



National Foster Home Capacity Study

Ioana Marinescu, PhD
Johanna Greeson, PhD, MSS, MLSP
Debra Schilling Wolfe, MEd
Fei Tan, MSSP

**Field Center for Children's Policy, Practice & Research
University of Pennsylvania**

October 2019

Executive Summary

The Chronicle of Social Change published its initial Foster Care Capacity Report in 2017.¹ This report explored the number of foster care, kinship care and group home beds relative to the number of foster children living in every state. *The Chronicle* was interested in learning what larger macroeconomic factors might be impacting systemic ability to recruit and retain a foster parent workforce and engaged researchers from the University of Pennsylvania's Field Center for Children's Policy, Practice & Research to conduct a macroeconomic analysis of the nation's foster care capacity.

The availability of foster homes can be affected by many factors, including economic variables. To understand how these factors may play out, we analyzed the demographics of foster parents. Next, we investigated the association between the number of children in foster care (used as a proxy for foster home availability) and three key economic determinants at the state level:

- (1) Association between board payments to foster parents and the number of children in foster care;
- (2) Association between housing costs and the number of children in foster care; and
- (3) Association between labor market conditions and the number of children in foster care.

How do **foster parents** compare to parents in the overall population? In 2006, foster parents were less educated and less likely to be working than all parents. Furthermore, foster parents were more likely to be disabled.

Higher **payments to foster parents** should encourage more households to take in foster children, while having no effect on the number of children who are in need of placement. Therefore, if higher payments increase the number of children in foster care, then this is likely due to an increase in capacity rather than an increase in need. We found that a 10% increase in state foster care payments was associated with a 0.9% increase in the number of children in foster care in that state.

Additionally, we used **North Carolina** as an example to show that an increase in payment to foster families results in more placements in foster family settings. North Carolina increased its payment to foster families (both relative and non-relative) after 2008. Compared to other states and accounting for other important factors, North Carolina had more children placed in foster homes after the increased payments.

Housing prices, like labor market conditions, can affect both foster parents and birth parents. For both sets of parents, higher housing prices likely reduces housing affordability. For birth parents, this could lead to more family stressors and therefore more children potentially needing placement. At the same time, for prospective foster parents, higher housing costs could reduce the affordability of taking on an additional child. We found a negative association between housing costs within a

¹ See <https://chronicleofsocialchange.org/wp-content/uploads/2017/10/The-Foster-Care-Housing-Crisis-10-31.pdf>

state and the number of children placed in foster care in that state; controlling for other relevant factors, an increase in housing costs in a state was associated with a decrease in the number of children in foster care in that state. This result suggests that higher housing costs may have an impact on prospective foster parents, making it more difficult to house an additional child.

Labor market conditions can affect both foster parents and birth parents in complex ways. We examined the association between the number of children in foster care and the **state minimum wage**, as well as female and male employment rates at the state level. We found that an increase in the state minimum wage was associated with a greater number of children in foster care. The male and female employment rates did not have a significant association with the number of children in foster care.

I. Introduction

Foster care serves as a resource for out-of-home placement of children who cannot safely remain in their own homes due to child abuse or neglect. Under the purview of child welfare systems in each U.S. state, recruitment, licensure, placement, and supervision of children in foster care is administered according to each state's own regulations, laws, and policies. As a result, there are variances from state to state, but the core function and responsibility remains the same.

Foster homes fall under two broad categories: general licensed foster homes and kinship homes. States recruit families to serve as (non-kin) foster parents, remaining available for placement of children on an as-needed basis. Alternatively, kinship care refers to family or family-like relations who become approved to provide in-home care for a specific child or children who are their "kin." Each state establishes their own definition of kin. For example, New Hampshire defines kin narrowly, with the requirement of a blood relationship, while federal guidelines are broader and allow for kin-like relationships.

According to the Children's Bureau's Adoption and Foster Care Analysis and Reporting System, the number of children placed in foster care in the United States is relatively unchanged, with 437,283 children in foster care on September 30, 2018, as compared to 441,071 the year before; a reduction of only 3,788 children placed in care. Neglect (62%) and drug abuse by parents (36%) continue to be the most frequently cited reasons for placement in foster care. With respect to placement availability, the number of available foster homes has decreased.

A report by *The Chronicle for Social Change* published in 2019 examined foster home capacity on a state-by-state basis looking at the numbers of licensed, non-relative foster homes. After excluding 15 states that were unable to provide usable data, this study of 25 states revealed a decrease in foster home capacity from 2012 through 2017 relative to the numbers of children in care.

Nationally, there has been an increasing reliance on placement of children in kinship homes. There are a number of factors contributing to this preference. Placement with kin is the least restrictive level of care, grounded in both policy and philosophy. It can be less traumatic for children to be placed with someone familiar rather than in a stranger's home. And the utilization of kinship homes eliminates the need to find an available general licensed foster home. In essence, the utilization of kinship placements has further staved off a foster home capacity crisis.

Numbers don't tell the whole story. The need for licensed foster homes is further compounded when attempting to match children with their placements. It can be a challenge to locate a home within the child's own community. Placement of sibling groups together, adolescents, and children with special needs are extremely challenging.

In an attempt to examine factors that may contribute to decreased foster home capacity, this study endeavored to examine possible contributing economic factors. This analysis looked at what macroeconomic trends may be impacting the systemic ability to recruit and retain a foster parent workforce. Some of the questions posed by researchers include:

- How do trends in minimum wages and employment affect the availability of foster parents?
- How do different trends by gender in employment affect the availability of foster parents?
- How do housing costs affect the availability of foster parents?
- To what extent could an increase in foster care board rates compensate for the effects of other trends that decrease the availability of foster parents?

By better understanding who comprises the existing foster care workforce, what economic factors correlate with an increase in foster home capacity, and what economic factors may serve as barriers, we can better understand how to potentially increase foster home capacity.

II. Demographics of Foster Parents

(from *Data on Children in Foster Care from the Census Bureau*²)

The 2006 American Community Survey (ACS) provides data on the characteristics of non-relative foster care households compared to all households with children. The 2000 Decennial Census identifies foster families, mostly non-relative, by designating one person in the household (usually the homeowner or the person in whose name an apartment or house is rented) as the householder. Since 2000, ACS has collected data on foster children. The characteristics of the foster parents include marital status, disability status, education and employment. The results are shown in Table 1.

Marital status

Households with foster children are less likely to be married-couple households. Overall, 43% of the non-relative foster families have no spouse, while for all families with children, 34% have no spouse. Among households with foster children, only 57% are married-couple households compared to 66% of all households with children. On the other hand, households with foster children are slightly more likely to be single-parent households (29% for foster care households compared to 27% of all households with children) and foster care households are twice as likely as all households with children to be cohabiting-couple households (14% compared to 7%).

Disability status

Households with foster children are more likely to be ones where the householder or spouse has a disability (any one of six kinds of disabilities recorded in the ACS). About a quarter (24%) of households with foster children had a householder or spouse with a disability compared to less than one-sixth (14%) of all households with children.

Education

Education levels of householders and spouses in households with foster children are lower than those for all households with children. 20% of non-relative foster care householders lack a high school degree vs. 14% for all householders, and proportions are similar for spouses (19% vs. 13%). At the other end of the education spectrum (four-year college degree+), the proportions are 20% of foster care householders vs. 28% for all householders with children; and 16% vs. 31% for spouses.

Employment

Householders and spouses in households with foster children are less likely to be employed compared to all households with children. Householders in households with foster children are about 50% more likely as those in all households with children to have gone without work in the previous year (20% compared to 13%). While 60% of householders in all households with children worked full time in the previous year, only 56% of householders in households with foster children worked full time in the previous year. The situation is similar for spouses.

² Source: 2006 ACS PUMS file in O'Hare, W.P. (2008). *Data on Children in Foster Care from the Census Bureau*.

Table 1. Characteristics of Unrelated Foster Family and Family with Children

	Unrelated foster family	(%)	Family with children	(%)
Family Structure				
Married-couple households	105,205	57	25,618,434	66
Householder not married nor cohabitating	53,577	29	10,469,723	27
Cohabitating-couple households	25,384	14	2,527,042	7
Householder or spouse disabled	43,641	24	5,308,918	14
Education of householder				
Less than high school graduate	37,840	21	5,482,188	14
High school graduate only	57,191	31	10,651,838	28
Some college	53,214	29	11,694,091	30
Four-year college degree+	35,921	20	10,787,082	28
Education of spouse				
Less than high school graduate	19,932	19	3,261,142	13
High school graduate only	36,417	35	6,951,799	27
Some college	32,149	31	7,414,074	29
Four-year college degree+	16,707	16	7,991,419	31
Employment status of householder				
Did not work last year	36,161	20	4,992,650	13
Worked part time or part year last year*	44,303	24	10,393,055	27
Worked full time last year	103,702	56	23,229,494	60
Employment status of spouse				
Did not work last year	31,033	30	5,803,233	23
Worked part time or part year last year	28,406	27	7,987,116	31
Worked full time last year	45,766	44	11,828,085	46
Neither householder nor spouse worked full-time year- round**	22,540	12	4,535,236	12
Both householder and spouse worked full-time year-round *	66,803	36	13,974,381	36

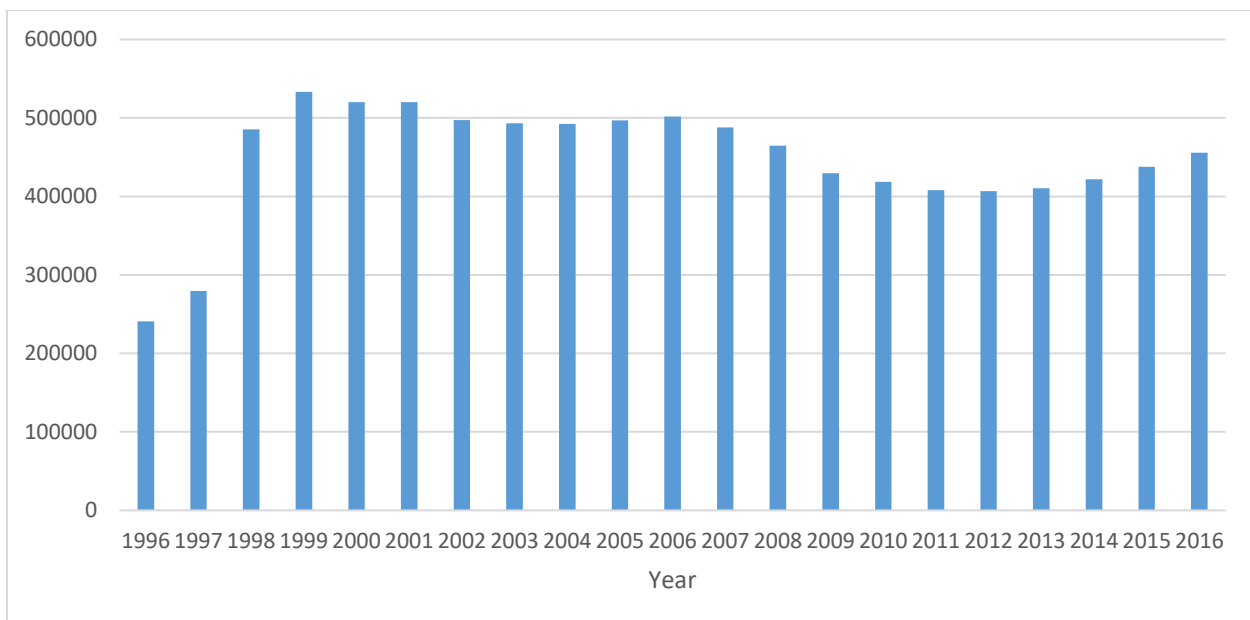
Source: 2006 ACS PUMS file in O'Hare, W.P. (2008). *Data on Children in Foster Care from the Census Bureau.*

III. Number of Children in Foster Care, Foster Care Board Rates, Minimum Wage, Employment, and Housing Costs

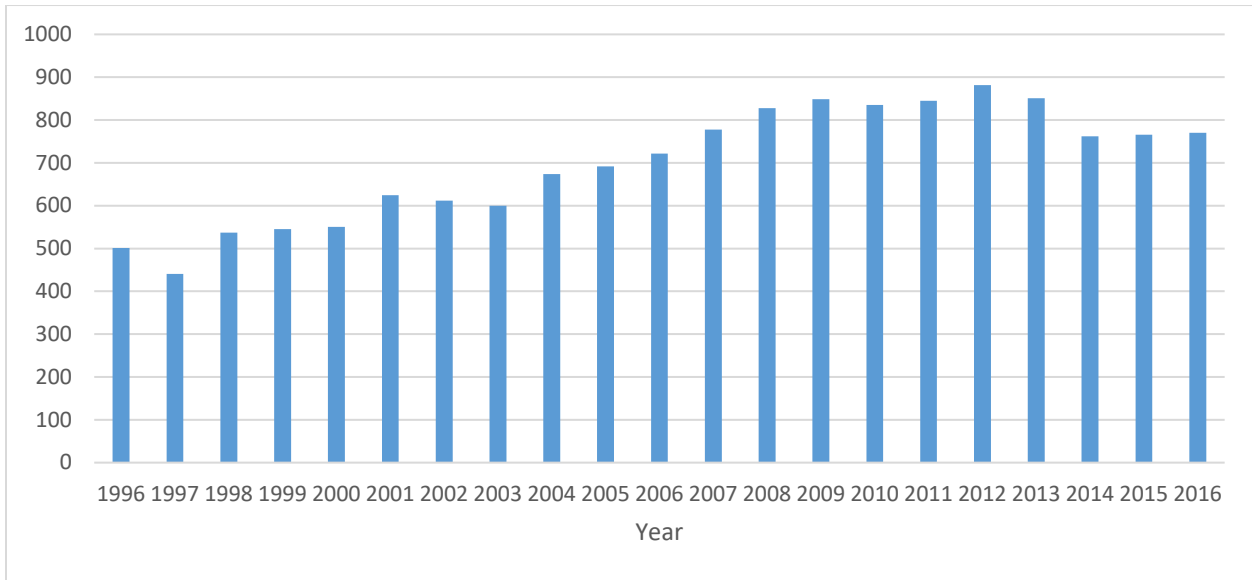
The following graphs show national trends for the number of children in foster care, overall payment and payment for nonrelative and relative foster families, housing price index, real minimum wage (minimum wage/CPI), employment rate for females and males, and housing costs. We also show board payments and real minimum wage for select states.

The number of children in foster care is used as a proxy for availability of foster parents. The total number of children in foster care reflects a combination of the number of foster homes that can be found to house these children and the number of children who are determined to be in need of placement. We are interested in the former, i.e. foster care capacity. However, there is no reliable measure of foster care capacity independent of foster care placements that can be used to analyze the impact of state-level factors that change over time. This is why we used the number of children in foster care as a proxy as it is the best available reliable data. Typically, the number of available homes is similar to the number of children in foster care due to a shortage of homes. When interpreting the impact of state-level factors on the number of children in foster care, we must discuss to what extent these factors may influence foster care capacity per se as opposed to need for placement. For each factor we consider, we discuss this issue, and we also control for a number of variables that can account for variation in the need for placement.

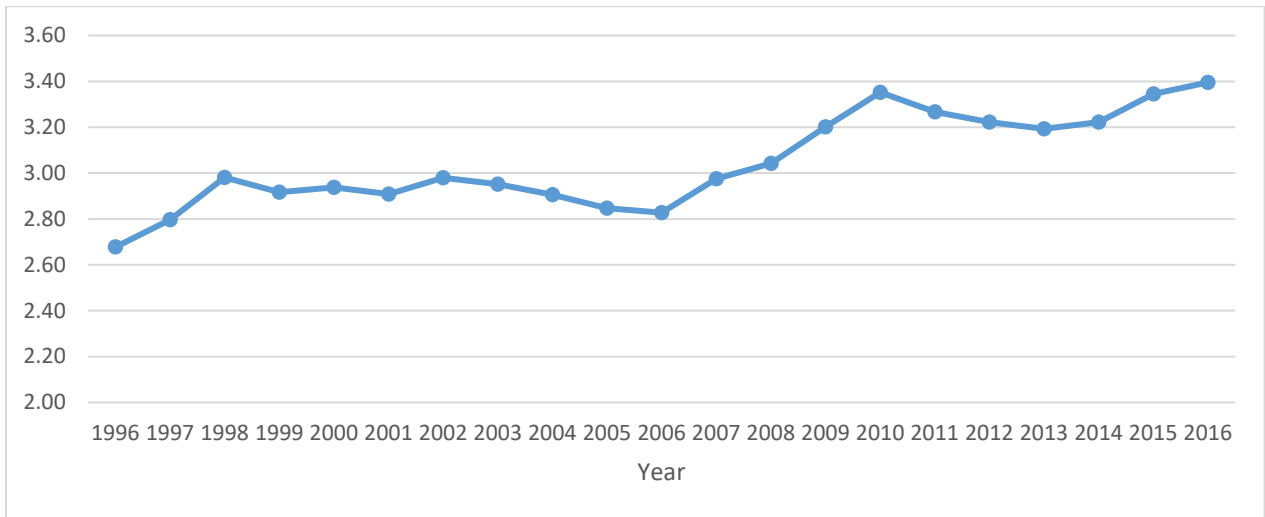
Graph 1. Number of Children in Foster Care



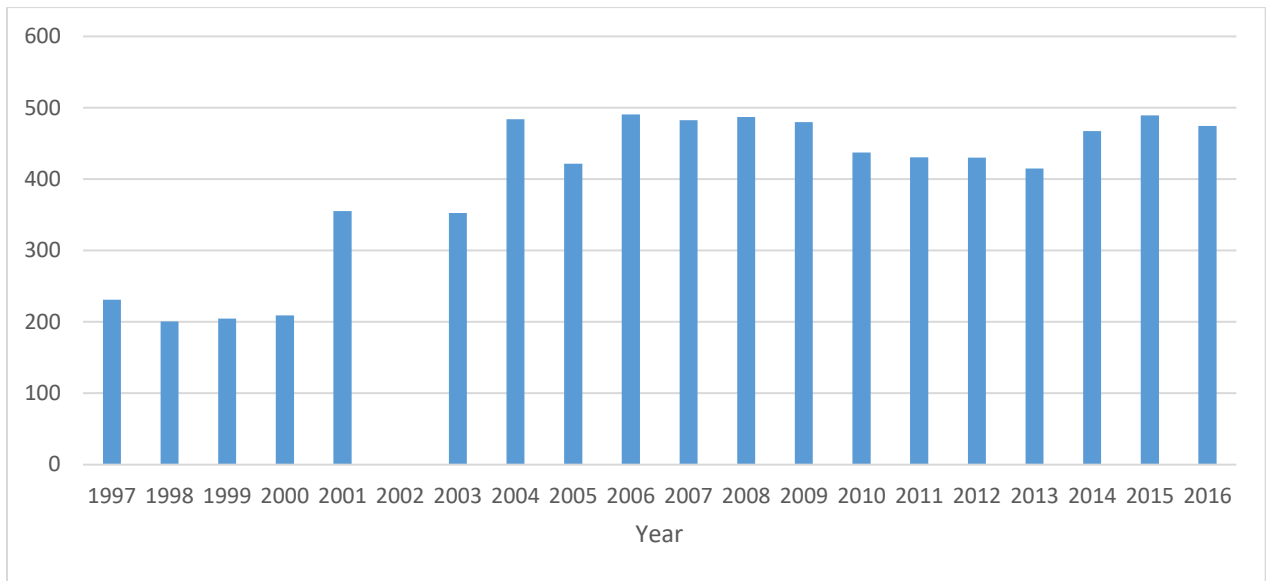
Graph 2. Overall Average Foster Care Board Payment \$



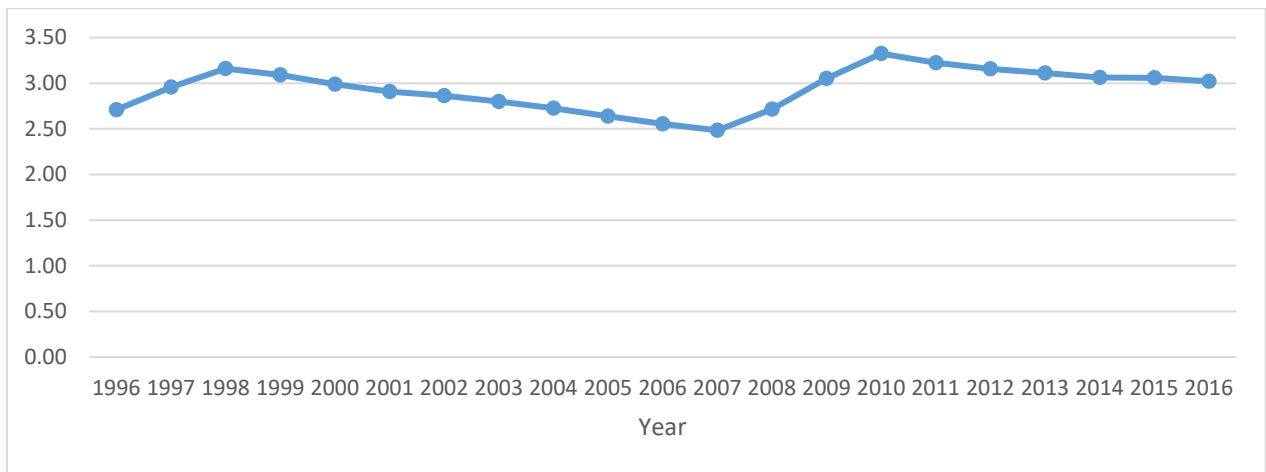
Graph 3. Real Hourly Minimum Wage (in 1982-1984 dollars)



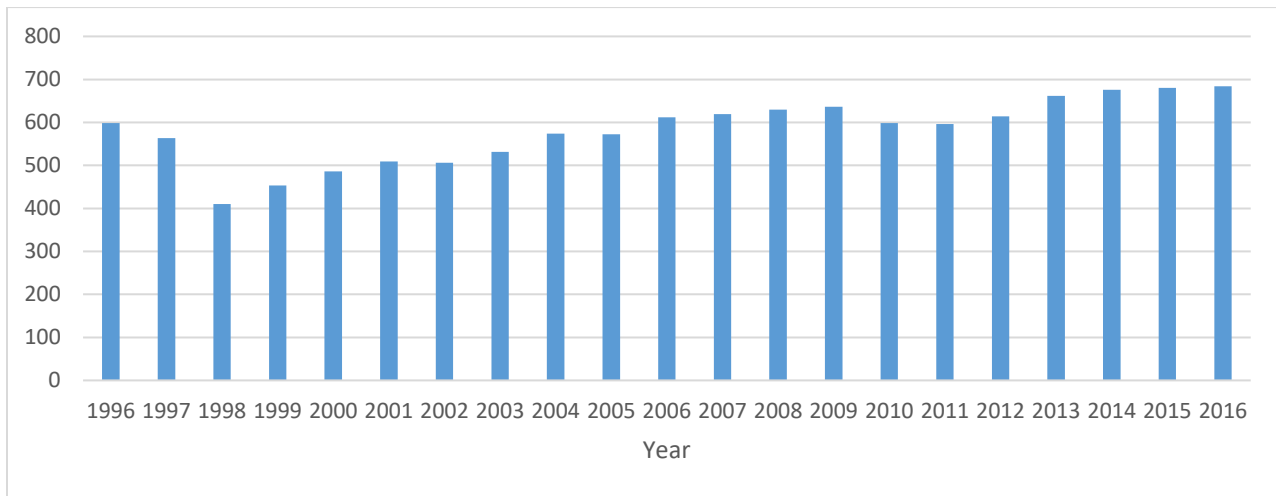
Graph 4. Oklahoma Average Monthly Foster Care Board Payment



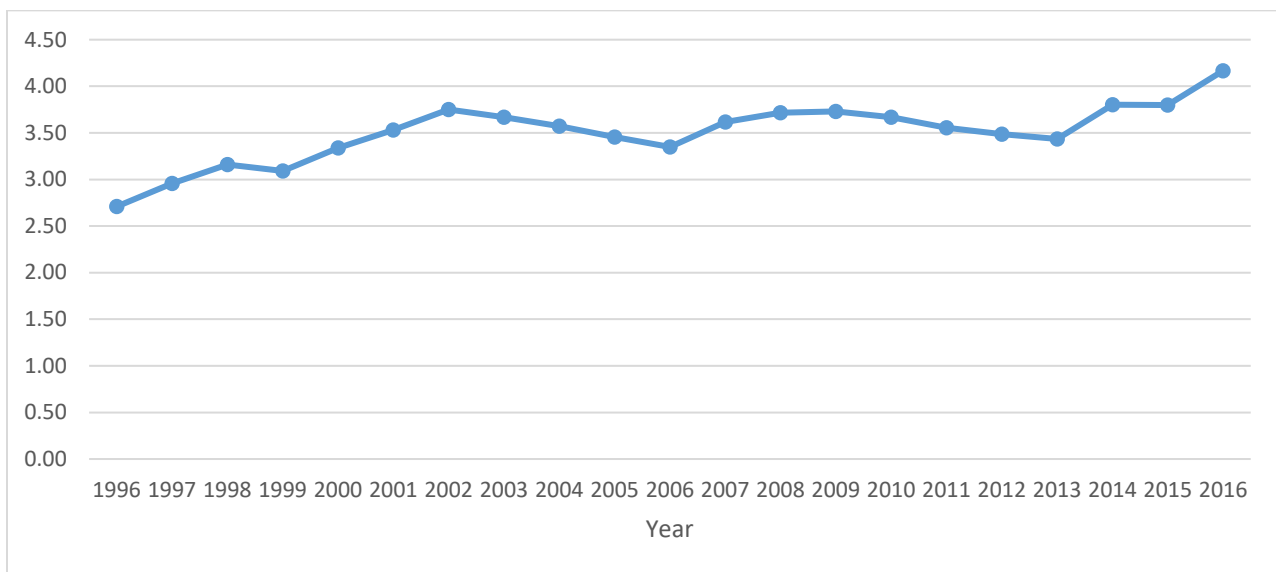
Graph 5. Oklahoma Real Hourly Minimum Wage (in 1982-1984 dollars)



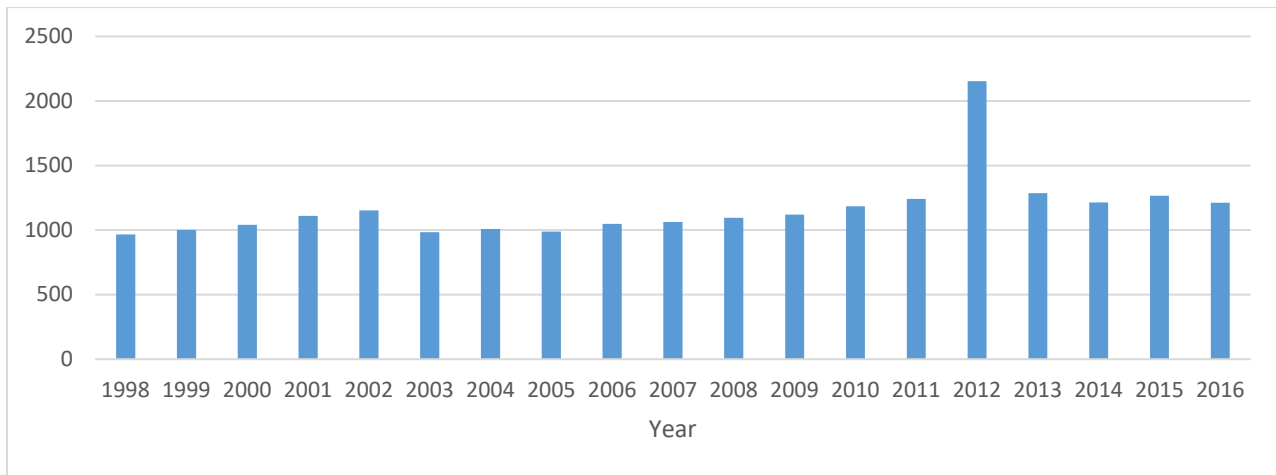
Graph 6. California Average Monthly Foster Care Board Payment



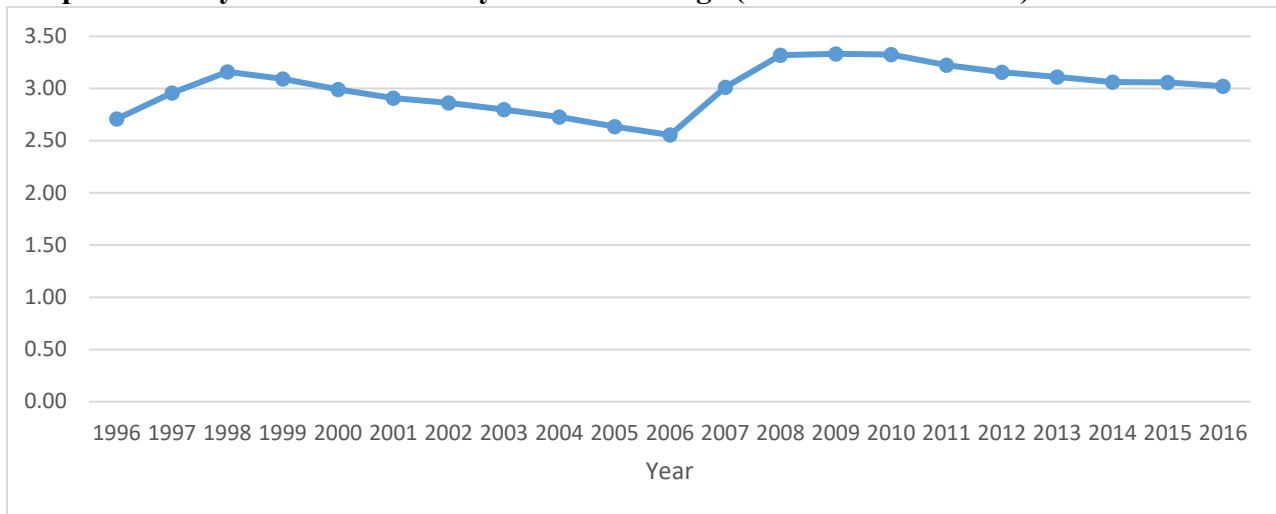
Graph 7. California Real Hourly Minimum Wage (in 1982-1984 dollars)



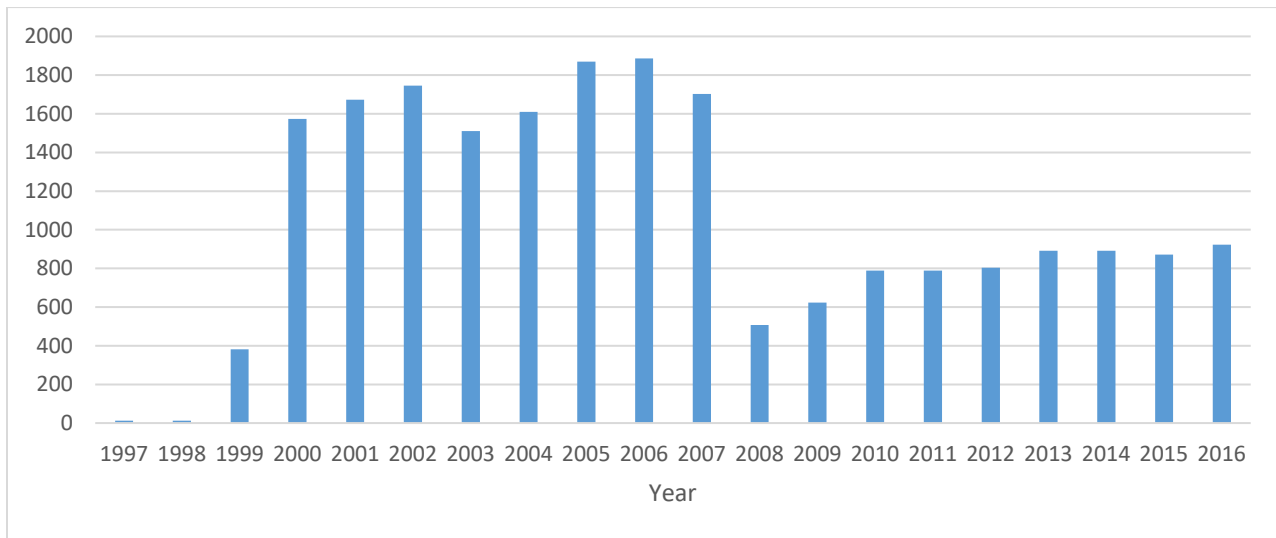
Graph 8. Pennsylvania Average Monthly Foster Care Board Payment



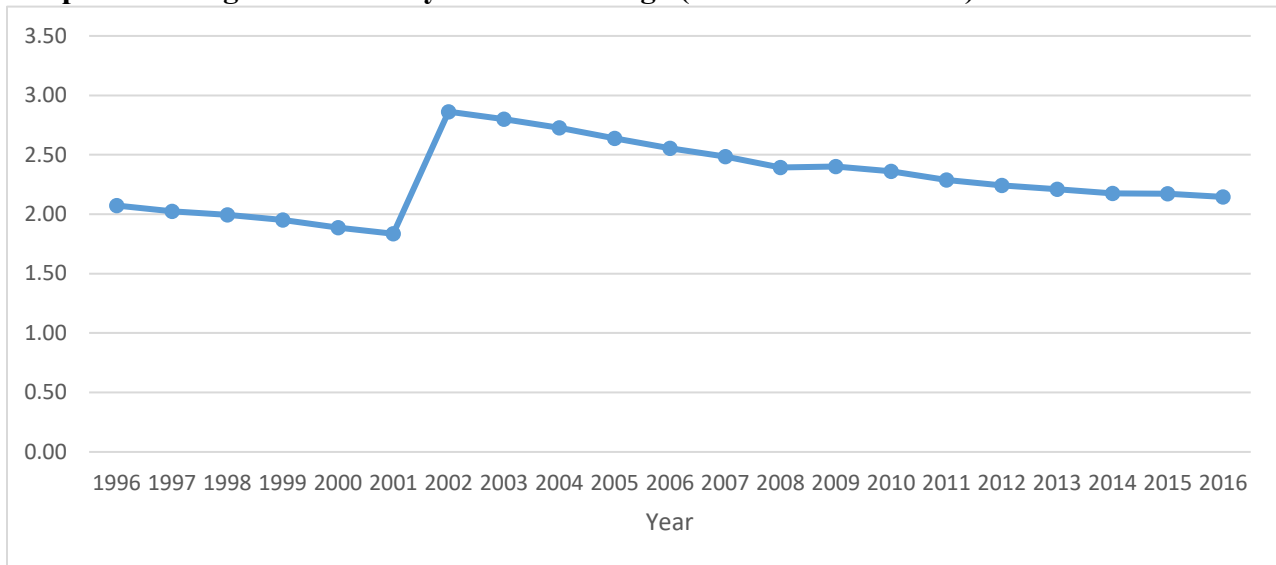
Graph 9. Pennsylvania Real Hourly Minimum Wage (in 1982-1984 dollars)



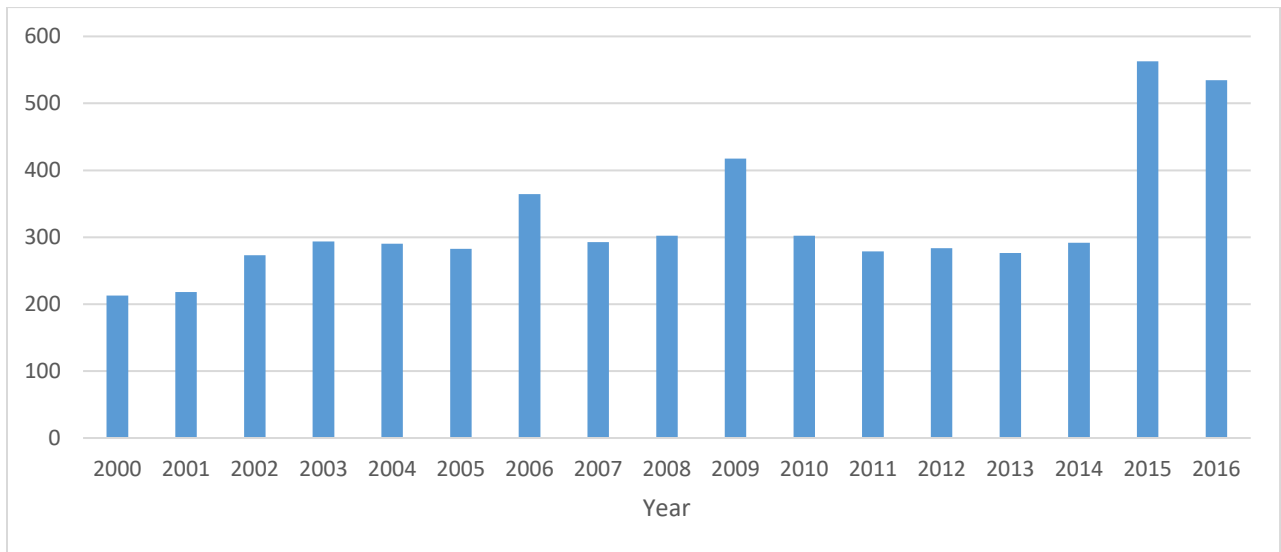
Graph 10. Georgia Average Monthly Foster Care Board Payment



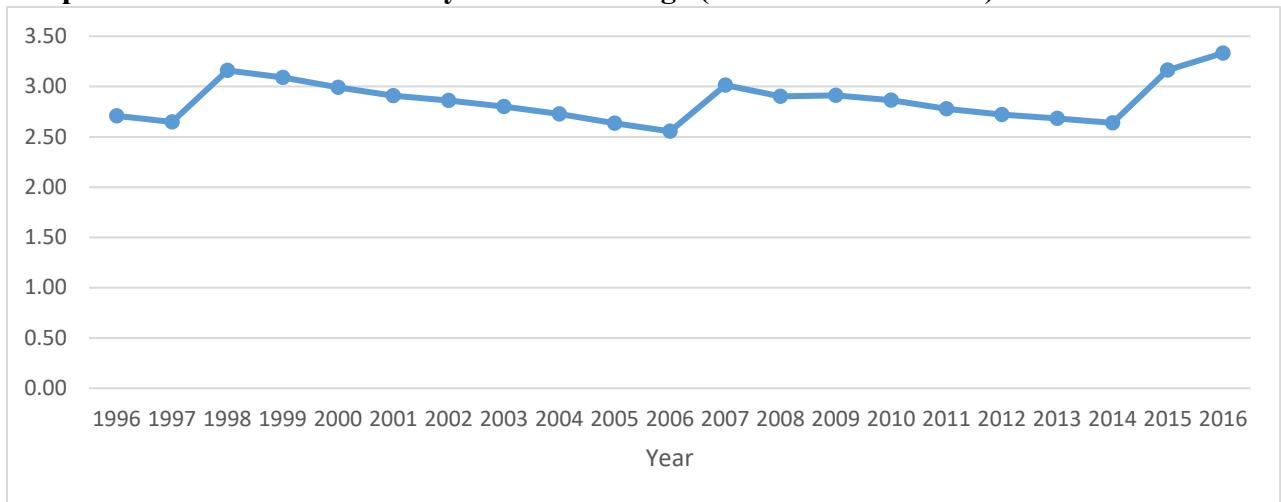
Graph 11. Georgia Real Hourly Minimum Wage (in 1982-1984 dollars)



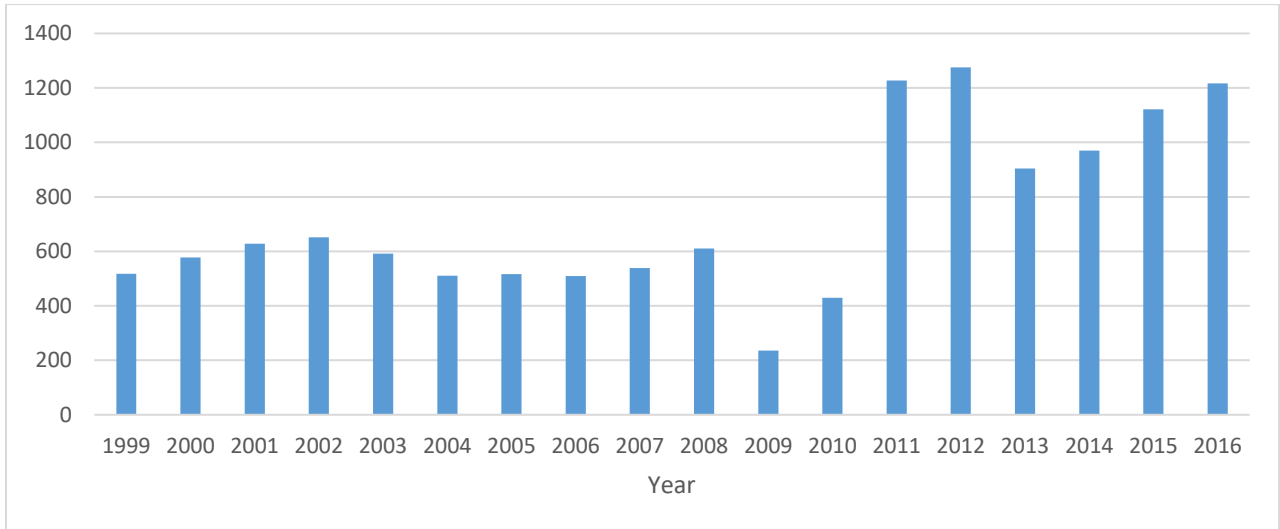
Graph 12. Arkansas Average Monthly Foster Care Board Payment



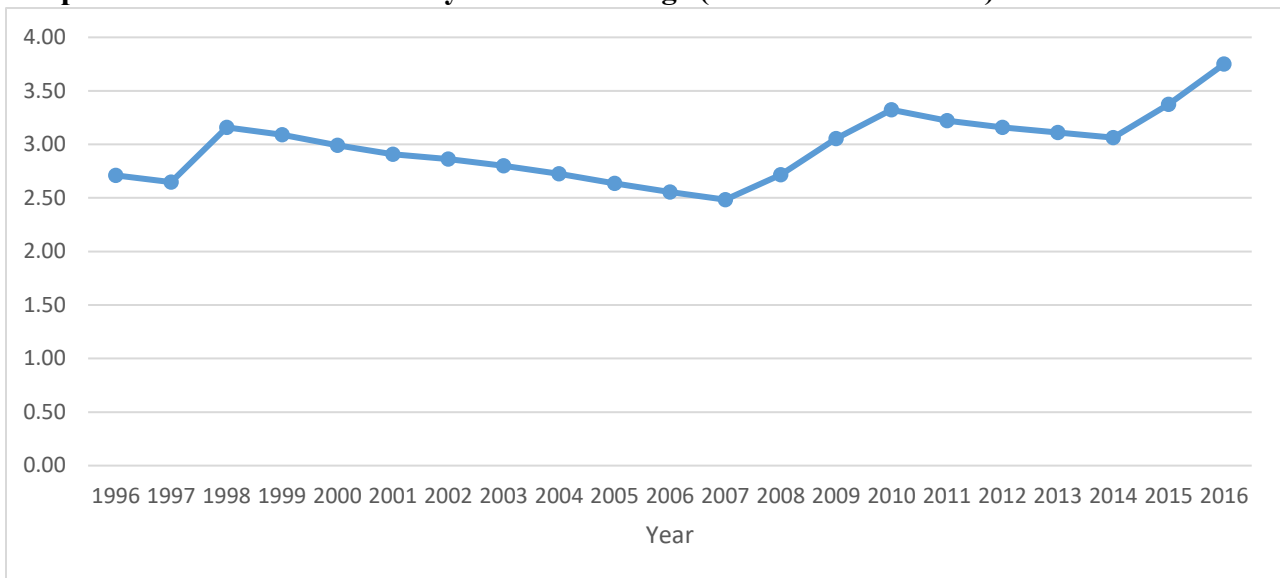
Graph 13. Arkansas Real Hourly Minimum Wage (in 1982-1984 dollars)



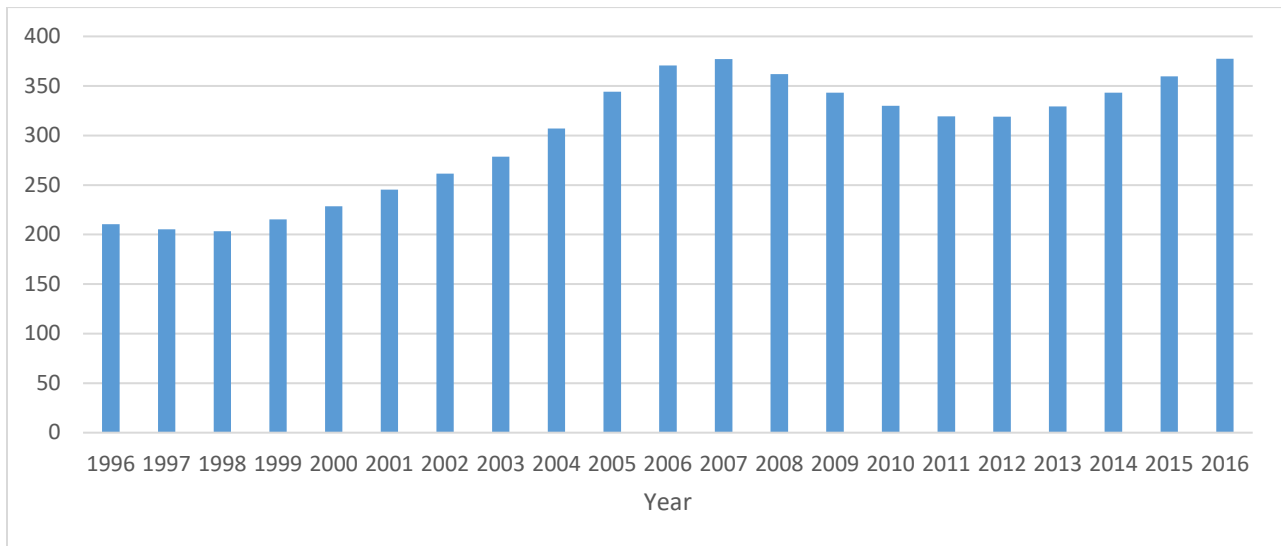
Graph 14. Nebraska Average Monthly Foster Care Board Payment



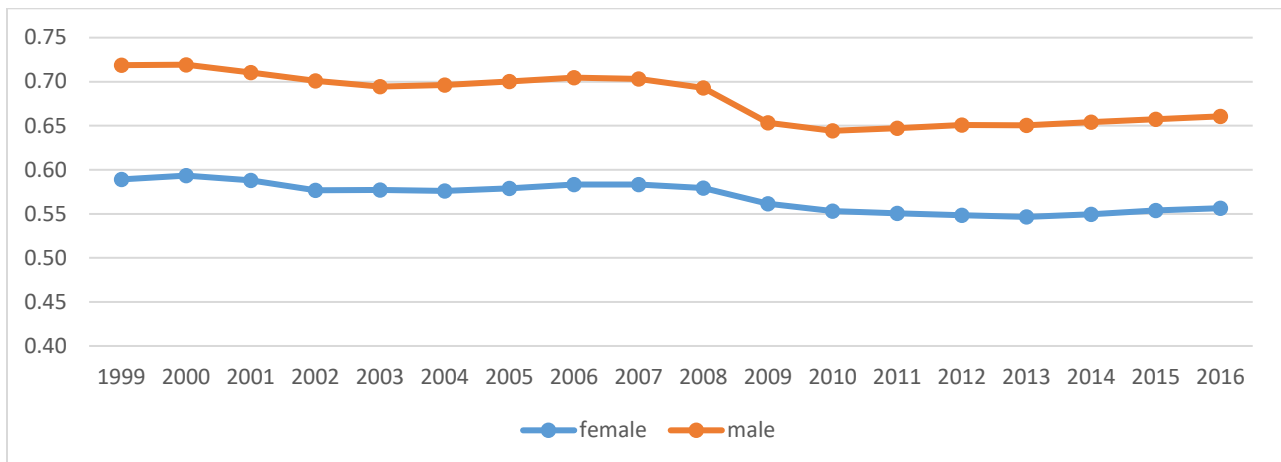
Graph 15. Nebraska Real Hourly Minimum Wage (in 1982-1984 dollars)



Graph 16. Housing Price Index



Graph 17. Employment Rate



IV. Method for Regression Analysis

For the variables we used in the models, two of them have been cleaned by certain restrictions. One is Current Placement Setting (CURPLSET). As we are more interested in children living in foster homes, we only kept those who are either in kinship foster homes or non-relative foster homes. The other is the Monthly Foster Care Payment (FCMNTPAY). We diagnosed some problems in the payment observations such as excessive zero payments and unusual outliers. To deal with this issue, we cleaned the payment data. Cleaning options are presented below.

1. No changes for payment data in these states:

California, New Jersey, Maryland, Tennessee, DC, Wisconsin, Connecticut, Louisiana, West Virginia, Iowa, Rhode Island, Hawaii, Utah, Montana, New Mexico, Idaho, South Dakota, New Hampshire, Delaware, Wyoming, Kentucky, North Dakota, South Carolina, New York, Pennsylvania, Illinois, Texas, Massachusetts, Colorado, Indiana, Arizona, Oregon, Maine, Alabama, Missouri.

2. Cleaning options for all other states:

(1) Set payments to missing in certain years;

For certain years, there are missing payments, or all the payment observations are zero payments. To deal with this potential data inaccuracy, we decided to set these data as missing data. This means that these observations were not to be used in the regression with payments, but observations on, for example, the number of foster children could be used in other analyses. These states include: Michigan (1998-2001), Virginia (1998, 2003-2011), Arkansas (1998-1999), Alaska (1996-2004), Florida (2012-2016), Nevada (2000-2003); Oklahoma (2002); Mississippi(1996-2005); Washington(1996-2001); Vermont(2000); Kansas (all years); Puerto Rico (all years); North Carolina (1996).

(2) Georgia may have changed the scale by ten times from 2003 to 2007, so we divided the payment by 10 for these years.

(3) We assume 99999 is a symbol for missing data rather than a true value and decide to set these data into missing. The distribution of 99999 in the whole dataset is as followed:

```
. tabulate st if fcmntpay == 99999
```

State	Freq.	Percent	Cum.
CA	1	0.34	0.34
MN	215	72.88	73.22
OH	79	26.78	100.00
Total	295	100.00	

Set those 99999 to missing in California, Minnesota and Ohio.

(4) Ohio: Other than setting 99999 for missing, we also set payments in 1999, 2006 and 2007 to missing.

V. Regression Results

There are 12 fixed effect regression models. Model 1 is the regression of each state’s yearly payment on year and state fixed effects. Model 2 Based on M1, added in control variables for all child characteristics available, minimum wage (log) and housing costs³, and female and male employment rate⁴ based on Model 1. Model 3 is the regression of log number of children in foster care by state and year on log average payment by state and year, controlling for state and year fixed effects. Model 4 adds the same control variables as in Model 3. Model 5 using the same variables as in Model 2 but under the condition of non-policy change states. Models 5-8 redo Model 1-4 for non-relative foster home. Models 9-12 redo Model 1-4 for relative foster home.

Table 2: Description of Regression Models

Model	Description
Model 1	reg payment i.state i.fy
Model 2	reg payment [control variables] i.state i.fy
Model 3	reg log(child number) log(payment) i.state i.fy
Model 4	reg log(child number) log(payment) [control variables] i.state i.fy
Model 5-8	redo Model 1-4 for non-relative foster home
Model 9-12	redo Model 1-4 for relative foster home

In short, higher payments were found associated with more children in foster families. In Model 4, the regression coefficient of log average payment by state and year is 0.09, which means that, for every one percent increase of average payment by state and year, there would be a 0.09% increase for the number of foster children, controlling for each additional variable. This result is statistically significant at the 1% level. At the same time, the positive association between higher payments and more children in foster care is stronger among kinship foster homes than non-relative foster homes. However, in some states, including North Dakota, the difference between relative and non-relative reflects a difference between licensed and unlicensed homes. Therefore, a licensed relative foster care home may be classified as non-relative.

The descriptive statistics for each variable are shown in Table 3. The regression model results are shown in Table 4, Table 5 (non-relative) and Table 6 (relative).

³ Federal Reserve Bank: <https://fred.stlouisfed.org/tags/series?t=minimum+wage;https://fred.stlouisfed.org/search?st=state+All-Transactions+House+Price+Index>

⁴ Bureau of Labor Statistics: Employment status of the civilian noninstitutional population <https://www.bls.gov/lau/ex14tables.htm>

Table 3: Variables Descriptive Analysis

Variable	Missing	Obs	Mean	SD	Min	Max
Avg FC Monthly Payment	101	910	722.18	610.21	11.59	5823.02
Female pc	0	1011	0.50	0.01	0.46	0.54
White pc	128	883	0.63	0.20	0.00	0.97
Mental Retardation pc	19	992	0.03	0.04	0.00	0.45
Visually/Hearing Impaired pc	22	989	0.02	0.08	0.00	0.94
Physically Disabled pc	19	992	0.01	0.02	0.00	0.16
Emotionally Disturbed pc	19	992	0.12	0.11	0.00	0.66
Child Ever Adopted pc	38	973	0.03	0.08	0.00	1.00
<12 Years Old pc	51	960	0.48	0.18	0.00	1.00
Avg Removals	0	1011	1.25	0.12	1.00	1.98
Avg Placement setting	5	1006	2.62	1.38	1.02	39.51
Voluntary Removal pc	25	986	0.06	0.11	0.00	0.94
Reason-Physical Abuse pc	21	990	0.16	0.09	0.00	0.77
Reason-Sexual Abuse pc	21	990	0.06	0.06	0.00	0.58
Reason-Neglect pc	20	991	0.61	0.19	0.00	0.98
Reason-Alcohol Abuse Parent pc	21	990	0.10	0.09	0.00	0.70
Reason-Drug Abuse Parent pc	21	990	0.25	0.14	0.00	0.70
Reason-Alcohol Abuse Child pc	24	987	0.01	0.03	0.00	0.37
Reason-Drug Abuse Child pc	24	987	0.02	0.06	0.00	0.63
Reason-Child Disability pc	24	987	0.03	0.06	0.00	0.62
Reason-Child Behavior Problem pc	21	990	0.09	0.10	0.00	1.00
Reason-Parent Death pc	24	987	0.02	0.09	0.00	0.90
Reason-Parent Incarceration pc	23	988	0.08	0.05	0.00	0.31
Reason-Caretaker Inability Cope pc	21	990	0.17	0.14	0.00	0.82
Reason-Abandonment pc	20	991	0.06	0.05	0.00	0.42
Reason-Relinquishment pc	23	988	0.02	0.03	0.00	0.30
Reason-Inadequate Housing pc	23	988	0.11	0.09	0.00	0.52
Multiple Reasons pc	0	1011	0.94	0.17	0.00	1.00
Out of State Placement pc	21	990	0.04	0.07	0.00	0.67
Case Plan Goal-Reunion pc	0	1011	0.51	0.15	0.01	0.95
Avg days stay in FC, all episodes	128	883	702.76	263.30	338.52	2964.50
Avg days-Previous FC stay	135	876	356.88	158.15	86.68	1494.24
Avg days-Current Placement Setting	128	883	357.96	168.21	117.69	2301.73
Avg days since latest removal date	128	883	657.82	254.69	313.98	2938.77
Log minimum wage	116	895	1.81	.25	.47	2.44
Female employment rate	95	916	0.57	0.05	0.45	0.69
Male employment rate	95	916	0.68	0.05	0.53	0.80
Housing costs	115	896	308.81	108.06	129.00	715.32
Avg child numbers	0	1011	9299.36	13108.52	338	124739

Table 4. Regression Analysis: Payments and Children (All States)

VARIABLES	M1 Avg. payment	M2 Avg. payment	M3 Log (kids)	M4 Log (kids)
Log Avg. FC Monthly Payment			0.0626*** (0.0165)	0.0942*** (0.0214)
Log minimum wage		141.4 (157.5)		0.212*** (0.0747)
Female employment rate		-1,179 (2,296)		1.297* (0.694)
Housing price		-0.139 (0.525)		-0.000517*** (0.000198)
Male employment rate		2,577 (1,705)		-0.674 (0.528)
Female pc		-2,124 (1,799)		-1.931*** (0.698)
White pc		496.2 (348.4)		-0.334* (0.188)
Mental Retardation pc		10.70 (729.0)		1.398*** (0.445)
Visually/Hearing Impaired pc		413.4 (260.8)		-0.586*** (0.180)
Physically Disabled pc		-564.6 (1,333)		-1.436** (0.634)
Emotionally Disturbed pc		-328.4 (341.1)		-0.0295 (0.134)
Child Ever Adopted pc		-710.0* (410.9)		0.305 (0.236)
<12 Years Old pc		-376.2 (508.8)		0.119* (0.0713)
Avg Removals		766.4* (428.9)		-0.127 (0.163)
Avg Placement setting		-2.340 (43.02)		-0.00471 (0.0258)
Voluntary Removal pc		-1,030*** (331.2)		0.117 (0.204)
Reason-Physical Abuse pc		-1,236** (561.2)		-0.404* (0.213)
Reason-Sexual Abuse pc		2,952*** (1,031)		-1.011 (0.681)
Reason-Neglect pc		226.6 (244.6)		0.0563 (0.105)
Reason-Alcohol Abuse Parent pc		-114.3 (458.4)		0.195 (0.242)
Reason-Drug Abuse		566.9* (458.4)		1.029*** (0.242)

Parent pc	(294.2)	(0.163)
Reason-Alcohol Abuse Child pc	-1,107	-3.914***
Reason-Drug Abuse Child pc	(1,020)	(0.968)
Reason-Child Disability pc	-1,039	0.0626
Reason-Child Behavior Problem pc	(733.2)	(0.500)
Reason-Parent Death pc	-224.1	-0.163
Reason-Parent Incarceration pc	(239.0)	(0.120)
Reason-Caretaker Inability Cope pc	1,069**	0.0135
Reason-Abandonment pc	(511.3)	(0.257)
Reason-Relinquishment pc	-5,780*	6.577***
Reason-Inadequate Housing pc	(3,239)	(1.096)
Reason-Parent Incarceration pc	58.58	-0.386
Reason-Abandonment pc	(614.5)	(0.322)
Reason-Relinquishment pc	-343.3***	-0.101
Reason-Parent Incarceration pc	(130.7)	(0.0906)
Reason-Child Behavior Problem pc	-1,085	-0.958**
Reason-Parent Incarceration pc	(757.0)	(0.431)
Reason-Child Behavior Problem pc	4,634**	-1.201**
Reason-Parent Incarceration pc	(1,956)	(0.557)
Reason-Child Behavior Problem pc	-1,145***	-0.120
Reason-Parent Incarceration pc	(417.7)	(0.285)
Reason-Child Behavior Problem pc	460.7*	-0.360***
Reason-Parent Incarceration pc	(241.5)	(0.119)
Reason-Child Behavior Problem pc	815.9*	-0.329*
Reason-Parent Incarceration pc	(446.1)	(0.178)
Reason-Child Behavior Problem pc	618.4***	-0.241**
Reason-Parent Incarceration pc	(235.0)	(0.103)
Reason-Child Behavior Problem pc	-0.473	-0.000502
Reason-Parent Incarceration pc	(1.335)	(0.000576)
Reason-Child Behavior Problem pc	-0.0261	-1.56e-05
Reason-Parent Incarceration pc	(0.229)	(0.000130)
Reason-Child Behavior Problem pc	0.439	5.14e-05
Reason-Parent Incarceration pc	(0.748)	(0.000182)
Reason-Child Behavior Problem pc	0.739	0.000580
Reason-Parent Incarceration pc	(1.459)	(0.000593)

State f.e.	√	√	√	√
Year f.e.	√	√	√	√
Constant	218.6 (161.6)	-1,467 (1,362)	7.048*** (0.153)	7.470*** (0.655)
Observations	910	652	910	652
R-squared	0.623	0.685	0.963	0.985

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 5. Regression Results for Non-relative Foster Home

VARIABLES	M5 Avg. payment	M6 Avg. payment	M7 Log (kids)	M8 Log (kids)
Log Avg. FC Monthly Payment			0.0537*** (0.0176)	0.0591*** (0.0225)
Log minimum wage		279.7 (189.9)		0.146* (0.0760)
Female employment rate		-2,436 (2,819)		0.890 (0.793)
Housing price		-0.719 (0.594)		-0.000364 (0.000238)
Male employment rate		4,144* (2,149)		-0.675 (0.609)
Female pc		-2,389 (1,585)		-1.228* (0.656)
White pc		369.1 (389.5)		-0.0634 (0.181)
Mental Retardation pc		-0.224 (828.5)		1.071*** (0.399)
Visually/Hearing Impaired pc		597.4* (337.0)		-0.499*** (0.189)
Physically Disabled pc		-208.9 (1,672)		-0.607 (0.533)
Emotionally Disturbed pc		-417.1 (429.4)		-0.0562 (0.136)
Child Ever Adopted pc		-1,148** (459.9)		0.360 (0.251)
<12 Years Old pc		-509.0 (545.1)		0.0709 (0.0907)
Avg Removals		747.8 (496.2)		-0.0855 (0.162)
Avg Placement setting		-19.21 (55.66)		-0.00301 (0.0278)
Voluntary Removal pc		-1,488***		0.132

Reason-Physical Abuse pc	(430.2) -2,125***	(0.238) -0.178
Reason-Sexual Abuse pc	(618.5) 3,227***	(0.202) 0.174
Reason-Neglect pc	(1,190) 102.1	(0.746) -0.167
Reason-Alcohol Abuse Parent pc	(237.5) -181.6	(0.118) 0.227
Reason-Drug Abuse Parent pc	(520.2) 1,028**	(0.257) 1.183***
Reason-Alcohol Abuse Child pc	(432.6) -3,956**	(0.198) -1.869*
Reason-Drug Abuse Child pc	(1,559) -180.8	(1.132) -0.784
Reason-Child Disability pc	(1,083) -123.8	(0.539) -0.262*
Reason-Child Behavior Problem pc	(316.6) 2,350***	(0.148) -0.134
Reason-Parent Death pc	(752.0) -10,044***	(0.224) 6.080***
Reason-Parent Incarceration pc	(3,726) 691.7	(1.191) -0.401
Reason-Caretaker Inability Cope pc	(768.1) -725.8***	(0.343) -0.131
Reason-Abandonment pc	(182.6) -1,277	(0.0980) -1.713***
Reason-Relinquishment pc	(845.7) 6,722***	(0.431) -0.844
Reason-Inadequate Housing pc	(2,136) -2,029***	(0.594) -0.0214
Multiple Reasons pc	(564.9) 738.8***	(0.287) -0.364
Out of State Placement pc	(273.1) 1,433***	(0.231) -0.462***
Case Plan Goal-Reunion pc	(532.6) 788.2***	(0.163) -0.412***
	(268.7)	(0.109)

Avg days stay in FC, all episodes		-0.414		4.60e-05
		(1.181)		(0.000501)
Avg days-Previous FC stay		0.0467		-0.000112
		(0.217)		(0.000123)
Avg days-Current Placement Setting		0.570		-7.83e-05
		(0.957)		(0.000239)
Avg days since latest removal date		0.874		-0.000149
		(1.323)		(0.000527)
State	√	√	√	√
year	√	√	√	√
Constant	130.5	-1,763	6.656***	7.308***
	(206.2)	(1,646)	(0.159)	(0.673)
Observations	910	651	910	651
R-squared	0.615	0.699	0.957	0.978

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 6. Regression Results for Relative Foster Home

VARIABLES	M9 Avg. payment	M10 Avg. payment	M11 Log (kids)	M12 Log (kids)
Log Avg. FC Monthly Payment			-0.00203 (0.0383)	0.113*** (0.0295)
Log minimum wage		20.91 (49.43)		0.354*** (0.0897)
Female employment rate		89.16 (533.9)		0.858 (1.128)
Housing price		0.146 (0.146)		-0.000875** (0.000343)
Male employment rate		85.47 (425.0)		1.639* (0.921)
Female pc		542.9* (283.3)		-1.918*** (0.719)
White pc		103.0 (86.42)		-0.392 (0.265)
Mental Retardation pc		-1,238*** (388.6)		1.061 (0.762)
Visually/Hearing Impaired pc		390.3*** (109.2)		-0.889*** (0.242)
Physically Disabled pc		-374.8 (505.4)		-2.934*** (1.049)
Emotionally Disturbed pc		-10.05 (105.5)		0.339 (0.292)
Child Ever Adopted pc		-70.91 (144.3)		-0.369 (0.459)
<12 Years Old pc		89.75 (65.00)		0.134 (0.0944)
Avg Removals		235.4** (99.10)		0.104 (0.247)
Avg Placement setting		-28.64* (15.26)		-0.0455 (0.0369)
Voluntary Removal pc		-390.5** (167.2)		-0.618 (0.377)
Reason-Physical Abuse pc		-33.39 (155.4)		-0.225 (0.309)
Reason-Sexual Abuse pc		-253.2 (350.5)		-2.275*** (0.876)
Reason-Neglect pc		3.668 (86.24)		-0.0765 (0.161)
Reason-Alcohol Abuse Parent pc		344.3**		-1.024***

Reason-Drug Abuse Parent pc	(136.3) -138.7	(0.363) 0.915***
Reason-Alcohol Abuse Child pc	(85.35) 983.6**	(0.194) -8.004***
Reason-Drug Abuse Child pc	(391.1) -233.6	(0.855) 1.617**
Reason-Child Disability pc	(279.0) 163.4	(0.746) -0.795***
Reason-Child Behavior Problem pc	(130.8) -584.6***	(0.298) 1.646***
Reason-Parent Death pc	(204.7) 253.7	(0.498) 4.929***
Reason-Parent Incarceration pc	(551.4) 61.57	(1.365) 0.536
Reason-Caretaker Inability Cope pc	(159.0) -62.59	(0.470) -0.491***
Reason-Abandonment pc	(59.70) -548.3***	(0.165) 1.489***
Reason-Relinquishment pc	(192.3) 1,148***	(0.483) -2.762***
Reason-Inadequate Housing pc	(313.5) -497.6***	(0.896) 0.227
Multiple Reasons pc	(162.3) 25.33	(0.347) -0.0502
Out of State Placement pc	(107.9) -544.2***	(0.179) -2.928***
Case Plan Goal-Reunion pc	(180.1) 72.81	(0.506) 0.0574
Avg days stay in FC, all episodes	(88.17) 1.258**	(0.158) 6.71e-05
Avg days-Previous FC stay	(0.499) 0.0120	(0.00107) 7.50e-05
Avg days-Current Placement Setting	(0.0759) -0.0696	(0.000220) -0.000127

		(0.0986)		(0.000263)
Avg days since latest removal date		-1.067**		0.000180
		(0.509)		(0.00110)
state	√	√	√	√
year	√	√	√	√
Constant	351.6***	-443.6	6.276***	4.785***
	(68.04)	(398.7)	(0.305)	(0.899)
Observations	909	599	907	599
R-squared	0.765	0.900	0.890	0.971

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Increased payments increase the number of children placed in foster family homes: The case of North Carolina

North Carolina is a good example of how an increase in foster care payment to foster families impacts placements. Through Difference-In-Difference models controlling both state trends and national trends, we found that North Carolina’s increased foster care reimbursements positively affected placements in foster care.

Descriptive Analysis: Foster care payment changes in North Carolina

The monthly foster care payment in North Carolina is presented in Figure 1, where an increase in payment to foster parents occurred around FY 2008. The most common payment amount before FY 2008 was about \$350 while after FY 2008 the most common payment amount was about \$520. According to the foster care reform coalition, Benchmarks NC, a non-profit association of provider agencies advocating for quality and accountability among human service providers, advocacy efforts at the state level played a key role in the rate increase, which resulted in a bill to increase the rate that was finalized and passed by the North Carolina legislature in 2008.

Figure 1 NC Monthly Foster Care Payment

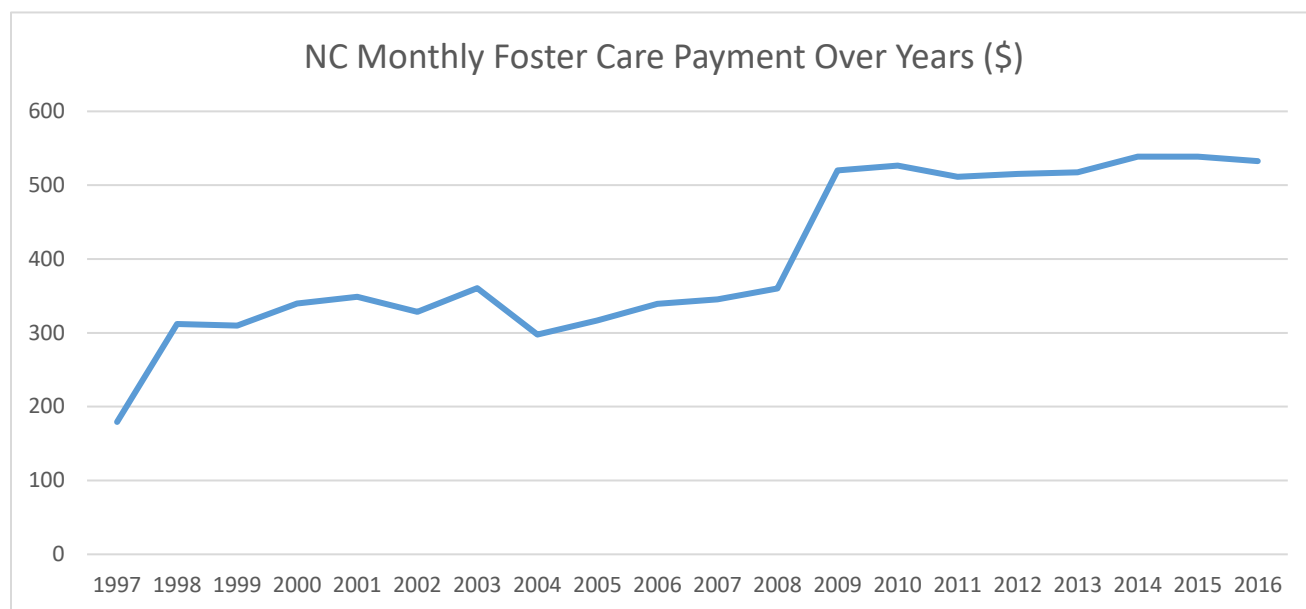


Table 1 Foster homes receiving payments in NC

Fiscal year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Foster homes receiving payments	10189	9722	9269	9286	9157	9577	10287	10189	9722

Policy Change Analysis

In 2007, there was a national Foster Care MARC (Minimum Adequate Rates for Children) campaign to support adequate foster care rates. The campaign reached North Carolina and House Bill 2436 was adopted in July 2008, increasing rates. The maximum rates for State participation in the foster care assistance program was established on a graduated scale as follows:

- (1) increase from \$390.00 to \$475.00 per child per month for children aged birth through 5;
- (2) increase from \$440.00 to \$581.00 per child per month for children aged 6 through 12; and
- (3) increase from \$490.00 to \$634.00 per child per month for children aged 13 through 18.

A report on Oct. 8th, 2008 from the Wilmington Star News⁵ published the news of increased rates, reporting that “foster parents’ monthly government stipends will increase across the state beginning Dec. 1st. State legislators increased foster board rates as part of the budget in July.” This was the last time the rate was increased in North Carolina.

Regression Analysis: Within state vs. Using all states as controls

First, we evaluated the increase with just the state’s own data. A difference-in-differences model was applied where foster homes are in the treated group and other types of placement in the control group; we defined the treatment as beginning in 2008, given that we observed a large increase in payments to foster home parents that year. The regression results are shown in column 1 of Table 2. According to the regression coefficient of foster homes after 2008, the effect of the payment increase on placements in foster homes is positive and statistically significant. This is consistent with Figure 2, since this graph shows an increase between 2008-2016 in placement in foster homes compared to other settings (the gap between foster families and other settings grows during this period in the Figure). In other words, if we evaluate the increase with the state’s own data (i.e., within state), the payment increase seems effective to cause more foster home placements and recruit additional foster care parents.

Moreover, if we compare the situation in North Carolina with the situation in other states, the results turn out to be similar. It is possible that the increase in foster home placements is affected by a general national increase trend in foster home placements. To address this potential factor, we compared foster homes in North Carolina to both other settings in the same state and to that in the other states. The regression results are shown in column 2 of Table 2. This comparison accounts for any national increase in foster homes placements over time. The specifications in column 2 show that placements in foster homes increased by 15% in North Carolina following the increased payment to foster care parents. In column 3, we ran the same specifications as in column 2, but adding the policy variables including minimum wage, housing costs, female and male employment rate, as well as a rich set of controls about the children in care. The effect of North Carolina’s policy stays positive and significant and the placements in foster homes increased by 20% after

⁵ <https://www.starnewsonline.com/news/20081008/foster-parents-in-nc-to-get-stipend-increase>

increased payments. This suggests that North Carolina's increased foster care payment statistically accounts for the increase in foster home placements.

Table 2: Regression Results for North Carolina

VARIABLES	(1) Log (kids)	(2) Log (kids)	(3) Log (kids)
Foster family home after the payment increase	0.444*** (0.0535)	0.150*** (0.0375)	0.201*** (0.0597)
Foster family home	0.501*** (0.0434)	0.750*** (0.154)	0.505*** (0.0700)
Log minimum wage			-0.0502 (0.0853)
Female employment rate			-0.638 (0.946)
Housing price			-0.0007** (0.0003)
Male employment rate			-0.938 (0.722)
Female %			-2.417** (1.037)
White %			0.130 (0.192)
Mental retardation %			0.490 (0.392)
Visually/hearing impaired %			-0.587** (0.233)
Physically disabled %			-1.955** (0.917)
Emotionally disturbed %			0.0533 (0.129)
Child ever adopted %			0.0322 (0.342)
<12 years-old %			0.0868 (0.0848)
Avg removals			-1.280*** (0.201)
Avg placement setting			-0.0383 (0.0288)
Voluntary removal %			-0.0543 (0.267)
Reason-Physical abuse %			-0.625** (0.266)
Reason-Sexual abuse %			-3.802*** (0.972)
Reason-Neglect %			0.704***

			(0.187)
Reason-Alcohol abuse parent %			0.312
			(0.294)
Reason-Drug abuse parent %			0.738***
			(0.217)
Reason-Alcohol abuse child %			-3.778***
			(0.815)
Reason-Drug abuse child %			1.947***
			(0.547)
Reason-Child disability %			-0.294*
			(0.154)
Reason-Child behavior problem %			0.488***
			(0.150)
Reason-Parent death %			6.344***
			(1.382)
Reason-Parent incarceration %			-0.237
			(0.500)
Reason-Caretaker inability cope %			-0.0397
			(0.113)
Reason-Abandonment %			-1.984***
			(0.589)
Reason-Relinquishment %			0.848*
			(0.435)
Reason-Inadequate housing %			-0.184
			(0.315)
Multiple reasons %			-0.0703
			(0.115)
Out of state placement %			0.0896
			(0.230)
Case plan goal-Reunification %			0.986***
			(0.211)
Avg days stay in foster care, All episodes			-0.000265
			(0.000952)
Avg days stay in foster care, Previous stay			0.000188
			(0.000177)
Avg days stay in foster care, Current placement setting			0.000234
			(0.000187)
Avg days stay in foster care, Since latest removal date			0.000502
			(0.000953)
State fixed effects f.e.	-	√	√
Year f.e.	√	√	√
Year*foster home f.e.	-	√	√

Constant	8.710*** (0.0266)	7.854*** (0.116)	10.76*** (1.107)
Observations	42	2,022	1,353
R-squared	0.971	0.899	0.940

Robust standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Figure 2 Foster Children in North Carolina

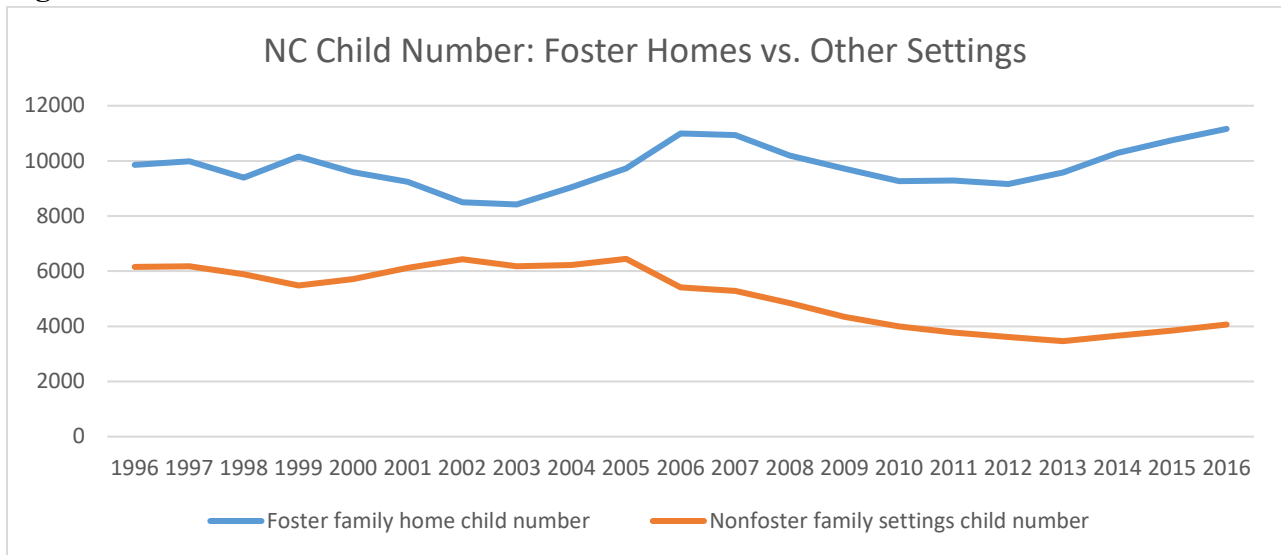


Figure 3: National trends

