## Simplification: Tax Analysis, Fiscal Note, Projection and Application

A. Yearly Changes: MO has changed taxable income ranges (10 or 9), effective tax rates and 10-page Withholding Tables yearly (by SB 509 and HB 2540) during 2016-2027, which has caused the complex situations. When existing 10/9 tax brackets are matched/simplified/reduced to 2 , tax analyses, fiscal notes and projections can be simplified. Each year has 6 tax charts. We combine/match Tables 1-72 into Table 73 simply. Also existing 10-page Withholding Tables can be eliminated/replaced. Besides income tax calculation simplification, the same method can also be used for other similar applications (next page).

Table 73 2016-2027 effective tax rate and tax formulas, which are from
Table 1(...12x6) 2016 Tax Chart Year Top rate Rate $/ \$ 9,000$ Bottom rate Tax Rate (not $>\$ 9,000$ ) Tax Rate $(>\$ 9,000)$

If TI is:
The tax is:
$20160.06 \quad 0.035^{*} \quad 0.015 \quad$ (YTI/450,000)+0.015 $0.06-(225 / \mathrm{YTI})$ $(* 0.035$ is from https://dor.mo.gov/forms/2016\ Tax\ Chart_2016.pdf )

** (2016) \$9,000.01 (1,000.00) are changed to (2017) $\$ 9,072.01, \ldots \ldots(2020) \$ 8,584.01$ or $(2021) 8,704.01(1,088.00)$.
B. Tax Rate and Tax Simplifications: SB 597 (2021) provides the 2 tax rate and tax formulas. For yearly taxable incomes (YTI) over $\$ \mathbf{\$ 9 , 0 0 0}$, the same formula is used (tax format $\rightarrow$ effective tax rate and tax format), which has no tax revenue change. For YTI not over $\$ 9,000$, existing 9 or 8 formulas are matched/combined into 1 formula in the effective format, which may have very slight (almost neutral) tax revenue change.

2016: " $\$ 315$ plus $6 \%$ of excess over $\$ 9,000 "=315+0.06($ YTI- 9000$)=0.06$ YTI- $225=(0.06-(225 \div \mathrm{YTI})) \times \mathrm{YTI}$ If the Missouri yearly taxable income is: The tax rate and tax are:
Not over \$9,000
Over \$9,000

| $(\mathrm{YTI} \div \mathrm{C}+0.014) \times \mathrm{TI}$ | $(\mathrm{YTI}=\mathrm{TI} \times \mathrm{F})$ |
| :--- | :--- |
| $(\mathrm{Top}$ tax rate $-(\mathrm{D} \div \mathrm{YTI})) \times \mathrm{TI}$ | $(\mathrm{F}=$ filing periods $)$ |

C. Tax Revenue, Analysis, Fiscal Note and Projection: (Only very slight tax revenue change)

For 2021: Total Tax=0.014Sum(YTIa)+Sum(YTIa×YTIa) $\div \mathrm{C}+\operatorname{Sum}(0.054 \mathrm{YTIb}-\mathrm{D})$
$(\mathrm{C}=9,000 \div(0.03322-0.014)=468,262$ and $\mathrm{D}=(0.054-0.03322) \times 9,000=187)$
(1) Existing Formula (1): Sub Tax Revenue $=0.015$ Sum YTI1 $+\operatorname{Sum}(\mathrm{A} 1+0.02(\mathrm{YTI} 2-1,000))+\mathrm{Sum}(\mathrm{A} 2+0.025$ (YTI3-2,000))+Sum (A3+0.03(YTI4-3,000))+Sum (A4+0.035(YTI5-4,000))+Sum (A5+0.04(YTI6-5,000))+ $\operatorname{Sum}(\mathrm{A} 6+0.045(\mathrm{YTI7}-6,000))+\operatorname{Sum}(\mathrm{A} 7+0.05(\mathrm{YTI} 8-7,000))+\operatorname{Sum}(\mathrm{A} 8+0.05 \mathrm{x}(\mathrm{YTI9}-8,000))$
(For 2016)
(For tax revenue not over $\$ 9,000$ (YTI) before tax credits)
A1,....A8 (8 constants) and YTI1,....YTI9 (9 groups) are combined/simplified into C and YTIa. Then Fiscal Notes can be simplified for such as SB 597. www.senate.mo.gov/FiscalNotes/2021-1/2783S.01I.ORG.pdf
(2) New Formula (2): Sub Tax Revenue $=0.014$ Sum YTI a+Sum(YTIa $\times$ YTIa) $\div \mathrm{C}$
(For all years)
$\underline{\text { Tax Revenue Change }}=$ Formula (2) - Formula (1)
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## D. Simplification for MO Federal Tax Percentage and Deduction with Fair and Less Brackets

Existing MO Federal Tax Percentage (MO-1040) has 5 brackets and step rates from $35 \%$ to $25 \%, 15 \%, 5 \%$ and $0 \%$ (HB 991 in 2021). The following example shows such as $\$ 1$ AGI difference to cause $\$ 1,500$ deduction difference*, which is unfair.
*Example: One person's MO AGI is $\$ 100,001$. Another person's AGI is $\$ 100,000$. When their federal taxes are the same $\$ 15,000$, their MO federal tax deduction is $\$ 750(5 \% \times 15,000)$ or $\$ 2,250(15 \% \times 15,000)$, which means $\mathbf{\$ 1}$ AGI difference causes $\mathbf{\$ 1 , 5 0 0}$ deduction difference, which is unfair.

With the simplified formula, their MO federal tax deduction is $\$ 1,049.96(6.99972 \% \times 15,000)$ or $\$ 1,050.00$ $(7 \% \times 15,000)$ with very slight difference $\$ 0.04$, which is fair and simple.

| Missouri AGI Range, Line 6 | Federal Tax Percentage | Simplified Formula |
| :--- | :---: | :---: |
| $\$ 25,000$ or less | $35 \%$ |  |
| $\$ 25,001$ to $\$ 50,000$ | $25 \%$ | $0.35(1-(\mathrm{AGI} \div 125,000))$ |
| $\$ 50,001$ to $\$ 100,000$ | $15 \%$ |  |
| $\$ 100,001$ to $\$ 125,000$ | $5 \%$ |  |
| $\$ 125,001$ or more | $0 \%$ | 0 |

## FIG. Existing MO Federal Tax Percentage (or Property Tax Credit) and Simplification

Percentage (or Rate)
Bracket \#: Federal Tax Percentage: 5 or Property Tax Credit: 55



## E. Simplification for MO Property Tax Credit (55 brackets are matched and reduced to 3)

MO Property Tax Credit Chart shows its reduction from $\$ 1,100$ to 0 when Line 10 is from 0 to $\$ 30,000$. Maximum tax credit (L13: Total Real Estate Tax Paid) is $\$ 1,100$.

One linear solution can be used to match related property tax credits with reducing 53 brackets to 1 with $98 \%$ reduction.

MO property tax credit (2019)

| Line 10 | $0-14,000$ | $14,000-30,000$ | Over 30,000 |
| :--- | :---: | :---: | :---: |
| Credit | L13* | L13 (1-(L10-14,000) $\div 16,000)$ | 0 |

* L13: Maximum total amount of allowable real estate tax paid is not to exceed $\$ 1,100$ (Form MO-PTS, Line 13).

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