

# The Claiming of Children on U.S. Tax Returns, 2017-2019<sup>\*</sup>

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## **Abstract**

Tax benefits linked to children form a central component of the social safety net in the United States and are at the heart of current policy proposals to expand benefits to households with children. To better understand the extent to which families with children already engage with the tax system, we study the claiming of children on tax returns in recent years. Focusing primarily on children whose presence in the U.S. can be verified through the receipt of health insurance information returns, we estimate that a significant majority (93-95%) of U.S. children are claimed on a tax return. Unclaimed children are concentrated in lower income households and tend to live in communities of color.

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# 1 Introduction

Providing financial assistance to low-income households with young children has important and well-documented benefits to both recipient children and to society. In the United States, a large and growing share of such assistance is provided through the income tax. Consequently, the societal gains from adopting such policies can only be realized if the children who qualify to receive these transfers are claimed on tax returns.

In practice, tax filing appears to operate as a significant barrier to participating in tax-administered safety net programs. For example, approximately one-in-five households that qualify for the Earned Income Tax Credit (EITC) fail to claim it, and of that group, approximately two-thirds do not file a tax return (Jones, 2014). Conversely, take-up of the EITC is quite high among those who do file a return, over 90% (Census, 2013). Similarly, President Biden's proposed expansion of the Child Tax Credit (CTC) has been lauded for its potential to dramatically reduce childhood poverty; but in order for those children currently living in poverty to benefit, a corresponding adult (usually a parent or other caregiver) must file a tax return claiming the child for purposes of the credit.

To better understand the degree to which tax-administered programs like the EITC and CTC are reaching children, we study the claiming of U.S.-resident children on tax returns in recent years. Specifically, the empirical quantity we aim to estimate is the share of children residing in the U.S. that are claimed on a U.S. tax return. Not all children qualify for every tax-administered program, so one cannot automatically conclude that an unclaimed child is missing out on an available benefit. At the same time, claiming a child on a tax return is a necessary condition for taking up child-linked tax benefits. And because the vast majority of taxpayers or their preparers use semi-automated software to file their tax returns, a taxpayer who claims a child on a return is likely to claim the full range of benefits for which the child qualifies (Goldin, 2018). For these reasons there is a close connection between a child being claimed on a tax return and the child benefiting from the tax-administered programs for which they qualify.

Determining the share of U.S.-resident children claimed on a tax return is difficult because there does not exist an authoritative data set of children residing in the U.S. and the universe

of individuals connected to the U.S. tax system is not limited to U.S. residents. To surmount these challenges, we first use health insurance information returns to identify a sub-population of children that consists (almost) entirely of U.S. residents. We then link this group to tax filing records to measure the share of U.S. children appearing on a health insurance information return that are claimed on a tax return. Finally, we consider various approaches to extrapolate the child claim rate for this sub-population to the overall population of children in the U.S. We use this methodology to estimate the share of children that go unclaimed, by age and by state, and we explore patterns in claim rates by various demographic characteristics. As a robustness check, we also compare our results to the child claim rate obtained by scaling the total number of children claimed on U.S. tax returns by the total number of children residing in the U.S.

We find that a significant majority of children living in the U.S. were claimed on tax returns during 2017-2019. Depending on the year, we estimate a child claim rate ranging from 93% to 95%. Our findings thus suggest that most children are likely to participate in the tax-administered benefits for which they qualify. At the same time, the fact that the child claim rate is below 100% suggests incomplete take-up is likely to remain a concern under a universal or near-universal child allowance, such as the expanded CTC that President Biden has proposed. In addition, we document heterogeneity in the child claim rate by geography and demographic characteristics. We estimate lower claim rates for children growing up in lower-income households as well as among children living in communities of color. We also estimate a lower child claim rate (91-92%) for children with health insurance coverage through Medicaid or the Children's Health Insurance Program (CHIP) compared to children with other forms of insurance (95-98%).

Much of the heterogeneity in child claiming that we document may be attributable to variation in rates of eligibility for child benefits by income and race during our sample period. More recently, however, Congress has enacted a range of child tax benefits with broad eligibility rules, for which nearly all U.S. children qualify.<sup>1</sup> Our findings suggest that children living in low-income households and in communities of color are at risk of missing out on such benefits, absent increases in the child claim rate for such groups.

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<sup>1</sup>We describe these programs in Section 2, below.

The remainder of the paper is organized as follows. Section 2 provides background information on child benefits available through the tax code during our sample period. Section 3 describes our data and estimation strategy. Section 4 presents our results. Section 5 concludes.

## 2 Institutional Background

This section briefly reviews a range of child-linked tax provisions to provide context for interpreting the child claim rate that we estimate below.

For illustration, we describe the rules underlying the the Child Tax Credit (CTC) in some detail before turning to other provisions. The CTC provides a partially refundable tax credit to most taxpayers claiming children. The design of the CTC has fluctuated in recent years; during our sample period the maximum credit amount was \$1,000 per child during 2017 and \$2,000 per child during 2018 and 2019. The credit phases out for high-income taxpayers, at a rate of \$5 for every \$100 of additional income above the phase-out threshold. The phase-out threshold (i.e., the income level at which the credit begins to phase out) has also varied over time: from \$55,000 (\$110,000 for joint filers) in 2017 to \$200,000 (\$400,000 for joint filers) in 2018 and 2019. Finally, in all three years during our sample period, the refundability of the CTC was phased in by earned income.<sup>2</sup> As a result of this design, individuals without earnings (or with very low earnings) had little incentive to claim their children for purposes of the credit (Collyer, Harris and Wimer, 2020).

There are a number of limitations on which children can be claimed for purposes of the CTC. First, the child must be younger than 17 on the last day of the year. Second, the child must not provide more than half of his or her own support. Third, beginning in 2018, the child must have a Social Security Number authorizing him or her for work. Fourth, the child must not file a joint return with his or her spouse.

There are additional limits on which taxpayers may claim which children for purposes of the CTC. In particular, the taxpayer must generally live with the child for more than half of the year and must be related to the child through one of a specified set of relationships (e.g.,

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<sup>2</sup>Specifically, refundability of the CTC was limited to 15% of the excess of a taxpayer's earned income above a minimum earnings threshold (\$3,000 in 2017 and \$2,500 in 2018 and 2019).

the child's parent, grandparent, sibling, aunt, or uncle). Furthermore, if two or more taxpayers qualify to claim a given child during a single year, a series of tie-breaker tests determine which taxpayer's claim will prevail.

Apart from the CTC, there are a number of other child-related tax benefits. Perhaps the most important of these is the Earned Income Tax Credit (EITC) – a refundable credit for low- and middle-income taxpayers with income from work. The EITC provides a larger credit the more children one claims, up to a maximum of three children per return. Individuals with children but without income from work do not benefit from the EITC; hence, like the CTC, the EITC does not provide individuals without earned income with an incentive to claim their children.

The rules that determine which children a taxpayer may claim for the EITC are similar to those that govern the CTC, but there are several important differences. First, the EITC is available for children up the age of 19, or 24, if the child is a full-time student, or any age, if the child is permanently and totally disabled. Second, a taxpayer may claim a child for the EITC even if the child provides more than half of her own support. A third difference is that unlike the CTC's residency requirement, the EITC's residency requirement cannot be waived by a custodial parent to allow a non-custodial parent to claim a child. Fourth, taxpayers without a social security number authorizing work in the United States cannot claim a child for the EITC, even if the child does have a qualifying SSN. In contrast, taxpayers without an SSN may claim a child for purposes of the CTC.

There are a number of additional child-linked tax provisions beyond the two described so far. A third is the Child and Dependent Care Tax Credit (CDCTC), which, during our sample period, provided a non-refundable credit of up to \$3,000 in child-care expenses per child for up to two children.<sup>3</sup> It is generally available only for children below the age of 13. Fourth, the Head of Household Filing Status (HHFS) provides a larger standard deduction and lower marginal tax brackets for unmarried taxpayers who claim a dependent. Fifth, the American Opportunity Tax Credit (AOTC), as well as various other provisions, provide tax credits or other tax savings to those who pay for a dependent's college expenses. Sixth, the Premium Tax Credit (PTC) is a refundable tax credit that subsidizes the cost of purchasing

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<sup>3</sup>Like the CTC, the American Rescue Plan made the CDCTC refundable for the 2021 tax year and temporarily increased its generosity to \$4000 per child for that year.

health insurance, including coverage that taxpayers obtain for their dependents. Seventh, the dependent exemption provided a deduction for each dependent claimed on one's return, though it has been suspended for tax years 2018 – 2025. In those years, dependents who would have qualified for the dependent exemption but who do not qualify for the CTC can be claimed for a smaller, non-refundable credit of \$500 per dependent. Finally, a number of other tax provisions are linked to the claiming of children, such as the deduction for unreimbursed medical expenses, which allows taxpayers to deduct medical expenses incurred on behalf of their dependents.

The eligibility requirements for children to qualify for these benefits vary across provisions. The requirements to claim a child for the CDCTC most closely resemble those of the EITC and CTC, whereas many of the other provisions impose looser requirements, for example allowing taxpayers to claim biologically unrelated children that qualify as their dependents. One notable difference – that will be significant for purposes of our analysis – in the child eligibility rules across provisions is that although most of these benefits are limited to children residing in the United States during the tax year, the dependent exemption (for 2017) and the \$500 credit for other dependents (for 2018 and 2019) may be claimed for children living in other countries (any country if the child is a U.S. citizen, and Canada or Mexico if the child is a non-citizen).

Finally, in recent years (and following the conclusion of our sample period), Congress has enacted a range of child-linked tax benefits with broad eligibility rules, for which the vast majority of U.S.-resident children qualify. For example, during 2020 and 2021, the IRS and Treasury Department disbursed three rounds of Economic Impact Payments (EIPs) to taxpayers and their dependents. These payments provided \$500, \$600, and \$1,400 per dependent, respectively. In addition, The American Rescue Plan Act, enacted in March of 2021, expanded the CTC for the 2021 tax year. Under this expansion, the CTC was made fully refundable and the maximum CTC benefit amount increased to \$3,600 per child under the age of 6 and \$3,000 per child between the ages of 6 of 18.<sup>4</sup>

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<sup>4</sup>Even under these expansions, not all U.S.-resident children qualify for a tax benefit, including children without a Social Security number and children being raised by someone other than a close relative. For details, see Goldin and Michelmore (2020).

### 3 Methodology and Data

Our main parameter of interest is the child claim rate for the United States. The child claim rate for year  $t$ ,  $CCR_t$  is defined as the share of children residing in the U.S. during year  $t$  that are reported on at least one U.S. tax return filed for year  $t$ :

$$CCR_t = \frac{\text{children claimed on a year } t \text{ tax return AND residing in US in year } t}{\text{children residing in US in year } t}$$

A child may be claimed by a taxpayer for purposes of a single tax provision or for multiple tax provisions; we classify a child as claimed in a year if she appears on one or more returns that are filed for that year.<sup>5</sup> We estimate the child claim rate for a range of groups, such as age, health insurance coverage type, or based on various geographic regions, such as individual states or counties.

We primarily focus our analysis on 2018, the most recent year following the Tax Cuts and Jobs Act for which our data is nearly complete, although we repeat our analyses for tax years 2017 and 2019 as well. As described in the prior section, these three years span a range of substantive rules relating to child tax provisions. We focus on children who are aged 0-16 at the conclusion of a year, which corresponds to the age cutoff for the CTC during our sample period.

A natural approach to measuring the child claim rate would be to compare counts of children that appear on tax returns with Census-based estimates of the U.S. population. However, some of the children claimed on tax returns may not actually live in the U.S. In particular, if some taxpayers claim children living outside of the U.S., the child claim rate derived from this approach would be biased upwards.<sup>6</sup> Indeed, Cilke (2014) and Larrimore, Mortenson and Splinter (2021) provide evidence that for some ages, the number of children claimed on returns exceeds the number of children physically present in the U.S., suggesting this issue is likely to

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<sup>5</sup>Note that the child claim rate differs from a take-up rate that one might estimate for a particular tax provision. The latter is defined as the share of individuals who claim a benefit among the population of individuals eligible to do so. In contrast, the child claim rate is not defined in relation to eligibility for any particular benefit.

<sup>6</sup>Children living outside of the U.S. may be claimed on a U.S. resident's tax return either in violation of the rules or because the provision did not require the child to be physically present in the U.S. or living with the taxpayer during the year. Provisions in the latter category include the dependent exemption in 2017 and the credit for other dependents in 2018 and 2019.

be important in practice.<sup>7</sup>

To avoid this concern, we restrict our focus to a specific subpopulation of U.S. children – those who appear in Social Security or IRS population records and who appear on a health insurance information return (Form 1095 A/B/C). These forms are provided to the IRS by private and public insurers, self-insured employers, and health insurance marketplaces, and report whether an individual was enrolled in health insurance coverage during each month of a calendar year. One Form 1095 is provided for each health insurance policy and lists each individual who was enrolled in one or more months of coverage through the policy during a given year (including children). In general, Form 1095's are only issued for U.S. residents.<sup>8</sup> For this reason, restricting our focus to children who received a Form 1095 allows us to be reasonably sure we have identified a group that spent at least some portion of the year in the U.S. At the same time, a downside of our approach is that, depending on the year, approximately 7-13% of children in the U.S. did not have health insurance information reported to the IRS by the date of our analysis and as a consequence, do not appear in our data. Thus, the parameter directly estimated by our empirical approach is the child claim rate for the insured population,  $CCR_t^I$ , defined as:

$$CCR_t^I = \frac{\text{children claimed on a year } t \text{ tax return AND reported on a Form 1095 for year } t}{\text{children reported on a Form 1095 for year } t}$$

To shed light on the degree to which our sample captures the population of U.S. children, Appendix Table 1 compares the number of children listed on a Form 1095 to Census-based estimates of the number of children present in the U.S. This exercise suggests that approximately 93% of children are included in our data in 2017, but the share declines to 92% in 2018 and 87% in 2019. This decline does not appear to be primarily driven by changes in the rate of childhood insurance – which has remained fairly stable over these years (CDC, 2021) – but

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<sup>7</sup>An alternative approach would be to match a representative sample of US-resident children to tax data, following an approach similar to that employed by the Census to estimate EITC take-up (see Plueger (2009); Jones (2014). However, such methods may be poorly suited for estimating the child claim rate to the extent unclaimed children that are present in the population data set cannot be reliably identified or matched across households.

<sup>8</sup>In rare cases, non-residents may receive a Form 1095, typically if they receive Medicare or, less frequently, if they work for a U.S. employer. In addition, some children appeared on a Form 1095 without an ITIN or SSN; in such cases we identified the child by matching based on name, date of birth, and tax unit, following Lurie and Pearce (2021). Children appearing on a Form 1095 who could not be identified using this methodology were excluded from our main sample.



rather by incomplete reporting of health insurance coverage information for recent years.<sup>9</sup> In the next section we consider extensions of our approach to recover the child claim rate for the full U.S. population.

To estimate the child claim rate, we link several sources of administrative data housed by the IRS. In particular, each Form 1095 contains a taxpayer identification number, or in cases where a taxpayer identification number is not available, a name and birth date for the covered individual. We use this information to match children to tax returns on which they are claimed and to social security records to obtain the child’s age during the year.<sup>10</sup> For additional details about these forms and a similar matching process, we refer readers to Lurie and Pearce (2021).

To measure the numerator of the child claim rate, we treat a child as claimed on a return if the child is listed as a dependent on the return, which occurs when the child is claimed for any of the tax provisions described in the previous section. Although a child may be claimed for a given benefit on only one return in a given year, in some cases the same child may be claimed for different benefits on different returns for the same year. In our data, approximately 3.6% of all children claimed within a given year appear on multiple tax returns.<sup>11</sup> In such cases we treat the child as claimed on a single return only, randomly assigning the child to one return from the set of returns on which the child appears in that year.<sup>12</sup>

## 4 Results

This section presents our estimated child claim rates. We first provide national estimates. We next explore heterogeneity in the child claim rate by geographic and demographic characteris-

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<sup>9</sup>In particular, the issue is that the reporting is incomplete as of the date of our analysis.

<sup>10</sup>For purposes of this analysis, we observe returns that have been uploaded to the IRS database as of April 14, 2021. Our sample includes approximately 119,000 children claimed for tax year 2019 through the nonfiler portal that IRS made available after the close of the filing season for tax year 2019. For context, there were approximately 7.1 million total returns filed through the nonfiler portal for that year.

<sup>11</sup>This figure includes children claimed as dependents by two or more taxpayers as well as children who file a dependent return.

<sup>12</sup>One potential limitation of the tax return data we observe is it reflects only the initially filed return, rather than adjustments from amended returns or post-audit. Another limitation of our data is that for the approximately 8% of returns that are not electronically filed each year, we observe only the first four dependents claimed on the return. To address this issue, we assessed a random 0.1% sample of tax year 2015 returns, for which we do observe all dependents on each return, and determined that approximately 0.17% of dependents were missing for this reason. Consequently, in all analyses, we scale our estimate of the number of children claimed on returns by

$\frac{1}{1-0.0017}$ .

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## 4.1 National Estimates

Table 1 contains our estimated claim rate for all U.S. children for tax years 2017-2019. Column 1 presents the child claim rate by year among children appearing on a Form 1095 (our main sample). Among this group, 95% of children were claimed in 2017 and 2018, and 93% were claimed in 2019. The difference in the observed claim rate from 2017 and 2018 for 2019 could reflect the combined effect of a number of factors, including the Covid-19 pandemic during the filing season for 2019 tax returns (lowering the claim rate or delaying the submission or processing of information returns) or the increased incentive for low-income taxpayers to claim children on their 2019 return to qualify for the economic impact payments adopted as part of pandemic relief legislation (raising the claim rate).

As discussed in Section 3, a limitation of the estimated child claim rates contained in Column 1 of Table 1 is that they are based only on those children who appear on a Form 1095; the estimates could therefore be biased if uninsured children are claimed at higher or lower rates than children with insurance. We next consider four approaches to circumvent this concern, reflected in Columns 2-5 of Table 1.

First, we adjust the estimated child claim rate from our sample to account for the correlation between claiming and health insurance coverage. More precisely, it is straightforward to show that the child claim rate for the full U.S. population,  $CCR_t$ , can be expressed as a function of the child claim rate among children with insurance,  $CCR_t^I$ , the covariance between having insurance and being claimed,  $\sigma_{(C,I)}$ , and the share of children with insurance,  $\bar{I}$ :

$$CCR_t = CCR_t^I - \frac{\sigma_{C,I}}{\bar{I}}$$

To estimate  $\sigma_{C,I}$ , we rely on the Annual Social and Economic Supplement to the Current Population survey for 2018, which contains information about whether a child has health insurance as well as whether the child is the dependent of an individual who files a tax return. The estimated covariance between health insurance and being claimed is only slightly positive,

$\sigma_{C,I} \approx 0.001$ . Combining this estimate with the child claim rate among children with 1095's from Column 1 and the share of children with 1095's from Appendix Table 1 allows us to estimate the child claim rate for the full population, reported in Column 2. Because this analysis suggests that having health insurance and being claimed are almost entirely uncorrelated, the estimates in Column 2 closely track those in Column 1.<sup>13</sup>

We next consider an alternative approach for extrapolating our 1095-sample results to the overall population of children in the U.S. by taking advantage of monthly data on health insurance coverage. In particular, Appendix Figure 1 plots the relationship between child claiming and *months* of reported coverage during the year, which are reported on the Form 1095's we observe. The figure shows the relationship between child claiming and months without coverage is downward-sloping and approximately linear, with each additional month of coverage associated with a 0.38 percentage point increase in the average claim rate. Extrapolating this relationship out-of-sample to children with 0 months of coverage implies an average claim rate for uninsured children of 90.6%.<sup>14</sup> Column 3 of Table 1 incorporates this estimated claim rate for uninsured children along with our main estimates in Column 1, weighting by the share of children who appear on a Form 1095 (previously reported in Appendix Table 1). Here as well, the estimated child claim rates for the population are similar to those reported in Columns 1 and 2.

Our third approach to recovering the child claim rate for the overall population is to attempt to estimate that parameter directly, without restricting the sample to children reported on a Form 1095. This naive estimate of the child claim rate,  $CCR_t^N$ , is defined as:

$$CCR_t^N = \frac{\text{children claimed on a year } t \text{ tax return}}{\text{children residing in US in year } t}$$

Specifically, the estimates in Column 4 of Table 1 are obtained by comparing the total number of distinct children claimed on tax returns originating from a U.S. address with Census counts for the total number of children present in the United States (see Columns 1-3 of Appendix

<sup>13</sup>A potential concern with this approach is that response to the CPS may be positively correlated with appearing on a Form 1095, which would imply that both approaches exclude the same individuals.

<sup>14</sup>Of course, the results of this analysis could be biased if the true relationship between child claiming and coverage varies non-linearly between 0 and 1 month of coverage.

Table 3 for additional detail). As discussed in Section 3, a potential concern with this approach is that some of the children claimed on U.S. tax returns may not be physically present in the U.S., even if the taxpayers claiming these children are themselves located in the U.S. Because such children would be included in the numerator of the estimated child claim rate, but not the denominator, this estimate is likely to be biased upwards. Indeed, as shown in Column 4 of Table 1, the child claim rate derived from this approach exceeds that derived from our main sample.<sup>15</sup> Notably, despite the difference in levels from Columns 1-3, the estimates in Column 4 also reflect a downward trend in the child claim rate over the years in our sample period.

Finally, to reduce the potential for bias in the Column 4 estimates due to some claimed children not being physically present in the United States, Column 5 of Table 1 includes in the numerator of the naive child claim rate only those children who were claimed on a year  $t$  tax return and who either appear on a Form 1095 or who were claimed for either the CTC or EITC. The rationale behind this additional restriction is that children in these categories are more likely to have been physically present in the U.S. during the year in question. In particular, recall that insurers are directed to send Form 1095's only to U.S. residents and that children claimed for the CTC or EITC are generally supposed to have resided with the taxpayer who claims them for at least half of the year. Even after imposing these restrictions, the estimated child claim rates presented in Column 5 exceed those derived from the 1095 data, suggesting that children without reported insurance are claimed at higher rates than those with reported insurance or that, notwithstanding the legal requirements, some children claimed for the EITC and CTC actually reside outside the U.S. during the tax year (see Columns 4-6 of Appendix Table 3 for additional detail).

In summary, across a range of approaches and assumptions, our results suggest that the significant majority of children are claimed on tax returns each year. In addition, the child claim rate appears to have slightly declined in 2019 relative to the two prior years, although this finding may be due to an increase in late-filing and delayed processing because of the Covid-19 pandemic.

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<sup>15</sup>If correct, this result would suggest that uninsured children were claimed at higher rates than children with insurance – a possibility we regard as possible but unlikely.

## 4.2 Heterogeneity in the Child Claim Rate by Demographic Characteristics

This subsection explores potential sources of heterogeneity in the child claim rate.

Figure 1 displays heterogeneity in the child claim rate by age. The figure reports estimated claim rates for 2018, but the pattern is similar in other years (see Appendix Table 4 for additional details). The claim rate peaks for 3 year-olds, of whom 95.5% are claimed and declines (mostly monotonically) for younger and older children. Despite these relative differences, the absolute level of claiming is quite similar by age; the minimum observed claim rate is for 15 and 16 year-olds, of whom approximately 94% are claimed.

Figure 2 investigates heterogeneity in the child claim rate by state. The state with the highest 2018 claim rate was North Carolina (97.8%) and the state with the lowest claim rate was West Virginia (90.8%). Appendix Table 5 presents a full set of state-level claim rate estimates for 2017-2019. In addition, we investigated, but did not observe, heterogeneity in the child claim rate based on whether the county in which a child's zip code was located is urban or rural.

We next investigate heterogeneity in the child claim rate by income. Child claiming could vary by income for a number of reasons. For example, during our sample period, taxpayers without earned income received no benefit from claiming children on their tax returns for the EITC or CTC, so the incentive for such taxpayers to claim their children was limited. Similarly, taxpayers' take-up of credits for which they qualify may also vary by income.

Although we do not observe household income for children who are not claimed, we can proxy it in several ways.<sup>16</sup> First, we investigate heterogeneity with respect to the wage income of a child's mother during the year. To do so, we use social security records drawn from birth certificates to link children to their mothers.<sup>17</sup> We then measure the mother's wage income in a year using the sum of all wages reported for her on a Form-W2 for the corresponding year.

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<sup>16</sup>Specifically, these analyses show the relationship between income and child claiming among children with coverage; if the nature of selection into coverage differs by income, these analyses would conflate those differences with differences by income in the child claim rate for the overall U.S. population.

<sup>17</sup>We focus on mothers rather than fathers because of the greater likelihood that children reside with the former compared to the latter. Using the 2018 CPS, for example, we estimate that 91.3% of children live with their mother compared to 73.4% who live with their father. When social security records list multiple mothers for a single child, we link the child to the mother with the highest income.

Figure 3 plots the results of this analysis.<sup>18</sup> The figure shows that the child claim rate rises by income, from approximately 90% for children whose mothers earn low incomes, to approximately 98% for children whose mothers have annual wage earnings of \$20,000 or greater.

Although Figure 3 provides child-level income information, a potential downside is that the measure of income that it uses does not reflect non-wage income for the mother or any income source for other family members. As an alternative, we next proxy income based on a child's location, using the zip code reported on the child's Form 1095. We link zip code to Census tract and use the 2018 5-year ACS to measure the average share of households in a tract with annual income of \$30,000 or greater.<sup>19</sup> Appendix Figure 2 displays a binned scatterplot of the relationship between the child claim rate and this measure of income. The estimated claim rate is increasing in income, with an estimated claim rate of approximately 93% for tracts in which 50% of households earn over \$30,000, compared with approximately 96% for tracts in which 90% of households do so. We observe a similar relationship between the child claim rate and the share of a Census tract that attended college (Appendix Figure 3).

As a third means of understanding the relationship between claiming and income, we next focus on a specific subpopulation of interest – children who receive health insurance coverage through Medicaid or CHIP. Because these programs are means-tested, this subpopulation of children tends to be lower income than our overall sample. Table 2 reports the child claim rate by whether the child was enrolled in one or more months of Medicaid coverage during the year. In each year, the child claim rate is substantially lower for children with Medicaid coverage than for children with other forms of insurance. In 2018, for example, only 92% of children on Medicaid were claimed on a tax return compared to almost 98% of children that were enrolled in other coverage.<sup>20</sup> These results therefore imply a similar story about the relationship between income and claiming.

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<sup>18</sup>The figure includes children whose mothers have positive wages below \$100,000. Children whose mothers had zero wages (23.8% of the sample) were claimed at a rate of 90.4%. Children whose mothers had wages above \$100,000 (4.7% of the sample) were claimed at a rate of 98.1%.

<sup>19</sup>We match tracts to zip codes using the cross-walk provided by HUD (2019). When multiple tracts match to a single zip code, we aggregate to the zip code level based on the ratio of addresses in the tract-zip match. We are unable to match approximately 2.4% of the children in our sample to a Census tract using a zip code reported on the child's Form 1095; we exclude these children from this analysis.

<sup>20</sup>Appendix Figure 4 replicates Appendix Figure 2 to study the relationship between income and claiming for the Medicaid population. Among this lower-income population, we nonetheless observe lower claim rates of children living in lower-income neighborhoods.

Figure 4 investigates heterogeneity in child-claiming by race, based on aggregated Census tract level data for the zip code in which the child lives. We find that the child claim rate increases in the share of a tract that is white (Panel A) and decreases in the share of a tract that is Black (Panel B), Native American (Panel C), or Hispanic (of any race) (Panel D). As with our prior results, the magnitude of the differences across neighborhoods with different racial makeups is fairly modest, with claim rates for neighborhoods typically ranging from 93-97%.

Finally, Appendix Table 6 investigates patterns in child-claiming by whether the child has an SSN or an ITIN. Given the changes in eligibility for the CTC described in Section 2, one might expect a reduction in the claiming of children with ITINs from 2017 to 2018 and 2019. Because of the relatively small share of children in the 1095 data with ITINs, we focus on population counts for this group. Column 1 shows a striking decline in the number of children with ITINs claimed on tax returns during our sample period, falling from approximately 1.6 million in 2017, to 930 thousand in 2018, to 530 thousand in 2019. In contrast, we observe no similar declines in the number of non-citizen children present in the U.S during those years (Column 2) or the claiming of children with SSNs (Column 3).

## 5 Discussion

In this paper we estimated the child claim rate for the 2017-2019 tax years. Our findings suggest that the significant majority of children, about 93-95%, are claimed each year on a tax return. Hence, most U.S. children already have some degree of contact with the income tax system. At the same time, the 5-7% of children not claimed on tax returns represent a sizable population in absolute terms – between 3.2-4.5 million children per year. In addition, our findings suggest that these unclaimed children differ from the general population in significant ways: in particular, they are more likely to be living in low-income households and in communities of color.

Finally, our results rely on a number of important assumptions. Most important of these is our extrapolation from the population of insured children who appear on a Form 1095 to the overall population of U.S.-resident children. In reality, it could be that the claiming behavior

for this subpopulation of children differs from the general population in important ways, with either a higher or lower child claim rate being possible. Although we considered a range of approaches to correct for such biases, all of those rely on additional assumptions, which we have outlined above. The fact that we find a numerically similar child claim rate under each of these alternative approaches increases our confidence in the validity of our main qualitative findings.

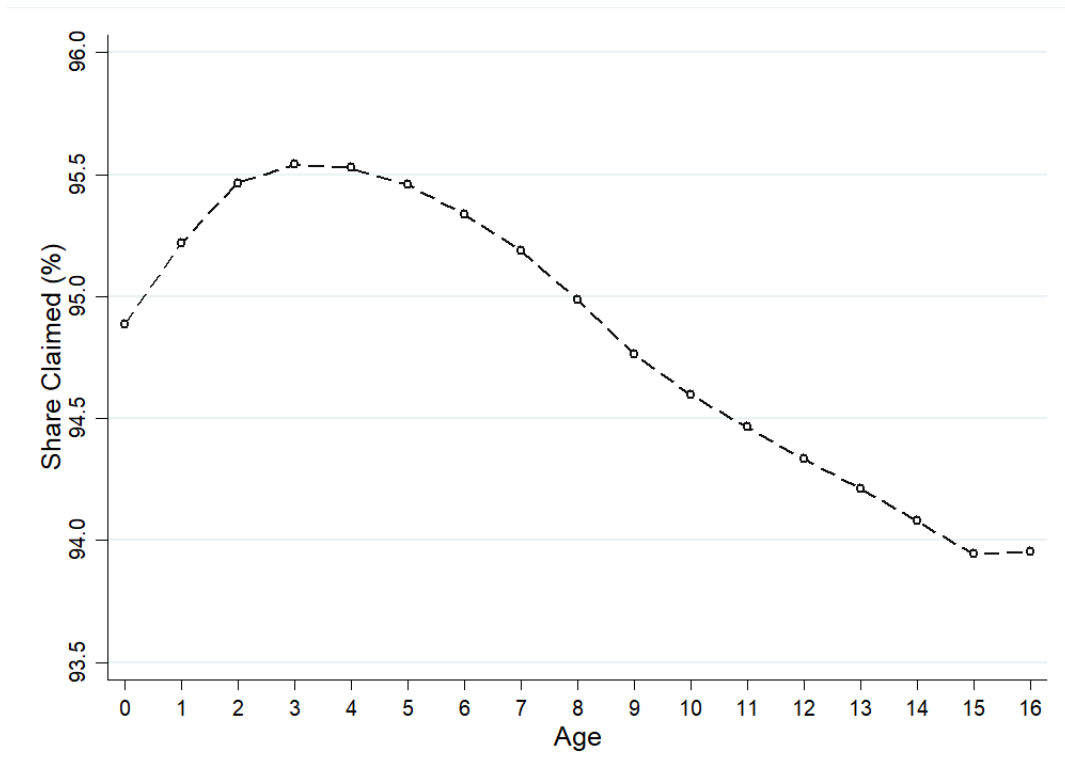
Our findings have important implications for the design of safety-net programs and for issues relating to take-up. In particular, because so many children are already claimed on tax returns, and because children claimed for one benefit are typically claimed for other benefits for which they qualify, administering a new benefit through the tax system is likely to reach most children without necessitating substantial additional costs on taxpayers. However, because lower income children and children living in communities of color are less likely to be claimed, they may be less likely to participate in tax-administered programs for which they qualify. Extending eligibility to children who have traditionally been excluded from tax-administered safety net benefits, as the EIP payments and recent expansion to the CTC do, may increase the child claim rate by increasing the incentives for taxpayers to file returns claiming these children. But unless these increases in the child claim rate materialize, low-income children and children living in communities of color may miss out on the newly available safety net programs for which they qualify.



## References

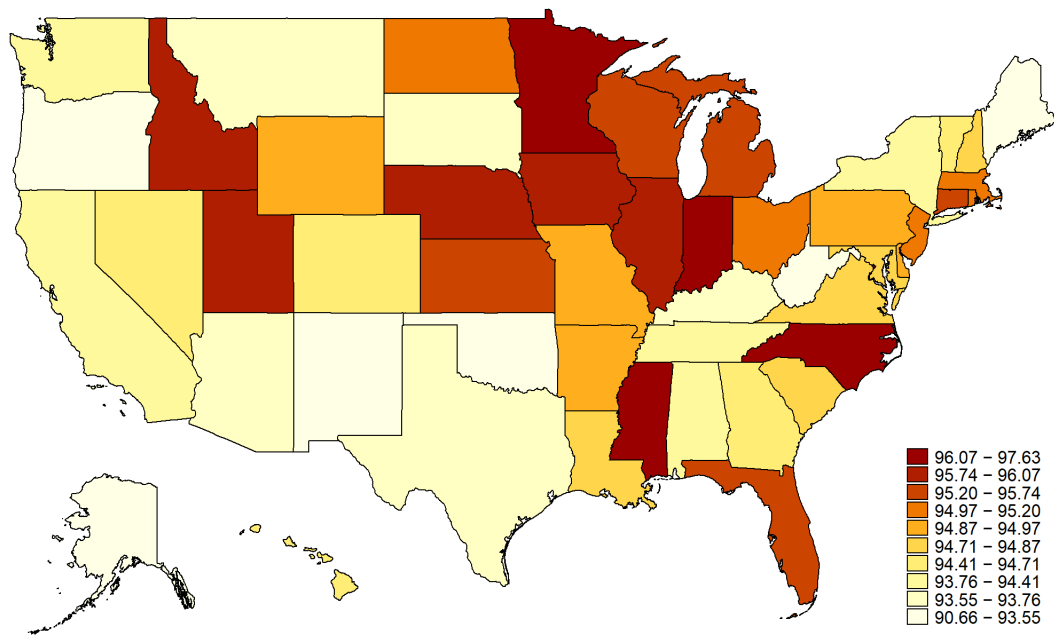
- CDC.** 2021. “Health Insurance Coverage: Estimates from the National Health Interview Survey.” Centers for Disease Control and Prevention.
- Census.** 2013. “TY2013 IRS-CPS ASEC Exact Match.” U.S. Census Bureau Working Paper.
- Census.** 2020. “Population Estimates by Age, Sex, Race and Hispanic Origin.” U.S. Census Bureau.
- Cilke, James.** 2014. “The Case of the Missing Strangers: What we Know and Don’t Know About Non-Filers.” Working Paper.
- Collyer, S, D Harris, and C Wimer.** 2020. “Left behind: The one-third of children in families who earn too little to get the full Child Tax Credit.”
- Goldin, Jacob.** 2018. “Tax Benefit Complexity and Take-Up: Lessons from the Earned Income Tax Credit.” Tax Law Review.
- Goldin, Jacob, and Katherine Micheltore.** 2020. “Who Benefits From the Child Tax Credit?” National Bureau of Economic Research.
- HUD.** 2019. “HUD USPS ZIP Code Crosswalk Files.” U.S. Department of Housing and Urban Development.
- Jones, Maggie R.** 2014. “Changes in EITC Eligibility and Participation, 2005–2009.” Center for Economic Studies, U.S. Census Bureau CARRA Working Papers 2014-04.
- Larrimore, Jeff, Jacob Mortenson, and David Splinter.** 2021. “Household Incomes in Tax Data: Using Addresses to Move from Tax-Unit to Household Income Distributions.” *Journal of Human Resources*, 56(2): 600–631.
- Lurie, Ithai Z., and James Pearce.** 2021. “Health Insurance Coverage in Tax and Survey Data.” *American Journal of Health Economics*, 7(2): 164–184.
- Plueger, Dean.** 2009. “Earned Income Tax Credit Participation Rate for Tax Year 2005.” IRS Research Bulletin.

Figure 1: Child Claim Rate by Age



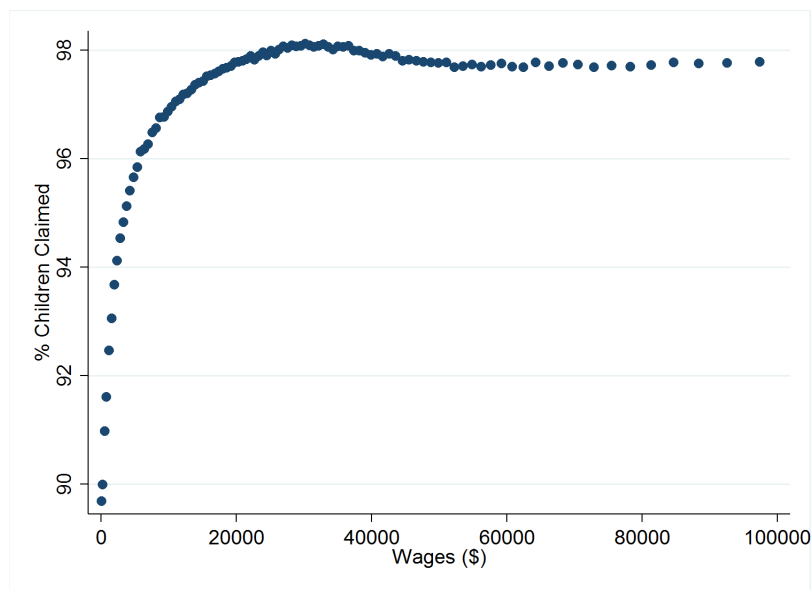
*Notes.* The figure shows the share of children claimed on a 2018 tax return by age of the child. Age is measured as of December 31, 2018. The sample consists of all children who received a Form 1095 reporting health insurance coverage for one or more months in 2018.

Figure 2: Child Claim Rate by State



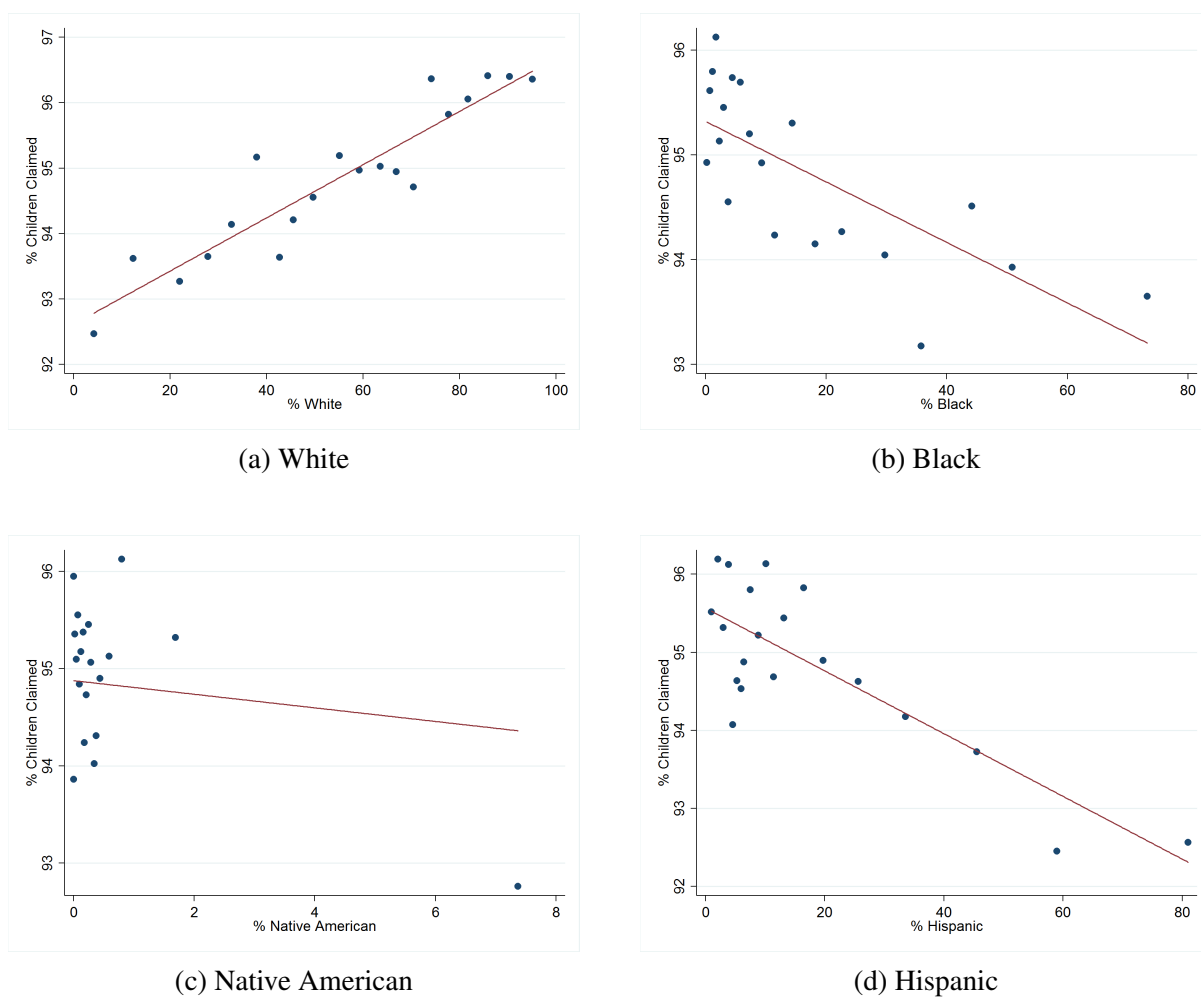
*Notes.* The figure shows the share of children claimed on a 2018 tax return by state. A child's state corresponds to the state reported on the child's Form 1095. The sample consists of all children aged 0-16 who received a Form 1095 reporting health insurance coverage for one or more months in 2018.

Figure 3: Child Claim Rate by Mother's Wages



*Notes.* The figure shows the relationship between the probability a child was claimed on a 2018 tax return and the child's mother's income from wages in that year (as reported on Form W-2). The sample is limited to children aged 0-16 who had one or more months of health insurance coverage reported on a Form 1095 for 2018. Children were matched to mothers using Social Security data derived from birth records. Approximately 13.9% of children were not matched to a mother; the average claim rate for this group was 90.4%. The figure is a binned scatterplot that includes mothers with positive incomes below \$100,000. Approximately 23.8% of mothers had no wage income; the average claim rate for children in this group (not included in the figure) was 90.9%. Approximately 4.7% of mothers had wage income above \$100,000; the average claim rate for children in this group (not included in the figure) was 98.1%.

Figure 4: Share Claimed by Race



*Notes.* The figure shows a binned scatterplot of the share of children claimed on a 2018 tax return by average race or ethnicity of the child's neighborhood. Neighborhood race or ethnicity is measured as the share of households in a census tract with the specified race or ethnicity. Children are linked to census tracts using the zip code reported on their Form 1095. Average race for a census tract is measured from the 2018 American Community Survey 5-year estimates. The binned scatterplot was constructed using weights equal to the number of children reported in a particular zip code. The solid line represents the best linear fit. The sample consists of all children aged 0-16 who received a Form 1095 reporting health insurance coverage for one or more months in 2018.

Table 1: Child Claim Rate by Year

	(1)	(2)	(3)	(4)	(5)
	Main Sample (Form 1095)	Covariance Adjusted	Linear Extrapolation	Any Return	Any Return (Likely Resident)
2017	95.1	95.0	94.9	98.2	97.1
2018	95.0	94.9	94.6	97.0	95.5
2019	93.0	92.9	92.4	94.4	93.1

*Notes:* The table reports the share of children claimed on a tax return by year. Column 1 provides the child claim rate for our main sample: children aged 0-16 who received a Form 1095 reporting one or more months of coverage during the applicable year. Columns 2-5 estimate the same parameter for the overall population of children aged 0-16 in the United States using a range of alternative sample populations and adjustment methods. Column 2 adjusts the estimate in Column 1 to reflect the observed degree of covariance between health insurance and child claiming from the March 2018 CPS, as described in Section 4 of the text. Column 3 imputes the child claim rate among children without coverage reported on a Form 1095 by linearly extrapolating the relationship between coverage and child claiming observed in our sample and reflected in Appendix Figure 1. The reported child claim rate in Column 3 is the weighted average of the child claim rate in Column 1 and the estimated child claim rate among children without reported coverage obtained from this method, where the weights are derived from the estimated share of U.S. children who received a Form 1095 (see Appendix Table 1 for weight calculations). Column 4 is the ratio of children claimed on U.S. tax returns to the number of children present in the U.S., reported by Census (2020). Column 5 is the same as Column 4, except that the numerator reflects the subset of children claimed on U.S. tax returns for the Child Tax Credit or the Earned Income Tax Credit, or who received a Form 1095. All columns were scaled to reflect dependents in excess of four that were listed on paper-filed returns, as described in the text of Section 4.

Table 2: Child Claim Rate by Year and Medicaid Coverage

	(1)	(2)	(3)
	Overall	Medicaid	Non-Medicaid
2017	95.1	92.5	98.2
2018	95.0	92.3	97.9
2019	93.0	91.2	95.2

*Notes:* The table reports the share of children claimed on a tax return by year, for children with and without Medicaid coverage. For reference, Column 1 shows the estimated child claim rate for our main sample (Column 1 of Table 1). Column 2 is limited to children for whom we observe a Form 1095 showing one or more months of Medicaid coverage during the specified year. Column 3 is limited to children for whom we observe a Form 1095 reporting zero months of Medicaid coverage for the specified year. All columns were scaled to reflect dependents in excess of four that were listed on paper-filed returns, as described in the text of Section 4.

# Appendix

Geoffrey Gee, Jacob Goldin, Joseph Hancuch,

Ithai Z. Lurie, and Vedant Vohra

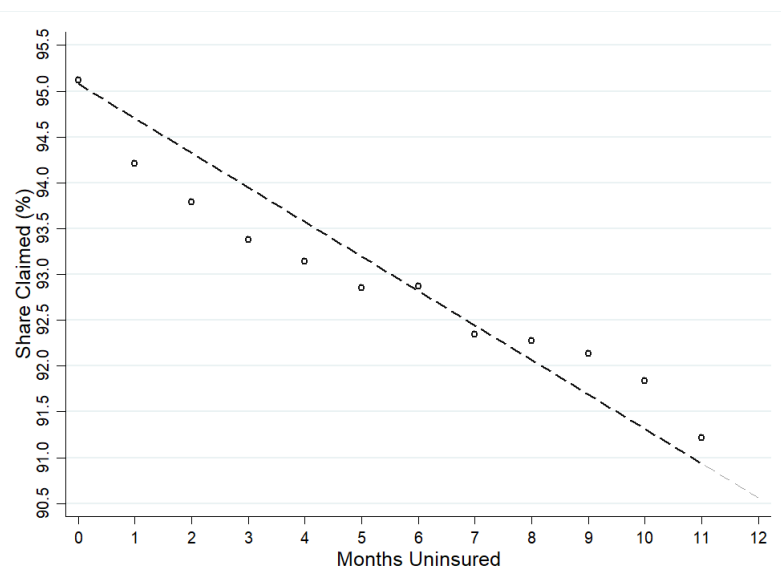
March 25, 2022

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\*Gee, Hancuch, and Lurie: Office of Tax Analysis, U.S. Treasury Department. Goldin and Vohra: Stanford. For helpful comments, we are grateful to Edith Brashares, James Cilke, Ben Meiselman, Jake Mortenson, David Splinter, and Mary Clair Turner. The views presented here do not necessarily represent those of the U.S. Treasury Department or IRS.

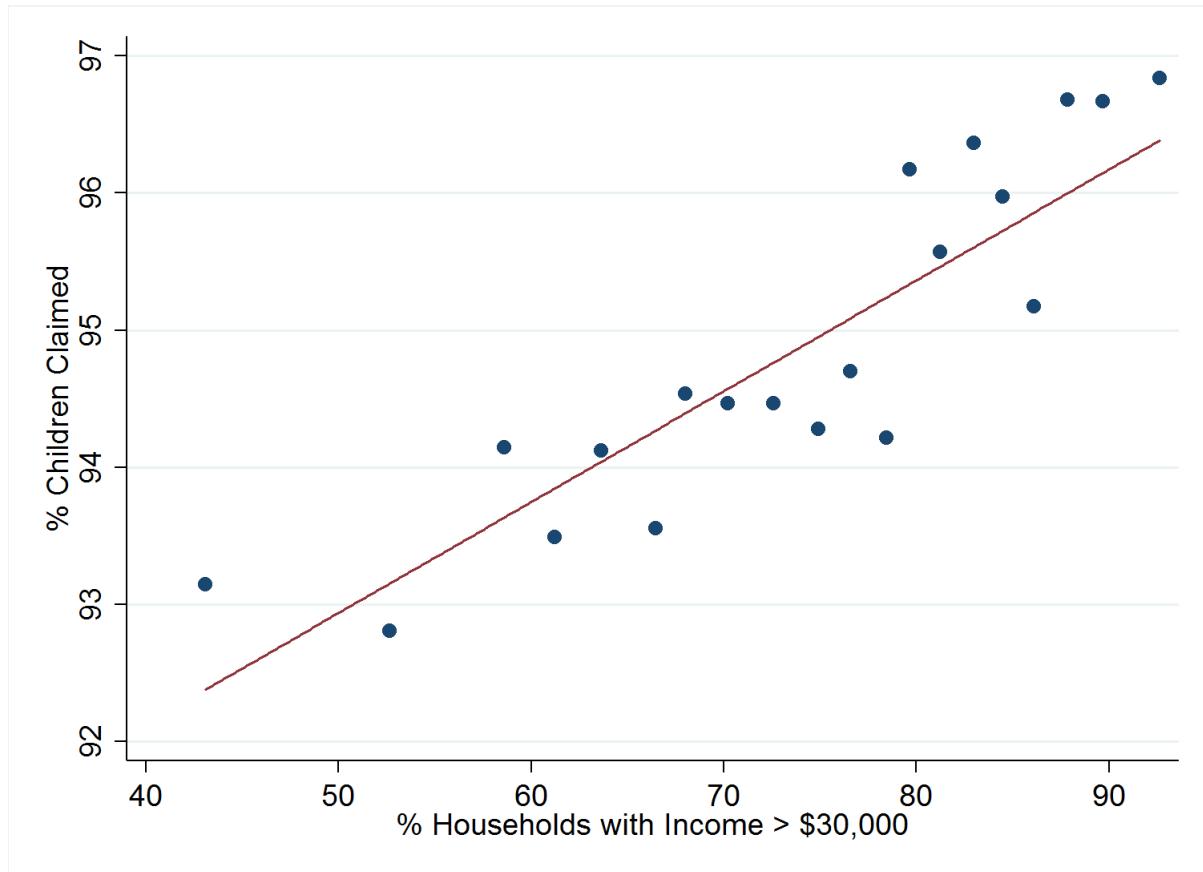


Figure A.1: Child Claim Rate by Months Without Insurance



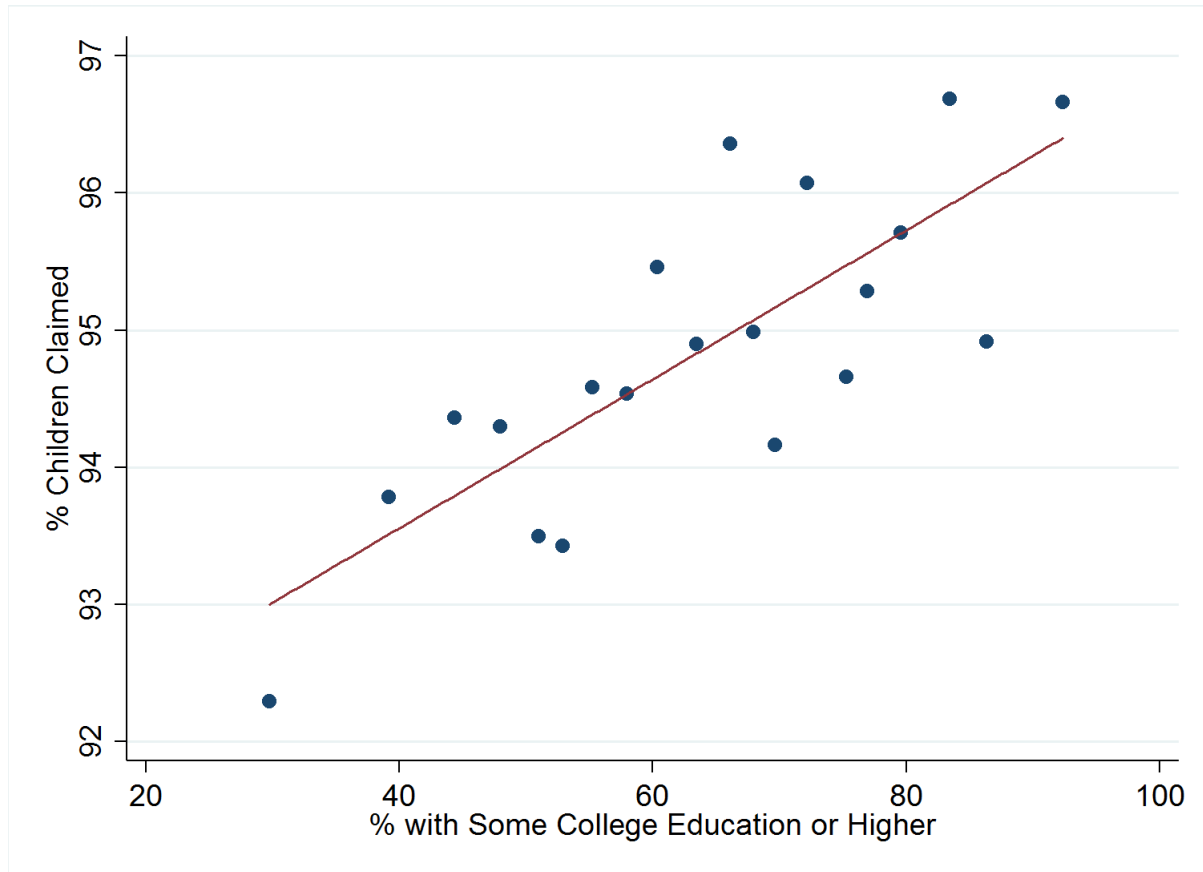
*Notes.* The figure shows the share of children claimed on a 2018 tax return by the number of months during 2018 for which the child did not have coverage reported on a Form 1095. The dashed line represents the best linear fit. The sample consists of all children aged 0-16 who received a Form 1095 reporting health insurance coverage for one or more months in 2018.

Figure A.2: Child Claim Rate by Income



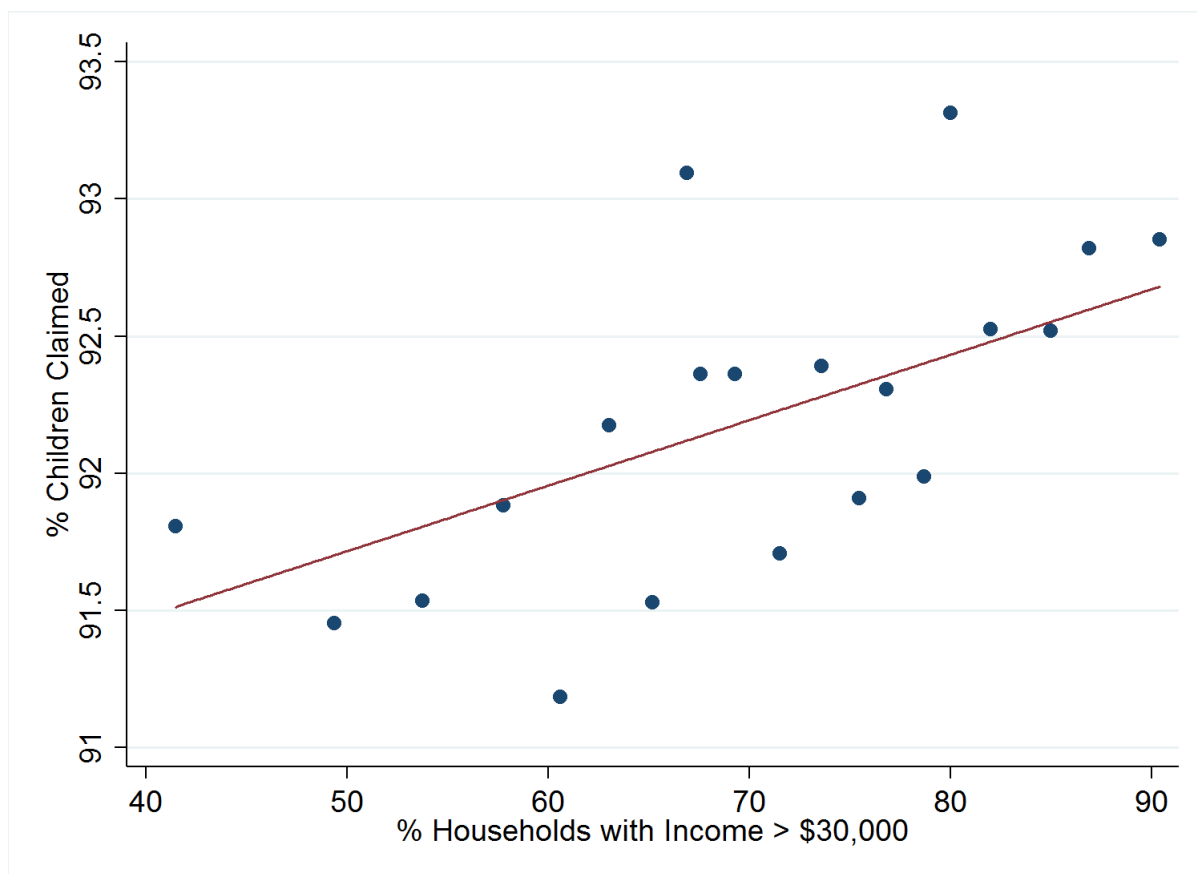
*Notes.* The figure shows a binned scatterplot of the share of children claimed on a 2018 tax return by neighborhood income. Neighborhood income is measured as the share of households in a census tract with annual household income greater than \$30,000. Children are linked to census tracts using the zip code reported on their Form 1095. Income for a census tract is measured from the 2018 American Community Survey 5-year estimates. The binned scatterplot was constructed using weights equal to the number of children reported in a particular zip code. The solid line represents the best linear fit. The sample consists of all children aged 0-16 who received a Form 1095 reporting health insurance coverage for one or more months in 2018.

Figure A.3: Share Claimed by Education



*Notes.* The figure shows a binned scatterplot of the share of children claimed on a 2018 tax return by average educational attainment in a neighborhood. Neighborhood education is measured as the share of households in a census tract that attended at least some college. Children are linked to census tracts using the zip code reported on their Form 1095. Educational attainment for a census tract is measured from the 2018 American Community Survey 5-year estimates. The binned scatterplot was constructed using weights equal to the number of children reported in a particular zip code. The solid line represents the best linear fit. The sample consists of all children aged 0-16 who received a Form 1095 reporting health insurance coverage for one or more months in 2018.

Figure A.4: Share Claimed by Income (Medicaid Sample)



*Notes.* The figure shows a binned scatterplot of the share of children enrolled in Medicaid coverage who were claimed on a 2018 tax return by neighborhood income. Neighborhood income is measured as the share of households in a census tract with annual household income greater than \$30,000. Children are linked to census tracts using the zip code reported on their Form 1095. Income for a census tract is measured from the 2018 American Community Survey 5-year estimates. The binned scatterplot was constructed using weights equal to the number of children reported in a particular zip code. The solid line represents the best linear fit. The sample consists of all children aged 0-16 who received a Form 1095 reporting Medicaid coverage for one or more months in 2018.

Table A.1: Form 1095 Coverage Rate by Age of Child and Year

	(1)	(2)	(3)
	1095 Count	Census Count	Share (%)
Panel A: 2017			
0	3,146,755	3,893,990	80.8
1	3,614,192	3,972,711	91.0
2	3,715,499	4,020,045	92.4
3	3,759,608	4,006,946	93.8
4	3,737,673	3,997,280	93.5
5	3,780,323	4,003,452	94.4
6	3,770,159	4,048,018	93.1
7	3,819,207	4,044,139	94.4
8	3,930,299	4,042,924	97.2
9	4,035,924	4,170,813	96.8
10	4,092,358	4,190,286	97.7
11	4,047,999	4,156,294	97.4
12	3,936,970	4,143,944	95.0
13	3,917,703	4,152,873	94.3
14	3,900,200	4,124,397	94.6
15	3,849,378	4,110,669	93.6
16	3,860,731	4,217,009	91.6
0-16	64,914,976	69,295,790	93.7
Panel B: 2018			
0	2,985,862	3,815,343	78.3
1	3,447,669	3,908,830	88.2
2	3,587,317	3,987,032	90.0
3	3,662,025	4,033,038	90.8
4	3,696,004	4,018,719	92.0
5	3,674,824	4,008,443	91.7
6	3,711,085	4,014,057	92.5
7	3,713,739	4,058,370	91.5
8	3,755,413	4,054,236	92.6
9	3,866,784	4,053,179	95.4
10	3,958,642	4,181,603	94.7
11	4,015,181	4,200,646	95.6
12	3,973,371	4,166,696	95.4
13	3,862,341	4,155,076	93.0
14	3,845,869	4,164,608	92.3
15	3,830,007	4,137,711	92.6
16	3,781,380	4,125,819	91.7
0-16	63,367,512	69,083,406	91.7
Panel C: 2019			
0	2,217,100	3,783,052	58.6
1	3,033,526	3,829,599	79.2
2	3,263,042	3,922,044	83.2
3	3,431,916	3,998,665	85.8
4	3,532,875	4,043,323	87.4
5	3,578,668	4,028,281	88.8
6	3,560,843	4,017,227	88.6
7	3,599,912	4,022,319	89.5
8	3,606,385	4,066,194	88.7
9	3,649,711	4,061,874	89.9
10	3,762,043	4,060,940	92.6
11	3,854,654	4,189,261	92.0
12	3,911,472	4,208,387	92.9
13	3,868,807	4,175,221	92.7
14	3,758,724	4,164,459	90.3
15	3,741,506	4,175,459	89.6
16	3,724,177	4,150,420	89.7
0-16	60,095,360	68,896,725	87.2

*Notes:* The table estimates the share of U.S. children that appear on a Form 1095 by age and by year. Column 1 reports the number of distinct children of the specified age that appear on a Form 1095 for the specified year. Column 2 reports the number of children of the specified age residing in the U.S. during the specified year as reported by Census (2020). Column 3 is obtained by dividing Column 1 by Column 2.

Table A.2: Child Claim Rate by Year: Late-Filing Adjustment

	(1)	(2)	(3)	(4)	(5)
	Main Sample (Form 1095)	Covariance Adjusted	Linear Extrapolation	Any Return	Any Return (Apparent Resident)
2017	95.1	95.0	94.9	98.2	97.1
2018	95.2	95.1	94.8	97.2	95.8
2019	93.7	93.5	93.0	95.0	93.8

*Notes:* The table is identical to Table 1 except that the estimated child claim rates for 2018 and 2019 were scaled to reflect children that could be expected to be claimed on late-filed returns, as described in the text of Section 4.

Table A.3: Child Claim Rate by Age and Year: Census-Based Estimates

	(1)	(2)	(3)	(4)	(5)
	Census Count	Total Claimed	Share Claimed (%)	Total Claimed (Likely Resident)	Share Claimed (%) (Likely Resident)
Panel A: 2017					
0	3,893,990	3,558,211	91.4	3,532,499	90.7
1	3,972,711	3,732,307	93.9	3,721,253	93.7
2	4,020,045	3,813,365	94.9	3,800,276	94.5
3	4,006,946	3,852,843	96.2	3,837,768	95.8
4	3,997,280	3,832,237	95.9	3,814,802	95.4
5	4,003,452	3,876,539	96.8	3,856,779	96.3
6	4,048,018	3,899,011	96.3	3,870,046	95.6
7	4,044,139	3,962,271	98.0	3,922,905	97.0
8	4,042,924	4,097,375	101.3	4,049,084	100.2
9	4,170,813	4,213,908	101.0	4,157,476	99.7
10	4,190,286	4,289,815	102.4	4,226,406	100.9
11	4,156,294	4,261,357	102.5	4,191,975	100.9
12	4,143,944	4,163,989	100.5	4,090,682	98.7
13	4,152,873	4,159,466	100.2	4,083,121	98.3
14	4,124,397	4,149,231	100.6	4,071,930	98.7
15	4,110,669	4,098,951	99.7	4,016,967	97.7
16	4,217,009	4,120,016	97.7	4,025,272	95.5
0-16	69,295,790	68,080,891	98.2	67,269,243	97.1
Panel B: 2018					
0	3,815,343	3,491,691	91.5	3,471,931	91.0
1	3,908,830	3,630,573	92.9	3,622,825	92.7
2	3,987,032	3,753,767	94.1	3,741,589	93.8
3	4,033,038	3,820,663	94.7	3,803,311	94.3
4	4,018,719	3,854,990	95.9	3,832,368	95.4
5	4,008,443	3,829,754	95.5	3,801,900	94.8
6	4,014,057	3,870,701	96.4	3,837,207	95.6
7	4,058,370	3,886,120	95.8	3,840,263	94.6
8	4,054,236	3,939,621	97.2	3,881,700	95.7
9	4,053,179	4,063,153	100.2	3,995,827	98.6
10	4,181,603	4,169,486	99.7	4,092,830	97.9
11	4,200,646	4,235,324	100.8	4,150,810	98.8
12	4,166,696	4,197,901	100.7	4,106,248	98.5
13	4,155,076	4,093,078	98.5	3,994,678	96.1
14	4,164,608	4,080,856	98.0	3,975,209	95.5
15	4,137,711	4,067,601	98.3	3,955,637	95.6
16	4,125,819	4,025,961	97.6	3,894,204	94.4
0-16	69,083,406	67,011,242	97.0	65,998,537	95.5
Panel C: 2019					
0	3,783,052	3,353,338	88.6	3,297,112	87.2
1	3,829,599	3,474,021	90.7	3,458,537	90.3
2	3,922,044	3,566,805	90.9	3,549,110	90.5
3	3,998,665	3,676,756	91.9	3,653,920	91.4
4	4,043,323	3,741,418	92.5	3,712,574	91.8
5	4,028,281	3,774,679	93.7	3,740,440	92.9
6	4,017,227	3,750,517	93.4	3,711,088	92.4
7	4,022,319	3,792,588	94.3	3,748,643	93.2
8	4,066,194	3,806,744	93.6	3,754,489	92.3
9	4,061,874	3,857,661	95.0	3,799,362	93.5
10	4,060,940	3,975,502	97.9	3,915,949	96.4
11	4,189,261	4,076,601	97.3	4,015,792	95.9
12	4,208,387	4,137,694	98.3	4,075,470	96.8
13	4,175,221	4,095,878	98.1	4,032,321	96.6
14	4,164,459	3,990,085	95.8	3,922,735	94.2
15	4,175,459	3,978,907	95.3	3,903,424	93.5
16	4,150,420	3,979,889	95.9	3,878,453	93.4
0-16	68,896,725	65,029,084	94.4	64,169,417	93.1

*Notes:* This table replicates Column 4 and 5 of Table 1, disaggregating the estimated child claim rate by age of the child. Column 1 reports the number of children of the specified age residing in the U.S. during the specified year as reported by Census (2020). Column 2 reports the number of children of the specified age claimed on U.S. tax returns during the specified year. Column 3 is obtained by dividing Column 2 by Column 1. Column 4 reports the number of children of the specified age claimed on U.S tax returns for the Child Tax Credit or the Earned Income Tax Credit, or who received a Form 1095, in the specified year. Column 5 is obtained by dividing Column 4 by Column 1. Columns 2 and 4 were scaled to reflect dependents in excess of four that were listed on paper-filed returns, as described in the text of Section 4

Table A.4: Child Claim Rate by Age

	(1)	(2)	(3)
	Total Count	Total Claimed	Share Claimed (%)
Panel A: 2017			
0	3,146,755	2,992,110	95.1
1	3,614,192	3,451,704	95.5
2	3,715,499	3,558,482	95.8
3	3,759,608	3,603,383	95.8
4	3,737,673	3,582,567	95.9
5	3,780,323	3,620,276	95.8
6	3,770,159	3,605,004	95.6
7	3,819,207	3,644,676	95.4
8	3,930,299	3,742,900	95.2
9	4,035,924	3,837,093	95.1
10	4,092,358	3,885,910	95.0
11	4,047,999	3,839,395	94.8
12	3,936,970	3,730,336	94.8
13	3,917,703	3,708,626	94.7
14	3,900,200	3,687,444	94.5
15	3,849,378	3,631,108	94.3
16	3,860,731	3,644,103	94.4
0-16	64,914,976	61,765,112	95.1
Panel B: 2018			
0	2,985,862	2,837,946	95.0
1	3,447,669	3,288,402	95.4
2	3,587,317	3,430,473	95.6
3	3,662,025	3,504,679	95.7
4	3,696,004	3,536,705	95.7
5	3,674,824	3,513,925	95.6
6	3,711,085	3,544,097	95.5
7	3,713,739	3,541,071	95.4
8	3,755,413	3,573,292	95.2
9	3,866,784	3,670,609	94.9
10	3,958,642	3,751,187	94.8
11	4,015,181	3,799,367	94.6
12	3,973,371	3,754,618	94.5
13	3,862,341	3,645,050	94.4
14	3,845,869	3,624,364	94.2
15	3,830,007	3,604,177	94.1
16	3,781,380	3,558,860	94.1
0-16	63,367,512	60,178,820	95.0
Panel C: 2019			
0	2,217,100	2,027,904	91.5
1	3,033,526	2,809,463	92.6
2	3,263,042	3,039,385	93.1
3	3,431,916	3,203,032	93.3
4	3,532,875	3,302,162	93.5
5	3,578,668	3,345,184	93.5
6	3,560,843	3,327,922	93.5
7	3,599,912	3,362,644	93.4
8	3,606,385	3,365,523	93.3
9	3,649,711	3,401,252	93.2
10	3,762,043	3,501,169	93.1
11	3,854,654	3,584,534	93.0
12	3,911,472	3,633,585	92.9
13	3,868,807	3,589,197	92.8
14	3,758,724	3,482,129	92.6
15	3,741,506	3,463,098	92.6
16	3,724,177	3,453,862	92.7
0-16	60,095,360	55,892,040	93.0

*Notes:* This table replicates Column 1 of Table 1, disaggregating the estimated child claim rate by age of the child. Age is measured as of December 31 of the specified year. Column 1 shows the total number of children of the specified age receiving a Form 1095 for the specified year. Column 2 shows the total number of children claimed on U.S. tax returns for the specified year among the population of children of the specified age receiving a Form 1095 for the specified year. Column 2 was scaled to reflect dependents in excess of four that were listed on paper-filed returns, as described in the text of Section 4. Column 3 is obtained from dividing Column 2 by Column 1.



Table A.5: Share Claimed (%) by State

	(1)	(2)	(3)
	2017	2018	2019
AK	93.4	93.2	90.7
AL	95.1	94.6	93.4
AR	95.2	95.0	94.2
AZ	94.1	93.8	91.9
CA	94.7	94.4	92.2
CO	95.4	94.8	92.8
CT	95.9	95.7	93.5
DC	97.2	96.9	94.8
DE	95.5	95.1	93.0
FL	95.6	95.4	93.3
GA	95.4	94.9	92.8
HI	94.9	94.6	92.7
IA	96.4	96.2	94.7
ID	96.0	95.9	94.2
IL	96.5	96.1	94.0
IN	96.5	96.5	94.8
KS	95.7	95.5	93.4
KY	94.0	93.8	93.5
LA	95.2	95.0	93.7
MA	95.5	95.3	92.5
MD	95.4	94.9	92.0
ME	93.9	93.7	93.0
MI	95.6	95.5	93.6
MN	96.7	96.5	94.3
MO	95.4	95.1	93.5
MS	97.0	96.5	94.8
MT	94.2	93.9	95.0
NC	95.3	97.8	93.6
ND	95.6	95.3	93.8
NE	96.4	96.2	94.1
NH	95.3	95.0	93.6
NJ	95.7	95.4	92.1
NM	93.7	93.3	92.6
NV	94.8	94.6	92.9
NY	94.5	94.3	91.8
OH	95.3	95.2	94.2
OK	93.4	93.1	91.7
OR	93.6	93.4	92.0
PA	95.1	95.1	93.7
RI	95.4	95.3	94.1
SC	95.4	95.0	93.2
SD	94.2	93.9	92.4
TN	94.9	94.5	93.0
TX	94.1	93.8	91.9
UT	96.3	96.2	91.5
VA	95.7	95.0	92.5
VT	94.9	94.9	93.7
WA	95.0	94.5	92.4
WI	96.1	95.9	94.3
WV	91.2	90.8	92.0
WY	95.1	95.1	92.5

*Notes:* This table replicates Column 1 of Table 1, disaggregating the estimated child claim rate by state of the child. A child's state corresponds to the state reported on the child's Form 1095.

Table A.6: Child Claim and Residence Counts by Citizenship

	(1)	(2)	(3)
	Claimed (ITIN)	Non-Citizen Population	Claimed (SSN)
2017	1,590,373	1,716,289	66,490,518
2018	931,589	1,686,827	66,079,654
2019	532,947	1,705,333	64,496,137

*Notes:* The table reports the number of children aged 0-16 claimed on tax returns by whether the child has an individual tax identification number (ITIN) (Column 1) or social security number (SSN) (Column 3). As a benchmark, Column 2 reports the number of non-citizen children residing in the U.S. during the specified year, as measured by Census (2020).

Table A.7: Child Claim Rate by Age and Medicaid Coverage

	(1)	(2)	(3)	(4)	(5)	(6)
	Medicaid			Non-Medicaid		
	Total Count	Total Claimed	Share Claimed (%)	Total Count	Total Claimed	Share Claimed (%)
Panel A: 2017						
0	1,743,740	1,607,209	92.2	1,403,015	1,384,900	98.7
1	2,095,593	1,950,068	93.1	1,518,599	1,501,636	98.9
2	2,134,707	1,995,737	93.5	1,580,792	1,562,745	98.9
3	2,143,347	2,006,025	93.6	1,616,261	1,597,358	98.8
4	2,118,513	1,983,943	93.6	1,619,160	1,598,624	98.7
5	2,125,209	1,987,701	93.5	1,655,114	1,632,574	98.6
6	2,084,766	1,944,836	93.3	1,685,393	1,660,167	98.5
7	2,103,062	1,956,974	93.1	1,716,145	1,687,702	98.3
8	2,158,653	2,003,380	92.8	1,771,646	1,739,520	98.2
9	2,206,020	2,042,306	92.6	1,829,904	1,794,787	98.1
10	2,198,454	2,030,370	92.4	1,893,904	1,855,540	98.0
11	2,128,441	1,961,095	92.1	1,919,558	1,878,300	97.9
12	2,011,063	1,847,736	91.9	1,925,907	1,882,599	97.8
13	1,945,506	1,782,575	91.6	1,972,197	1,926,050	97.7
14	1,884,346	1,721,256	91.3	2,015,854	1,966,188	97.5
15	1,836,801	1,669,868	90.9	2,012,577	1,961,240	97.4
16	1,812,305	1,645,769	90.8	2,048,426	1,998,334	97.6
0-16	34,730,526	32,136,848	92.5	30,184,452	29,628,265	98.2
Panel B: 2018						
0	1,587,746	1,458,964	91.9	1,398,116	1,378,981	98.6
1	1,967,703	1,826,835	92.8	1,479,966	1,461,568	98.8
2	2,013,456	1,876,477	93.2	1,573,861	1,553,996	98.7
3	2,051,469	1,915,959	93.4	1,610,556	1,588,720	98.6
4	2,052,226	1,917,044	93.4	1,643,778	1,619,660	98.5
5	2,027,585	1,892,879	93.4	1,647,239	1,621,046	98.4
6	2,028,095	1,890,103	93.2	1,682,990	1,653,994	98.3
7	2,001,679	1,860,980	93.0	1,712,060	1,680,091	98.1
8	2,014,208	1,867,769	92.7	1,741,205	1,705,522	98.0
9	2,072,646	1,915,776	92.4	1,794,138	1,754,833	97.8
10	2,103,263	1,939,197	92.2	1,855,379	1,811,990	97.7
11	2,096,688	1,927,843	91.9	1,918,493	1,871,524	97.6
12	2,031,479	1,862,459	91.7	1,941,892	1,892,159	97.4
13	1,915,696	1,750,767	91.4	1,946,645	1,894,282	97.3
14	1,853,628	1,688,348	91.1	1,992,241	1,936,015	97.2
15	1,794,690	1,628,784	90.8	2,035,317	1,975,393	97.1
16	1,748,811	1,583,290	90.5	2,032,569	1,975,570	97.2
0-16	33,361,068	30,803,474	92.3	30,006,445	29,375,345	97.9
Panel C: 2019						
0	1,238,793	1,095,662	88.4	978,307	932,242	95.3
1	1,815,748	1,643,074	90.5	1,217,778	1,166,389	95.8
2	1,931,967	1,763,353	91.3	1,331,075	1,276,032	95.9
3	1,993,722	1,825,226	91.5	1,438,194	1,377,806	95.8
4	2,031,107	1,864,606	91.8	1,501,768	1,437,556	95.7
5	2,036,872	1,871,749	91.9	1,541,796	1,473,435	95.6
6	2,011,253	1,848,257	91.9	1,549,590	1,479,664	95.5
7	2,009,846	1,846,373	91.9	1,590,066	1,516,271	95.4
8	1,986,936	1,822,676	91.7	1,619,449	1,542,847	95.3
9	1,999,671	1,831,525	91.6	1,650,040	1,569,728	95.1
10	2,058,013	1,882,080	91.5	1,704,030	1,619,089	95.0
11	2,088,392	1,907,559	91.3	1,766,262	1,676,975	94.9
12	2,082,794	1,899,194	91.2	1,828,678	1,734,391	94.8
13	2,015,005	1,833,648	91.0	1,853,802	1,755,548	94.7
14	1,897,655	1,722,917	90.8	1,861,069	1,759,212	94.5
15	1,834,379	1,662,167	90.6	1,907,127	1,800,932	94.4
16	1,775,426	1,607,444	90.5	1,948,751	1,846,418	94.7
0-16	32,807,579	29,927,507	91.2	27,287,782	25,964,535	95.2

Notes: This table replicates Column 2 and 3 of Table 2, disaggregating the estimated child claim rate by age of the child. Age is measured as of December 31 of the specified year. Columns 1-3 are limited to children for whom we observe a Form 1095 showing one or more months of Medicaid coverage during the specified year. Columns 4-6 are limited to children for whom we observe a Form 1095 reporting zero months of Medicaid coverage for the specified year. Columns 1 and 4 show the total number of children of the specified age receiving a Form 1095 for the specified year. Columns 2 and 5 show the total number of children claimed on U.S. tax returns for the specified year among the population of children of the specified age receiving a Form 1095 for the specified year. Column 2 and 5 were scaled to reflect dependents in excess of four that were listed on paper-filed returns, as described in the text of Section 4. Column 3 and Column 6 are obtained from dividing Column 2 by Column 1, and Column 5 by Column 4, respectively.