's Bureau. Funding for the project was provided by the Children's Bureau, Administration on Children, Youth and Families, Administration for Children and Families, U.S. Department of Health and Human Services. The receiver of the original data, the funder, the Archive, Cornell University and their agents or employees bear no responsibility for the analyses or interpretations presented here.

I. Introduction

On any given day in the United States, there are over half a million children in foster care, largely due to findings of substantiated child maltreatment.² After removal from their homes without any guarantee of reuniting with their parents, these children spend years moving in and out of different foster care placements.³ As a result of their unstable childhood, former foster youth are more prone to lower employment rates, lower annual earnings, lower levels of education, homelessness, mental health issues, and substance and alcohol abuse.⁴ Due to an already impacted child welfare system, it is crucial to understand some of the mechanisms behind entries into the foster care system and how the macroeconomy can influence the growth of the foster care system.

I hypothesize that the risk for children entering foster care due to child maltreatment would increase during a period of economic decline due to stress and pressures on parents who may have lost their jobs, are facing housing or food insecurity, or have less income to support their children. Because of the gravity of the Great Recession, these economic pressures on adults were likely intensified, which may have heightened the possibility of child maltreatment. Since child maltreatment is a leading factor of why children enter foster care, I use foster care data from the United States Children's Bureau that highlights entries into the foster care system based on why the child was removed from their home, and I match it with state unemployment rates to attempt to

² Commission on Children in Foster Care, "Fostering the Future: Safety Permanence and Well-Being for Children in Foster Care," The Pew Charitable Trusts, May 2004, <https://www.pewtrusts.org/en/research-and-analysis/reports/0001/01/01/fostering-the-future-safety-permanence-and-wellbeing-for-children-in-foster-care>.

³ Commission on Children in Foster Care, "Fostering the Future: Safety Permanence and Well-Being for Children in Foster Care."

⁴ Lauren Gypen et al., "Outcomes of children who grew up in foster care: Systematic-review," *Children and Youth Services Review* 76 (2017): 80, accessed January 21, 2021, <https://doi.org/10.1016/j.childyouth.2017.02.035>.

draw inference for a causal relationship between the Great Recession and entries into the system based on physical abuse or neglect. There exists a growing body of literature proving that recessions and economic hardship can jeopardize one's parenting and elevate the risk for child maltreatment, but there has still yet to be any findings relating a weakened economy, or more specifically, The Great Recession, to the foster care system. Using the unemployment rate as a measure of the Great Recession, I run several OLS regressions to address the lack of work on the subject. I find no significant correlation between an increasing unemployment rate and children entering foster care due to physical abuse, neglect, or maltreatment. Nevertheless, I do see the number of Asian children entering foster care due to physical abuse and maltreatment decrease with an increasing unemployment rate, and I also see an increase in the number of Black children entering foster care due to physical abuse, neglect, and maltreatment with an increasing unemployment rate. The entry of White and Hispanic or Latine children into the system was not as sensitive to changes in the unemployment rate.

II. Background

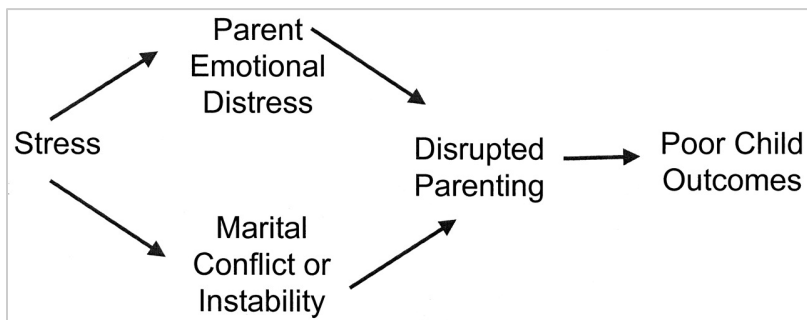
The Family Stress Model is the basis of most existing research on the impact of the economy on rates of child abuse or neglect. The Family Stress Model, or the FSM, postulates that economic hardship, such as low income or high debt to income ratios, leads to economic pressures such as lack of material needs, the inability to pay bills, or having to cut back on expenses.⁵ In turn, these pressures may cause parental emotional distress and interparental conflict which then translates into harsh parenting.⁶ The

⁵ Tricia K. Neppl, Jennifer M. Senia, and M. Brent Donnellan, "The Effects of Economic Hardship: Testing the Family Stress Model over Time," *Journal of Family Psychology* 30, no. 1 (2016): 2-3, accessed December 1, 2020, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4742411/>.

⁶ Neppl, Senia, and Donnellan, 3.

model, as shown in *Figure 1*, was originally used to highlight the impact of the 1980s agricultural economic downturn in the U.S. on families,⁷ and I will use it to theorize why the widespread recession of 2008 could have affected child maltreatment and the foster care system.

Figure 1: Family Stress Model



Source: Conger KJ, Rueter MA, Conger RD. The role of economic pressure in the lives of parents and their adolescents: the family stress model. In: Crockett LJ, Silbereisen RJ, eds. *Negotiating Adolescence in Times of Social Change*. Cambridge, England: Cambridge University Press; 2000:201–233.

The National Bureau of Economic Research defines a recession as a “significant decline in economic activity that is spread across the economy and lasts more than a few months.”⁸ The Great Recession, which officially lasted from December 2007 to June 2009,⁹ was the most severe collapse in the United States economy since the Great Depression.¹⁰ Prior to the recession, unemployment was historically low, and employment was rising in education, healthcare and housing market industries.¹¹ Due

⁷ Nepl. Senia, and Donnellan, 2.

⁸ Evan Cunningham, “Great Recession, great recovery? Trends from the Current Population Survey,” *Monthly Labor Review*, U.S. Bureau of Labor Statistics, April 2019, <https://doi.org/10.21916/mlr.2018.10>.

⁹ Christopher J. Goodman and Steven M. Mance, “Employment loss and the 2007-09 recession: an overview,” *Monthly Labor Review*, U.S. Bureau of Labor Statistics, April 2011, <https://www.bls.gov/opub/mlr/2011/04/art1full.pdf>, 3.

¹⁰ Cunningham, “Great Recession, great recovery?”

¹¹ Goodman and Mance, “Employment loss and the 2007-09 recession: an overview,” 3.

to the rapid growth in jobs related to the housing market industry and the rise of housing prices, the housing market was booming and it caused a ripple “wealth effect” that fueled a rise in consumer expenditures.¹² However, the growth of the housing market began to slow as home sales peaked in mid-2005, and the housing credit market deteriorated as the effects of subprime mortgage lending began to take their toll.¹³ Throughout 2007, the burst of the housing market bubble spread into other areas of the economy, and unemployment was on the rise by the end of the year.¹⁴ The Great Recession was notable for its high rates of unemployment; the unemployment rate peaked at 10 percent in October 2009 with more than 15 million Americans unemployed,¹⁵ which was a 5.0 percentage point increase in unemployment since the start of the recession¹⁶ and the largest contraction in the labor market since the end of World War II.¹⁷

Due to the severity of the Great Recession, I predict that, with the Family Stress Model as the basis for this theory, the Great Recession had a significant impact on the entries into foster care due to child maltreatment. Child maltreatment is imperative to this discussion, because the removal of a child from their home and the subsequent placement in out-of-home care is typically largely due to proof of maltreatment.¹⁸ While the child welfare systems and the definition of maltreatment vary by state, The Child Abuse and Prevention Act (CAPTA) states the minimum definition of maltreatment as

¹² Goodman and Mance, 3-4.

¹³ Goodman and Mance, 4.

¹⁴ Goodman and Mance, 4.

¹⁵ Cunningham, “Great Recession, great recovery?”

¹⁶ U.S. Bureau of Labor Statistics, Unemployment Rate [UNRATE], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UNRATE>, December 8, 2020.

¹⁷ Goodman and Mance, “Employment loss and the 2007-09 recession: an overview,” 9.

¹⁸ Delilah Bruskas, “Children in Foster Care: A Vulnerable Population at Risk,” *Journal of Child and Adolescent Psychiatric Nursing* 21, no. 2 (2008): 70, accessed November 27, 2020, <https://doi.org/10.1111/j.1744-6171.2008.00134.x>.

“Any recent act or failure to act on the part of a parent or caretaker which results in death, serious physical or emotional harm, sexual abuse or exploitation; or an act or failure to act, which presents an imminent risk of serious harm.”¹⁹ In this discussion, I focus on physical abuse and neglect as maltreatment because I believe those are the two subsets of maltreatment that would be most impacted during times of economic hardship. That is, when I refer to children entering foster care due to maltreatment, I am referring to children entering foster care due to either physical abuse or neglect, or both.

If there is suspicion of child abuse or neglect, anyone can make a report to Child Protective Services (CPS), who works with the court to investigate reports that have enough information to warrant an investigation, also known as screened-in reports.²⁰ In 2019, there was a national estimate of 4.4 million referrals made to CPS, which includes approximately 7.9 million children; out of all of these reports, 54.5 percent were screened-in.²¹ After a thorough investigation, CPS workers make an unsubstantiated or substantiated claim on the case, with substantiation meaning that there was enough evidence to suggest that abuse or neglect occurred by state definition.²² Depending on the degree of the child’s risk at home, caseworkers will either close the case, make referrals to the parents for child welfare services to reduce risks of maltreatment, or have the court order removal of the child from their home.²³ Most children who enter the foster care system are placed in kinship care with a relative or they are placed with a

¹⁹ Children’s Bureau, *Child Maltreatment 2019*, Office of the Administration for Children and Families, 2021, <https://www.acf.hhs.gov/cb/data-research/child-maltreatment>.

²⁰ Children’s Bureau, “How the Child Welfare System Works,” Child Welfare Information Gateway, February 2013, <https://www.childwelfare.gov/pubPDFs/cpswork.pdf>.

²¹ Children’s Bureau, *Child Maltreatment 2019*.

²² Children’s Bureau, “How the Child Welfare System Works.”

²³ Children’s Bureau, “How the Child Welfare System Works.”

foster family, while the rest are placed in a group home or residential setting.²⁴ Family reunification is the case plan goal for most children removed from their homes, but if that is not an option, adoption or a custody transfer to a relative are also permanency plans.²⁵

Child welfare systems are complex webs of entities that work to reinforce the safety of children in their homes. Unfortunately, it is not a perfect system – children end up staying in the system longer than hoped, there are a shortage of treatment options for parents, and due to the sheer number of cases and mental toll of the job, caseworkers have a substantially high turnover rate.²⁶ None of these shortcomings of the child welfare system are improved by a tumbling economy, which is why we must understand what role a recession plays in further complicating the system in order to better prepare for future economic downturns with the appropriate resources and an adequate amount of caseworkers to respond to reports of child maltreatment.

III. Literature Review

Research conducted on the links between socioeconomic circumstances and child maltreatment generally indicates that low income, stress, and changes in parental work status can all lead to increases in child maltreatment.²⁷ There has been increasingly more research that relates the Great Recession specifically to instances of child abuse or severe parenting, but there has not been any substantial work that ties these outcomes

²⁴ Children's Bureau, "How the Child Welfare System Works."

²⁵ Children's Bureau, "How the Child Welfare System Works."

²⁶ Commission on Children in Foster Care, "Fostering the Future: Safety Permanence and Well-Being for Children in Foster Care."

²⁷ Christina Paxson and Jane Waldfogel, "Work, Welfare, and Child Maltreatment," *National Bureau of Economic Research Working Paper Series*, no. 7343 (1999): 27-28, accessed January 27, 2021, <http://www.nber.org/papers/w7343>.

to influxes into the foster care system. Existing work on the former topic cites Glen Elder and Rand Conger's work on families and increased aggressive parenting behaviors during the Great Depression and the Iowa Farm Crisis as a foundation since Elder and Conger laid the groundwork for the Family Stress Model.²⁸ I focus on two separate works of literature written by William Schneider, Jane Waldfogel and Jeanne Brooks-Gunn, who utilized data from the Fragile Families and Child Wellbeing Study (FFCWS) to draw conclusions on the Great Recession and its relation to child maltreatment. The FFCWS contains interviews from almost 5000 random families from 20 large U.S. cities who had a newborn child between 1998 and 2001; interviews were conducted within 48 hours of childbirth and follow-up surveys were made when the child was 1, 3, 5, and 9 years old.²⁹

Schneider, Waldfogel, and Brooks-Gunn's earliest piece was one of the first studies to link child abuse rates during the Great Recession to economic indicators. I utilize a similar method, instead linking entries into foster care due to physical abuse, neglect, or maltreatment with state unemployment rates as economic indicators. Released nearly four years after the Great Recession ended, "The Great Recession and the risk for child maltreatment" studies the association between the Great Recession and frequency of maternal spanking, while also noting that spanking is not necessarily abuse, but it could create a continuum of corporal punishment that ultimately leads to abuse.³⁰ They also cited research that found correlations between spanking and corporal punishment and

²⁸ William Schneider, Jane Waldfogel, and Jeanne Brooks-Gunn, "The Great Recession and risk for child abuse and neglect," *Children and Youth Services Review* 72 (2016): 72, accessed November 7, 2020, <https://doi.org/10.1016/j.chilyouth.2016.10.016>.

²⁹ Jeanne Brooks-Gunn, William Schneider, and Jane Waldfogel, "The Great Recession and the risk for child maltreatment," *Child Abuse & Neglect* 37 (2013): 722, accessed October 28, 2020, <https://doi.org/10.1016/j.chiabu.2013.08.004>.

³⁰ Brooks-Gunn, Schneider, and Waldfogel, 722.

poorer behavioral outcomes for children.³¹ The FFWCS contains specific questions regarding spanking, and Schneider, Waldfogel, and Brooks-Gunn defined high frequency spanking as 11-20 or 20 more times in a year for the purpose of their study.³² They measured the financial crisis using the Consumer Sentiment Index (CSI), local unemployment rates, and home foreclosure rates while also controlling for other demographic variables,³³ and they then matched these indicators to the Fragile Families and Child Wellbeing Study data. After estimating four increasingly controlled models,³⁴ they found a significant correlation between a decreasing CSI and risk of high frequency spanking for more economically advantaged families, and the results remained the same once controls for unemployment and home foreclosure rates were added and when controlling for spanking at the previous wave.³⁵ While they did not have an objective measure of maltreatment, they found a significant correlation between high frequency spanking and parents being contacted by CPS.³⁶

In their second piece, “The Great Recession and risk for child abuse and neglect,” Schneider, Waldfogel, and Brooks-Gunn explore the correlation between the Great Recession and four measures of maternal child abuse and neglect.³⁷ Similar to their prior literature, they matched the CSI and local unemployment rates to FFCWS survey data that assesses aggressive parenting behaviors from the 9-year wave, while also controlling for past parenting behaviors and demographic variables.³⁸ They defined

³¹ Brooks-Gunn, Schneider, and Waldfogel, 722.

³² Brooks-Gunn, Schneider, and Waldfogel, 723.

³³ Brooks-Gunn, Schneider, and Waldfogel, 723.

³⁴ Brooks-Gunn, Schneider, and Waldfogel, 723.

³⁵ Brooks-Gunn, Schneider, and Waldfogel, 725-726.

³⁶ Brooks-Gunn, Schneider, and Waldfogel, 725.

³⁷ Schneider, Waldfogel, and Brooks-Gunn, “The Great Recession and risk for child abuse and neglect,” 71.

³⁸ Schneider, Waldfogel, and Brooks-Gunn, 74-75.

high frequency aggressive behavior as “aggressive behavior that occurred 11 or more times in the past year.”³⁹ They found a significant correlation between a worsening CSI and a higher unemployment rate against the risk of frequent physical and psychological abuse by mothers.⁴⁰ In addition, mothers who were married to or cohabitating with a social father (non-biological father figure) displayed higher odds of physical aggression, while marital status did not make a notable difference when looking at the impact of the CSI or unemployment rate on child neglect.⁴¹ Contrarily, they generally found decreased risk of physical and supervisory child neglect when compared to a decreasing CSI and increasing unemployment rate,⁴² which may be indicative that child neglect is linked to individual experience of hardship as opposed to macroeconomic measures⁴³ or that it was not measured precisely due to varying definitions of neglect by state.⁴⁴ Again, their results demonstrate an increase in the risk for abuse during the recession, which could have led to influxes into the foster care system. The arguments in both of their works were consistent in confirming that economic downturns are associated with increased harsh parenting,⁴⁵ which, alone, is an indispensable finding for my own hypothesis.

IV. Theoretical Discussion

The economic pressures outlined by the Family Stress Model would undoubtedly arise during a recession, especially one as drastic as the Great Recession, which could lead to increased risk of child maltreatment and influxes of children into the foster care system

³⁹ Schneider, Waldfogel, and Brooks-Gunn, 75.

⁴⁰ Schneider, Waldfogel, and Brooks-Gunn, 76.

⁴¹ Schneider, Waldfogel, and Brooks-Gunn, 77.

⁴² Schneider, Waldfogel, and Brooks-Gunn, 78.

⁴³ Schneider, Waldfogel, and Brooks-Gunn, 79.

⁴⁴ Schneider, Waldfogel, and Brooks-Gunn, 77.

⁴⁵ Schneider, Waldfogel, and Brooks-Gunn, 78.

as a result. There is evidence that job loss, or even fear of job loss, can negatively take a toll on one's well-being and health,⁴⁶ and that may impact one's parenting. Low levels of income and poverty are also often linked with child maltreatment,⁴⁷ which is important to note because lower income households are often hit the hardest during an economic downturn.

I separately assess relationships between unemployment and children entering foster care due to physical abuse, neglect, or any combination of the two. This allows me to gauge whether the pathway to entry is differentially affected by economic conditions. I expect to see foster care entries due to physical abuse rise in accordance with past literature that posited increases in harsh parenting and cases of child abuse during the Great Recession. Although Schneider, Waldfogel, and Brooks-Gunn saw decreased risk of neglect during the Great Recession, I expect to potentially see foster care entries due to neglect increase because neglect is the inability to materially provide for a child,⁴⁸ which often prevails during times of financial hardship.

In addition, we think about children entering foster care from different racial or ethnic groups and how their families were likely impacted by the Great Recession. In their study of the Great Recession, David Grusky, Bruce Western, and Christopher Wimer point out that unemployment among Black Americans was higher than other racial groups prior to the recession, and their unemployment reached new heights during the crisis.⁴⁹ Research also shows that education has a lower return for Black Americans;

⁴⁶ Schneider, Waldfogel, and Brooks-Gunn, 73.

⁴⁷ Schneider, Waldfogel, and Brooks-Gunn, 73.

⁴⁸ Schneider, Waldfogel, and Brooks-Gunn, 73.

⁴⁹ David Grusky, Bruce Western, and Christopher Wimer, *The Great Recession* (New York: Russell Sage Foundation, 2011), 75.

White and Asian American laborers with a college degree have twice the protection against unemployment as Black Americans.⁵⁰ Therefore, Black Americans are more sensitive to the unemployment rate, and it is possible that Black children would bear the brunt of the effects of the recession on their parents due to the Family Stress Model. We would then see the number of Black children going into foster care potentially increase due to maltreatment, while we may see that White children were not as affected.

In addition to having a high return on education, research conducted following the Great Recession shows that Asian Americans had the highest levels of employment and the highest weekly earnings.⁵¹ There may be reason to believe that, due to Asian Americans' comparably favorable conditions during the Great Recession, Asian American children entering foster care would decrease as a result of less pressures put on their parents relative to the population as a whole, or they would remain unaffected. On the other hand, the Asian American Pacific Islander community was found to have the second highest number of long-term unemployed workers, right under Black Americans.⁵² Consequently, it is plausible that an increase in the unemployment rate would have a lagged effect on Asian Americans, in which we would not see Asian American children entering foster care in the current period due to short-term lower levels of unemployment, but possibly later on.

⁵⁰ Grusky, Western, and Wimer, 76.

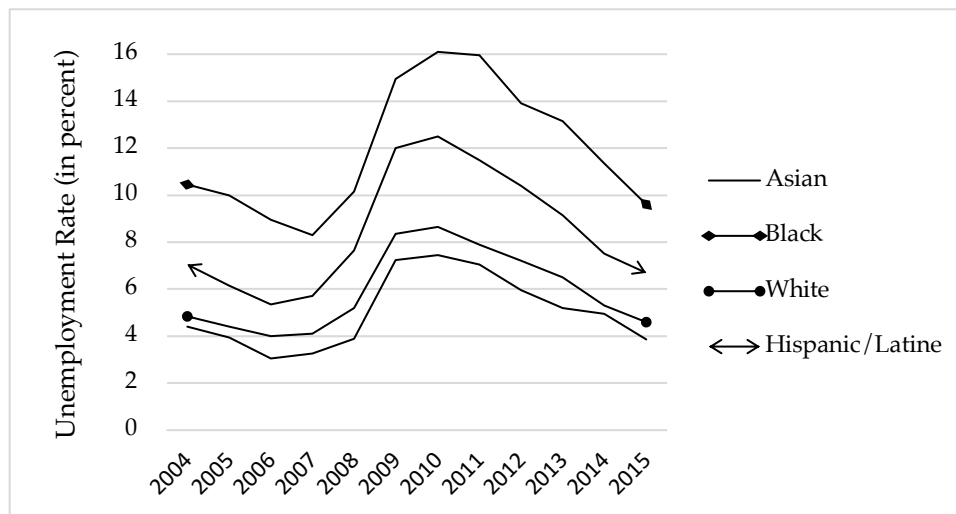
⁵¹ United States Department of Labor, "The Economic Status of Asian Americans and Pacific Islanders in the Wake of the Great Recession," accessed March 3, 2021, <http://asianchamberphila.org/wp-content/uploads/2019/05/20140828-AAPI.pdf>.

⁵² United States Department of Labor, "The Economic Status of Asian Americans and Pacific Islanders in the Wake of the Great Recession."

It is also feasible that there would be increases of Hispanic or Latine children entering foster care as the unemployment rate for Hispanic or Latine workers increased sharply due to the disparate impact of the recession on their demographic.⁵³ In addition, the unemployment gap between Hispanic or Latine workers and non-Hispanic or non-Latine workers widened during the financial crisis, which is potentially due to the fact that Hispanic or Latine workers tend to work in service industries that suffer during recessions, and they have a higher labor force participation rate than non-Hispanic or non-Latine workers.⁵⁴

Figure 2 presents the average national unemployment rate per year for Black Americans, Asian Americans, White Americans and those of Hispanic or Latine origin.

Figure 2: Unemployment Rate and Race or Origin 2004-2015



Note: Data from U.S. Bureau of Labor Statistics, Current Population Survey (2021)

⁵³ Carli Dimino, "The Hispanic Worker Through the Great Recession and Recovery," The Libre Institute, accessed February 21, 2021, <https://onedrive.live.com/View.aspx?resid=3F48D7736A5FC067!371757Tauthkey=!AGkD5BWTTrOyP7wI>.

⁵⁴ Carli Dimino, "The Hispanic Worker Through the Great Recession and Recovery."

In *Figure 2*, we see that Asian Americans and White Americans have the lowest average unemployment each year, while Black Americans and those of Hispanic or Latine origin have the highest average unemployment each year. The gaps between Black unemployment and non-Black unemployment also widened during the recession, as did the gaps between Hispanic or Latine unemployment and White or Asian unemployment.

V. Empirical Strategy

We start off with three baseline models, each with a different dependent variable, focusing on the impact of the unemployment rate on the number of children entering foster care from 2004 to 2015.

$$\log(Y) = \beta_0 + \beta_1 Asian + \beta_2 Black + \beta_3 Mixed_Race + \beta_4 Other_Race + \beta_5 Hispanic + \beta_6 Male + \beta_7 Disability + \beta_8 Unemployment_{st} + \theta_s + \gamma_t + \varepsilon_{st}$$

In the first regression, the dependent variable is $\ln(\text{number of children entering foster care due to physical abuse})$. In the second regression, the dependent variable is $\ln(\text{number of children entering foster care due to neglect})$. In the third regression, the dependent variable is $\ln(\text{number of children entering foster care due to maltreatment})$. The unit of observation is race x sex x disability x year x state. I take the natural log of the dependent variable in each regression in order to deal with outlier observations and the fact that the scale of Y may differ considerably across groups.

Asian is a binary variable for whether the child's recorded race is only Asian, *Black* is a binary variable for whether the child's recorded race is only Black, *Mixed_Race* is a binary variable for whether the child is any combination of Asian, Black, or White, and *Other_Race* is a binary variable for whether the child is recorded as any other race that is not solely Asian, Black, or White. The *White* variable, whether the child's recorded race is only White, is omitted from the model as White children are the largest racial group in the data. *Hispanic* is a binary variable for whether the child is of Hispanic or Latine origin. *Male* is a binary variable for whether the child's recorded sex is male. *Disability* is a binary variable determining whether the child is medically diagnosed and requires extra care, such as those who are visually or hearing impaired, physically disabled, emotionally disturbed, or intellectually disabled. $Unemployment_{st}$ is the average unemployment rate in state s in year t , θ_s is a set of state fixed effects, γ_t is a set of year fixed effects, and ε_{st} is an error term. The state fixed effects control for time-invariant changes across states while the year fixed effects control for state-invariant changes over time, including common nationwide yearly shocks (e.g., new presidential administration).

We then look to assess whether there is variation between children entering foster care from 2004 to 2015 among different racial groups or ethnic origin. I do this by adding interactions between the race and ethnicity groups, as defined above, and the unemployment rate to the three baseline models, with *White* as the omitted group again:

$$\begin{aligned} \log(Y) = & \beta_0 + \beta_1 \textit{Asian} + \beta_2 \textit{Black} + \beta_3 \textit{Mixed_Race} + \beta_4 \textit{Other_Race} + \beta_5 \textit{Hispanic} \\ & + \beta_6 \textit{Male} + \beta_7 \textit{Disability} + \beta_8 \textit{Unemployment}_{st} + \beta_9 \textit{Asian} \\ & * \textit{Unemployment}_{st} + \beta_{10} \textit{Black} * \textit{Unemployment}_{st} + \beta_{11} \textit{Mixed_Race} \\ & * \textit{Unemployment}_{st} + \beta_{12} \textit{Other_Race} * \textit{Unemployment}_{st} + \beta_{13} \textit{Hispanic} \\ & * \textit{Unemployment}_{st} + \theta_s + \gamma_t + \varepsilon_{st} \end{aligned}$$

As Schneider, Waldfogel, and Brooks-Gunn noted, using a macroeconomic indicator, such as the unemployment rate, as an independent variable helps avoid endogeneity issues due to individual circumstances, such as parental income, that are independent of the unemployment rate.⁵⁵ However, endogeneity due to factors affecting both unemployment rates and entries into foster care will not be circumvented (e.g., changes in generosity in benefits).

VI. Data and Descriptive Statistics

I draw on data from the Children’s Bureau, which is within the Office of the Administration for Children and Families within the U.S. Department of Health and Human Services.⁵⁶ This federal agency focuses on improving and protecting the lives of children through federal legislation,⁵⁷ and it collects information regarding child welfare. There are two reporting systems within the Children’s Bureau, but I focus on data from The Adoption and Foster Care Analysis and Reporting System (AFCARS). AFCARS collects case-level details on children in foster care from title IV-E agencies (federally funded),⁵⁸ and the data were available through the National Data Archive on

⁵⁵ Schneider, Waldfogel, and Brooks-Gunn, “The Great Recession and risk for child abuse and neglect,” 72.

⁵⁶ Children’s Bureau, “About Child Welfare Information Gateway,” Child Welfare Information Gateway, accessed December 9, 2020, <https://www.childwelfare.gov/aboutus/>.

⁵⁷ Children’s Bureau, “How the Child Welfare System Works.”

⁵⁸ Children’s Bureau, “Reporting Systems,” Office of the Administration for Children and Families, accessed December 9, 2020, <https://www.acf.hhs.gov/cb/research-data-technology/reporting-systems>.

Child Abuse and Neglect (NDACAN). I utilize data from 2004 to 2015 across 50 states in order to illustrate what the entries into the foster care system looked like before the recession as well as changes that took place during and after the recession. Each year contains state-level data that has information on every child in the foster care system that year (600,000+ observations per year). This data is appropriate for this study because it not only specifies entries into the system per year, but it highlights the reason children entered the system, which is imperative in understanding if entries due to child maltreatment rose as a result of the recession.

I match the AFCARS data to the average state unemployment rate per year to measure whether there is a significant correlation between entries into foster care due to physical abuse, neglect, or maltreatment and the unemployment rate and to evaluate whether race or ethnic origin played a role in who exactly entered the system. I retrieved state unemployment rate data, for 2004 to 2015 as well, from the St. Louis Federal Reserve Bank Economic Data website, which collects data from the U.S. Bureau of Labor Statistics (BLS). The BLS is the official federal government agency that collects facts regarding employment data,⁵⁹ so it is the most reliable and trusted source for labor force data.

Table 1 displays descriptive statistics on the sample, with a column for children entering foster care from 2004 to 2015 and a column for 2010 Census population estimations for comparison.

⁵⁹ Federal Reserve Bank of St. Louis, "St. Louis Fed Home," FRED Economic Data, accessed December 15, 2020, <https://fred.stlouisfed.org/>.

Table 1: Descriptive Statistics (in percent)

	AFCARS Data 2004-2015	Census Data 2010
Asian	4.05	5.90
Black	25.81	13.40
White	57.95	76.30
Mixed Race	3.46	2.80
Other Race	14.76	1.50
Hispanic or Latine Origin	19.50	18.50
Male	51.53	49.20
Disability	17.90	8.60
Entry Reason: Physical Abuse	14.52	N/A
Entry Reason: Neglect	52.64	N/A
Entry Reason: Maltreatment	67.16	N/A
Entry Reason: Other	38.81	N/A

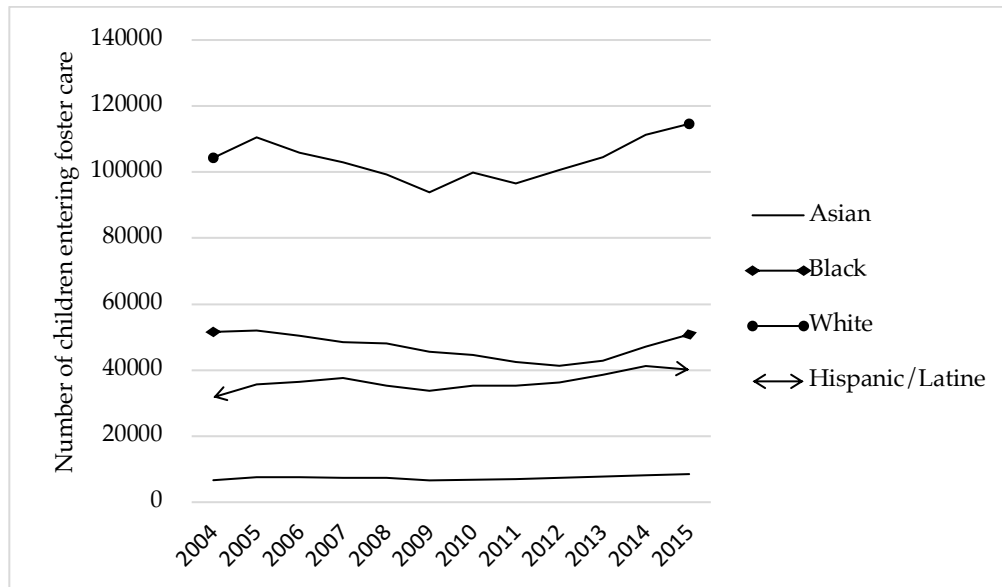
Note: Population data from U.S. Census Bureau, April 1, 2010.

AFCARS data: Children in the “Other Race” category may be mixed race and not included in “Mixed Race,” any child may have entered foster care for several reasons, and children whose sex was not recorded were excluded from the data.

Census Data: “Mixed Race” is defined as two or more races, “Other Race” is defined as American Indian, Alaska Native, Native Hawaiian, or Other Pacific Islander, and “Disability” is defined as having a disability under the age of 65.

Figure 3 displays the number of Asian, Black, White, and Hispanic or Latine children entering foster care due to maltreatment overall from 2004 to 2015. We do not focus on children that are mixed-race in this study because the number of mixed-race children, as defined in this paper, is relatively small. We also do not focus on children in the “Other Race” category as the group is not specific enough and contains children whose race was undetermined.

Figure 3: Number of Children Entering Foster Care Due to Maltreatment by Race or Origin
2004-2015



VII. Results

Table 2 presents the regression results from the three baseline models that do not include any interactions with race or ethnic origin, with the dependent variable varying as the number of children entering foster care due to physical abuse, neglect, or maltreatment. The state and year fixed effects are not listed in the table for conciseness.

Table 2: Effect of Unemployment Rate on Children Entering Foster Care 2004-2015

	Dependent variable:		
	ln(number of children entering foster care)		
	Physical Abuse (1)	Neglect (2)	Maltreatment (3)
Unemployment _{st}	-0.007 (0.009)	-0.014 (0.010)	-0.010 (0.008)
Asian	-0.413*** (0.023)	-0.144** (0.022)	-0.208** (0.018)
Black	-0.785*** (0.017)	-1.142*** (0.018)	-1.009*** (0.015)
Mixed Race	-1.884*** (0.019)	-2.013*** (0.022)	-1.959*** (0.018)
Other Race	-1.694*** (0.020)	-2.173*** (0.022)	-2.006*** (0.017)
Hispanic	-1.067*** (0.015)	-1.125*** (0.015)	-1.107*** (0.012)
Male	0.040*** (0.013)	0.037*** (0.015)	0.039*** (0.012)
Disability	-1.019*** (0.014)	-1.102*** (0.015)	-1.070*** (0.012)
Constant	3.490*** (0.092)	3.937*** (0.098)	3.882*** (0.076)

Robust standard errors in parentheses
*p<0.1; **p<0.05; ***p<0.01

The coefficient on the unemployment rate is not statistically significant in any of the baseline models. Moreover, the point estimates are small. In particular, a 1 unit (i.e., 1 percentage point) increase in the unemployment rate leads to a 0.7 percentage point decrease in children entering foster care due to physical abuse, a 1.4 percentage point decrease in children entering foster care due to neglect, and a 1.0 percentage point decrease in the children entering foster care due to maltreatment. Although this finding

is inconsistent with the hypothesis stated, it prompts further investigation into entries into the foster care system along racial or ethnic lines.

Table 3 displays the regression results from the three focal models, with the dependent variable varying as the number of children entering foster care due to physical abuse, neglect, or maltreatment. These models control for gender, the three race categories, whether the child is of Hispanic or Latine origin, and whether the child has a disability, along with including state and year fixed effects – these controls are not listed in the table for conciseness.

Table 3: Effect of Unemployment Rate on Children Entering Foster Care 2004-2015

	<i>Dependent variable:</i>		
	ln(number of children entering foster care)		
	Physical Abuse (1)	Neglect (2)	Maltreatment (3)
Unemployment _{st}	-0.006 (0.010)	0.011 (0.012)	0.008 (0.010)
Asian*Unemployment _{st}	-0.054*** (0.011)	-0.032*** (0.010)	-0.043*** (0.008)
Black*Unemployment _{st}	0.039*** (0.008)	0.030*** (0.008)	0.031*** (0.007)
Mixed Race*Unemployment _{st}	0.028*** (0.008)	0.025** (0.010)	0.024*** (0.008)
Other Race*Unemployment _{st}	-0.032*** (0.010)	-0.069*** (0.010)	-0.056*** (0.008)
Hispanic*Unemployment _{st}	0.014** (0.007)	0.005 (0.007)	0.008 (0.006)
Constant	3.475*** (0.097)	3.770*** (0.109)	3.757*** (0.084)

Robust standard errors in parentheses
*p<0.1; **p<0.05; ***p<0.01

From these findings, we conclude that a changing unemployment rate resulting from the Great Recession does not substantially affect the number of White children entering foster care due to physical abuse, neglect, and maltreatment.

On the other hand, we see an increasing unemployment rate influencing entries into foster care for non-White children, with increased entries into the system for Black children but decreased entries into the system for Asian children. The unemployment rate interacted with children who are Asian and the unemployment rate interacted with children who are Black are statistically significant in each of the three models. The unemployment rate interacted with children who are Hispanic or Latine is statistically significant in the physical abuse model. We add together the significant interacted variable coefficients with the unemployment variable coefficient in order to see the total effect of unemployment for each relevant group:

- when $Asian = 1$ and the derivative of the model is taken with respect to unemployment, the total effect of unemployment is $\beta_8 + \beta_9$
- when $Black = 1$ and the derivative of the model is taken with respect to unemployment, the total effect of unemployment is $\beta_8 + \beta_{10}$
- when $Hispanic = 1$ and the derivative of the model is taken with respect to unemployment, the total effect of unemployment is $\beta_8 + \beta_{13}$

I use an F-test to determine whether the total effect of the unemployment rate on each of the groups at hand entering foster care is different from zero. Testing $\beta_8 + \beta_9$ in each of the three models, we can reject the null hypotheses that the total effects of the unemployment rate on Asian children entering foster care due to physical abuse and due to maltreatment are each close to zero, but we cannot reject the null hypothesis that

the total effect of the unemployment rate on Asian children entering foster care due to neglect is close to zero. Testing $\beta_8 + \beta_{10}$ in each of the three models, we can reject the null hypotheses that the total effects of the unemployment rate on Black children entering foster care due to physical abuse, neglect, and maltreatment are each close to zero. Lastly, testing $\beta_8 + \beta_{13}$ in the first model where $\beta_{13}Hispanic * Unemployment_{st}$ is significant, we cannot reject the null hypothesis, suggesting that we cannot say that the total effect of the unemployment rate on Hispanic or Latine children entering foster care due to physical abuse is not close to zero. We deduce that entries of Hispanic or Latine children into the system because of child maltreatment were not sensitive to changes in the unemployment rate, similar to entries of White children into the system.

With a 1 unit increase in the unemployment rate, the number of Asian children entering foster care due to physical abuse decreases by 6 percent, on average. With a 1 unit increase in the unemployment rate, the number of Asian children entering foster care due to maltreatment decreases by 3.5 percent, on average. For scaling purposes, approximately 1,448 Asian children entered foster care due to physical abuse in 2009 and 6,686 Asian children entered foster care due to maltreatment in 2009. With a 5 unit increase in the national unemployment rate from December 2008 to October 2009, approximately 434 fewer Asian children enter foster care due to physical abuse, and approximately 1,170 fewer Asian children enter foster care due to maltreatment, which, relative to the number of Asian children entering foster care per year, is sizeable in magnitude.

With a 1 unit increase in the unemployment rate, the number of Black children entering foster care due to physical abuse increases by 3.3 percent, on average. With a 1 unit increase in the unemployment rate, the number of Black children entering foster care due to neglect increases by 4.1 percent, on average. With a 1 unit increase in the unemployment rate, the number of Black children entering foster care due to maltreatment increases by 3.9 percent, on average. We do not see a difference in direction of entries into foster care for Black children whether the entries are due to physical abuse or neglect. For scaling purposes, approximately 11,585 Black children entered foster care due to physical abuse in 2009, 31,315 Black children entered foster care due to neglect in 2009, and 39,780 Black children entered foster care due to maltreatment in 2009. With a 5 unit increase in the national unemployment rate from December 2008 to October 2009, approximately 1,911 more Black children enter foster care due to physical abuse, approximately 6,419 more Black children enter foster care due to neglect, and approximately 7,757 more Black children enter foster care due to maltreatment, which is a substantial number of children.

From these findings, we gather that the unemployment rate does not appear to affect children entering foster care due to physical abuse, neglect, and maltreatment across all racial groups or ethnic origin, and it also does not impact the number of White and Hispanic or Latine children entering foster care due to physical abuse, neglect, and maltreatment. Since White children constitute the majority of children entering foster care, and the unemployment rate did not affect their entry into foster care due to maltreatment, it is reasonable that we do not see the unemployment rate affecting entries into foster care due to maltreatment across all racial groups or ethnic origin. Looking beyond the baseline models, we note that the effect of the unemployment rate

on Asian American children versus the effect on Black American children entering foster care generally move in opposing directions. We see the number of Asian children entering foster care due to physical abuse or maltreatment decreasing with an increasing unemployment rate. The unemployment rate does not have an effect on Asian children entering foster care solely due to neglect, suggesting harsh parenting may have declined in Asian American families during this time which lowered the number of children entering foster care due to physical abuse. In accordance with earlier theory, Asian Americans had the lowest levels of unemployment throughout the recession along with higher income, so that could have alleviated some of the pressures outlined in the Family Stress Model in an otherwise incredibly taxing time, causing relief and gratitude at home. Future studies may want to compute the unemployment rate for each racial or ethnic group in the event that Asian Americans do not respond to the overall unemployment rate but are responsive to their specific unemployment rate. We also see confirmations that Black children are more susceptible to entering foster care due to physical abuse, neglect, and maltreatment when the unemployment rate increases. This is not particularly surprising; the results are consistent with the theory that Black Americans bear more of the unemployment burden, especially when the economy begins to decline, and it is likely that Black children are at higher risk of facing physical abuse or having their material needs neglected because of disproportionate economic pressures on their parents.

VIII. Lagged Model

It is also conceivable that the Great Recession did not immediately impact any particular family and that it took time before the increased unemployment rate began to

affect parenting or the ability of parents to provide for their children. In order to capture potential lags in the effect of the unemployment rate on children entering foster care due to maltreatment, we use two lagged models:

$$\begin{aligned} \log(Y) = & \beta_0 + \beta_1 \text{Asian} + \beta_2 \text{Black} + \beta_3 \text{Mixed_Race} + \beta_4 \text{Other_Race} + \beta_5 \text{Hispanic} \\ & + \beta_6 \text{Male} + \beta_7 \text{Disability} + \beta_8 \text{Unemployment}_{st-1} + \beta_9 \text{Asian} \\ & * \text{Unemployment}_{st-1} + \beta_{10} \text{Black} * \text{Unemployment}_{st-1} + \beta_{11} \text{Mixed_Race} \\ & * \text{Unemployment}_{st-1} + \beta_{12} \text{Other_Race} * \text{Unemployment}_{st-1} \\ & + \beta_{13} \text{Hispanic} * \text{Unemployment}_{st-1} + \theta_s + \gamma_t + \varepsilon_{st} \end{aligned}$$

$$\begin{aligned} \log(Y) = & \beta_0 + \beta_1 \text{Asian} + \beta_2 \text{Black} + \beta_3 \text{Mixed_Race} + \beta_4 \text{Other_Race} + \beta_5 \text{Hispanic} \\ & + \beta_6 \text{Male} + \beta_7 \text{Disability} + \beta_8 \text{Unemployment}_{st-2} + \beta_9 \text{Asian} \\ & * \text{Unemployment}_{st-2} + \beta_{10} \text{Black} * \text{Unemployment}_{st-2} + \beta_{11} \text{Mixed_Race} \\ & * \text{Unemployment}_{st-2} + \beta_{12} \text{Other_Race} * \text{Unemployment}_{st-2} \\ & + \beta_{13} \text{Hispanic} * \text{Unemployment}_{st-2} + \theta_s + \gamma_t + \varepsilon_{st} \end{aligned}$$

The first model uses the unemployment rate from the previous year instead of the current year, and the second model uses the unemployment rate from two years ago instead of the current year. For simplicity, the only dependent variable used here is $\ln(\text{number of children entering foster care due to maltreatment})$. *Table 4* presents the results of the two lagged models.

Table 4: Lagged Effect of Unemployment Rate on Children Entering Foster Care 2004-2015

	<i>Dependent variable:</i> ln(number of children entering foster care)	
	Maltreatment	
	(1)	(2)
Unemployment _{st-1}	0.00002 (0.010)	
Asian*Unemployment _{st-1}	-0.043*** (0.009)	
Black*Unemployment _{st-1}	0.026*** (0.007)	
Mixed Race*Unemployment _{st-1}	0.026*** (0.009)	
Other Race*Unemployment _{st-1}	-0.058*** (0.009)	
Hispanic*Unemployment _{st-1}	0.006 (0.006)	
Unemployment _{st-2}		0.003 (0.010)
Asian*Unemployment _{st-2}		-0.038*** (0.009)
Black*Unemployment _{st-2}		0.021*** (0.007)
Mixed Race*Unemployment _{st-2}		0.023*** (0.009)
Other Race*Unemployment _{st-2}		-0.062*** (0.009)
Hispanic*Unemployment _{st-2}		0.007 (0.006)
Constant	3.802*** (0.087)	3.718*** (0.088)

Robust standard errors in parentheses
*p<0.1; **p<0.05; ***p<0.01

The coefficients on the unemployment rate from the previous year and the unemployment rate from two years ago are not statistically significant. Consistent with the models using the current unemployment rate, the coefficients on the unemployment rate interacted with *Asian* and *Black* are significant. Using the F-test, we can reject the null hypotheses that the total effect of the unemployment rate lagged one year on Asian children entering foster care due to maltreatment is close to zero, and that the total effect of the unemployment rate lagged two years on Asian children entering foster care due to maltreatment is close to zero. We also reject the null hypotheses that the total effect of the unemployment rate lagged one year on Black children entering foster care due to maltreatment is close to zero, and that the total effect of the unemployment rate lagged two years on Black children entering foster care due to maltreatment is close to zero.

With a 1 unit increase in the unemployment rate from one year ago, the number of Asian children entering foster care due to maltreatment decreases by 4.3 percent, on average. With a 1 unit increase in the unemployment rate from two years ago, the number of Asian children entering foster care due to maltreatment decreases by 3.5 percent, on average. There is a 3.5 percent decrease in Asian children entering foster care due to maltreatment with a 1 unit increase in the current unemployment rate, so Asian children entering foster care due to maltreatment decreases at a higher or similar rate one to two years, respectively, after the unemployment rate increases when compared to the current unemployment rate increase. The direction of the effects of unemployment on Asian children is the same whether the unemployment rate is lagged or not, but the magnitude of the effect is largest when looking at the unemployment

rate lagged one year on entries of Asian children into foster care because of maltreatment. Since we still do not see Asian American children entering foster care due to maltreatment increasing, even after noting Asian Americans' higher long-term unemployment rates, it is also plausible that looking at one or two years was not sufficient enough in determining whether long-term unemployment negatively affected Asian American parenting or their ability to provide for their children.

With a 1 unit increase in the unemployment rate from one year ago, the number of Black children entering foster care due to maltreatment increases by 2.6 percent, on average. With a 1 unit increase in the unemployment rate from two years ago, the number of Black children entering foster care due to maltreatment increases by 2.4 percent, on average. With a 1 unit increase in the current unemployment rate, the number of Black children entering foster care due to maltreatment increases by 3.9 percent, on average. Therefore, we see Black children entering foster care due to maltreatment at the highest rate when the unemployment rate increases in the current period. We still see increases of Black children into foster care one to two years after the unemployment rate increases, just at a lower rate when compared to increases in the current unemployment rate.

IX. Conclusion

This discussion confronts the lack of studies on the Great Recession as it pertains to entries into the foster care system. While Schneider, Waldfogel, and Brooks-Gunn found increased risk of child abuse and decreased risk of child neglect in relation to the financial crisis, we see that an increasing unemployment rate during the Great

Recession did not affect the number of children entering foster care due to maltreatment across all racial groups or ethnic origin. However, an increasing unemployment rate caused the number of Black children entering the foster care system due to physical abuse, neglect, and maltreatment overall to increase. When accounting for time lags in the unemployment rate by one year and then two years, we still see the number of Black children entering foster care due to maltreatment increase with an increasing unemployment rate in previous years. The findings also indicate that the number of Asian children entering foster care due to physical abuse and maltreatment overall decreased as a result of the Great Recession, and the number of Asian children entering foster care due to maltreatment also decreased with time lags in the unemployment rate by one year and then two years. On the other hand, we gather that the fluctuating unemployment rate did not have as much of an impact on how many White and Hispanic or Latine children enter foster care, even with time lags.

There are several limitations in this study. In previous literature, the unemployment rate is used as a measure of the Great Recession alongside the Consumer Sentiment Index (CSI), an indicator of consumer confidence.⁶⁰ The CSI measures how the country perceived the state of the economy at a given point in time,⁶¹ which is useful in gauging the impact of the Great Recession on consumer perceptions. In this research, I only use state unemployment rates because the CSI is a national measure, so it loses variation across states, and the rest of the variables in the regressions at hand are measured at the state-level. In addition, it is possible that due to shrinking state budgets during the

⁶⁰ Schneider, Waldfogel, and Brooks-Gunn, "The Great Recession and risk for child abuse and neglect," 72.

⁶¹ Schneider, Waldfogel, and Brooks-Gunn, 72.

recession, CPS budgets were hit, which may have caused the number of workers able to assess and respond to reports of maltreatment to decrease, letting cases slip through the cracks. In any case, child maltreatment is underreported due to an overwhelmed system, and there are not enough foster homes to accommodate for every child who may need one. The estimates presented are likely understated due to these factors.

Furthermore, the unemployment rate used in this study does not capture workers who have stopped looking for work, and these workers could have been parents just as impacted by the recession with children who were also at risk for maltreatment. The unemployment rate also does not capture workers who were involuntarily forced into part-time work. During the Great Recession, the rate at which Hispanic or Latine workers were forced into involuntary part-time work increased significantly, as did the involuntary part-time work gap between them and non-Hispanic or non-Latine workers.⁶² Their underemployment is not reflected in the unemployment rate, and that could have also led to economic pressures outlined in the Family Stress Model for those who were parents, or it could have led those parents to spend more quality time with their children which then decreased the risk for maltreatment. Either of these scenarios could have occurred but we would not see significant changes in the number of Hispanic or Latine children going into foster care due to maltreatment with an increased unemployment rate that fails to capture these possibilities – use of the U-6 unemployment rate in future research would address this issue.

⁶² Carli Dimino, “The Hispanic Worker Through the Great Recession and Recovery.”

Lastly, there is the question of causality. This study uses state and year fixed effects and demographic controls along with implementing time lags to account for changes that took place after the unemployment rate increased in order to address causality issues. Nonetheless, there is still the possibility of endogeneity in which unobservable covariates are correlated with the unemployment rate, such as the opioid crisis or inherently harsh parenting styles regardless of the recession.

The results presented in this paper are imperative in allowing us to see how economic conditions affect children and the foster care system. It draws attention to systematic changes that must take place to address disparities in racial outcomes in which more Black children are entering foster care during a recession. The findings also shed light on the need to address employment or wage gaps between Black or Hispanic workers and White or Asian American workers. We also note that there must be financial and mental-wellbeing resources provided to families, including Black households that have less resources to fall back on, during times of economic hardship in order to prevent child maltreatment or other risk factors, such as substance abuse, that would constitute removal of a child from their home. In addition, the study proposes an increase in the demand for caseworkers during a recession who should be equipped with the proper tools to determine whether a child is in danger at home. In conclusion, these results are especially relevant today in light of the COVID-19 pandemic – the national U.S. unemployment rate peaked at 14.7 percent in April 2020,⁶³ social workers cannot enter homes to investigate cases, and there is a lack of foster homes.⁶⁴ Learning from the most

⁶³ U.S. Bureau of Labor Statistics, Unemployment Rate [UNRATE], retrieved from FRED, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/series/UNRATE>, December 8, 2020.

⁶⁴ Kristin Schwab, "How the pandemic is testing the foster care system," Marketplace Morning Report, June 2020, <https://www.marketplace.org/2020/06/25/covid-19-foster-care-system/>.

recent recession on its impacts on the child welfare system and how we can improve it will only help come up with better solutions to some of the issues in the foster care system that we are currently facing, which would be a crucial and appropriate study to look at next.

X. References

- Brooks-Gunn, Jeanne, William Schneider, and Jane Waldfogel. "The Great Recession and the risk for child maltreatment." *Child Abuse and Neglect* 37 (2013): 721-729. Accessed October 28, 2020. <https://doi.org/10.1016/j.chiabu.2013.08.004>.
- Bruskas, Delilah. "Children in Foster Care: A Vulnerable Population at Risk." *Journal of Child and Adolescent Psychiatric Nursing* 21, no. 2 (2008): 70-77. Accessed November 27, 2020. <https://doi.org/10.1111/j.1744-6171.2008.00134.x>.
- Children's Bureau. "About Child Welfare Information Gateway." Child Welfare Information Gateway. Accessed December 9, 2020. <https://www.childwelfare.gov/aboutus/>.
- Children's Bureau. *Child Maltreatment 2019*. Office of the Administration for Children and Families. 2021. <https://www.acf.hhs.gov/cb/data-research/child-maltreatment>.
- Children's Bureau. "How the Child Welfare System Works. Child Welfare Information Gateway. February 2013. <https://www.childwelfare.gov/pubPDFs/cpswork.pdf>.
- Children's Bureau. "Reporting Systems." Office of the Administration for Children and Families. Accessed December 9, 2020. <https://www.acf.hhs.gov/cb/research-data-technology/reporting-systems>.
- Commission on Children in Foster Care. "Fostering the Future: Safety Permanence and Well-Being for Children in Foster Care." The Pew Charitable Trusts. May 2004. <https://www.pewtrusts.org/en/research-and-analysis/reports/0001/01/01/fostering-the-future-safety-permanence-and-wellbeing-for-children-in-foster-care>.

- Cunningham, Evan. "Great Recession, great recovery? Trends from the Current Population Survey." *Monthly Labor Review*. U.S. Bureau of Labor Statistics. April 2019. <https://doi.org/10.21916/mlr.2018.10>.
- Dimino, Carli. "The Hispanic Worker Through the Great Recession and Recovery." The Libre Institute. Accessed February 20, 2021. <https://thelibrestitute.org/blog/2015/10/the-hispanic-worker-through-the-great-recession-and-recovery/>.
- Federal Reserve Bank of St. Louis. "St. Louis Fed Home." FRED Economic Data. Accessed December 14, 2020. <https://fred.stlouisfed.org/>.
- Goodman, Christopher J. and Steven M. Mance. "Employment loss and the 2007-09 recession: an overview." *Monthly Labor Review*. U.S. Bureau of Labor Statistics. April 2011. <https://www.bls.gov/opub/mlr/2011/04/art1full.pdf>.
- Grusky, David, Bruce Western, and Christopher Wimer. *The Great Recession*. New York: Russell Sage Foundation, 2011.
- Gypen, Laura, Johan Vanderfaeillie, Skrallan De Maeyer, Laurence Belenger, Frank Van Holen. "Outcomes of children who grew up in foster care: Systematic-review." *Children and Youth Services Review* 76 (2017): 74-83. Accessed January 21, 2021. <https://doi.org/10.1016/j.childyouth.2017.02.035>.
- Neppl, Tricia K., Jennifer M. Senia, and M. Brent Donnellan. "The Effects of Economic Hardship: Testing the Family Stress Model over Time." *Journal of Family Psychology* 30, no. 1 (2016): 1-20. Accessed December 1, 2020. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4742411/>.
- Paxson, Christina and Jane Waldfogel. "Work, Welfare, and Child Maltreatment." *National Bureau of Economic Research Working Paper Series*, no. 7343 (1999): 27-28. Accessed January 27, 2021, <http://www.nber.org/papers/w7343>.

Schneider, William, Jane Waldfogel, and Jeanne Brooks-Gunn. "The Great Recession and risk for child abuse and neglect." *Children and Youth Services Review* 72 (2016): 71-81. Accessed November 7, 2020.

<https://doi.org/10.1016/j.childyouth.2016.10.016>.

Schwab, Kristin. "How the pandemic is testing the foster care system." *Marketplace Morning Report*. June 2020. <https://www.marketplace.org/2020/06/25/covid-19-foster-care-system/>.

United States Department of Labor. "The Economic Status of Asian Americans and Pacific Islanders in the Wake of the Great Recession." Accessed March 3, 2021. <http://asianchamberphila.org/wp-content/uploads/2019/05/20140828-AAPI.pdf>.

U.S. Bureau of Labor Statistics. Unemployment Rate [UNRATE]. Retrieved from FRED, Federal Reserve Bank of St. Louis. Accessed December 8, 2020. <https://fred.stlouisfed.org/series/UNRATE>.