Methodology for “Trump’s Child Care Plan Doesn’t Help the Families that Won Him the Election”
By Rasheed Malik and Harry Stein

Summary
This memo describes the methods used to derive an estimate of the net benefits a typical family in a Trump swing county might receive from the Trump child care plan, using a family from a high-income neighborhood for comparison. This analysis has four steps:

1. Identifying areas where the Republican vote share increased significantly from 2012 to 2016
2. Determining the typical family income and child care spending in those areas
3. Identifying a comparison family from a wealthy area, where benefits are likely to be greater
4. Running these family characteristics through a tax model to see how the benefits from the Trump plan compare with current policy

Assumptions

• Current 2017 tax brackets¹

• Continuation of the Child and Dependent Care Tax Credit, or CDCTC, which can be used in conjunction with the new policy as long as expenses are not double-counted²

• Limits on child care expenditure deduction—average cost of care, by age of child, by state—come from Child Care Aware 2016 State Fact Sheets³
Step 1: Identify Trump swing counties

Using county-level election results from the last two elections, this analysis compares the share of presidential votes received by the two major parties. The smallest available election results data is at the county level. In order to identify the counties that showed significantly greater support for the Republican candidate in 2016 relative to 2012, this study uses a measure of the “Trump shift,” which is defined as:

\[ \text{Trump shift} = (\text{Trump vote share} - \text{Clinton vote share}) - (\text{Romney vote share} - \text{Obama vote share}) \]

A positive value for this variable describes a county that gave a higher share of its vote to the Republican candidate in 2016 than in 2012. Over 2,700 counties showed a positive Trump shift. The counties in the upper one-third of the distribution of Trump shift, the counties that showed the most movement toward the Republican presidential candidate, have been defined as “Trump swing counties.” These 977 counties shifted by more than 15 percentage points toward the Republican candidate from 2012 to 2016.

Step 2: Estimate typical family income and child care spending in Trump swing counties

This analysis uses the American Community Survey 2011–2015 5-Year Sample, which has been harmonized into the Integrated Public Use Microdata Series from the University of Minnesota. Using ArcGIS software, the authors identified the Public Use Microdata Areas that contained only Trump swing counties, which yielded a sample of nearly one million individual observations in Trump swing counties. The authors then analyzed a subset of the sample to estimate the median family income for households living within a Trump swing county comprised of two married adults and two children between the ages of zero and five, which came to $68,502.

The centerpiece of the Trump child care plan is a tax deduction on all child care expenses, formal and informal, up to the average cost of care in one’s state. While the price of child care centers, family child care, and school-age care has been well-documented by Child Care Aware of America, the price that a family pays may vary depending on a number of factors, including whether the family uses a regulated child care
program or informal care. In order to estimate the amount that a family spends on child care, the authors used the National Survey of Early Care and Education, or NSECE—a nationally representative survey of households with at least one child under 13. The authors constructed a survey-weighted linear regression model to predict the average spending on child care. The model regressed monthly household child care spending on household income; the number of children under the age of 6; the size of the household; the number of working parents; and indicators for whether the family included an infant and whether each of the first two children were in regular nonparental care.

Using the statistical relationships determined in this regression, the model calculated the predicted monthly child care spending for a family based on their household income and family composition. When the median income for a family of four in a Trump swing county is plugged into the model, the predicted child care spending comes to $6,037.

Step 3: Identify potential winners from a policy change

The Trump child care tax deduction is transparently regressive in structure, so it seems likely that high income families in areas with highly deductible child care prices will benefit the most from the policy change. An analysis of IPUMS-USA microdata finds that the median income in New York City’s Upper East Side neighborhood—defined as Public Use Microdata Area 3805—is an astronomical $293,188. Child care and preschool routinely tops $20,000 per child in this neighborhood. Such a family could also choose to deduct the cost of a nanny, up to the average cost of care, which for an infant and preschooler is $25,844, according to Child Care Aware.

Step 4: Calculating net benefits for both families

Finally, this analysis uses a basic tax model to estimate the change in tax liability for both of these families. Since the Trump plan intends to continue the CDCTC, most families will continue to use this credit, which is nonrefundable. The Trump swing county family, which is only taxed at the marginal rate of 15 percent, will only have an additional $37 in child care expenses to deduct from their taxable income after using the full $6,000 CDCTC. This gives them a net benefit of $5.55. Meanwhile, the Upper East Side family will no longer use the CDCTC, instead deducting the maximum amount allowed in New York for two children in child care—$25,844—which results in a net benefit to their income taxes of $7,329.
Conclusion

The result of this policy change is that the typical family with two young children on the Upper East Side of Manhattan will receive more than 1,000 times as much benefit as the typical family with two young children in the counties that helped Trump win the election.

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For more information on the methodology used in this analysis, please contact Rasheed Malik at rmalik@americanprogress.org

Endnotes