Stylized Marginal and Average Income Tax Rates and Tax Support for Families with Children and Students as Family Income Increases 2019 Law

Office of Tax Analysis
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The amount of income tax owed and tax benefits received at any level of income is determined by the interaction of the taxpayer's income and filing status with the other characteristics of the taxpayer's family. These figures present the stylized marginal and average tax rates faced by five typical family types with different incomes. For families with dependents, the amount of tax support provided to the family due to the presence of that dependent is also shown.

Taxpayers with dependent children pay lower taxes than similar families without children through the following major tax provisions of the individual income tax:

- *Filing status* – Unmarried taxpayers who are supporting a dependent child may be eligible to file as a head of household, instead of as a single filer. Head of household status has a higher standard deduction, and income is taxed under a separate rate bracket structure that is more generous than the brackets available to single filers.
- *Child credit (CTC)* – Taxpayers may be eligible for a partially refundable child credit of $2,000 for each child up through age 16 with a valid social security number. In general, the CTC is non-refundable, but taxpayers with insufficient tax liability to claim the entire CTC may claim the refundable additional child credit (ACTC), which equals 15% of earned income greater than $2,500, up to the lesser of (1) the value of the unused portion of the child credit and (2) $1,400 per child. The CTC (combined with the amount of other dependent credit [see below]) phases out beginning at $200,000 of modified adjusted gross income (AGI) ($400,000 for married couples filing a joint return).
- *Other dependent credit (ODTC)* – Taxpayers may be eligible for a non-refundable other dependent credit of up to $500 for each qualifying dependent relative or child who is not eligible for the child credit. The ODTC (combined with the amount of CTC [see above]) phases out beginning at $200,000 of modified AGI ($400,000 for married couples filing a joint return).
- *Earned income tax credit (EITC)* – Taxpayers may be eligible for a refundable EITC. The amount of EITC a taxpayer may receive initially increases as the taxpayer earns more income, then remains constant over a range of earned income, and then decreases as earned income increases further. For families with one child, the maximum credit is $3,526. The credit begins to phase out at a higher income level for married taxpayers and is more generous for families with more children (up to three children). Taxpayers without qualifying children may be eligible for a much smaller EITC.
- *American opportunity tax credit (AOTC)* – Taxpayers with expenses related to their or their dependent children's post-secondary education may be eligible for the partially refundable AOTC of up to $2,500, with up to $1,000 of the credit being refundable. The credit phases out beginning at $80,000 of modified AGI ($160,000 for joint filers) and is available for 4 years.
- *Child and dependent care credit (CDCTC)* – Taxpayers with expenses for caring for a qualifying individual, which may be a child or an adult, may be eligible for a non-refundable CDCTC. The credit is generally available for working taxpayers with dependent children under age 13, but it is also available for working taxpayers supporting parents or other dependents needing care. The maximum credit rate is 35% of up to $3,000 of child care

expenses for 1 child and $6,000 for 2 or more children. The credit rate phases down beginning at incomes of $15,000 until the rate reaches 20% at incomes above $43,000.

In order to produce these figures, a number of simplifying assumptions about the families are made. First, all income comes from wages, and families are only eligible for the benefits listed above. Second, 15% of family income is spent on items that qualify for an itemized deduction.[1] Examples of such items include mortgage interest expenses, state and local income and property tax payments, and charitable contributions. Third, taxpayers choose to itemize their deductions or claim the standard deduction in order to minimize their tax liability.

The second and third assumptions have an important implication when trying to interpret the figures that follow. The lines labeled "stylized marginal tax rate" are calculated as follows. At each AGI level, the taxpayer is given an extra $1,000 of wages.[2] The second assumption implies the taxpayer therefore has an additional $150 of itemizable expenses. The taxpayer, by the third assumption, re-determines whether to itemize deductions or claim the standard deduction. Taxable income—in this case wages less either the standard deduction or itemized deductions—is then recalculated, and the relevant tax rates and credits are applied to determine the tax liability.[3] The difference in liability is divided by the $1,000 change in income to get a stylized marginal tax rate.

Figure 1 presents the stylized marginal tax rate and average tax rate faced by a single filer. The stylized marginal tax rate deviates from the statutory marginal rate schedule due to the EITC at low income levels and the switch to itemization at higher income levels. The EITC decreases the stylized marginal tax rate as the credit phases in and increases it as the credit phases out.

Figure 2 presents on the left axis the stylized marginal tax rate and average income tax rate faced by a married filer with one dependent child but no child care expenses. The figure presents on the right axis the amount of tax support the family receives as a result of the child. The stylized marginal tax rate is large and negative as the EITC and ACTC phase in and is large and positive as the EITC phases out. If this figure were continued on for higher income families, there would be a temporary increase in the stylized marginal tax rate as the CTC begins to phase out at $400,000.

Figure 2A presents the same information but focuses on families with low and modest incomes who are not able to claim the full child credit. This figure decomposes the total tax support for

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[1] To reflect the $10,000 cap on state and local tax deductions under TCJA, the previous Treasury assumption of 18% has been decreased to 15%.

[2] Stylized marginal tax rates are calculated based on thousand dollar earnings increments, except in Figure 1 which (without loss of comparability) uses hundred dollar increments in order to conform to the lower income scale on the horizontal axis.

[3] For taxpayers who claim the standard deduction, taxable income increases by the $1,000 increase in wages. The second assumption implies that, for taxpayers who itemize their deductions, taxable income increases by $850—the $1,000 increase in wages less 15%, or $150, for the commensurate increase in itemizable expenses. This implies that once a taxpayer begins to itemize deductions (and ignoring phase-outs of any credits), the stylized marginal tax rate is equal to the statutory marginal rate reduced by 15%.

the child into the contribution of the CTC (green), the ACTC (gray), and the EITC (blue).[4] Families with the lowest incomes will receive less than the full value of the CTC due to insufficient income, and the benefit to families with slightly more income is constrained by the $1,400 limit on the credit's refundability.

Figure 3 replicates Figure 2 for a head of household filer with one dependent child but no childcare expenses. The stylized marginal tax rate shares all of the key features seen in Figure 2, but with a less generous underlying statutory marginal rate schedule and credits that phase out at lower income levels. The amount of tax support for this family type includes the added element that the child creates eligibility for head of household status—and thus a more generous rate schedule than applies to other unmarried taxpayers. The portion of the tax support due to the difference in schedules is shown in a lighter shade than the portion due to the remaining child-related provisions.

Figure 4 presents the stylized marginal tax rate and average tax rate faced by a married couple with a dependent student who is assumed to have sufficient education expenses to qualify for the maximum amount of the AOTC. The figure also presents the amount of tax support the filer receives as a result of the student. Key differences between this figure and Figure 2 are the large initial benefit from the refundable portion of the AOTC, which affects tax support but not stylized marginal rates; eligibility for the ODTC instead of the CTC and ACTC; and high stylized marginal tax rates as the AOTC phases out.

Figure 5 presents the stylized marginal tax rate and average tax rate faced by a joint filer with one dependent child and sufficient child care expenses to qualify for the maximum CDCTC. The figure also presents the amount of tax support the filer receives as a result of the child. Key differences between this figure and Figure 2 are the higher marginal rates for taxpayers earning modest incomes as the CDCTC phases down and the additional benefit from this credit for taxpayers at all but the lowest levels of income.

[4] The tax support for a child due to the EITC is the value of the EITC for a family with one child less the value of the EITC to that family in absence of that child. This effect is most visible at the lowest income, where the EITC for workers without children is also phasing in.

Figure 1
Stylized Marginal and Average Tax Rates and as Family Income Increases
Single Filer No Dependents
Current Law - Tax Year 2019

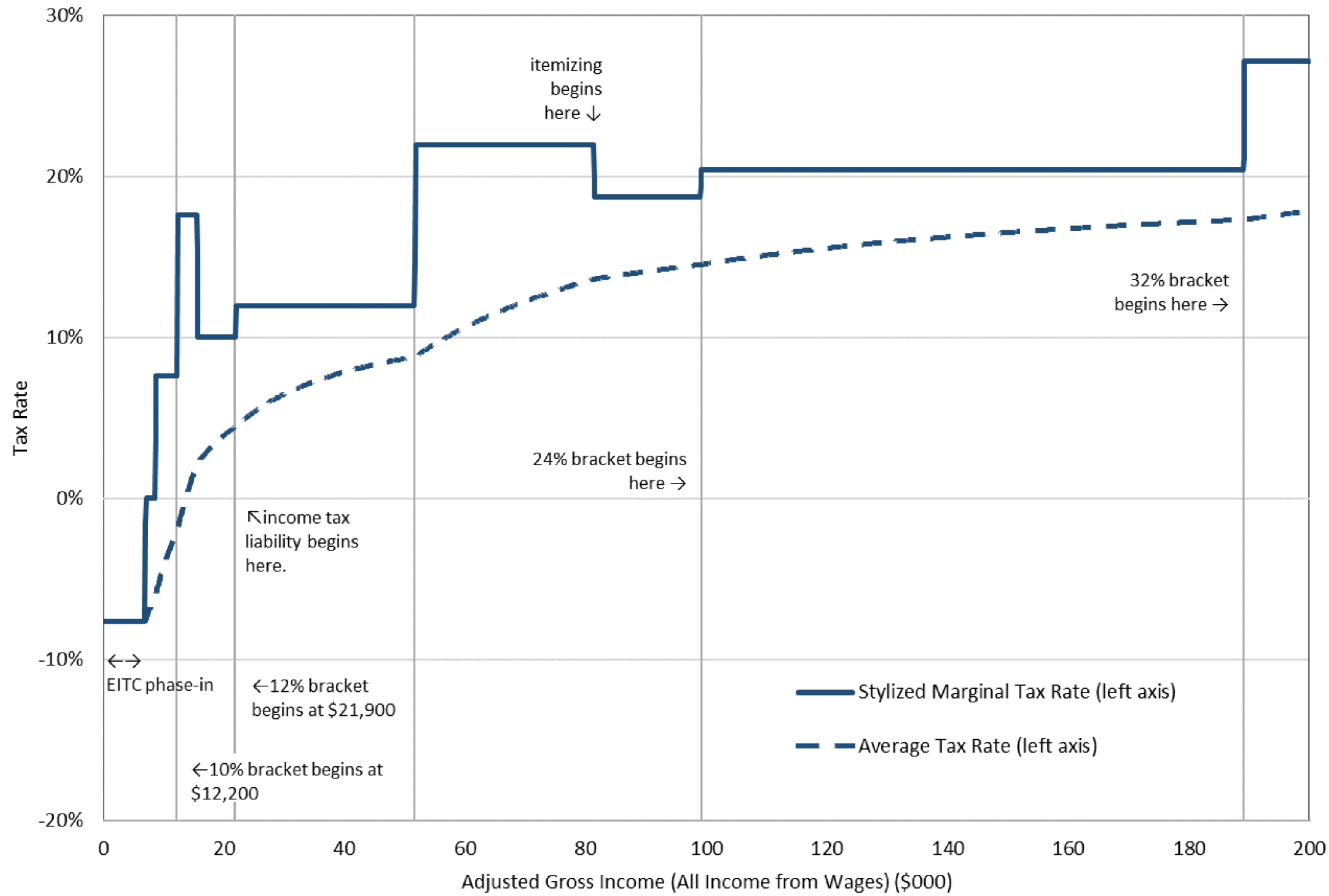

Figure 2
Stylized Marginal and Average Tax Rates and Tax Support for Joint Filer with One Dependent Child under 17
Current Law - 2019

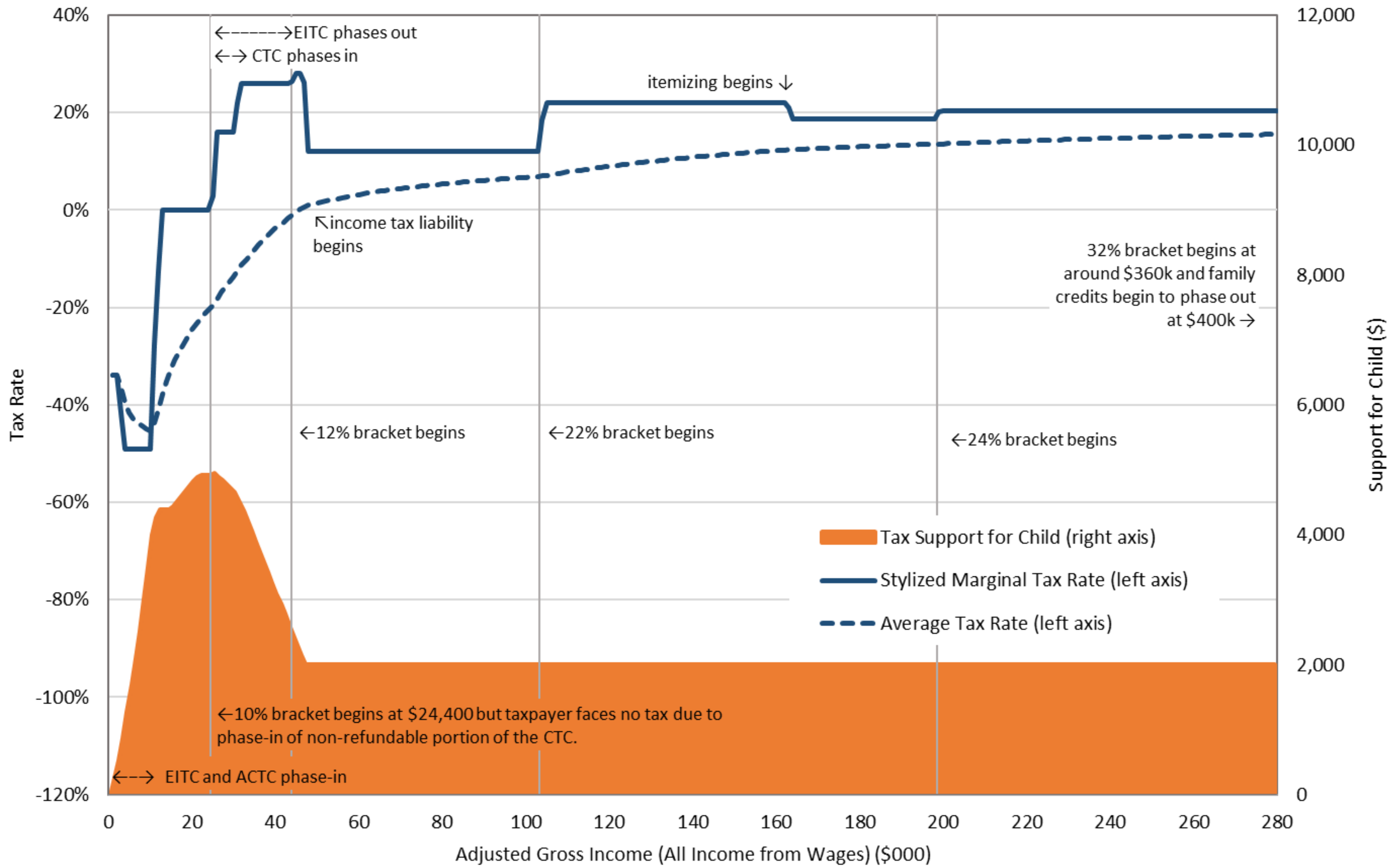

Figure 2A - Moderate Income Focus
Stylized Marginal and Average Tax Rates and Tax Support for
Joint Filer with One Dependent Child under 17
Current Law - 2019

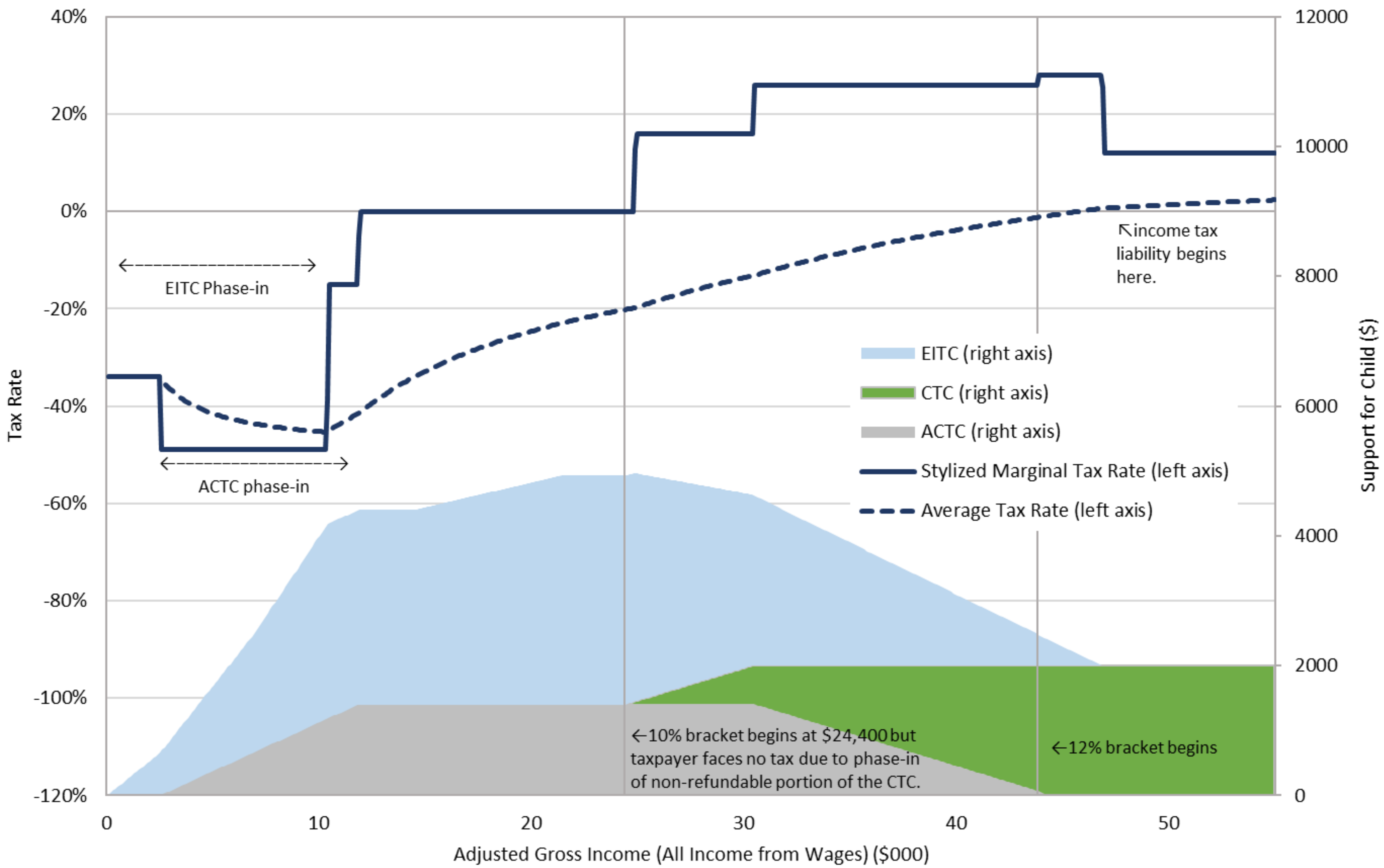

Figure 3
Stylized Marginal and Average Tax Rates and Tax Support for Head of Household Filer with One Dependent Child under 17
Current Law - 2019

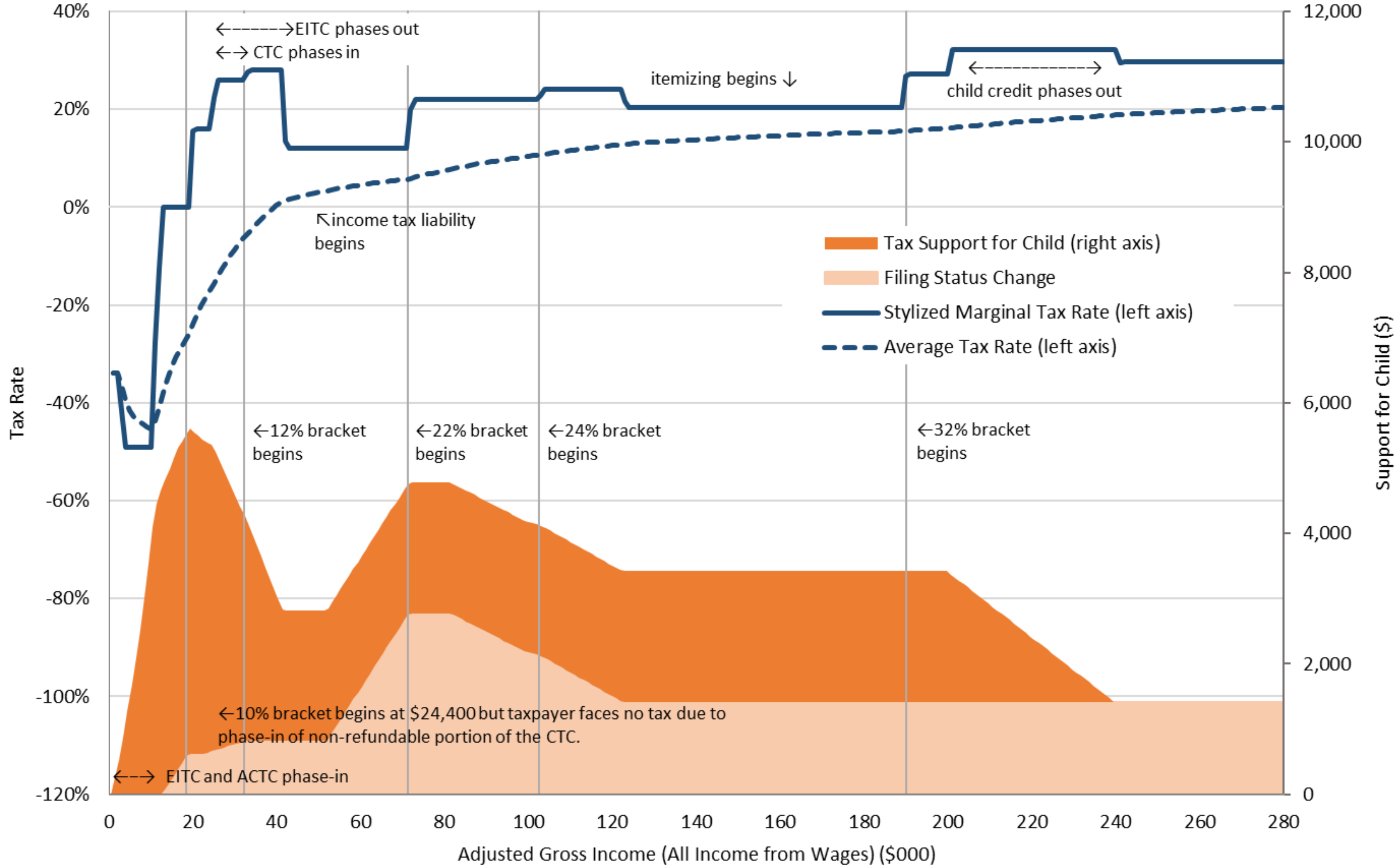

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Figure 4
Stylized Marginal and Average Tax Rates and Tax Support for Joint Filer with One Dependent College Student
Current Law - 2019

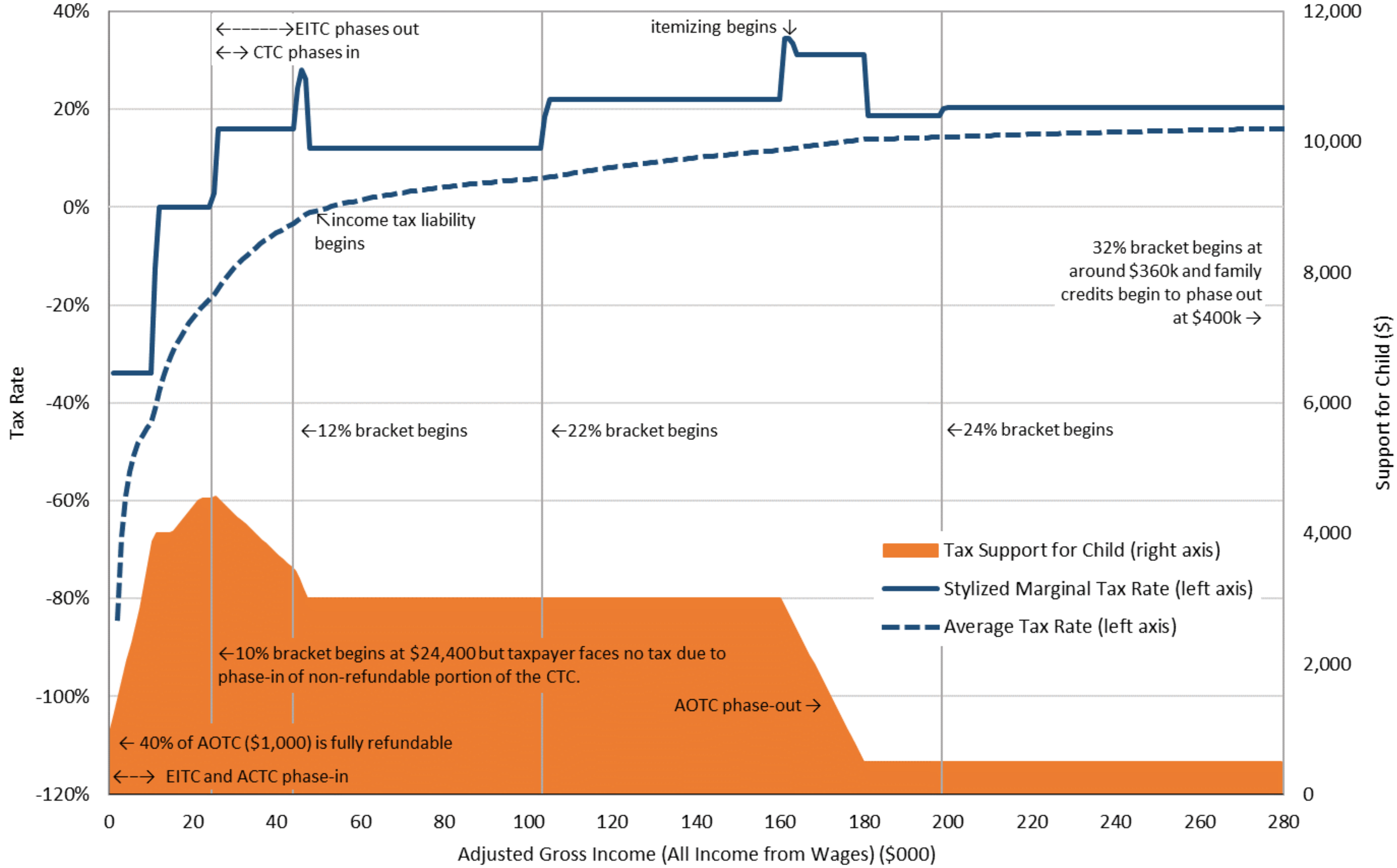

Figure 5
Stylized Marginal and Average Tax Rates and Tax Support for
Joint Filer with One Dependent Child under 17 and Child Care Expenses
Current Law - 2019