

# The Effect of Kinship Placement on Foster Children's Well-Being

JOB MARKET PAPER

Iryna Hayduk\*  
*University of Houston*

March, 2014

## Abstract

Economists enhanced their attention to foster care issues only recently and while existing literature made a progress in recognizing the need for improving quality of foster care, economic studies are silent about the effective ways to reach this goal. This paper fills the gap by examining whether placing foster children with relatives, instead of unfamiliar caregivers, institutions, or group homes, increases the effectiveness of foster care and consequently improves children's well-being. As a source of exogenous variation in kinship placement, I use recent major reform of foster care—state policies that prefer kin placement over other types of foster care settings. Using individual-level panel dataset—the Adoption and Foster Care Analysis and Reporting System (AFCARS)—and employing difference-in-differences identification strategy, I find that in the short-run children exposed to law benefit from higher stability of placement and shorter length of foster care episode, but do not experience significant changes in either mental or physical health. In the longer term kinship foster homes are more efficient in terms of improving safety and providing permanent home through discharge from foster care with a relative. Thus, given the effectiveness of kinship care, policymakers should focus on developing and implementing policies that further facilitate relatives' involvement in foster care.

*JEL classification:* I38, J13

*Keywords:* Child welfare; Kinship foster care; Kinship placement

---

\*Ph.D. Candidate, Department of Economics, University of Houston, Houston, TX 77204-5882. Email: ihayduk@uh.edu. Phone: (512) 560-0421. I thank Aimee Chin, Chinhui Juhn, Andrew Zuppann, and participants at the 2013 Stata Texas Empirical Microeconomics Conference and the University of Houston graduate research workshop for helpful comments and suggestions. The data used in this paper 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 collected by the Children's Bureau and funded 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 collector 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.

# 1. Introduction

In 2011, about 400,000 children lived in foster care (Child Trends Data Bank, 2012). These children were removed from parents by court order and entered state custody for a variety of reasons with the most common being neglect, parental addiction to drugs, and physical abuse. When the state assumes responsibility for a child, it must make critical decisions about child placement—finding the appropriate temporary and eventually permanent home for the child. Failure to place a foster child in a safe and nurturing setting might have serious negative consequences that are costly to the child as well as society. For example, the economic literature on foster care suggests that on average foster caregivers provide lower quality care than birth parents, as indicated by the foster children’s worse labor market outcomes (Doyle, 2007b) and higher chances to be involved in criminal activity later in life (Doyle, 2008). However, given that out-of-home placement is unavoidable in many cases (e.g., severe physical abuse by parents, parental incarceration and parental death), an important question is how to improve the foster care experience so that these negative consequences can be averted or mitigated. One potential avenue for achieving this goal is placing foster children with relatives instead of unfamiliar caregivers, institutions, or group homes.

The purpose of this paper is to provide the first rigorous assessment of the impact of being placed with a relative on foster children, compared to other out-of-home placements. Although relatives are not the same as parents, they are familiar people in a child’s life, and as members of the same family may be more likely to act more altruistically toward the child. Studies suggest that placing child with a familiar person reduces psychological trauma and minimizes difficulties for adjusting to a new living environment (Ehrle and Geen, 2002; Conway and Hutson, 2007). On the other hand, relatives are more likely to share the socio-economic conditions of the foster child, and if on average they are poorer or in worse neighborhoods then some of the benefits of relative care could be offset.

Empirically it is difficult to identify a causal effect of kinship foster care on children's well-being. This problem arises because children placed with a relative may differ from those living in other foster care settings in terms of many observed and unobserved characteristics. The existing literature (Cuddeback, 2004<sup>1</sup>; Koh and Testa, 2008; Winokur et al., 2009; Chamberlain et al., 2006, Rubin et al., 2008) does not address this potential selection bias and, therefore, the correlations they report between kinship placement and children's outcomes are unlikely to have a causal interpretation. My study contributes to this literature by exploiting the plausibly exogenous variation in kinship placement generated by state policy changes to learn about the causal impact of kinship placement on children's well-being.

In the last two decades, both federal and state child welfare policies shifted toward giving preference to a family member over unrelated caregiver when seeking a home for a child in state custody. A total of 27 states have state laws that encourage welfare agencies to facilitate placement with a caregiver who has preexisting relationship with the child. Did these laws indeed raise the likelihood of being placed with a relative for foster children as intended? Do these laws improve foster children's well-being? Shockingly, despite the prevalence of these laws, and their important implications for child well-being, there has been no rigorous evaluation of these laws. My study is the first to provide a systematic analysis of the impacts of kinship foster care placement laws. In particular, I exploit the state-time variation in the adoption of these laws to identify the causal effect of these laws. This is essentially a difference-in-differences estimation strategy in which changes over time in child outcome in states adopting the law earlier minus changes in states adopting the law later or not changing their law status over the whole period are interpreted as effects of the law. The identifying assumption is that states passing the law earlier would have had the same trends in child outcomes as the other states in the counterfactual world without the

---

<sup>1</sup>Cutterback (2004) presents an overview of the early kinship care literature and concludes that additionally to the mixed findings on the effectiveness of kinship foster care, this literature also suffers from serious methodological limitations.

law. A concern is that the earlier passers would have had differential trends. Below, I always control for state-specific time trends, and additionally I show there is no evidence in the years immediately preceding the passage of the law of differential trends, which lends credibility to the identifying assumption, and supports the interpretation of the difference-in-differences estimates as the causal impacts of the state kinship placement laws.

I apply this difference-in-differences estimation strategy to data on individual foster care cases from the Adoption and Foster Care Analysis and Reporting System (AFCARS) for the period 1998 to 2011. The AFCARS data contains the *universe* of foster care cases in the U.S., and for each case contains information on the child, the date of entry, the type of care provided in foster care, and if the case has been concluded then the end date and permanent placement. I find that the state kinship laws increased the likelihood that a child is ever placed with a relative during the foster care episode. The point estimate of 3.5 percentage points is about 11 percent of the mean share ever placed with a relative during the foster care episode, and is statistically significantly different from zero with 90 percent confidence (standard errors clustered by state are used for inference). It is important to note that relative foster care substitute for not only non-relatives (the probability of being placed in non-relative foster home decreases by insignificant 7 percent), but also for institutional placement (the probability of being placed in an institution declines by a significant 16 percent). This is an important finding since the literature suggests that institutions constitute worse living arrangements for children than foster homes (Barth, 2002).

As for the effect of the reform on children's well-being, I have several notable findings. First, the state kinship placement laws statistically significantly reduce the time a child spends in foster care; the average foster care episode lasts two years, and the point estimate indicates that the law shortens the episode by 55 days. Second, there is greater stability of placement, with the law causing a 5.2 percentage point increase in the likelihood of being in the same home for the entire foster care episode. Third, the state kinship laws raise the

likelihood of being permanently placed with a relative, and reduce the likelihood that a child returns to the foster care system later due to abuse by caretaker. The results collectively suggest that the state kinship laws benefit foster children, both while they are in foster care and after they exit foster care. From the state public finance perspective, particularly since on average kinship placement is far cheaper than all other types of placement (286 dollars versus 1016 dollars per month), the results indicate that the laws enabled better care for less resources.

This paper proceeds as follows. Section 2, provides some basic background on kinship foster care policy and presents review of related literature. My empirical strategy is discussed in Section 3, followed by description of the data in Section 4. I report my results in Section 5 and Section 6 concludes.

## **2. Background**

### **2.1. Foster Care Placement Policy and Practice**

Teachers, doctors, police officers, and social workers are required to report child maltreatment if they have the reasons to believe that a child have been abused or neglected (Child Welfare Information Gateway, 2012). Following a report, child protective services conduct an investigation and if maltreatment is confirmed, court approves child removal from parents and placement into one of the foster care settings: kinship home, non-relative foster home, institution, or group home. Before placing a child into foster home, either with familiar or unfamiliar to a child caregiver, the case worker has to determine whether potential foster parent meets all eligibility criteria and whether child's living conditions will be satisfactory based on an on-site home study. To qualify, foster parents should have proper physical and mental health, be capable to provide safe and supportive living environment for a child,

and must pass a criminal background check. This requirement applies to non-relative and relative caregivers alike. At the same time, according to the law, poverty is not a sufficient reason for declining foster parent application received from a relative, but this waiver doesn't apply for nonrelatives. As for the kinship-specific requirements, the type of relatives who qualify to become foster care providers varies by state and generally includes not only persons related to the child by blood, marriage or adoption, but also any other adults who have a prior relationship with the child. The latter category may include, but is not limited to, neighbors, godparents, and family friends.

Foster care placement is a temporary living arrangement for a child, therefore, foster parent has temporary physical custody of a child but legal custody remains with the State until child discharge from foster care. All children in state custody, whether placed with a relative, or in traditional setting, are subject to the department of social services supervision to ensure their safety (Child Welfare Information Gateway, 2011). Besides, while foster parent is responsible for providing everyday care for a child, welfare agency should support and assist foster caregiver to ensure that child receives necessary care and to increase child's chances to be discharge from foster care and achieve permanency with this caregiver through adoption, guardianship, or discharge with a relative.

## **2.2. State Kinship Foster Care Placement Laws**

The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA) enacted by the federal government in 1996 and consequently the 1997 Adoption and Safe Families Act (ASFA) initiated a fundamental change in child welfare policies. This legislation required states to consider relatives as preferable foster caregivers for children removed from home by court and placed in state custody. Following (PRWORA), 18 states adopted kinship foster care placement laws; 9 states already had such laws in 1998. In Table 1, I document for each of the 50 states whether it has a kinship foster care placement law, and if so which year it

was adopted; there was no pre-existing compilation of kinship foster care laws by state, and I made this list based on my careful review of state laws related to foster care and child welfare more generally<sup>2</sup>. While the text of these laws varies state by state, the common element is to formalize favoring relatives for out-of-home placements for foster children. Generally these laws require social services agency to exercise due diligence to identify child's relatives and notify them about the possibility to become foster parents and receive financial assistance. In some states, the Department of Social Services has to present a written report about measures taken to place child with a kin. Upon locating a relative, child welfare agencies should give preferential consideration to him or her rather than unknown to the child person, institution or group home when seeking placement setting for the child removed from parents.

The enactment of PRWORA, ASFA, and the state kinship foster care placement laws, are the culmination of the gradual changes in philosophy about kinship foster care which began several decades earlier. Until the late 1970s relatives who cared for a child in state custody were not considered to be foster parents, which precluded their eligibility for foster care payments. At the time, child welfare workers were focusing on possible disadvantages of placing foster children with the extended family members, emphasizing the possibility that abusive parents tend to have relatives with the same child-rearing practices. Another common view was that relatives of the child have moral obligation to provide care and, therefore, should receive much lower monthly payments than unrelated caregivers. This practice changed in 1979 when the U.S. Supreme Court case Miller versus Youakim extended the definition of foster parent by adding child's relative, and obligated states to treat related

---

<sup>2</sup>A note is in order about Kentucky, Maryland, Michigan, Oklahoma, Rhode Island, and Florida, which are classified in Table 1 as not having a kinship foster care placement law. These states do have laws favoring kinship placement, however these laws pertain to care provided outside the foster care system, and as such are not kinship foster care placement laws. Specifically, child welfare laws in these states emphasize the importance of keeping children from entering foster care and explicitly state that their first priority is informal kinship care that prevents foster care entry. I consider these states with informal kinship care to be comparison states in my empirical analysis below. However, these states did not change their kinship care laws during the 1998-2011 period, and all the results are robust to the exclusion of these states from the analysis.

foster parents in the same way as unrelated caregivers (Miller versus Youakim, 1979). Today, relative foster parents have the same rights and responsibilities as non-relative foster parents.

State heterogeneity in terms of preference for kinship placement to a large extent is a result of a limited federal guidance about assessing kinship caregivers. Even though federal government encourages states to increase relatives' involvement in foster care, it gives them broad discretion about kinship care policies. As a result, state laws regarding kinship care have evolved in a way where states differ in their views about the role of relatives in out-of-home care.

### **2.3. Related Literature**

This study is most directly related to the existing literature on kinship foster care. These studies, primarily in sociology and psychology, compare outcomes for children in two types of out-of-home settings, kin foster homes and non-kin placements. They tend to find a positive association between kinship placement and children's well-being, in terms of greater stability of placement (Koh and Testa, 2008; Winokur et al., 2009; Chamberlain et al., 2006, Rubin et al., 2008), better school performance (Berrick et al., 1994) and fewer behavioral problems (Rubin et al., 2008, Keller et al., 2001). On the other hand, a few studies find that kinship placement is associated with negative outcomes, including longer stay in foster care (Berrick and Needell, 1999), and for foster children with the pre-existing exposure to drugs, worse emotional development (Brooks and Barth, 1998). None of these studies address the potential problem of endogeneity in kinship placement in estimating the effect of kinship placement on child outcomes, thus their estimated correlations are unlikely to have a causal interpretation. For example, disabled children or less well behaved children are more difficult to place and so may be more likely to live in kin foster homes, but they are more likely to have worse measured health and education outcomes, so the correlation would encapsulate both the true effect of kinship placement as well as the effect of the omitted variables. My



study is the first to use a research design that addresses this endogeneity problem and obtain estimates of the causal impact of kinship placement.

This study also contributes to the small but growing literature in economics on different aspects of foster care. One set of studies analyzes whether financial incentives affect the willingness of potential foster parents to provide care, as well as quality of care provided (Doyle and Peters, 2007; Doyle, 2007a; Duncan and Argys, 2007). My study is the most related to Doyle (2007a) who examines wage reform in Illinois in 1995 that introduces stricter licensing requirements for kin foster parents and decreases foster care payment for those relative caregivers who don't meet new licensing criteria. He finds that 30 percent drop in foster care subsidy decreases kinship placement rates by 15 percent. However, payment generosity doesn't affect quality of care as measured by foster parents' quitting rates, children's health care utilization, and test scores. One interpretation of Doyle's results is that payment reform selected out the poorest relatives who offered perhaps the lowest quality care, resulting in no overall changes in child outcomes. In contrast to Doyle (2007a) which focuses exclusively on payment reform, my study looks at a more general policy change that favored relative caregivers. I also study different outcomes not studied by Doyle: time spent in foster care, child discharged to live with a relative, adoption by a relative, and re-entry due to abuse by caretaker.

A second set of studies in economics focuses on estimating the effect of foster care placement on adult outcomes (Doyle, 2007b; Doyle, 2008). These papers use the removal tendency of investigators as an instrument for foster care placement: some investigators just favor removal from parents more than others. By comparing outcomes for abused children who went to foster care versus those who remained at home, Doyle (2007b) finds that children with the history of foster care placements are more likely to experience teen motherhood, are worse off in terms of employment opportunities, and have higher probability to be involved in the juvenile delinquency cases. Doyle (2008) provides more insight on the issue by showing

that for the former foster children arrest, conviction, and imprisonment rates are three times higher in comparison to children on the margin of placement in state custody. These studies document that living with foster caregivers leads to worse outcomes than remaining with birth parents. However, they compare parental custody to the average effect of foster care and do not take into account that the effects of foster care can differ by type such as kin care, non-relative, institution or group home. In addition, since out-of-home care is unavoidable in some cases, it would nevertheless be useful to know whether some types of foster care are more effective than the others. My study explores whether kinship foster homes provide better quality care than non-relative foster homes, institutions, or group homes.

This study also adds to a more general literature on child development which shows that early life experiences and home environment affect adult outcomes (Almond and Currie, 2011; Cunha and Heckman, 2007, Sacerdote, 2002; Santavirta, 2012). For instance, Sacerdote (2002) emphasizes the importance of nurture by showing that higher socio-economic status of adoptive family is associated with better educational attainments and lower probability to be married at the young age. Additionally, Santavirta (2012) uses child-evacuation program during World War II, which randomly distributed children to foster families, and finds that foster home environment plays an important role in determining educational outcomes. This suggests that even though for most children placement in foster care is temporary, it could have lasting effects. Therefore, federal and state policies should focus on improving quality of foster care.

The main contribution of my paper is that I evaluate the effectiveness of kinship foster care using major reform which wasn't used before in the literature—state kinship placement policies that give preferential consideration to relatives as caregivers for foster children. To my knowledge, this is the first study on the effect of kinship foster care on children's outcomes.

## 3. Empirical Strategy

### 3.1. Conceptual Framework

How might kinship foster care placement laws impact foster children's care during foster care, transition to permanent placement, and well-being? By requiring the caseworker to search for relatives, these laws weakly increase the number of options available for the foster child's placement; the traditional options (e.g., non-relative foster parents, institutions) remain, and relative foster parent options become available in some cases). If the state, via the caseworker, is working to find the best quality child-caregiver match, then match quality is expected to weakly increase with these kinship foster care placement laws.

The crucial question is whether these incremental options involving relatives will actually be used (if not, match quality is unchanged), and this involves consideration of the impact of kinship care on child well-being. Relatives might be more likely to be guided by altruism, more willing to provide nonmonetary parental inputs, and feel greater moral obligation to care for the child than non-relative foster parents. This would lead to a better match quality between the child and a relative. On the other hand, to the extent that relatives are of lower socio-economic status than the candidate non-relative foster parents, then the match involving relatives may be a worse one, as it involves more financial strain for the caregiver and fewer resources for raising the child. Overall, therefore, it is ambiguous whether the child-caregiver match quality will be better, unchanged, or worse with kinship care.

It is difficult to measure match quality directly, and I use several indirect ones in my empirical analysis. Consider a simple model in which a caregiver receives a noisy signal about match quality each period while the child is in foster care, and based on this information decides whether to continue relationship with a child or quit. The higher is the match quality,

the less likely the foster parent is to quit, which improves stability of placement for the child while in foster care (measured as being with the same care provider for the whole foster care episode). To the extent that matches with relatives are better, then the stability in relative matches would be higher.

Moreover, in cases where reunification with parents is not possible (in my sample, 55 percent of cases end in parental reunification), foster parents may get an additional option of becoming a permanent caregiver (e.g., by adopting the foster child or becoming a legal guardian). If relatives value the relationship with the child more, or they have a lower match quality threshold above which they will keep the relationship, then we might expect more transitions to permanent care relationships and therefore shorter foster care episodes (e.g., by adopting the foster child or becoming a legal guardian). For children for whom it is hard to find permanent placements, such as children with health or behavioral problems, and we might expect the differences between relative and non-relative caregivers to be especially pronounced.

Besides stability of care during foster care, and speed of transition to a permanent placement, I use re-entry into the foster care system as an outcome measure below. If the match quality is sufficiently low between the child and the permanent caregiver, then the child could return to the foster care system. Thus, while the caseworker, caregiver and child expect the match to be acceptable at the time the permanent placement is made, it is hard to predict how a specific match will play out (the signals about match quality are noisy, and though there is learning over time, there is never certainty), and re-entry is a clear indicator of an unsuccessful match.

Of course if matches with relatives are worse, say because the disadvantages of lower socio-economic status of relatives are greater than the advantages of non-monetary aspects of care, then the predictions for match quality and child well-being would be the reverse of what was discussed. Thus, theory suggests that kinship placement and kinship foster

care placement laws could increase or decrease child well-being, and below I examine this empirically.

### 3.2. Identification Strategy

To quantify the impact of kinship foster care placement laws on children’s well-being, I use a difference-in-differences approach exploiting state-time variation in the passage of the laws. In particular, I estimate the following regression model:

$$y_{ist} = \alpha_s + \gamma_t + \beta[Exposed\ to\ law]_{st} + X_{ist}\theta + \tau_s Trend_s + e_{ist} \quad (1)$$

where  $y_{ist}$  is the outcome for child  $i$  who entered foster care in state  $s$  in year  $t$ ;  $[Exposed\ to\ law]_{st}$  is a dummy variable indicating the child’s exposure to the law (I use a measure of potential exposure, as I discuss below),  $\alpha_s$  is a full set of state dummies which control for all time-invariant characteristics of the state that affect the outcome,  $\gamma_t$  is a full set of year of entry dummies which control for common time effects,  $Trend_s$  is the year variable interacted with a dummy for state and hence  $\tau_s$  is a state-specific linear time trend, and  $X_{ist}$  is a set of control variables (e.g., demographic characteristics of foster children (age, race, gender) and their birth parents (age and marital status), and a full set of dummies for reason the child entered foster care). Since the policy variable is at the state-time level, there is a concern that the error term is heteroscedastic and correlated among observations from the same state, hence for inference I use robust standard errors that allow for clustering at the state level (Bertrand, Duflo, Mullainathan, 2004).

The specific measure of exposure to policy that I use is whether, anytime within the two-year period following a child’s entry into foster care, the state has a kinship foster care placement law. I choose the two-year window because the average foster care case is two years long. For example, suppose a state adopts the law in 2000. Then a child who enters

that state's foster care system in 1999 or later has the policy variable, Exposed to law, set equal to one; for the 1999 entrants, though the law is not in place for the first year, it is for the second year, still within the time during which most cases are being resolved. Note this is a measure of *potential* exposure to the law, as opposed to actual exposure. It is preferable to use potential exposure because actual exposure, which is based on actual duration in foster care as opposed to the two-year length imposed on every case, is likely endogenous<sup>3</sup>.

In order to interpret  $\beta$ , the difference-in-differences estimate, as the causal impact of the state kinship foster care placement laws, it must be that in the absence of these laws, the parallel trend assumption must hold: the change over time in the outcomes would have been the same between states adopting the law earlier and other states (conditional on the various explanatory variables in Equation 1). To make this identifying assumption more plausible, I included in Equation 1 state-specific time trends, which allow for a fixed differential trend from state to state. A remaining concern, though, is whether states passing the laws earlier experience time effects that are off their historical trends, and that systematically differ from what other states experience. For example, is the timing of the adoption of the law tied unobserved or unmeasured state characteristics that vary at the state-time level? To test for differential trends in outcomes between treated and control states that might remain even after controlling for state-specific time trends, I augment model (1) with a variable measuring a placebo policy variable, *Law in two or three years*, which is a dummy equal to one if state  $s$  has the law 2 or 3 years after the child enters the foster care system at time  $t$ . For example, for a state adopting the law in 2000, this variable takes on the value one for children who enter that state's foster care system in 1997 or 1998. (Recall that the true

---

<sup>3</sup>The length of the case is correlated with observed and unobserved characteristics of the case (e.g., cases with disadvantaged children last longer, and since states are transitioning from not having the law to adopting the law, then systematically cases with disadvantaged children may be coded as having the law, which would bias against finding a beneficial impact of the law), and also the policy may itself impact duration (since duration is an outcome variable of interest, it would not be appropriate to have the policy variable or any explanatory variable that is itself defined based on duration).

policy dummy variable, Exposed to law, equals one if state  $s$  has the law in the year the child enters or one year after.) Specifically, I estimate the following equation:

$$y_{ist} = \alpha_s + \gamma_t + \beta[Exposed\ to\ law]_{st} + \mu[Law\ in\ two\ or\ three\ years]_{s,(t-2,t-3)} + X_{ist}\theta + \tau_s Trend_s + e_{ist} \quad (2)$$

The difference-in-differences in outcomes comparing two time periods involving no true policy changes (here, two to three years before the policy is compared to four or more years before the policy) should be zero (i.e.,  $\mu$  should equal zero) under the parallel trend assumption. Below, I show that the estimated  $\mu$  is close to zero and not statistically significant, which lends credibility to the identifying assumption necessary to interpret  $\beta$  (in Equation 1 or 2) as the causal impact of the state kinship foster care placement laws.

Besides estimating the impact of these laws on children’s well-being, I am also interested in the more general question of the impact of kinship foster care placement on children’s well-being. Suppose this relationship could be expressed as:

$$y_{ist} = \alpha_s + \gamma_t + \delta[Kinship\ placement]_{ist} + X_{ist}\theta + \tau_s Trend_s + e_{ist} \quad (3)$$

where *Kinship placement* is a dummy variable equal to one if foster child is placed with a kin and zero otherwise. The ordinary least squares (OLS) estimate of  $\delta$  is likely to be biased due to the omission of variables that are correlated with kinship placement and the outcome, such as unobserved characteristics of children, parents and foster parents (e.g., difficult-to-place child, sibling situation with strong wishes for joint placement, family is closer knit, family lives in same geographic area). To provide an estimate of  $\delta$  with a causal interpretation, I reestimate model (3) by instrumenting *Kinship placement* with the policy variable *Exposed to law*. Under the assumption that the policy affects children’s outcomes only through one channel—the IV estimate is a consistent estimate of effect of

kinship placement, and particular it provides the impact of kinship placement for children of relatives who were induced by the laws to serve as a foster parent. As I discuss below, there are reasons to believe why other channels might also be playing a role, so this exclusion restriction is unlikely to hold, nevertheless performing the IV estimation is of interest for back-of-the-envelope calculations of the magnitude of the impacts of kinship placement, and to understand the nature of selection into kinship placement by comparing the OLS and IV estimates  $\delta$  of in Equation 3.

## 4. Data

The source of data for my empirical analysis is the Adoption and Foster Care Analysis and Reporting System (AFCARS) dataset, distributed annually by the National Data Archive on Child Abuse and Neglect (NDACAN). This is federally mandated data which includes detailed case histories for *all* U.S. children who were removed from their parents and placed into foster care. My analysis is based on 14 years of data, 1998-2011<sup>4</sup>.

States are required to report to the Children’s Bureau date of removal from parents, removal reason (physical abuse, neglect, parental death, child behavior problem, etc.), date of foster care discharge, reason for discharge (reunification with parents, adoption, etc), type and number of placement settings (placement with the relative, non-relative, group home, etc), number of removals from parents (number of foster care episodes), etc. In addition, information about child’s mental and physical health, and demographic characteristics of foster children (age, race, gender), as well as their caregivers were also collected.

Children present in foster care in multiple periods have records in each of them. Moreover, some children tend to experience return to foster care after being discharged. Keeping all foster care episodes for a child may result in the situation when the same child upon the

---

<sup>4</sup>AFCARS starts in 1995, however, since financial penalties were introduced only in 1998, most states either didn’t provide information for the federal agency at all or submitted incomplete foster care files.



first removal from parents before law implementation is considered to be in control group, while her subsequent foster care episode which takes place after law adoption, puts this child in the treatment group. To avoid this situation, I transform case-year level data into child level data by merging foster care files for the time period 1998-2011 and keeping only the first foster care episode for each child. Sample is further restricted to children who entered foster care at or after 1998 and for whom information about current placement setting and health status is available.

The difficulty of merging is related to the fact that most states don't provide child identification number that would remain consistent from year to year. To solve this problem, I use information on child's date of birth, date of first removal from home, gender, state and county of residence (counties with less than 1000 children are not disclosed) for merging data files for the time period 1998-2008. Starting from 2009, data underwent significant improvements and I performed merges using unique child identifiers. Merging results in success for 91 percent of observations.

It is important to keep in mind that data is right-censored—in my last data period, 2011, some children still remain in foster care. Either keeping those children or excluding them from the sample will lead to biased results. To solve this problem, I restrict sample to children that entered state custody before 2010, which gives each child two years to complete an episode. I choose this duration because on average children spend in out-of-home care two years.

Summary statistics is presented in Table 2. The first outcome of interest is placement in the relative foster home during the first foster care episode. AFCARS reports information about placement setting on the annual basis. I construct two measures of foster care placement with a relative. The first one, *Initially placed with a relative*, takes value of one if child lives in relative foster home during his or her first year in foster care and zero otherwise. Second measure, *Ever placed with a relative*, is also coded as a dummy variable and equals

one if during the first episode in foster care, child was ever placed with a previously known caregiver and zero otherwise. As shown in Table 2, 26 percent of children are placed with a familiar caregiver upon entering foster care and this share increases to 31 percent if we take into account subsequent placement with a relative.

I construct measure of length of first foster care episode using information on date of removal from parents and date of foster care discharge or date of reporting for incomplete spells. On average, children spend 641 days in out-of-home care. Another foster care outcome—*Stability of placement*—is coded as a dummy variable which takes value of one if child stays in the same foster care setting for the whole episode and zero otherwise. Only 42 percent don't change caregiver or placement facility, all others experience at least two placements.

As for the permanency outcomes, they indicate what are living arrangements for the children that exit foster care. In my analysis, I use four types of permanency defined by Children's Bureau: reunified with the parents, discharged to live with a relative, adopted, and discharged with a legal guardian<sup>5</sup>. Each is used as a separate dependent variable and takes value of one if certain type of permanency occurs upon exiting and zero otherwise. First two outcomes imply that parental rights are not terminated, while the last two require taking away legal custody from parents. Children discharged with the relative are in physical custody of the relative who has parental responsibility to provide care for them until they are grown up. The most common reason for leaving foster care is reunification with parents (55 percent), followed by adoption (18 percent), living with a relative (11 percent), and guardianship (5 percent).

Another important outcome of interest is children's safety. My first measure of safety is foster care re-entry which equals one if child re-entered foster care within 3 years after

---

<sup>5</sup>Besides achieving permanency, there are four other reasons for leaving foster care: emancipation (8 percent of cases), transfer to another agency (2 percent), runaway (1 percent), and death of child (0.2 percent).

removal from parents and zero otherwise. As a starting point, I choose year of entering rather than year of exiting because length of foster care episode is endogenous. I also make necessary age and year restrictions to ensure that children in treated and control states have the same time limit for re-entering foster care. As seen in Table 2, 11 percent of children re-entered foster care within 3 years. Next, I use caretaker's allegation of physical and/or sexual abuse as a proxy for safety and construct a measure of safety which takes value of one if caretaker abused child within fixed period of time—3 years after entering foster care. In Table 2, we see that 2 percent of former foster children were abused by their caregivers within 3 years after initial foster care entry, which led to re-entry.

Finally, my analysis utilizes health outcomes. Big advantage of the data is that it contains information about child's mental and physical health. Moreover, health was evaluated by a qualified professional and reported annually. Clinical diagnosis improves data reliability by providing objective measures of health status. My two measures of health, *Any mental health problem* and *Any physical health problem*, are dummy variables which take value of one if child experienced certain health problem during his or her last year in foster care and zero otherwise. 10 percent of children have at least one mental health problem during the last period in foster care and 11 percent suffer from physical health issues. One limitation of the data is that health was not measured after child exited foster care.

Children are removed from parents for various reasons with the neglect being the most common—54 percent of cases. Usually more than one reason is cited and they are interrelated. For instance, 20 percent of foster care children who were removed because of parental drug addiction also experienced physical abuse (16 percent), housing problems (19 percent), parental alcohol addiction (19 percent)<sup>6</sup>, etc. All reasons for foster care entry could be divided into two groups—parent-related and child-related. Some children enter foster care because they have behavior problems (16 percent), abuse drugs (3 percent), are alcohol

---

<sup>6</sup>Author's calculations. SourceAFCARS foster care files.

addicts (1 percent), or are disabled (3 percent). Finally, state policy variable in Table 2 indicates that 44 percent of children experienced potential exposure to reform.

## **5. Results**

### **5.1. Effect on Foster Care Provided**

In this section, I first explore whether laws affected likelihood for the foster children to be placed with the member of extended family and then focus on outcomes which reflect children's well-being stability of placement and length of foster care episode.

#### **5.1.1. Effect on Placement with a Relative**

For children in foster care living with birth parents is temporary or even permanently impossible, so it is crucial to be placed with a suitable caregiver. Set of options, additionally to being placed with a person previously known to a child, also includes living with the initially unfamiliar foster parent, in group home or in institutional setting. I explore effect of the reform on type of placement in Table 3. Panel A shows the effect of law exposure on type of foster care setting and the goal of panel B is to assess the validity of parallel trend assumption. Each column within each panel reports the results of a separate model that also controls for child's age, race and gender; removal reason, birth parent's age and marital status, state and year fixed effects, and linear state-specific time trends. State fixed effects account for time-invariant state attributes. For example, wealthier states may spend more financial resources and consequently provide higher quality care for foster children. In my case, including state fixed effects is especially important because Kentucky, Maryland, Michigan, Oklahoma and Rhode Island have preference for informal kinship care and failure to account for this may lead to the selection bias. Laws in these states say that when child

is removed from parents, welfare agency should first consider placing this child with the relative but avoid foster care entry. This practice is known as kinship diversion (Annie E. Casey Foundation's report). Quality of foster parents in terms of socio-economic status may be lower in these states if child welfare agencies employ better quality relatives as informal kin caregivers and allow relatives in need of financial assistance to become foster parents. Year fixed effect control for national year-specific shocks to children's outcomes. Finally, I allow outcomes for each state to follow state-specific linear time trend.

The first point to note in Table 3, results in panel A, columns 1 and 2 reveal that there is sizable and significant effect of laws on the likelihood to be placed with a familiar caregiver. Reduced-form estimate in panel A, column 1 addresses the concern that longer stay in foster care leads to higher chances of being treated and suggests that policy implementation raises the probability of being initially placed with a relative by 3.2 percentage points. When compared to the average relative placement rate, this effect represents 12 percent increase. The results are even stronger if dependent variable is defined as a probability of *ever* being placed with a relative, column 2 panel A. This is my preferred measure of relative placement because some states will explicitly state in the law that they will provide preferential consideration for a relative each time child in foster care needs a new placement. Point estimate indicates that law is associated with 3.5 percentage points higher probability to be placed with a relative, or roughly 11 percent.

Results in the first two columns of Table 3 show that policy is effective in terms of encouraging relatives to become foster parents. The next logical question is which foster care settings relatives substitute for after the reform. Results in columns 3-5 clearly indicate that relatives not only substitute for non-relative caregivers but also institutions: the probability of being placed in an institution decreases by 16 percent, column 4 panel A, and the probability of being placed with an unfamiliar caregiver declines by an insignificant 7 percent, column 3 panel A. This is an important finding because even though there could be

some debate about whether relatives are better than non-relatives, institutions are clearly worse living arrangements than foster homes (Barth, 2002). What is more, the public cost of placing a child in an institution is equal to 1637 dollars per month and exceeds the average cost of kinship placement by nearly six-fold.

A causal interpretation of the previous results would be weakened if I found that relative placement rates were increasing in treated states prior to the law implementation. To shed light on this issue, I estimate equation (2) where model is augmented with a dummy variable that equals one if child entered foster care in treated state two or three years before policy implementation. As shown in Table 3 panel B, states that implemented kinship foster care laws were not more likely to practice placement with a relative prior to the law adoption.

### **5.1.2. Effect on Number and Composition of Cases**

Relatives' decision to care for children may be driven by financial incentives because foster parents receive higher payments than informal kinship care providers. In fact, economic literature suggests that amount of foster care subsidy increases supply of foster homes (Doyle and Peters, 2007). However, study does not differentiate between relatives and non-relatives. Additionally, knowing that placement agency will give them preference, relatives may be more willing to report to child protective services about child maltreatment in order to become foster parents. This may unintentionally increase number of foster children in treated states, therefore, I examine whether policy affects number of children that enter foster care.

To explore this issue, I collapse data by year and state and estimate the model where the dependent variable represents number of children that entered foster care in a given year and state. Set of controls includes state and year fixed effects, and state-specific linear time trends. Results reveal that policy doesn't have significant effect on the number of cases (see Table A1 in the Appendix). These findings suggest that treated states substitute non-relative caregivers, group, and institutional settings with relatives. At the same time, composition

of cases underwent some changes, with the alcohol addicted and physically abused children being less likely to come to the attention of welfare system (see Table A1 in the Appendix).

Even though number of foster care children and, therefore, number of caregivers, remains the same, quality of an average caregiver may be affected. Data doesn't provide direct measures of caregiver's socioeconomic status which could be used as a proxy for quality; however, it includes information about payments for licensed and unlicensed foster parents. It is important to keep in mind that among those who receive financial assistance, relative foster parents in expectation receive lower payments because only relatives could be unlicensed and, therefore, not eligible for full payments. Usually, foster family financial status is one of the main criteria for determining payment eligibility. Since income requirement for becoming foster parent could be waived for relatives but not for nonrelated applicants, these is a reason to expect more low-income relatives becoming foster parents. Results indicate that reform doesn't lead to recruiting more caregivers of low socio-economic status who are in need for receiving foster care payment and doesn't affect amount of foster care subsidy (see Table A1 in the Appendix). However, it should be taken into account that I only have rough proxies rather than direct measures of socio-economic status.

Policy also doesn't affect composition of foster caregivers in terms of age: probability to be placed with older caregiver (60+ years old) and probability to be placed with older relative caregiver remains the same (see Table A1 in the Appendix). This suggests that marginal relatives who responded to the reform probably are aunts, uncles, cousins rather than grandparents. The reason for it might be that grandparents are the first to respond and to foster a child even without policy in place.

### **5.1.3. Effect on Stability of Placement and Time Spent in Foster Care**

I now turn to assessing the impact of new legislature on outcomes that shed the light on children's well-being—length of foster care episode and stability of placement. The former

measure serves two purposes. First, foster care is costly for taxpayers, therefore, the shorter duration of foster care episode, the lower expenses. Besides, fewer days in foster care implies less time living in uncertainty about the future placement and, therefore, less stress for a child. As discussed in the data section, my sample includes all children that entered foster care prior to 2010, but I observe their outcomes up to 2011. Since 6 percent of children in my sample still are in foster care in 2011 and therefore don't have a complete spell, my results might be biased if I keep them. On the other hand, excluding these children from the sample also might lead to misleading inferences if there is a selection into exiting foster care. To shed light on this issue, in Table 4 I first present results for the whole sample, columns 1-3, and then only for children that have information about date of discharge from foster care<sup>7</sup>, columns 4-6.

Point estimates for both samples are very similar in magnitude and lead to the same conclusions. In particular, children exposed to law spend 55 days less in state custody<sup>8</sup>, panel A column 1, and exclusion of those who are still in care increases point estimate to 59 days, column 4 panel A, suggesting that we underestimate effect of the law by keeping children with incomplete spell. The fact that children placed with a kin exit foster care earlier eliminates one of the concerns regarding kinship care raised by policymakers. Specifically, some argued that the possibility of collecting foster care payments will disincentivize relatives to exit foster care and assume legal responsibility for a child.

Results for stability of placement exhibit the same pattern for both samples. Point estimate in column 2 panel A demonstrates that policies that facilitate placement with a kin

---

<sup>7</sup>Since 6 percent of children still have incomplete episode in 2011, mainly because 22 percent of children that entered foster care in 2008 haven't been discharged yet, it is important to check whether policy affects child's probability to remain in care in 2011. Regression results with the dependent variable indicating child's presence in care in 2011 reveal that policy doesn't change child's probability to remain in care, i.e. point estimate is equal to -.001 with p-value .931(see Table A2 in the Appendix).

<sup>8</sup>While for those children who achieve permanency shorter foster care episode is considered a good outcome, this would not be true for children who run away or die. To address this issue, I set length of foster care episode to the maximum possible for the latter subsample. This change has very small effect on point estimate (it increases in magnitude from 55 to 56 days) and doesn't change previous conclusions.



have a positive impact on stability. In particular, the probability of remaining at the same foster care setting increases by 5.2 percentage points or by 12 percent, panel A, column 2, with even larger effect for sample with completed spells, panel A, column 5. Technically children who stay in foster care longer are more likely to experience changes in living arrangements, therefore, as a robustness check, I control for duration of foster care episode<sup>9</sup>. Results in column 3 and 6 reveal that even after accounting for duration of stay in out-of-home care, children in treated states still are less likely to move from one foster home to another. Results in panel B, with the insignificant coefficients on the indicator for future law, demonstrate that changes in the stability and duration of placement also coincide with the timing of the reform.

Since literature shows that frequent changes of caregiver negatively affects emotional, social, and psychological development (Prior and Glaser 2006), my findings suggest that living with a kin should improve long-run outcomes. Additionally, Duncan and Argys (2007) argue that increase in financial assistance improves stability of placement. Given my results, it is evident that investing in relative foster parents should lead to higher returns. Besides, higher stability means that kinship placement is less costly because social workers save on home study and on cost of searching for a new foster parent.

My findings thus far are consistent with the kinship foster care placement laws increasing children's chances to be placed with a familiar caregiver, as well as improving stability of placement and decreasing time spent in foster care. However, this does not preclude the possibility that relatives will be unwilling to become permanent caregivers. I explore this issue in the next section.

---

<sup>9</sup>This is not a perfect way to account for duration since policy affects duration of episode, however, it is the only possible way and this robustness check provides some reassurance that policy improved stability through channels other than just length of stay in foster care.

## 5.2. Effect on Permanency Outcomes and Foster Care Re-entry

In this subsection, I analyze whether policy that promotes foster care placement with a relative also affects permanency and re-entry. These outcomes are of great interest because from the policy viewpoint it is important to know whether relatives are willing to provide only a temporary home for the children in need or are also ready to become permanent caregivers.

The results of running regressions for various measures of permanency and re-entry are shown in Table 5. Note that number of observation is smaller for permanency outcomes because they are observed only for children that exited foster care<sup>10</sup>. First, as displayed in column 1, kinship foster care laws increase the probability of living permanently with a relative by 1.2 percentage points. This represents an approximately 11 percent increase. However, as shown in columns 2-4, there is no robust evidence that the policy changed the probabilities of reunification with the parents, adoption or guardianship. While there is no overall increase in adoption rates, it is important to note that this is somewhat counter to previous studies which suggest that kin foster care may actually reduce adoption rates since relatives may be unwilling to forego foster care payments (Testa, 2001). In addition, even though results in Table 5 indicate that policy doesn't affect overall adoption, further exploration of the issue reveals that children with medical condition and/or behavior problem are more likely to find permanent home through adoption after policy implementation, as shown in Table 6.

While from the policy viewpoint it is important to know that relatives are able and willing to provide permanent home for foster children, even more significant issue is whether living with the relative improves child's safety. Since discharged children are not subject to the department supervision, this increases their risk of maltreatment. I start with examining

---

<sup>10</sup>As discussed before, there no selection into exiting foster care and achieving permanency.

policy effect on foster care re-entry and report results in Table 5, column 5. Number of observation is smaller, as discussed in the data section, however, there is no selection into this subsample (see Table A2 in the Appendix). Point estimate reveals that reform doesn't change children's probability of returning to foster care. However, it is important to keep in mind that this model requires excluding all children that entered foster care after 2008. This significantly reduces power because during this time period several big states adopted new laws.

To a large extent re-entry is a proxy for safety and, therefore, reflects overall quality of care. Nevertheless, it should be taken into account that children return to foster care for variety of reasons and while caretaker's death definitely causes negative shock for a child, it may be not as detrimental to the child's well-being as severe physical abuse by a caretaker. Next, I use caretaker's allegation of child sexual or physical abuse as a measure of safe environment and explore impact of policy on probability of reentering foster care due to abuse by caregiver. The estimate presented in Table 5, column 6 suggests that policy benefits children by reducing their probability to be abused by 11 percent. Overall, the evidence is clear that policy improves safety and benefits children even after their exit from foster care. This is an important finding because economic literature provides convincing evidence about the negative long-run consequences of childhood abuse. In particular, Currie and Tekin (2012) use the National Longitudinal Study of Adolescent Health and find that sexual abuse, physical abuse and other forms of child maltreatment are major determinants of criminal behavior in adulthood. Currie and Widom (2010) shed more light on the abuse issue by showing its negative effect on education, employment, and earnings.

In Table 5 we found that the policy had no significant impact on overall adoption and guardianship rates. There are two potential explanations for these results. Either it is really the case that relatives are not ready to assume legal responsibility for the foster child, or relative caregivers just substitute for nonrelated care providers in the adoption process. In

light of the fact that the reform didn't affect number of children that entered foster care and relative substituted for non-related foster parents, the second scenario is more likely. I examine this issue in more detail below.

Ideally, we also would like to know whether adoptive parent is child's relative. However, foster data files don't provide this information. Since adoption is one of the most desirable forms of permanency in case of termination of parental rights, I use additional source of data, AFCARS adoption files, to examine impact of the new legislation on adoption by a relative. This dataset specifies the type of adoptive parent but unfortunately includes only adopted children and doesn't provide information about year of entering foster care, creating difficulty with determining treatment status. Since federal law requires state agencies to terminate parental rights if a child spent up to 22 months in foster care (Child Welfare Information Gateway, 2013), I consider treated those children that entered foster care two years prior to the termination of parental rights (TPR)<sup>11</sup>.

Table 7 presents estimates of the impact of new legal regime on the probability of being adopted by a relative (conditional on being adopted). Each column corresponds to a different specification, with the latter columns controlling for heterogeneity of effect by special needs basis. Point estimate in column 1 is equal to 0.074 and suggests a significant and sizable impact on adoption by a relative. In column 2, coefficient on Law indicates that the law increased the probability of being adopted by a relative by 8.2 percentage points among children without any medical conditions. Among children with medical conditions, the effect of the law on adoption by relative was somewhat smaller (point estimate =  $8.2 - 3.5 = 4.7$  percentage points and is statistically significant at 5 percent level). The law had somewhat larger impact on adoption by relatives among children with siblings (column 3), older children (column 4), and children with special needs (column 5), although the latter two

---

<sup>11</sup>Data from foster care files, which contains both date of entering foster care and date of TPR, shows that states follow these guidelines and about 75 percent of children experience TPR within first two years after removal from home.

effects are not significant. Since special need children are eligible for adoption subsidies, it raises the question whether relatives' willingness to adopt a child is driven only by economic incentives. Results in column 5 show that this is not the case. In fact, children without special need, who do not receive adoption subsidy, have the same chances to be adopted by a relative as children with a special need, as shown by the insignificant coefficient on the interaction term in column 5. Buckles (2013) examines the effect of adoption subsidy eligibility on number of adoptions and also finds that relative's decision to adopt a child is not responsive to financial incentives.

Together these findings suggest that policy that aims to place more foster children with the familiar caregivers has positive long-run effects because it increases likelihood for the children to be discharged from foster care with a relative to live permanently with this caregiver and decreases propensity to re-enter foster care because of abuse by caretaker.

### **5.3. Effect on Mental and Physical Health**

Table 8 presents estimates of the impact of the law on mental and physical health. Estimates in the first two columns do not account for duration of stay in state custody and estimates in the last two columns are conditional on duration since more disadvantage children may have worse health because they stay longer in foster care. Ideally, I would like to have information about child's health right before she or he enters foster care to account for the possible differences in initial health status between treated and control states. However, AFCARS data set doesn't provide this information. Therefore, I estimate policy impact on mental and physical health evaluated during child's last year in foster care. All point estimates in Table 8, panel A, are statistically insignificant, however, with such large standard errors and wide confidence intervals I can not reject the hypothesis that in fact policy improves health.

While I didn't find any indication of the policy impact on health, it is certainly possible that reform has a long-run impact on health, but a snapshot at the last year in foster care

doesn't pick it up. Besides, health outcomes are coded as dummy variables and, therefore, provide limited information about children's health. Additionally, as shown in Table 7, relatives are more likely to adopt children with medical condition which means that they are more likely to be foster parents for a child with serious medical problems. Finally, I see from Table 3 that children, who would otherwise end up in the institution, now are placed with relatives. In other words, there is evidence that children in relative foster homes have worse health and behavioral outcomes upon entering foster care.

#### **5.4. Implied Effect of Relative Placement**

In the previous subsections I presented reduced-form estimates—effect of the law on foster children's outcomes. Now I turn to assessing the impact of placement with a relative by first estimating equation (3) with OLS and then proceed with evaluating 2SLS estimates where kinship placement is instrumented with exposure to law. The goal of this exercise is to provide back of the envelope calculations rather than to evaluate causal effect of relative placement because it is unlikely that law affects children only through placement with a familiar caregiver. I discuss this issue in details after providing information about the results.

Table 9 summarizes my findings. OLS estimates in the first two columns of panel A, though statistically insignificant, provide some evidence that children placed with a kin tend to stay in foster care longer and are more likely to change foster settings. As for the permanency outcomes, all point estimates are statistically significant and indicate that kinship placement is associated with higher chances to be discharged with a relative or legal guardian and decreases probability to be reunified with parents or to be adopted. Given the endogeneity of kinship placement, these estimates are unlikely to uncover true effect of living in kin foster home, therefore, I present 2SLS coefficients in panel B. Observe that point estimates are very imprecise and do not allow to evaluate magnitude of the effect. For example, even though estimate in column 1 suggests statistically insignificant but positive

effect on length of foster care episode, at 5 percent significance level we can not rule out the possibility that in fact this effect is negative because the 95 percent confidence interval for this estimate is [-2324, 3138]. As for the stability, 2SLS estimate is more precise suggesting that OLS understates benefits of relative placement because it fails to account for selection. In other words, causal impact is more beneficial than naive estimates. Estimate for living with the relative is the only one 2SLS estimate that is significant and as in the case of OLS and reduced-form estimate suggests that policy increases children's chances to live permanently with a relative.

There are several potential reasons for imprecise 2SLS estimates in panel B. First, it is unlikely that policy affects children's outcomes only through one particular channel—placement with a relative. For example, if states that adopt law prioritize relatives, they might also disproportionately invest in relatives in terms of services. Given state campaigns about the necessity of greater relatives' involvement in foster care, child welfare agencies may be more likely to invest their time in training and supervising relatives because of expected higher returns. As a result, children's outcomes will improve in adopted states partially due to placement in kin homes but also because social workers will provide more services for relatives. Second, possibly Kinship placement variable doesn't capture true relatives' involvement in fostering a child because what really matters is duration of treatment rather than the fact that child was placed with a relative<sup>12</sup>. Third, notice that first stage is weak. In general, 2SLS estimates are consistent with reduced-form estimates suggesting higher effectiveness of kinship placement.

---

<sup>12</sup>AFCARS doesn't provide information about the duration of time child spends in certain foster care setting.

## 6. Conclusion

Recent state reforms of foster care that facilitate placement foster children with relatives create a unique opportunity to evaluate the effectiveness of kin caregivers. By relying on exogenous changes in kinship placement rates, generated by policy shift, and using the Adoption and Foster Care Analysis and Reporting System (AFCARS) dataset for the period 1998-2011, I find that placing foster children with relatives helps to solve many existing foster care problems and improve children's outcomes on a variety of dimensions. In particular, children placed with a kin tend to spend less time in foster care, experience higher stability of placement, and benefit even after exiting state custody through improvements in safety—lower probability to be abused by a caregiver. Additionally, policy increases children's chances to find permanent home with kin caregivers. Finally, while there is no an indication of the short-run policy impact on either mental or physical health, it might be that this time span is too short for children to experience changes in health.

Ideally, one would like to know through which mechanisms temporary placement with a relative affects children's outcomes. One of the explanations is related to the possible differences in nonmonetary parental inputs between kin and non-kin caregivers. In other words, relatives could be more likely to provide nurturing and loving home for the child because many of them have preexisting relationship with the child, besides, they might feel moral obligation to provide good care for a family member. Existing literature provide empirical support for the importance of nonmonetary parental inputs by suggesting that children living with the kin tend to develop closer relationship with their caregivers than those placed in traditional settings (Conway and Hutson, 2007). In particular, children in kinship care are more likely to report liking their foster caregivers and feeling loved. However, the most convincing indication of the positive perception of kinship placement is the fact that children living with relatives are more willing to achieve permanency with their foster



parents through adoption or legal guardianship. Finally, the fact that policy doesn't affect composition of foster caregivers in terms of socio-economic status certainly reinforces the belief that nonmonetary factors are at play.

In light of my findings that children in kinship care benefit from higher stability of placement and tend to live in a safer environment, kinship care should have positive long-lasting effects. The justification for this argument comes from the studies which suggest that failure to provide safe and stable home for the child leads to attachment disorders and growth delays (Kaye and White, 2008) and eventually manifests itself in criminal behavior (Currie and Tekin, 2012), unemployment, and low earnings (Currie and Widom, 2010). Since kin foster homes are more effective in achieving primary goal of child welfare—providing stable, safe, and permanent home for disadvantaged children—this type of placement should become a preferred foster setting in all states.

## References

- [1] Almond, Douglas and Janet Currie. 2011. Human Capital Development before Age Five. In: Ashenfelter, Orley and David Card (eds.). *The Handbook of Labor Economics* Vol. 4B. New York: North Holland, pp. 1315-1486.
- [2] Annie E. Casey Foundation. 2011. Data Snapshot on Foster Care Placement.
- [3] Argys, Laura and Brian Duncan. 2007. Economic Incentives and Foster care Placement. *The Southern Economic Journal*, 74(1), pp. 114-142.
- [4] Argys, Laura and Brian Duncan. 2013. Economic Incentives and Foster Child Adoption. Forthcoming, *Demography*.

- [5] Barth, R.P. 2002. Institutions vs. Foster Homes: The Empirical Base for the Second Century of Debate. Chapel Hill, NC: UNC, School of Social Work, Jordan Institute for Families
- [6] Barth, R., Kwon Lee, C., Wildfire, J., and Guo, S. 2006. A Comparison of the Governmental Costs of Long-Term Foster Care and Adoption. *Social Services Review*, 80(1): 127-58.
- [7] Berrick, J. D., Barth, R. P., and Needell, B. 1994. A comparison of kinship foster homes and foster family homes: implications for kinship foster care as family preservation. *Children and Youth Services Review*, 16 (12), 33-63.
- [8] Berrick, J.D., and Needell, B. Recent trends in kinship care: Public policy, payments, and outcomes for children. In *The foster care crisis: Translating research into practice and policy*. P.A. Curtis and G. Dale, eds. Lincoln, NE: University of Nebraska Press, in press.
- [9] Bertrand, Marianne, Esther Duflo, and Sendhil Mullainathan. 2004. How Much Should We Trust Differences-in-Differences Estimates?, *The Quarterly Journal of Economics*, vol. 119 (1), pages 249-275
- [10] Brooks, D., and Barth, R. P. 1998. Characteristics and outcomes of drug-exposed and non drug-exposed children in kinship and non-relative foster care. *Children and Youth Services Review*, Vol. 20, No. 6: 75-501.
- [11] Buckles, Kasey. 2013. Adoption Subsidies and Placement Outcomes for Children in Foster Care. Forthcoming, *Journal of Human Resources*.

- [12] Chamberlain, P., Price, J., Reid, J., Landsverk, J., Fisher, P., and Stoolmiller, M. 2006. Who disrupts from placement in foster and kinship care? *Child Abuse and Neglect*, 30, 409-424.
- [13] Child Welfare Information Gateway. 2011. Home study requirements for prospective foster parents. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.
- [14] Child Welfare Information Gateway. 2013. Grounds for involuntary termination of parental rights. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.
- [15] Child Welfare Information Gateway. 2003. Placement of Children with Relatives. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.
- [16] Child Welfare Information Gateway. 2005. Placement of Children with Relatives. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.
- [17] Child Welfare Information Gateway. 2008. Placement of Children with Relatives. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.
- [18] Child Welfare Information Gateway. 2010. Placement of Children with Relatives. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau.
- [19] Children's Defense Fund. 2011. Children in the United States.
- [20] Conway, T., Hutson, R. 2007. Is Kinship Care Good for Kids? Washington, DC: Center for Law and Social Policy.
- [21] Cuddeback, G.S., 2004. Kinship and family foster care: a methodological substantive synthesis of research. *Children and Youth Services Review*, 26 (7), 623-639.

- [22] Cunningham, Scott and Keith Finlay. 2013. Parental Substance Use and Foster Care: Evidence from Two Methamphetamine Supply Shocks, *Economic Inquiry*, Western Economic Association International, vol. 51(1):764-782
- [23] Currie J and CS Widom. 2010. Long-term consequences of child abuse and neglect on adult economic well-being. *Child Maltreatment*, 15 (2):111-120.
- [24] Currie, Janet and Erdal Tekin. 2012. Understanding the Cycle: Childhood Maltreatment and Future Crime. *Journal of Human Resources*, 47.2: 509-549.
- [25] Curtis, P.A., Dale, G. The Foster Care Crisis: Translating Research into Practice and Policy. University of Nebraska Press, Lincoln NE.
- [26] DeVooght, K., Fletcher, M., Vaughn, B, and Cooper, H. 2012. Federal, State, and Local Spending to Address Child Abuse and Neglect in SFYs 2008 and 2010. Child Trends, Washington, DC
- [27] Doyle, Joseph and H. Elizabeth Peters. 2007. The Market for Foster Care: An Empirical Study of the Impact of Foster Care Subsidies. *Review of Economics of the Household*, 5: 329-351.
- [28] Doyle, Joseph J. 2008. Child Protection and Adult Crime: Using Investigator Assignment to Estimate Causal Effects of Foster Care. *Journal of Political Economy*. 116(4): 746-770.
- [29] Doyle, Joseph. 2007a. Can't buy me love? Subsidizing the care of related children. *Journal of Public Economics*, vol. 91, issue 1-2: 281-304
- [30] Doyle, Joseph. 2007b. Child Protection and Child Outcomes: Measuring the Effects of Foster Care. *American Economic Review*, 97(5): 1583-1610.

- [31] Ehrle, J., and Geen, R. 2002. Kin and non-kin in foster care: Findings from a national survey. *Children and Youth Services Review*, 24(1/2), 15-35
- [32] Ehrle, Jennifer, Rob Geen, and Regan Main. 2003. Kinship Foster Care: Custody, Hardships, and Services. *Snapshots of America's Families III*, No. 14
- [33] Gebel, T. J. 1996. Kinship care and non-relative family foster care: a comparison of caregiver attributes and attitudes. *Child Welfare*, 75(1), 5 -18.
- [34] Geen, Rob. 2004. The Evolution of Kinship Care Policy and Practice, *Future of Children*, Vol. 14, No. 1
- [35] Goldston, Linda and Mark Gomez. 2010. South Bay sex-abuse lawsuit: Ex-foster child awarded \$30 million. *San Jose Mercury News*
- [36] Jonathan Guryan, Erik Hurst, and Melissa Kearney, 2008. Parental Education and Parental Time with Children, *Journal of Economic Perspectives*, vol. 22(3): 23-46
- [37] Kaye, S. and White, C. 2008. Placement matters: Promoting placement stability.
- [38] Keller, T. E., Wetherbee, K., Le Prohn, N., Payne, V., Sim, K., and Lamont, E. R. 2001. Competencies and problem behaviors of children in family foster care: variations by kinship placement status and race. *Children and Youth Services Review*, 23(12), 915-940.
- [39] Koh, E. and Testa, M. 2008. Propensity score matching of children in kinship and non-kinship foster care: Do permanency outcomes still differ? *Social Work Research*, 32: 105-116.
- [40] Markowitz, Sara, Alison Evans Cuellar, Ryan M. Conrad, and Michael Grossman. 2011. The Effects of Alcohol Policies in Reducing Entry Rates and Time Spent in Foster Care. NBER Working Paper 16915

- [41] Messing, J. 2005. From the Child's Perspective: A Qualitative Analysis of Kinship Care Placements. National Abandoned Infants Assistance Resource Center, University of California at Berkeley.
- [42] Miller versus Youakim, 44 U.S. 125, 99 S. Ct. 957 (1979)
- [43] Prior V; Glaser D. 2006. Understanding Attachment and Attachment Disorders: Theory, Evidence and Practice. Child and Adolescent Mental Health Series. London: Jessica Kingsley Publishers: 248-250.
- [44] Rubin, D., Downes, K., O'Reily, A., McKonnen, R., Luan, X., and Localio, R. 2008. Impact of kinship care on behavioral well-being for children in out-of-home care. *Archives of Pediatric Adolescent Medicine*, 162: 550-556.
- [45] Ryan, Joseph P, Jun Sung Hong, Denise Herz, and Pedro M. Hernandez . 2010. Kinship Foster Care and the Risk of Juvenile Delinquency. *Children and Youth Services Review*, vol. 32, issue 12: 1823-1830
- [46] Sacerdote, Bruce. 2002. The Nature and Nurture of Economic Outcomes. *American Economic Review*, 92, 2: 344-48
- [47] Santavirta, Torsten. 2012. How Large Are the Effects from Temporary Changes in Family Environment: Evidence from a Child-Evacuation Program during World War II. *American Economic Journal: Applied Economics*, 4(3): 28-42
- [48] Schwartz, Ann. 2002. Societal Value and the Funding of Kinship Care. *Social Service Review*, Vol. 76, No. 3, pp. 430-459
- [49] Sheran, Michelle and Christopher Swann. 2007. The take-up of cash assistance among private kinship care families. *Children and Youth Services Review*, 29(8): 973-987

- [50] Stepping up for kids: what government and communities should do to support kinship families. Policy report. The Annie E. Casey Foundation.
- [51] Winokur M, Holtan A, Valentine D. 2009. Kinship care for the safety, permanency, and well-being of children removed from the home for maltreatment. Cochrane Database of Systematic Reviews.
- [52] Zill, N. 2011. Adoption from foster care: Aiding children while saving public money. Washington, DC: Brookings Institution, Center on Children and Families.
- [53] Zinn, Andrew, Jan DeCoursey, Robert M. Goerge, Mark E. Courtney. 2006. A Study of Placement Stability in Illinois. Chapin Hall Working Paper

Table 1: Kinship Foster Care Placement Laws

State	Year of adoption	State	Year of adoption
Alabama	1999	Montana	2005
Alaska	1999	Nebraska	No
Arizona	2000	Nevada	No
Arkansas	Before 1998	New Hampshire	No
California	Before 1998	New Jersey	Before 1998
Colorado	Before 1998	New Mexico	No
Connecticut	No	New York	2005
Delaware	No	North Carolina	2005
Florida	No	North Dakota	No
Georgia	No	Ohio	No
Hawaii	2010	Oklahoma	No
Idaho	2010	Oregon	2007
Illinois	2006	Pennsylvania	2005
Indiana	2009	Rhode Island	No
Iowa	2009	South Carolina	Before 1998
Kansas	No	South Dakota	No
Kentucky	No	Tennessee	No
Louisiana	2005	Texas	2005
Maine	No	Utah	Before 1998
Maryland	No	Vermont	Before 1998
Massachusetts	No	Virginia	2006
Michigan	No	Washington	2003
Minnesota	2001	West Virginia	No
Mississippi	Before 1998	Wisconsin	No
Missouri	Before 1998	Wyoming	No

*Notes:* List is based on author's review of the state laws on kinship foster care placement.



Table 2: Summary Statistics, AFCARS Foster Care Files

	Mean	Std. Dev.	Obs
<i>Outcomes</i>			
Initially placed with a relative	0.259	0.438	2,224,996
Ever placed with a relative	0.307	0.461	2,224,996
Ever placed with a non-relative	0.482	0.500	2,224,996
Ever placed in institution	0.134	0.340	2,224,996
Ever placed in group home	0.096	0.294	2,224,996
Length of foster care episode, days	641	717	2,224,996
Stability of placement	0.424	0.494	2,224,996
Living with a relative	0.106	0.308	2,084,325
Reunification	0.546	0.498	2,084,325
Adoption	0.181	0.385	2,084,325
Guardianship	0.054	0.227	2,084,325
Reentry	0.109	0.312	1,786,334
Reentry due to caretaker's abuse	0.018	0.132	1,786,334
Any mental health problem	0.097	0.297	2,053,045
Any physical health problem	0.112	0.315	2,052,965
<i>Control variables</i>			
Physical abuse	0.170	0.376	2,224,996
Sexual abuse	0.056	0.231	2,224,996
Neglect	0.535	0.499	2,224,996
Alcohol abuse, parent	0.071	0.257	2,224,996
Drug abuse, parent	0.198	0.399	2,224,996
Alcohol abuse, child	0.012	0.108	2,224,996
Drug abuse, child	0.027	0.162	2,224,996
Disability, child	0.025	0.155	2,224,996
Behavior problem, child	0.163	0.369	2,224,996
Parent died	0.007	0.082	2,224,996
Parent in jail	0.063	0.243	2,224,996
Parent couldn't cope	0.181	0.385	2,224,996
Abandonment	0.054	0.225	2,224,996
Relinquishment	0.011	0.103	2,224,996
Housing	0.092	0.289	2,224,996
Hispanic	0.181	0.385	2,224,996
Black	0.287	0.452	2,224,996
Female	0.489	0.500	2,224,996
Age at removal	7.755	5.826	2,224,996
Exposed to law	0.440	0.496	2,224,996

Table 3: Impact of Kinship Placement Laws on Type of Placement Setting

	Initially placed with a relative (1)	Ever placed with a relative (2)	Ever placed with a non-relative (3)	Ever placed in institution (4)	Ever placed in group home (5)
A: Effects of law					
Exposed to law	0.032* (0.018)	0.035* (0.019)	-0.034 (0.025)	-0.021* (0.013)	0.003 (0.006)
B: Effects of future law					
Exposed to law	0.033* (0.018)	0.036* (0.019)	-0.036 (0.025)	-0.021* (0.013)	0.004 (0.006)
Law in two or three years	0.005 (0.004)	0.002 (0.003)	-0.006 (0.005)	0.003 (0.004)	0.001 (0.003)
Mean of dependent variable	0.259	0.301	0.482	0.134	0.096
Observations	2,224,996	2,224,996	2,224,996	2,224,996	2,224,996

*Notes:* The analysis uses AFCARS foster care data files. Each column within each panel reports the results of a separate model that also controls for child's age, race and gender; removal reason, birth parent's age and marital status, state and year fixed effects, and linear state-specific time trends. Panel A includes only a measure of whether child that entered foster care system this year or last year is exposed to law. Panel B also includes a control for whether state will adopt law in two or three years, to test for pretrends. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table 4: Impact of Kinship Placement Laws on Time Spent in Foster Care and Stability of Placement

	All observations			Conditional on observed end date		
	Length of foster care episode, days (1)	Stability of placement (2)	Stability of placement, adjusted for length of episode (3)	Length of foster care episode, days (4)	Stability of placement (5)	Stability of placement, adjusted for length of episode (6)
A: Effects of law						
Exposed to law	-54.874*** (13.914)	0.052*** (0.016)	0.041** (0.017)	-59.017*** (10.763)	0.059*** (0.016)	0.045** (0.018)
B: Effects of future law						
Exposed to law	-55.076*** (13.758)	0.051*** (0.016)	0.039** (0.017)	-59.007*** (10.477)	0.058*** (0.017)	0.043** (0.018)
Law in two or three years	-0.707 (4.862)	-0.004 (0.006)	-0.004 (0.006)	0.035 (5.236)	-0.004 (0.005)	-0.004 (0.005)
Mean of dependent variable	641	0.424	0.424	581	0.435	0.435
Observations	2,224,996	2,224,996	2,224,996	2,084,325	2,084,325	2,084,325

*Notes:* The analysis uses AFCARS foster care data files. Each column within each panel reports the results of a separate model that also controls for child's age, race and gender; removal reason, birth parent's age and marital status, state and year fixed effects, and linear state-specific time trends. In columns 1-3, all children that entered foster care during the time period 1998-2009 are included in the sample. In columns 4-5, children that are still in foster care, i.e. don't have a completed spell, are excluded. Panel A includes only a measure of whether child that entered foster care system this year or last year is exposed to law. Panel B also includes a control for whether state will adopt law in two or three years, to test for pretrends. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table 5: Impact of Kinship Placement Laws on Long-Run Case Outcomes

	Permanency outcomes				Re-entry	
	Discharged to live with a relative (1)	Reunification (2)	Adoption (3)	Guardianship (4)	Re-entry (5)	Re-entry due to abuse by caretaker (6)
A: Effects of law						
Exposed to law	0.012** (0.006)	0.014 (0.016)	-0.004 (0.007)	-0.002 (0.008)	-0.002 (0.005)	-0.002* (0.001)
B: Effects of future law						
Exposed to law	0.011** (0.006)	0.016 (0.016)	-0.005 (0.007)	-0.002 (0.008)	-0.002 (0.006)	-0.002* (0.001)
Law in two or three years	-0.001 (0.003)	0.006 (0.004)	-0.003 (0.002)	-0.000 (0.002)	-0.001 (0.003)	-0.000 (0.001)
Mean of dependent variable	0.106	0.546	0.181	0.054	0.109	0.018
Observations	2,084,325	2,084,325	2,084,325	2,084,325	1,786,334	1,786,334

*Notes:* The analysis uses AFCARS foster care data files. Each column within each panel reports the results of a separate model that also controls for child's age, race and gender; removal reason, birth parent's age and marital status, state and year fixed effects, and linear state-specific time trends. Panel A includes only a measure of whether child that entered foster care system this year or last year is exposed to law. Panel B also includes a control for whether state will adopt law in two or three years, to test for pretrends. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table 6: Impact of Kinship Placement Laws on Permanency Outcomes, by Child Characteristics

	Discharged to live with a relative (1)	Reunification (2)	Adoption (3)	Guardianship (4)	Discharged to live with a relative (5)	Reunification (6)	Adoption (7)	Guardianship (8)
Exposed to law *Health problem and/or behavior problem					0.017 (0.015)	-0.102* (0.058)	0.053** (0.021)	-0.012* (0.007)
Exposed to law*Older child	0.009 (0.016)	-0.063 (0.047)	0.033* (0.018)	-0.010 (0.007)				
Exposed to law	0.009 (0.008)	0.032 (0.019)	-0.013 (0.009)	0.001 (0.008)	0.008 (0.007)	0.039* (0.020)	-0.017* (0.009)	0.001 (0.008)
<i>Effect [p-value of effect] for:</i> Children with health problems and/or behavior problems					0.025** [0.040]	-0.063 [0.241]	0.036* [0.060]	-0.011 [0.160]
Older children	0.018 [0.129]	-0.031 [0.465]	0.02 [0.194]	-0.009 [0.274]				
Mean of dependent variable	0.106	0.546	0.181	0.054	0.106	0.546	0.181	0.054
Observations	2,084,325	2,084,325	2,084,325	2,084,325	2,084,325	2,084,325	2,084,325	2,084,325

*Notes:* The analysis uses AFCARS foster care data files. Each column reports the results of a separate model that also controls for child's age, race and gender; removal reason, birth parent's age and marital status, state and year fixed effects, and linear state-specific time trends. Sample includes all children that entered foster care system during the time period 1998-2009. Child is considered to have medical and/or behavior problems if he/she entered foster case because of drug abuse, alcohol abuse, disability, and/or behavior problem. The bottom panel of the table shows the effect for the subgroup of children. These coefficient estimates were calculated based on the coefficients reported in the upper panel. P-value reported in the brackets is associated with the null hypothesis that the effect is zero for the category. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table 7: The Effect of Kinship Placement Laws on Adoption by a Relative

	Dependent variable: foster child adopted by a relative				
	(1)	(2)	(3)	(4)	(5)
Law	0.074*** (0.020)	0.082*** (0.021)	0.062*** (0.017)	0.069*** (0.019)	0.068*** (0.020)
Medical condition		0.039*** (0.014)			
Law*Medical condition		-0.035** (0.014)			
Has siblings			0.032** (0.015)		
Law*Has siblings			0.031* (0.016)		
Older				0.021 (0.030)	
Law*Older				0.025 (0.033)	
No special need					0.009 (0.024)
Law*No special need					0.022 (0.017)
<i>Effect [p value of effect] for:</i>					
Children with medical conditions		0.047*** [0.007]			
Children who have siblings			0.093*** [0.001]		
Older children				0.094** [0.027]	
Children without special needs					0.090*** [0.000]
Mean of dependent variable	0.290	0.290	0.290	0.290	0.290
Observations	350,390	350,390	350,390	350,390	350,390

*Notes:* The analysis uses AFCARS adoption data files. Since adoption data files, do not provide information about year of foster care entry but do specify year of termination of parental rights (TPR), I set policy variable Law to be equal to one two years prior to TPR for states that implemented new policy and zero otherwise. The dependent variable in each regression is a dummy denoting adoption by a relative that equals 1 if child was adopted by a relative and zero otherwise. Each column within each panel reports the results of a separate model that also controls for child's age, race and gender; special need status, state and year fixed effects, and linear state-specific time trends. The bottom panel of the table shows the effect of relative placement laws on adoption by a relative for each type of special need status. These coefficient estimates were calculated based on the coefficients reported in the upper panel. P-value reported in the brackets is associated with the null hypothesis that the effect is zero for the category. Each child has only one special need which is determined by state. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table 8: The Effect of Kinship Placement Laws on Children’s Mental and Physical Health at the Last Period in Foster Care

	Any mental health problem (1)	Any physical health problem (2)	Any mental health problem (3)	Any physical health problem (4)
A: Effects of law				
Exposed to law	-0.008 (0.011)	0.002 (0.014)	-0.002 (0.010)	0.005 (0.014)
B: Effects of future law				
Exposed to law	-0.009 (0.011)	0.000 (0.014)	-0.003 (0.011)	0.004 (0.015)
Law in two or three years	-0.003 (0.003)	-0.005 (0.005)	-0.002 (0.003)	-0.005 (0.005)
Mean of dependent variable	0.098	0.112	0.098	0.112
Observations	2,053,045	2,052,965	2,053,045	2,052,965

*Notes:* The analysis uses AFCARS foster care data files. Dependent variable Any mental health problem (Any physical health problem) equals 1 if child had problems with the mental (physical) health during the last year in foster care and 0 otherwise. Sample is restricted to children that spend at least two years in foster care. Each column within each panel reports the results of a separate model that also controls for child’s age, race and gender; removal reason, birth parent’s age and marital status, child’s mental and physical health problems in the first period, state and year fixed effects, and linear state-specific time trends. Models in the last two columns also control for length of foster care episode. Panel A includes only a measure of whether child that entered foster care system this year or last year is exposed to law. Panel B also includes a control for whether state will adopt law in two or three years, to test for pretrends. Robust standard errors, clustered at the state level, are reported in parenthesis. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table 9: Implied Effect of Kinship Placement on Foster Care Outcomes

	Length of foster care episode, days (1)	Stability of placement (2)	Discharged to live with a relative (3)	Reunification (4)	Adoption (5)	Guardianship (6)
			A: OLS			
Ever placed with a relative	42.343 (46.779)	-0.033 (0.035)	0.149*** (0.044)	-0.163*** (0.018)	-0.051* (0.026)	0.103*** (0.015)
			B: 2SLS			
Ever placed with a relative	407.108 (1,393.509)	0.964 (0.716)	0.347** (0.148)	-0.937 (0.673)	0.431 (0.293)	0.132 (0.140)
			B: First stage			
Exposed to law	0.035* (0.019)	0.035* (0.019)	0.031 (0.020)	0.031 (0.020)	0.031 (0.020)	0.031 (0.020)
Mean of dependent variable	641	0.424	0.106	0.546	0.181	0.054
Observations	2,224,996	2,224,996	2,084,325	2,084,325	2,084,325	2,084,325

*Notes:* The analysis uses AFCARS foster care data files. Each column within each panel reports the results of a separate model that also controls for child's age, race and gender; removal reason, birth parent's age and marital status, state and year fixed effects, and linear state-specific time trends. In panel B, variable Ever placed with a relative is instrumented with Exposed to law variable. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.



## A. Appendix

Table A1: Effect of Kinship Placement Laws on Number and Composition of Cases

Dependent variable	Coefficient	Mean of dependent variable	Obs
Panel A: Number of cases			
# of children entered foster care	238.164 (210.836)	4214	528
Panel B: Composition of children			
<i>Removal reason child-related</i>			
Alcohol abuse	-0.002* (0.001)	0.012	2,224,996
Drug abuse	0.001 (0.003)	0.027	2,224,996
Disability	-0.001 (0.002)	0.025	2,224,996
Behavior problem	-0.004 (0.009)	0.163	2,224,996
<i>Removal reason parent-related</i>			
Physical abuse	-0.023** (0.010)	0.17	2,224,996
Sexual abuse	-0.004 (0.004)	0.056	2,224,996
Neglect	0.031 (0.039)	0.535	2,224,996
Alcohol abuse	-0.026 (0.016)	0.071	2,224,996
Drug abuse	-0.009 (0.024)	0.198	2,224,996
Parent died	-0.000 (0.001)	0.007	2,224,996
Parent in jail	0.001 (0.004)	0.063	2,224,996
No cope	-0.024 (0.018)	0.181	2,224,996
Abandonment	-0.026 (0.020)	0.054	2,224,996
Relinquishment	0.001 (0.001)	0.011	2,224,996
Housing	-0.022 (0.016)	0.092	2,224,996

Table continues on next page

Table A1: The Effect of Kinship Placement Laws on Number and Composition of Cases  
(Continued)

Dependent variable	Coefficient	Mean of dependent variable	Obs
Panel C: Composition of foster parents			
Receives subsidy	0.024 (0.042)	0.539	2,179,320
Receives subsidy, kin placement	-0.033 (0.030)	0.403	571,880
Receives subsidy, all other placements	0.044 (0.053)	0.587	1607440
Receives TANF, kin placement	-0.003 (0.020)	0.108	572,002
Subsidy amount	199.344 (140.986)	824	2,179,320
Subsidy amount, kin placement	44.967 (70.804)	286	571,880
Subsidy amount, all other placements	267.524 (165.525)	1016	1,607,440
Older foster parent	0.007 (0.005)	0.125	1,403,192
Older foster parent, kin placement	0.010 (0.007)	0.142	442,605
Older foster parent, all other placements	0.004 (0.007)	0.117	960,587

*Notes:* The analysis uses AFCARS foster care data files. Each coefficient is from the separate regression. Dependent variable Foster care payment equals 1 if caregiver receives financial assistance. TANF is a dummy variable indicating whether foster parent receives financial assistance through TANF program. Model in panel A, with the number of children entered foster care as a dependent variable, controls for state and year fixed effects, and state-specific linear time trends. Specifications in panel B, with one of the removal reason as a dependent variable, control for child's age, race and gender; birth parents age and marital status, state and year fixed effects, and linear state-specific time trends. Specifications in panel C, additionally to controls in panel B, also include dummies for removal reason. Variable Older foster parent is equal to one if foster caregiver is over age 60 and zero otherwise. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table A2: Test for Policy Impact on Spell Completion

	By 2011, has missing data on end date, entered before 2010 (1)	By 2011, has missing data on end date, entered before 2009 (2)
Exposed to law	-0.001 (0.007)	-0.003 (0.007)
Mean of dependent variable	0.197	0.063
Observations	2,224,996	2,224,996

*Notes:* The analysis uses AFCARS foster care data files. Each column reports the results of a separate model that also controls for child's age, race and gender; removal reason, birth parent's age and marital status, state and year fixed effects, and linear state-specific time trends. Sample includes all children that entered foster care system during the time period 1998-2009. Robust standard errors, clustered at the state level, are reported in parentheses. \*, \*\* and \*\*\* denote significance at the 10 percent, 5 percent and 1 percent levels, respectively.

Table A3: Attributes of Relatives and Unrelated Foster Caretakers,  
AFCARS Foster Care Files

	Relative		Non-relative	
	Mean [SD]	Obs	Mean [SD]	Obs
Age $\leq$ 30	0.12 [0.32]	577,628	0.09 [0.28]	969,549
Age $>$ 30 & $\leq$ 45	0.33 [0.47]	577,628	0.44 [0.50]	969,549
Age $>$ 45 & $\leq$ 60	0.43 [0.49]	577,628	0.37 [0.48]	969,549
Age 60+	0.13 [0.33]	577,628	0.11 [0.31]	969,549
Receives subsidy	0.45 [0.50]	576,338	0.71 [0.46]	962,079
Married couple	0.45 [0.50]	577,628	0.60 [0.49]	969,549
Unmarried couple	0.05 [0.23]	577,628	0.04 [0.19]	969,549
Single female	0.39 [0.49]	577,628	0.25 [0.43]	969,549
Single male	0.05 [0.22]	577,628	0.02 [0.13]	969,549
Unable to determine	0.05 [0.22]	577,628	0.09 [0.29]	969,549