Downward Spiral: The Impact of Foster Care Placements on Paternal Public Dependency

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——— **Preliminary version - do not quote or share** ———

Abstract

This study analyzes the effect of having a child placed in foster care on fathers' welfare dependency. Recent research suggests that the stigma of having a child placed in foster care has a negative impact on fathers' sense of identity, but so far no research has analyzed whether this negative psychological impact also affects fathers' labor supply. Using population data from Denmark that include all fathers who had a firstborn child placed in foster care in the period 1981-2005, this study suggests that the stigma of having a child placed in foster care is associated with a nontrivial increase in fathers' dependency on welfare benefits. This result persists in fixed effect and selection models that control for unobserved characteristics of fathers leading them to having both a high risk of having a child placed in foster care and a high risk of being on welfare benefits.

Keywords: family, fatherhood, foster care, welfare dependency

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The impact of fatherhood on men's lives has received increasing attention over the last two decades (e.g., Knoester & Eggebeen, 2006; Marsiglio, Amato, Day, & Lamb, 2000). Arrival and timely departure of children affect labor supply, criminal activities, and other forms of social behavior. Fatherhood changes time constrains and social identity (Farrington & West, 1995; Kaufman & Uhlenberg, 2000; Knoester, Petts, & Eggebeen, 2007; Warr, 1998). Untimely departure of children may also impact paternal social identity. Both British, Australian, and American studies find that men who have their child or children placed in care experience feelings of grief and loss of social identity and rights (Ainsworth & Hansen, 2011; Buchbinder & Bareqet-Moshe, 2011; Schofield et al., 2011). Hence, children seem to help maintain fathers' social inclusion. The untimely departure of a child due to foster care placement might place this inclusion at odds. Morover, it is predominately children from disadvantaged backgrounds that experience foster care placement (**?**) Studies of the effect of child removal on fathers' social exclusion can therefore offer new insights in how children affect lives of social disadvantaged men. Moreover, having your child placed in foster care placements are a sign of parental failure – society exclude the individual from the parenting role. If such exclusion spills over into other parts of social life, fathers might face a process of cumulative disadvantages (Merton, 1968, 1988) leading to further adverse life outcomes.

Social context and family-status condition the impact of fatherhood on men's behaviors (Knoester & Eggebeen, 2006). Men from disadvantaged or delinquent backgrounds have received special attention in the literature (Knoester et al., 2007; Sampson, Laub, & Wimer, 2006). Having a child increases socially encouraged activities amongst disadvantaged men , especially when they live with the child. The rise of non-traditional families and the change to formation and maintenance of the father-role caused by the rise (Seltzer, 2000) might affect how the presence (or,

lack of presence) of children changes men's lives. The behavior of single fathers and cohabiting fathers (neither of whom normally live with their children) are of particular interest. Although these men are biological fathers, their potential low level of daily interaction with their children mean that fatherhood might have a different impact on their social behavior than amongst fathers in traditional nuclear families (Nock, 1998).

The main purposes of this study is (a) to consider how changes in the experienced father-role caused by child removal impact social exclusion; and (b) examine how different family forms condition this impact. Comparing single fathers to fathers living with the child prior to placement allow me to address how change of father-role without changes in time-constrains (because single fathers almost never live with their child) affect welfare dependency. Fixed effect models and a natural experiment caused by a policy change allows me to address the selection-bias in whose children enter into care. I use welfare dependency defined as passive public dependency (PPD) as an indicator for social exclusion. Young men (fathers) are expected to spend a reasonable amount of time on a daily basis either at work or engaged in educational activities (disregarding periods of temporary sick leave and paternal leave). Work and educational activities are gainful activity - hence, lack of both is a sign of (potential) exclusion from mainstream society due to lack of contribution. At the same time, work and education expose individuals to peers engaged in similar activities, thereby further guarding against exclusion.

The arrival of a child is the defining event of fatherhood. Yet, childbirth might not be the opportune time to examine the impact of fatherhood on men. Fatherhood is not a randomized event and researchers seldom observe the actual decision to become a father, which can lie a long time prior to conception. To-be fathers appear to increase their labor supply prior to childbirth (Waite, Haggstrom, & Kanouse,

1985) indicating that not only the physical presence of a child but also the expectation of fatherhood affect behavior. Moreover, although fatherhood is a more or less permanent state, the first years of parenting might not reflect the general effect of fatherhood. The needs of an infant or toddler, as well as the shock-effect of the role-change (St John, Cameron, & McVeigh, 2005), might distinguish men's preliminary father-role from the general father-role during the child's upbringing. That is, father's update their information and social role until finding some form of stable role later in the child's life. Studying foster care placements offers a way of examining the effect of departure from a more stable father-role instead of looking at the effect of initiation into a not fully formed father-role.

For this study I use data on foster care drawn from Danish administrative registers that allow me to include all first time fathers whose children spent time in foster care. In order to compare the sample of fathers who experience placement to a baseline I draw a random control group of first-time fathers whose children did not spent time in care. Because data is obtained from administrative registers there is no measurement error and only sources of attrition is death and emigration. The data allow me to examine how placements impact PPD using a differences-in-differences approach that compares fathers experiencing placement to themselves prior to placement happened, as well as comparing them against baseline fathers who do not experience child placement. To counter the endogeneity problems in the data (i.e., child-removal does not happen at random) I utilize the data's longitudinal format and address the problem of time-invariant individual characteristics (fixed effects) that could affect both placement-risk and PPD. I also use a natural experiment caused by a policy change that happened during the sample-period to address the time-variant selection issue. The reform changed obligations for teachers and other youth workers to report suspected child maltreatment, thereby increasing the likelihood of having one's child

taken into care. The detailed administrative data include monthly information on PPD and child-placement as well as information on father's relationship status and educational background.

This analysis contributes to the emerging literature on the impact of placements on parental behavior, as well as introducing new insights on the social inclusive workings of fatherhood. First, whereas a large body of work analyzed the effect of foster care experiences on children's life outcome (Berger & Waldfogel, 2004; Doyle, 2007; Heath, Colton, & Aldgate, 1989; Kerman, Wildfire, & Barth, 2002; Mech & Fung, 1999; Paxson & Waldfogel, 2003; Vinnerljung, Oeman, & Gunnarson, 2005; Warburton, Warburton, Sweetman, & Hertzman, 2011), only a few studies examined the impact on fathers (Ainsworth & Hansen, 2011; Buchbinder & Bareqet-Moshe, 2011; Schofield et al., 2011). These papers found negative psychological consequences of placements for parents, but do not address selection issues. Nevertheless these studies provide indications that child-removal has adverse effects for fathers. This study provides quantifiable evidence of these effects. Second, the impact of fatherhood on men's behavior have received increasing attention the last two decades. But the lack of random assignment of fatherhood means conclusion drawn from empirical studies may be biased. Moreover, most studies focus on new fathers, but there is potential shock- or honeymoon-effect of new fatherhood (St John et al., 2005) that not necessarily persist as the child grows older, which could mean problem with generalization of results. By instead studying untimely departure of children I limit my study to men who actually become fathers, and the longitudinal data format with multiple observation for each subject evens out potential shock effects. Foster care placements have high social and economic costs. It is one of the most intrusive sanction-possibilities the state holds over its citizens. The negative psychological consequences fathers experience when their child enters foster care might lead to accumulation of addi-

tional disadvantages in other areas of social life. Knowledge of whether fathers enter a downward social trajectory, and to what extent, can help outline the the full social and economic consequences and costs of foster care placements.

Theoretical framework

In this study I take my point of departure from the idea of the political economy of the life course set forth by Dewilde (2003). Dewilde integrated the family-centric traditional life-course approach where changes arise from interaction between situational circumstances and social structure with an institutional approach that more formally dealt with individuals' embeddedness and positions in the welfare state when considering social exclusion and poverty. It follows that social exclusion is not the result of deviance from a normal or proper life-course. Instead focus is on how social institutions stratify life-courses. Merging the predominately European notion of social exclusion with the resembling notion of cumulative disadvantage (O'Rand, 1995) the approach both encompassed a comparative element examining stratification of the life-course and a longitudinal dimension focusing on differentiations over the life course. The theory considers social exclusion not merely as an individual abnormality, but instead as a structural conditioned situation that it is possible to transition into and out of. Or to put it in other words, events or turning points (Abbott, 1997; Sampson & Laub, 1996) can serve to intensify or end a process of cumulative disadvantage.

I focus only on one dimension where exclusion can take place: what Burchardt, Le Grand, and Piachaud (1999) name the production dimension–that is, the contribution to society through gainful activities such as either family care, education or labor market participation, with the first not being relevant for this study. Earlier American, Australian, and British studies have shown that fathers to out-of-home placed

children experience feelings identity loss and loss of rights (Ainsworth & Hansen, 2011; Buchbinder & Bareqet-Moshe, 2011; Schofield et al., 2011). By focusing on the production dimension of exclusion, I examine whether disadvantages accumulate across dimensions when placement occurs. It is known that drop in level of labor market participation leads to income drop due to loss of wage income. Hence, father transitions from an active contributing state to a passive dependent state. Therefore, lack of contribution through either work or educational activities (the latter viewed as investment in future productivity) link directly with exclusion from the production dimension.

Foster care placement, social position, and family-forms

Foster care placements has an inherent social imbalance. It is a measure predominantly but not only experienced by families with low socioeconomic status (SES) with parental public dependency and criminal activity being some of the most well known risk factors (Ejrnæs, Ejrnæs, & Frederiksen, 2010). There is little doubt that an out of home placement in itself constitutes a form of social exclusion on the family-level. It is a break with normal activities within any family-formation; be it nuclear, cohabiting, or single-parent household. It is a very direct form of loss of social and legal right to parenthood. Although a large array of possible stigmatizing fatherhood-failures exist, none carries more stigma than having one's child placed outside home. It is an official indication that the foster care system are better carers for the child than the parents are able to be. There is potentially other figures in a child's life that functions as a father (in the social sense) more than the biological father. This holds for example if mother and father are divorced and the child has little to no contact with the biological father. Yet, for analytical simplicity I limit my main theoretical and empirical scope to the biological father.

Life-course stratification. While the child is at home, only a potential divorce- or family court ruling (in case of divorce) might mediate father's access to the child. When placement occurs, social services and foster institutions also affect the possibility for father to interact with his child access. Dewilde (2003) and Laub and Sampson (2003) argued that type and severity of impact of an event to the life-course may differ dependent on social position, agency, and institutional factors. Following this work I focus on two dimensions of social position and institutional factors when studying the impact of placement on PPD : (a) relationship-status; (b) educational position. The latter dimension explains father's ability to navigate and understand the foster care system, as well as how the system perceives and interacts with the father. Educational difference is an important social class component and also translates into differences in views and interpretation of the social world (Bourdieu, 1987). Individuals with higher educational positions have the vocabulary that enables them to better negotiate with social services about their child's placement, as well as a more proactive stance on handling their child's problems, while lower educational positions to a higher extent expect institutional intervention (Vincent, 2001). Identical problems or situations warranting attention from social services are understood and handled in different ways across educational position because of differences in interpretation. We should expect that causes for placement (and therefore also impact of placement) differ across educational position.

Father's relationship-status can ideal-typically be horizontally stratified into three positions: living with child's biological mother, cohabiting with other partner, and single. Especially from the criminology we know that steady relationships are a protective factor when it comes to social inclusive behavior (Laub & Sampson, 2003; Sampson & Laub, 1997). Hence, I expect relationships to mitigate some of the impact of child placement on social exclusion because other social roles remain active

(such as partner/husband, provider, etc.). If this hypothesis holds single fathers who did not live together with their children prior to placement should react to the placement by increasing welfare dependency more than fathers in relationships. Hence, children do not only act as increased time constrains (i.e., social control). The identity of fatherhood also has in itself a social inclusive element that hinges on father's consciousness of his social position viewable through availability of the child in father's social sphere. On the one hand, the impact to this consciousness due to experiencing placement may be lessened if other social roles that demand social inclusive behavior remains available (e.g., one seeks to uphold the nuclear family in time of adversity). On the other hand, the mitigating aspect of relationship might be stronger for cohabiting fathers because a placement could be a direct assault on the notion of "the nuclear family" consisting of children and biological parents; that is, not only one but two social roles will be challenged by a placement in this case.

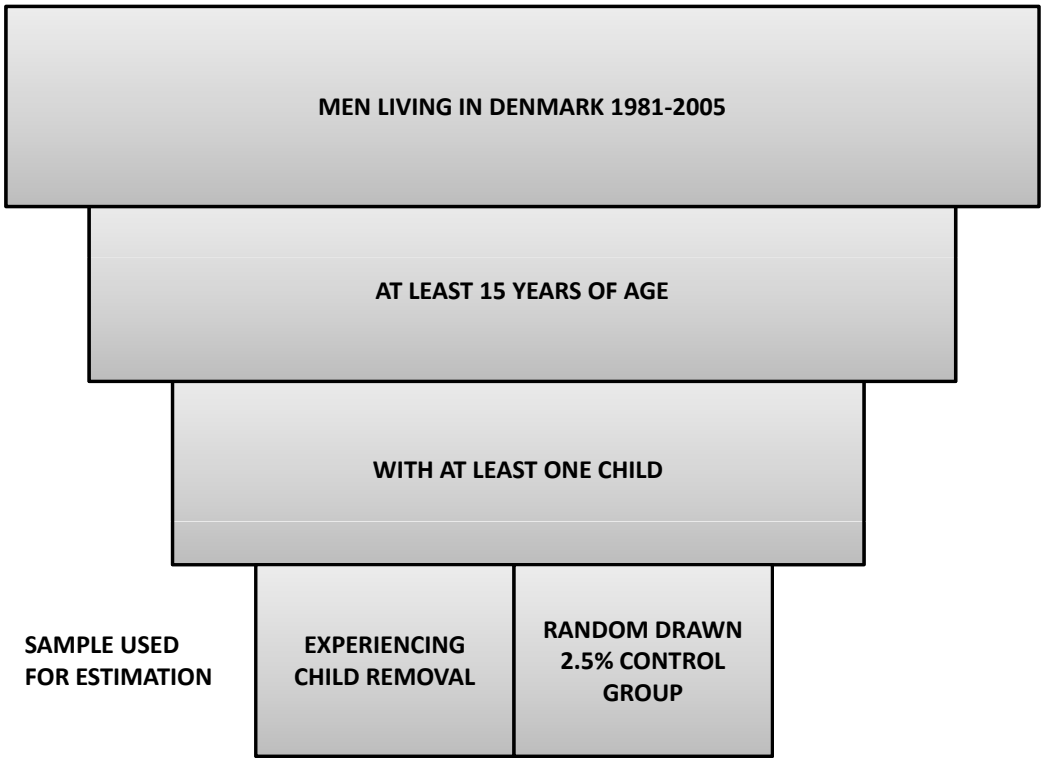
Foster care placement serves as the event that changes the state of fatherhood to the state of social not-fatherhood, thereby also unintentionally changing social behavior through role-disintegration. I expect (a) that fathers decrease labor market activities and educational activities; (b) that single fathers to respond more than fathers in cohabiting relationships; and (c) that fathers living in nuclear families respond differently than cohabiting fathers, though whether the dominant mechanism is the social control mechanism or the blow to the nuclear family mechanism is unclear.

Method

Data

I use Danish register data in this study. I locate all firstborn children who had contact with the social services during upbring and whose fathers were at least 15 years of age (the Danish age of legality at that period) and under the age of pension (67 years

Figure 1. Diagram of Sample Construction



old) for all or some of the period between January 1st, 1981 and December 31st, 2005. I then follow the fathers until they either leave the sample due to death or migration, the child obtain age of adulthood (age 18), or become right censored due the data cut off point at December 31st, 2005. I also sample a random draw of first time fathers without contact to the social services as a control group. Figure 1 illustrates the data construction. I obtain monthly data on relationship status, age, parenthood, foster care measures for the firstborn child born and public dependency degree for the fathers. The latter is defined as the percentage of a month a father receive any form of welfare benefit – that is, any form of public payment that does not imply an active position on the labor market. Hence, unemployment benefits are not viewed as a welfare benefit, because individuals have to be actively job-seeking in order to qualify for unemployment benefits. I obtain annual information on education. I also exclude

fathers in periods where they serve prison-terms, because they at that period not are present to interact with the child, and also not physically available for the labor market. The sample includes 110,594 fathers, of which 43,803 have their child placed in foster care at some point. Because I use register data, death and emigration are the only sources of attrition. 2.9 percent of the fathers in the sample either die or migrate during the sampling-period. Table 1 shows sample statistics and the differences on observables between the part of the sample experiencing placement and the Danish same-age male population. Fathers whose children was put in foster care have lower educational level, moves into fatherhood earlier, has higher unemployment, and are less likely to live with the biological mother. Their PPD is also higher.

Analytical framework

It is not random whose child enters foster care, yet as researchers we do not necessarily observe all relevant information that affects such a decision. At the same time, if unobserved characteristics that affect risk of having one's child placed in care also affects labor supply (e.g. a tendency to use illegal substances) we might misjudge the actual relationship between child placements and welfare dependency because of omitted variable bias. If the omitted variable is a constant trait for the individual, such as violent tendencies that do not change over time, fixed-effect models can address the bias issue. Yet, if individual unobserved traits that vary over time also affect both labor supply and placement risk (such as undertaking or quitting a substance abuse) also are present, then there still remain omitted variable bias. To address this time-varying bias I use a natural experiment affecting placement-risk but not affecting labor supply to model the omitted latent variable using a control function approach. This is all done in a differences-in-differences (DID) setup. I observe fathers repeatedly because of the longitudinal format of the data. The sample

Table 1
Summary Statistics

	No Placement	Placement
Variable	Mean (Std. Dev.)	Mean (Std. Dev.)
PPD	4.546	12.248
	(20.151)	(31.776)
Placement		0.250
		(0.433)
Place*Cohab.		0.128
		(0.334)
Place*With bio.		0.060
		(0.237)
Place*Single		0.062
		(0.241)
Education		
Some Primary	0.126	0.182
	(0.332)	(0.386)
Primary	0.133	0.225
	(0.340)	(0.418)
Primary+	0.087	0.132
	(0.282)	(0.339)
High School	0.042	0.029
	(0.201)	(0.167)
Vocationel	0.417	0.353
	(0.493)	(0.478)
Short Tertiary	0.047	0.026
	(0.211)	(0.159)
College	0.087	0.035
	(0.281)	(0.183)
Master's or more	0.061	0.018
	(0.240)	(0.134)
Single	0.079	0.230
	(0.270)	(0.421)
Cohabiting	0.278	0.416
	(0.448)	(0.493)
With bio.	0.643	0.354
	(0.479)	(0.478)
Age	37.612	36.187
	(6.962)	(7.163)
Child's age	8.336	9.294
	(5.143)	(5.027)
Year	1995.068	1993.892
	(5.984)	(5.717)
N	7,544,035	5,784,031

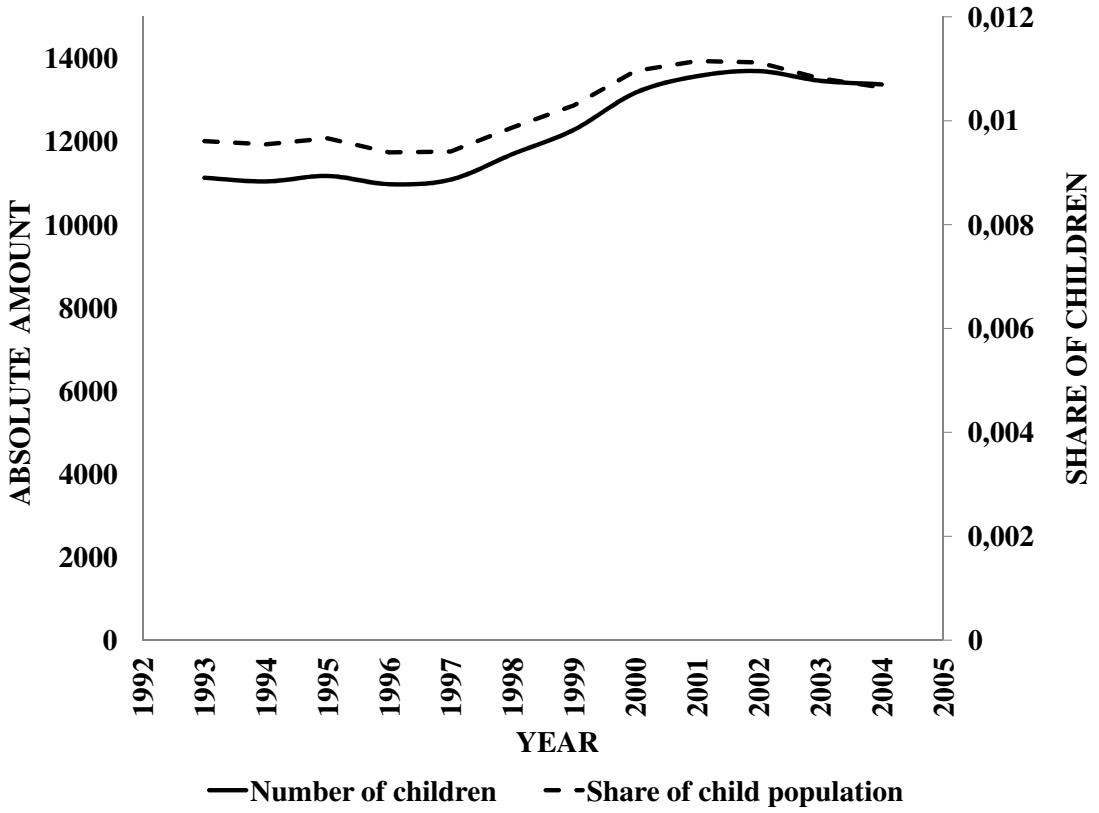
consists of two subgroups: (a) fathers who experience child-placement at some point (i.e., the treatment group); (b) fathers who never experience child-placement (i.e., the control group). DID allows me to address both the difference within individuals who experience placement (i.e., time before and after placement compared to time during placement), as well a taking general time trends into account by comparing individuals who experience treatment with those who do not. Hence, the DID framework expresses the before and after within subject differences between treated subjects and control subjects. Usually, the time-dimension in DID is historical time. Yet, in this analysis historical time only works as censoring points for the sample (and to take business-cycle effects into account), whereas the age of the child (i.e., biographical time) is the time-component that the fathers move along. That is, I expect experiences and differences along the time-dimension of the child's age to be of most importance. Because children's move from kindergarten to school and to youth clubs as they get older affects both time constrains in the home (e.g., whether the child needs to be picked up at a certain time) and there by labor market behavior, as well as the risk for experiencing foster care placement (because the risk of maltreatment or child misbehavior being observed and reported might vary from kindergarten to school to youth club) I judge this to be the main time-dimension in the study, especially when addressing selection into placement. This also allows me use to use the policy change in 1998 as an instrument for placement-risk without facing problems of autocorrelation with time-variables. Hence, I specify the the model according to this:

$$\begin{aligned} PPD_{it} =& \mathbf{X}_{it}\boldsymbol{\beta} + \sum_{ag} I_{ag}(ag_{it})\gamma_{ag} + \sum_{ca} I_{ca}(ca_{it})\gamma_{ca} \\ &+ \gamma_y y_t + \sum_{m} I_m \gamma_m + \delta P_{it} + \alpha_i + \epsilon_{it} \end{aligned} \tag{1}$$

where PPD_{it} is passive public dependency expressed as share of month for individual i at child age t, $\mathbf{X}_{it}$ is a matrix of socioeconomic covariates, $I_{ag}(ag_{it})$ is a set of age-dummies for father, $I_{ca}(ca_{it})$ is the biographical time-dimension expressed as a set of age dummies for the child, y_t is historical year as a linear term, I_m is month dummies, P_{it} is an indicator equal to one if the child is placed in foster care that month, α_i is the individual unobserved constant term, and ϵ_{it} is the idiosyncratic error term. An individual level fixed effect model will estimate the effect of removal on PPD consistently if father's time-changing unobserved characteristics do not affect placement-risk and PPD. yet, this assumption might not be completely realistic. For example will the beginning or end of an illegal substance abuse quite possibly affect both PPD and child-placement risk, but this is unobserved in the data. Hence, there is possibly a selection-mechanism into and out of child-placement that is not random. I address this problem using a Heckman two-step selection approach that models the latent selection-mechanism with a control function Heckman (1979). I also use the extension suggested by Semykina and Wooldridge (2010). Such an approach needs an observed mechanism that exclusively affects placement without affecting labor supply. I use a natural experiment created by a policy change in 1997 as such an exclusion restriction. Below I describe the policy change in detail.

§124 of Law concerning Social Services. The Danish social services was subject to a reform in 1997 (enacted in 1998). Paragraph 154 of the law constitutes a natural experiment in regard to experiencing foster care placements. The paragraph underlined the responsibility for teachers, child workers, and others in contact with children to report to the authorities on suspicion of child maltreatment. The increased focus on responsibility corresponds with a rise in both number and share of children experiencing an out-of-home placement (see Figure 2). Thus, it appears plausible that the policy change is a natural experiment affecting the probability of having

Figure 2. The Impact of 1998 Reform on Placement Probability for all Children



your child placed in foster care. By isolating the variation in placement-risk caused solely by the reform, and using this exogenous shock to model time-varying selection on whose child enters into care, I address the problem of time-varying omitted variable bias.

§124 affected teachers and other youth workers, but did not provide incentives for fathers to change behavior. Hence, it is realistic to assume that all fathers in the sample on average are identical on unobserved characteristics before and after the policy change. Therefore, the reform is an experiment changing the risk of having a child placed in foster care. I use the Heckman sample selection procedure to formally deal with the the time-varying selection issue. That is, I run the following first stage

probit for each separate time-period in the data (ie., each month of age for the child):

$$\Pr\left(P_{it}=1|Z_{it}\right)=\Phi\left(\theta Z_{it}\right) \tag{2}$$

where Z_{it} includes constant term, year as a linear term, X_{it}, age and month dummies, a dummy for whether the reform had been implemented, and the average of the reform-dummy for each individual following the approach suggested by Semykina and Wooldridge (2010). Then, I estimate the following second stage regression model:

$$\begin{aligned} PPD_{it} =& \mathbf{X}_{it}\boldsymbol{\beta}+\sum_{ag} I_{ag}(ag_{it})\gamma_{ag}+\sum_{ca} I_{ca}(ca_{it})\gamma_{ca} \\ &+\gamma_y y_t+\sum_{m} I_m\gamma_m+\delta P_{it}+\lambda_1\left(Z_{it}\right)P_{it}\gamma_{P1} \\ &+\lambda_2\left(Z_{it}\right)\left(1-P_{it}\right)\right)\gamma_{P2}+\alpha_i+\epsilon_{it} \end{aligned} \tag{3}$$

where

$$\lambda_1\left(Z_{it}\right)=\frac{\phi\left(\theta Z_{it}\right)}{\Phi\left(\theta Z_{it}\right)},\ \lambda_2\left(Z_{it}\right)=\frac{\phi\left(\theta Z_{it}\right)}{1-\Phi\left(\theta Z_{it}\right)}$$

are control functions that use the exogenous variation caused by the reform to model the time-varying selection into child placement. Then δ is the average effect of child placement on PPD for fathers who experience placement. A bootstrap procedure provides robust standard errors.

Results

In this study I examine the impact of child placement on fathers' welfare dependency. I use a DID approach to address bias caused by individual constant traits and use a selection model to address time-varying unobserved bias. I also allow the impact of placement on welfare dependency to variate across father's family-status. Table 2 shows results from OLS and Fixed Effect estimations of the impact of out of

Table 2
OLS and Fixed Effect regressions on PPD

	OLS 1	OLS 2	OLS 3	FE 1	FE 2	FE 3
Placement	6.480***	6.152***		2.766***	1.330***	
	(0.02)	(0.02)		(0.02)	(0.02)	
Place*Cohab.			4.636***			1.178***
			(0.03)			(0.03)
Place*With bio.			7.305***			1.046***
			(0.05)			(0.04)
Place*Single			8.126***			1.988***
			(0.05)			(0.05)
Primary	−0.880***	−1.414***	−1.407***	−0.737***	−1.124***	−1.120***
	(0.02)	(0.03)	(0.03)	(0.17)	(0.17)	(0.17)
Primary+	−1.918***	−2.628***	−2.631***	−3.172***	−3.595***	−3.594***
	(0.03)	(0.03)	(0.03)	(0.18)	(0.17)	(0.17)
High School	−3.617***	−4.464***	−4.449***	−2.884***	−3.983***	−3.986***
	(0.04)	(0.04)	(0.04)	(0.18)	(0.18)	(0.18)
Vocational	−6.792***	−7.252***	−7.245***	−5.243***	−6.604***	−6.606***
	(0.02)	(0.02)	(0.02)	(0.14)	(0.14)	(0.14)
Short tertiary	−6.873***	−7.772***	−7.761***	−8.204***	−10.897***	−10.895***
	(0.04)	(0.04)	(0.04)	(0.17)	(0.17)	(0.17)
College	−8.377***	−9.214***	−9.198***	−17.243***	−19.981***	−19.979***
	(0.03)	(0.03)	(0.03)	(0.17)	(0.17)	(0.17)
Master's or more	−8.847***	−9.942***	−9.930***	−15.657***	−18.884***	−18.881***
	(0.04)	(0.04)	(0.04)	(0.20)	(0.20)	(0.20)
Cohab .	−4.856***	−4.566***	−3.921***	0.708***	−0.338***	−0.211***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)	(0.03)
With bio.	−7.668***	−7.537***	−7.206***	−1.933***	−0.987***	−0.873***
	(0.02)	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
Age 20-29		−2.150***	−2.171***		−3.719***	−3.757***
		(0.13)	(0.13)		(0.11)	(0.11)
Age 30-39		−3.348***	−3.383***		−4.349***	−4.391***
		(0.13)	(0.13)		(0.11)	(0.11)
Age 40-49		−2.709***	−2.764***		−3.969***	−4.008***
		(0.13)	(0.13)		(0.12)	(0.12)
Age 50-59		0.619***	0.527***		−1.217***	−1.253***
		(0.13)	(0.13)		(0.13)	(0.13)
Age 60-66		9.159***	9.020***		9.901***	9.864***
		(0.18)	(0.18)		(0.19)	(0.19)

N = 13,328,066. Standard errors in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.
Child age dummies, monthly dummies, and year term not shown.

home placement on PPD. The impact is highest for single fathers, followed by fathers living with their child's biological mothers, and then cohabiting fathers. Placement raises PPD significantly. When individual level fixed effects are taken into account the impact are lower and the estimate for fathers living with the biological mother are lower than cohabiting fathers. The higher education groups all have the lower PPD. Both cohabiting fathers and fathers living with biological mothers have lower PPD than single fathers.

Table 3 reports the estimates for placement when selection is taken into account. Due to computational considerations I only use a 20 percent random draw of fathers from the sample. The selection parameters are not shown, but are significant for all models. Standard errors are bootstrapped. The effect of placement in the selection models are higher in absolute terms than in the ordinary fixed effects but lower than the OLS. Cohabiting fathers increase PPD marginally less than single fathers. Fathers living with biological mother have the highest increase when selection is addressed. The impact of placement on PPD for both single fathers and cohabiting fathers are almost the same, with an increase of roughly 4.6 percentage points in welfare benefit dependency. Fathers living with the biological mother increase dependency with5.9 percentage points. Due to differences in selection the average impact of placement is lower than the effect of placement conditioned on relationship-status.

Fathers increase overall passive public dependency when placement happens, thereby experiencing an increase in exclusion from the productive dimension. The results suggest that the fixed effect models underestimates the impact of placement. This is quite possibly due to the fact that fathers who experience placement already have high PPD, because PPD is bounded at 100 percentage and they, therefore, has less room to react. This leads to underestimation of the impact of placement. About 5,000 children enters into foster care placement each year (Andersen et al., 2010).

Table 3
Selection corrected estimates

	PPD 1	PPD 2
Placement	3.788***	
	(1.62)	
Place*Cohab		4.540**
		(1.74)
Place*With bio.		5.889**
		(1.55)
Place*Single		4.609**
		(0.61)
Primary	0.994	0.983
	(2.38)	(2.62)
Primary+	−1.544	−1.565
	(2.74)	(2.48)
High School	−0.657	−0.669
	(2.88)	(2.59)
Vocationel	−6.014**	−6.012**
	(2.02)	(2.07)
Short Tertiary	−11.665***	−11.661***
	(2.17))	(2.25)
College	−20.331***	−20.329***
	(2.21)	(2.64)
Master's or more	−17.980***	−17.973***
	(2.56)	(2.820)
Cohabiting	−0.227	−0.226
	(0.37)	(0.30)
With bio.	−0.632	−0.693
	(0.38)	(0.48)
Age 20-29	−5.693***	−5.683***
	(1.40)	(1.27)
Age 30-39	−6.552***	−6.538***
	(1.45)	(1.26)
Age 40-49	−6.133***	−6.118***
	(1.39)	(1.27)
Age 50-59	−3.515*	−3.495*
	(1.42)	(1.48)
Age 60-66	5.140	5.139
	(3.31)	(3.47)

N = 2,650,663 * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$
Bootstrapped standard errors in parentheses. Child age dummies, monthly dummies, and year term not shown.

About 85 percent of them have fathers living in Denmark. The average duration of a placement is approximately 26 months. Welfare benefits for men with children are somewhere between $1,400 and $2,000 a month. Hence, the increased public spending on welfare benefits due to cumulative disadvantage caused by foster care placement for fathers alone will roughly be between $7,735,000 and $11,050,000. This translates into the cost of approximately 460 additional people on highest welfare benefit rate for a year. Hence, besides the income drop fathers experience from entering welfare benefit scheme, which is set substantially lower than even rather low paid jobs, society both looses tax revenues from gainful activities while at the same time increasing welfare payments substantially.

The results also show that impact of placement is non-trivial and positive even for single fathers even though they do the very seldom experience a loss of time-constrains due to placement (they almost never live with their children prior to placement). This fits the cumulative disadvantage hypothesis, stating that having your child placed in foster care leads to identity-loss or exclusion from one area of social life that then spills over into other areas creating further adverse life circumstances. The fact that fathers who are in a cohabiting relationship react less than fathers living with the biological mother implies that the social control function performed by the nuclear family identity construct lessens when foster care placement occurs.

Discussion

Child removal is one of the most severe sanctioning-possibilities present in modern society. In this study I have examined a hitherto underexposed aspect of foster care placements: the consequences for fathers' welfare dependency when their child is placed outside home. Earlier qualitative studies have described how parents, who

have a child placed in foster care, experience negative psychological consequences. Using population level longitudinal data drawn from official registers I have shown that foster care placements significantly increase welfare dependency amongst fathers, even when controlling for both constant and time-variant unobserved traits that could affect both placement risk and welfare dependency. Also, I have found that foster care placements when controlling for selection have highest impact on welfare dependency for fathers living with the biological mother. The effect for fathers who either are single or cohabiting is also non-trivial. This unintended consequence of foster care placement leads to non-trivial secondary costs for society, due to loss of tax revenue and increased expenditure on welfare benefits.

The results in this study support the conclusions drawn from recent qualitative research on the experiences of identity-loss amongst fathers to children in foster care. The negative experiences caused by having one's child placed in care leads to disadvantages in other parts of social life beyond the family. Gainful activities such as educational attainment and work keep individuals self-sufficient and connected to other members of mainstream society. When the impact to family and social life caused by a foster care placement spills over into labor market status, it seems evident that a process of cumulative disadvantages takes place – fathers appear to move further down a negative social spiral. It is recognized that children do best when they live in good and stable home environments. This is also by far the cheapest solution for society as a whole. There is therefore obvious incentives for the social services and policy makers to help fathers to foster children get back on their feet, so the children can be reunited with their biological parents. For this reason as well, it is unfortunate that foster care placements impact fathers in the quite opposite direction.

Limitations

In this study I have considered issues concerning selection into foster care by addressing selection bias caused by individual-specific constant traits as well as time-varying traits. Yet, some fathers might instigate out of home placements on own initiative. If for example they cannot control their own child, or the child suffers from a mental or physical condition or illness that demands time-consuming and specialized care, fathers might ask social services to take the child into care. If such situations are not constant over time, selection issues will remain in the presented results. Nevertheless, in the above mentioned cases bias would probably only occur for fathers living with their child (i.e., almost never for single fathers) and bias should impact of placement on welfare dependency towards zero, because a placement would release father from time-demands in the home and therefore increase his labor supply.

Another issue is that of reversed causality. That is, father might enter the child into care if welfare dependency rises. Danish welfare payments are in an international perspective rather generous ($1,400 to over $2,000 a month for social assistance, depending on provider-position, age, and number of children), and it is mostly unheard of that parents enter children into care due to poverty-issues. Hence, reversed causality will only be an serious issue if we observe that fathers increase welfare benefit take-up because of an underlying prior to placement, and this underlying condition also leads to placement (this would be a version of the Ashenfelter's dip (Ashenfelter, 1978)). Again, if we consider the results for single fathers for whom such an underlying condition almost never would lead to placement, this does not seem to be a serious issue. Nevertheless, for especially fathers living with biological mother this issue would definitely be worth addressing in future work that could extend insights from the present study.

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