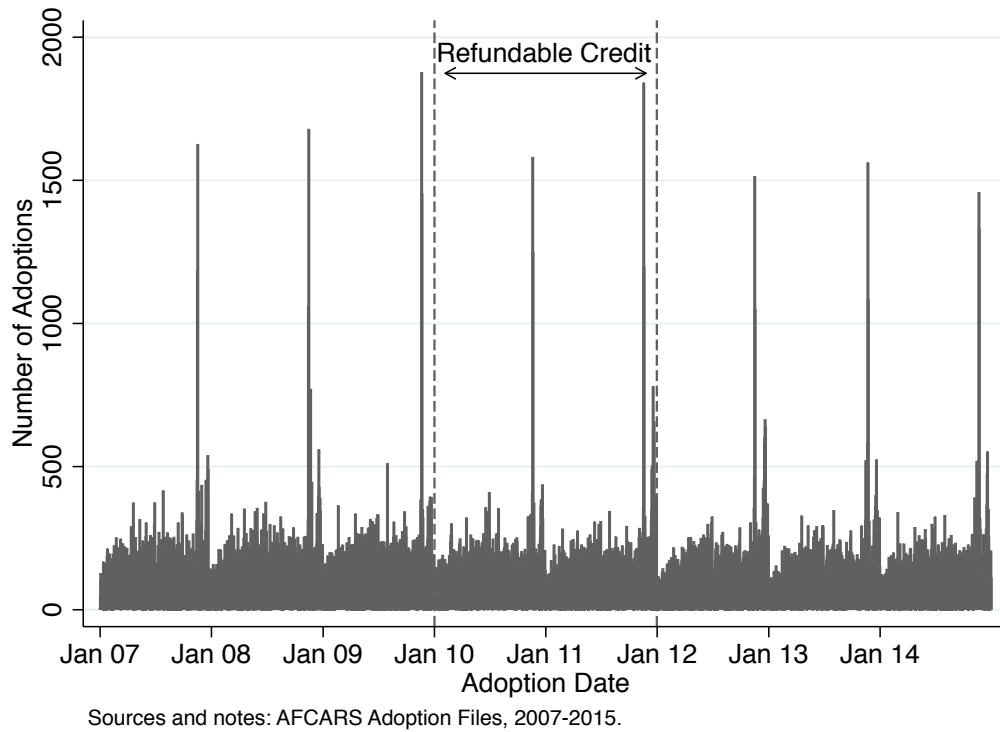
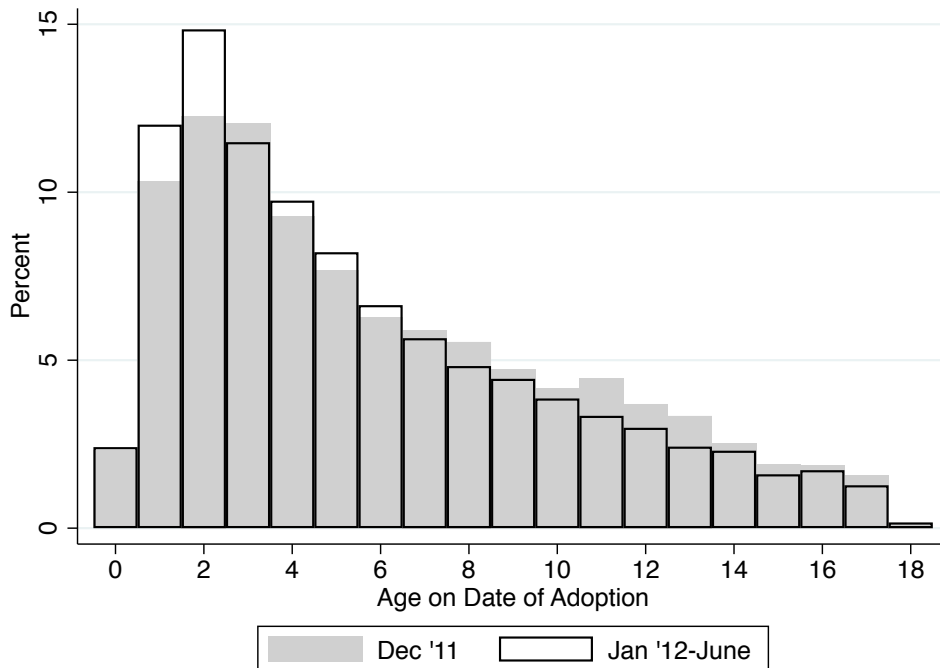


**Appendix A**

**Figure A1. Number of adoptions by finalization day, 2007–2014**



**Figure A2. Age distribution of adoptions in December 2011 and January–June 2012**



**Table A1. Dynamic shifting specification and sample checks**

	Day-of-week x Fiscal year indicators	Calendar year indicators	Controlling for real max. credit amount	Excluding Dec. 2012 and Jan. 2013
Refundable				
Dec-11	78.2** (33.6)	70.3** (27.4)	78.2 (53.4)	83.0** (35.5)
Non-refundable				
Jan-12	-27.8 (24.3)	-5.0 (27.8)	-25.4 (16.2)	-33.5 (28.5)
Feb-12	-23.5 (23.7)	-4.4 (26.3)	-20.8 (14.5)	-28.2 (27.8)
Mar-12	-17.7 (23.8)	-11.9 (24.1)	-15.5 (13.8)	-21.5 (27.6)
Apr-12	-5.5 (22.5)	-2.8 (23.8)	-2.54 (13.5)	-9.0 (27.4)
May-12	-11.9 (23.4)	-12.8 (24.3)	-8.53 (14.6)	-15.4 (28.0)
Jun-12	-4.5 (24.0)	-10.4 (23.9)	-2.28 (14.1)	-9.3 (27.9)
Increase in Dec. 2011	2,426** (1,041)	2,178** (849)	2,423 (1,654)	2,572** (1,100)
Cumulative change from Dec. 2011	-310 (4,815)	740 (4,225)	167 (2,347)	-949 (5,700)

Notes: \*\*\* p< 0.01, \*\* p<0.05, \* p<0.10. Data are from AFCARS 2002-2015 Adoption files. Sample excludes step-parent adoptions. Results are from OLS regressions; all specifications include day of year, day of week, and fiscal year fixed effects. The specification in the third column also includes a control for the maximum adoption tax credit amount inflated to 2015 USD. Sample is daily adoptions covering November through July, fiscal years 2002 through 2015. Total adoptions is calculated as the sum of the coefficients multiplied by the number of days in the month. The cumulative change from December 2011 is calculated as the coefficient in December 2011 times 31, plus the cumulative estimated decrease in adoptions in the included months of 2012. Standard errors are clustered at the day-of-year level and shown in parentheses.

**Table A2. Ages of adopted children while the credit was refundable**

Window	1 mo.	2 mos.	3 mos.	4 mos.	5 mos.	6 mos.
Age 0-3	-0.032** (0.015)	-0.037*** (0.014)	-0.034*** (0.012)	-0.033*** (0.011)	-0.035*** (0.010)	-0.034*** (0.010)
Age 4-8	0.003 (0.015)	0.008 (0.010)	0.002 (0.009)	-0.00005 (0.009)	-0.001 (0.008)	0.0002 (0.008)
Age 9-13	0.042*** (0.013)	0.026** (0.010)	0.027*** (0.008)	0.027*** (0.007)	0.029*** (0.007)	0.027*** (0.006)
Age 14-17	-0.013 (0.009)	0.004 (0.006)	0.005 (0.005)	0.007 (0.004)	0.006 (0.004)	0.006 (0.004)
Observations	94,508	132,265	180,733	232,874	287,938	350,530

Notes: \*\*\* p< 0.01, \*\* p<0.05, \* p<0.10. Data are from AFCARS 2002-2015 Adoption files. Results are the estimates from OLS regressions using as the dependent variable an indicator for the age of the adopted child falling in the noted age bin. All specifications include day of year, day of week, fiscal year, and state fixed effects. Sample includes adoptions within the relevant window from December 2002 through June 2015. Sample excludes step-parent adoptions. Window refers to the number of months into 2012. For example, the six-month window includes adoptions through June of each year. Standard errors are clustered at the day-of-year level and shown in parentheses.

## Appendix B

This section presents heterogeneity analyses by state special needs definitions. Special needs designation contains information on the size of the marginal benefit from adopting under a refundable credit. State definitions reflect characteristics that present barriers to adoption without providing financial assistance to adoptive families. In general, definitions include physical, medical, or emotional needs, and may list additional conditions. Table B1 provides bunching estimates around the introduction of the refundable credit where the sample is split by adoptions occurring in states that do and do not include additional considerations for special needs. States are divided based on minimum age cutoffs; whether or not states consider membership of an ethnic/racial minority, and whether or not states consider risk of *future* physical, mental, or emotional difficulties.<sup>1</sup> Estimates use equation (1) with a quartic time trend. The results in Table B2 provide bunching estimates around the expiration of the refundable credit.

Overall, I do not find evidence of stronger responses in states with additional considerations. Rather, I find the opposite. The one exception is the larger percent decrease in December 2009 adoptions in states that consider membership in a racial/ethnic minority (17 percent decrease) compared to states that do not (9 percent decrease). There are several explanations for the lack of stronger effects where the definitions appear more expansive. First, it is likely special needs definitions are endogenous. This is because special needs definitions reflect barriers to adoption in that state, and thus will vary, depending on risk factors for foster care placement and adoption as well as the characteristics and demographics of state populations. Second, and perhaps more important, the definitions do not outline state practices in applying

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<sup>1</sup> Categories were created based off state profile pages provided by NACAC: <https://www.nacac.org/help/adoption-assistance/adoption-assistance-us/state-programs/>. Though not all states specify an age cutoff, the minimum age for special needs designation ranges from 1 to 12 and the median minimum age is 6.

definitions; practices likely differ across states with similar considerations and conditions listed in definitions are not always meaningful. For example, Buckles (2013) notes that in some states there are high special needs designation rates among children below specified minimum age cutoffs. Finally, it is possible definitions that do not include explicit additional considerations for special needs designation provide *more* flexibility for special needs designation.

**Table B1. Bunching estimates around the refundable credit introduction: heterogeneity by state special needs definitions**

Special needs definition	Minimum age		Membership of racial/ethnic minority		Future risk		
	All	Below-median	Above-median	Does consider	Does not consider	Does consider	Does not consider
Nov-09	349 (1,717)	150 (779)	137 (746)	214 (1,444)	135 (343)	317 (1,071)	32 (683)
Dec-09	-918** (445)	-432* (255)	-448** (188)	-775** (354)	-143 (133)	-451 (277)	-466** (224)
Jan-10	614 (417)	320 (214)	252 (185)	540 (338)	74 (104)	380 (248)	234 (190)
Feb-10	456 (371)	316 (223)	139 (161)	408 (315)	48 (86)	264 (227)	192 (166)
Mar-10	686** (344)	361** (175)	295* (171)	583** (285)	102 (88)	415** (210)	271* (163)
Apr-10	292 (317)	191 (205)	133 (156)	338 (264)	-46 (83)	239 (194)	53 (158)
May-10	241 (364)	72 (190)	154 (165)	224 (290)	17 (99)	282 (232)	-42 (167)
Jun-10	497 (387)	166 (189)	349 (220)	547 (350)	-50 (85)	313 (238)	183 (182)
Actual number of adoptions in Dec. 2009	5,099	2,856	1,794	3,720	1,379	3,090	2,009
Percent decrease in Dec. 2009	-15%	-13%	-20%	-17%	-9%	-13%	-19%

Notes: \*\*\* p< 0.01, \*\* p<0.05, \* p<0.10. Data are from AFCARS 2002-2015 Adoption files. Sample excludes step-parent adoptions. Sample is daily adoptions covering July 2002 to September 2015. Each column provides results from a separate estimating procedure. Dependent variable is the number of adoptions by day. The estimates come from fitting daily number of adoptions on a day-of-week indicators, calendar month and year indicators, an indicator for National Adoption Day, and a quartic polynomial in time, excluding data from the indicated bunching region, and then using the parameter estimates to estimate adoptions that would have occurred within the bunching region. Bootstrapped standard errors in parentheses. Each column aggregates adoption counts within states based on special needs definition as described in column titles.

**Table B2. Bunching estimates around the refundable credit expiration: heterogeneity by state special needs definitions**

Special needs definition	Minimum age		Membership of racial/ethnic		Future risk		
	All	Below-median	Above-median	Does consider	Does not consider	Does consider	Does not consider
Nov-11	381 (1,520)	147 (716)	194 (644)	319 (1,286)	62 (265)	179 (817)	201 (725)
Dec-11	2,508*** (873)	1,082*** (426)	1,317*** (444)	1,748*** (625)	760*** (272)	1,409*** (532)	1,099*** (383)
Jan-12	-537 (522)	-344 (252)	-140 (248)	-371 (420)	-166 (124)	-319 (328)	-218 (215)
Feb-12	-450 (441)	-245 (223)	-183 (210)	-365 (358)	-85 (109)	-300 (279)	-150 (184)
Mar-12	-457 (446)	-84 (224)	-344 (217)	-503 (376)	46 (96)	-191 (281)	-266 (193)
Apr-12	-119 (401)	-48 (208)	-48 (203)	-200 (332)	82 (103)	-227 (258)	108 (191)
May-12	-393 (431)	-223 (220)	-126 (210)	-416 (356)	22 (105)	-344 (260)	-50 (196)
Jun-12	-280 (422)	-57 (211)	-147 (229)	-156 (348)	-125 (101)	-39 (265)	-242 (205)
Actual number of adoptions in Dec. 2011	7,845	3,943	3,653	5,713	2,132	4,524	3,321
Percent increase in Dec. 2011	47%	37%	56%	44%	55%	45%	49%

Notes: \*\*\* p< 0.01, \*\* p<0.05, \* p<0.10. Data are from AFCARS 2002-2015 Adoption files. Sample excludes step-parent adoptions. Sample is daily adoptions covering July 2002 to September 2015. Each column provides results from a separate estimating procedure. Dependent variable is the number of adoptions by day. The estimates come from fitting daily number of adoptions on a day-of-week indicators, calendar month and year indicators, an indicator for National Adoption Day, and a quartic polynomial in time, excluding data from the indicated bunching region, and then using the parameter estimates to estimate adoptions that would have occurred within the bunching region. Bootstrapped standard errors in parentheses. Each column aggregates adoption counts within states based on special needs definition as described in column titles.