

# Estimating the Revenue Impact of the Tax Cuts and Jobs Act on Minnesota

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# Overview

- A. Background and History
- B. Microsimulation Estimates
- C. Apportioned JCT Estimates
- D. Other Issues

# A. Background and History

- November 29, 2017: MN completed its first preliminary estimate of the bill as passed by the House
- December 14, 2017: MN completed preliminary estimate of the bill as passed by the Senate
- December 22, 2017: Public Law 115-97 was enacted
- January 9, 2018: MN released preliminary estimate of law as enacted
- March 15, 2018: MN released final estimate, revised for February 2018 forecast

# Federal Update Items

Minnesota's definition of taxable income starts with federal taxable income

- Provisions that affect federal taxable income
  - Deductions
  - Exemptions
  - Definition of income
  - Timing provisions (depreciation, deferral of income)

# Estimating Methodology

- Income tax microsimulation model used for some provisions:
  - Increase standard deduction, indexed with chained CPI-U
  - Suspend personal and dependent exemptions
  - Suspend or modify certain itemized deductions
  - Reduce floor for medical expense deduction (TY 17 and 18 only)
  - Suspend deduction for moving expenses
- Most other estimates based on Joint Committee on Taxation estimates (JCX-67-17)
- Minor impact on property tax refund

# Summary of Estimates

|                           | Number of Provisions | Fiscal Year Impact (\$000s) |                  |                  |                  |
|---------------------------|----------------------|-----------------------------|------------------|------------------|------------------|
|                           |                      | 2018                        | 2019             | 2020             | 2020             |
| Microsimulation Estimates | 5                    | \$0                         | \$308,300        | \$303,100        | \$300,300        |
| Apportioned JCT Estimates | 39                   | (\$4,960)                   | \$108,140        | \$180,720        | \$188,320        |
| Property Tax Refund Model | 2                    | \$0                         | \$0              | \$84,010         | \$84,430         |
| <b>Total</b>              | <b>46</b>            | <b>(\$4,960)</b>            | <b>\$416,440</b> | <b>\$567,830</b> | <b>\$573,050</b> |

## B. Microsimulation Estimates

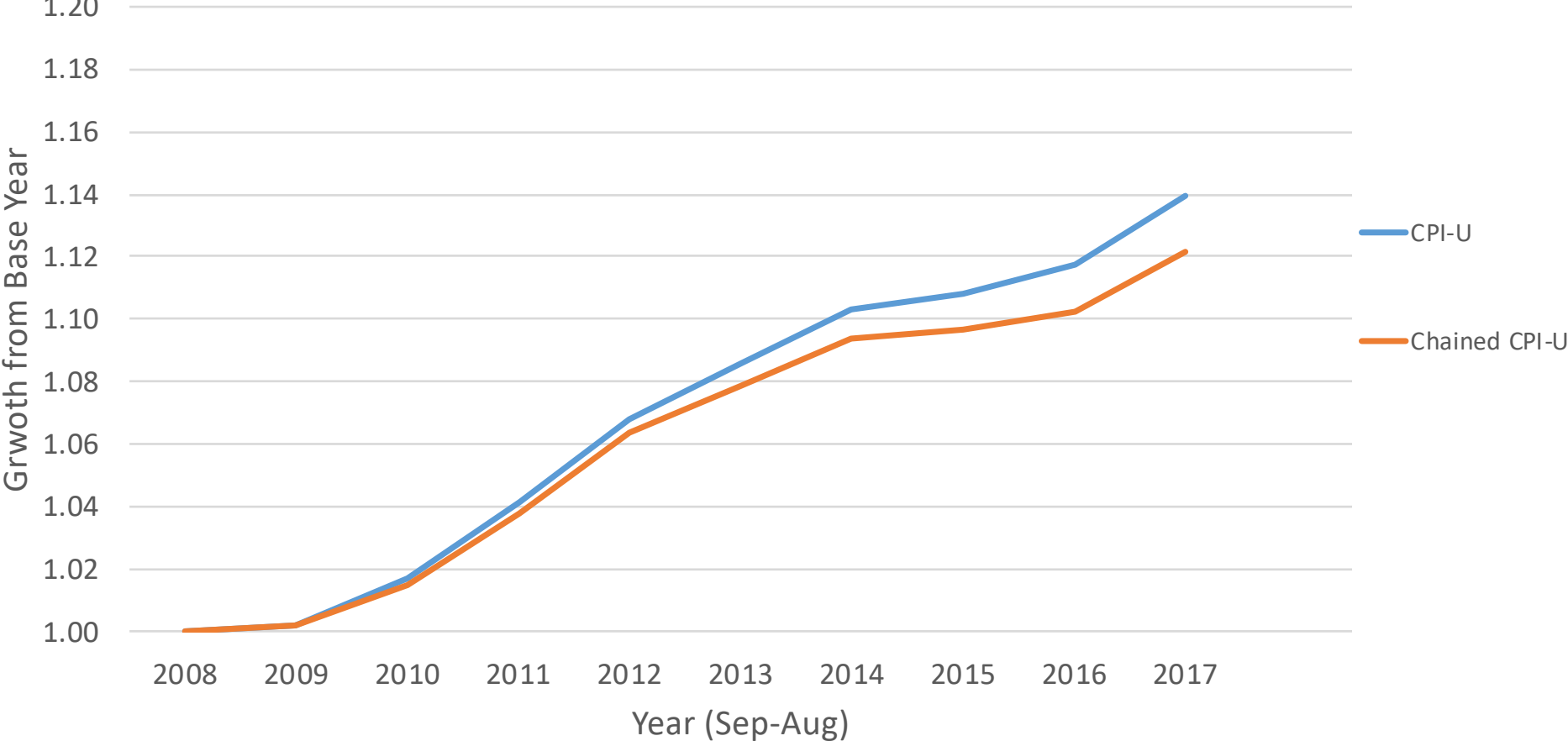
- Microsimulation model uses a sample of 2015 income tax returns
- Incorporates economic growth projections from state forecast
- Estimates focused on provisions that would affect MN tax liability, but also modeled federal rate changes, AMT changes, federal child credit, etc.
- Re-indexed all provisions using Chained CPI
- Provisions were estimated in the order shown on analysis, added one at a time to show the marginal impact of each

# Adoption of Chained CPI-U

- Minnesota currently uses IHS Markit projections for CPI
- Chained CPI projections are not available
- Adjustment was done based on historical relationship between CPI and Chained CPI
- On average, Chained CPI is assumed to grow 0.2% more slowly than CPI



# Chained CPI-U and CPI-U 2008-2017 (2008=1)



# CPI-U

| Year | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     | Sep-Aug Average |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------|
| 2007 | 202.416 | 203.499 | 205.352 | 206.686 | 207.949 | 208.352 | 208.299 | 207.917 | 208.49  | 208.936 | 210.177 | 210.036 |                 |
| 2008 | 211.08  | 211.693 | 213.528 | 214.823 | 216.632 | 218.815 | 219.964 | 219.086 | 218.783 | 216.573 | 212.425 | 210.228 | 213.605         |
| 2009 | 211.143 | 212.193 | 212.709 | 213.24  | 213.856 | 215.693 | 215.351 | 215.834 | 215.969 | 216.177 | 216.33  | 215.949 | 214.002         |
| 2010 | 216.687 | 216.741 | 217.631 | 218.009 | 218.178 | 217.965 | 218.011 | 218.312 | 218.439 | 218.711 | 218.803 | 219.179 | 217.163         |
| 2011 | 220.223 | 221.309 | 223.467 | 224.906 | 225.964 | 225.722 | 225.922 | 226.545 | 226.889 | 226.421 | 226.23  | 225.672 | 222.433         |
| 2012 | 226.665 | 227.663 | 229.392 | 230.085 | 229.815 | 229.478 | 229.104 | 230.379 | 231.407 | 231.317 | 230.221 | 229.601 | 228.149         |
| 2013 | 230.28  | 232.166 | 232.773 | 232.531 | 232.945 | 233.504 | 233.596 | 233.877 | 234.149 | 233.546 | 233.069 | 233.049 | 232.018         |
| 2014 | 233.916 | 234.781 | 236.293 | 237.072 | 237.9   | 238.343 | 238.25  | 237.852 | 238.031 | 237.433 | 236.151 | 234.812 | 235.685         |
| 2015 | 233.707 | 234.722 | 236.119 | 236.599 | 237.805 | 238.638 | 238.654 | 238.316 | 237.945 | 237.838 | 237.336 | 236.525 | 236.749         |
| 2016 | 236.916 | 237.111 | 238.132 | 239.261 | 240.229 | 241.018 | 240.628 | 240.849 | 241.428 | 241.729 | 241.353 | 241.432 | 238.649         |
| 2017 | 242.839 | 243.603 | 243.801 | 244.524 | 244.733 | 244.955 | 244.786 | 245.519 | 246.819 |         |         |         | 243.392         |

# Chained CPI-U

| Year | Jan     | Feb     | Mar     | Apr     | May     | Jun     | Jul     | Aug     | Sep     | Oct     | Nov     | Dec     | Sep-Aug Average |
|------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-----------------|
| 2007 | 117.33  | 117.877 | 118.913 | 119.666 | 120.292 | 120.439 | 120.377 | 120.288 | 120.638 | 120.885 | 121.481 | 121.295 |                 |
| 2008 | 121.867 | 122.25  | 123.323 | 124.116 | 125.171 | 126.307 | 126.918 | 126.594 | 126.551 | 125.5   | 123.044 | 121.557 | 123.404         |
| 2009 | 122.095 | 122.598 | 122.803 | 123.053 | 123.427 | 124.485 | 124.293 | 124.62  | 124.706 | 124.791 | 124.788 | 124.544 | 123.669         |
| 2010 | 124.987 | 124.972 | 125.442 | 125.62  | 125.678 | 125.521 | 125.536 | 125.756 | 125.83  | 125.969 | 125.92  | 126.143 | 125.195         |
| 2011 | 126.778 | 127.363 | 128.585 | 129.483 | 129.999 | 129.846 | 129.983 | 130.351 | 130.635 | 130.373 | 130.196 | 129.844 | 128.021         |
| 2012 | 130.438 | 130.953 | 131.905 | 132.284 | 132.154 | 131.956 | 131.731 | 132.43  | 132.988 | 132.892 | 132.208 | 131.77  | 131.242         |
| 2013 | 132.137 | 133.204 | 133.558 | 133.421 | 133.626 | 133.9   | 133.919 | 134.098 | 134.255 | 133.876 | 133.596 | 133.509 | 133.143         |
| 2014 | 134.017 | 134.542 | 135.375 | 135.771 | 136.216 | 136.433 | 136.392 | 136.127 | 136.211 | 135.891 | 135.107 | 134.207 | 135.009         |
| 2015 | 133.487 | 134.053 | 134.969 | 135.222 | 135.977 | 136.391 | 136.371 | 136.125 | 135.837 | 135.735 | 135.393 | 134.788 | 135.334         |
| 2016 | 134.966 | 134.953 | 135.655 | 136.332 | 136.895 | 137.329 | 137.007 | 137.026 | 137.328 | 137.514 | 137.237 | 137.282 | 135.993         |
| 2017 | 138.151 | 138.551 | 138.646 | 139.088 | 139.17  | 139.241 | 139.075 | 139.519 | 140.371 |         |         |         | 138.400         |

Source: Bureau of Labor Statistics

**Chained CPI-U and CPI-U  
Annual Average (September-August)  
(2008=1)**

|               | 2008 | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   |
|---------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| CPI-U         | 1    | 1.0019 | 1.0167 | 1.0413 | 1.0681 | 1.0862 | 1.1034 | 1.1083 | 1.1172 | 1.1394 |
| Chained CPI-U | 1    | 1.0021 | 1.0145 | 1.0374 | 1.0635 | 1.0789 | 1.0940 | 1.0967 | 1.1020 | 1.1215 |

**Year-over-Year Change**

|                 | 2008   | 2009  | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   | 2017   |
|-----------------|--------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| CPI-U           |        | 0.19% | 1.48%  | 2.43%  | 2.57%  | 1.70%  | 1.58%  | 0.45%  | 0.80%  | 1.99%  |
| Chained CPI-U   |        | 0.21% | 1.23%  | 2.26%  | 2.52%  | 1.45%  | 1.40%  | 0.24%  | 0.49%  | 1.77%  |
| Difference      |        | 0.03% | -0.24% | -0.17% | -0.05% | -0.25% | -0.18% | -0.21% | -0.32% | -0.22% |
| 5-Year Average  | -0.23% |       |        |        |        |        |        |        |        |        |
| 10-Year Average | -0.18% |       |        |        |        |        |        |        |        |        |

**Projected Standard Deductions by Tax Year**  
**Unrounded Amounts**

|        |               | 2018   | 2019   | 2020   | 2021   |
|--------|---------------|--------|--------|--------|--------|
| Single | CPI_U         | 12,000 | 12,274 | 12,491 | 12,794 |
|        | Chained CPI_U | 12,000 | 12,250 | 12,443 | 12,719 |
| MFJ    | CPI_U         | 24,000 | 24,548 | 24,983 | 25,589 |
|        | Chained CPI_U | 24,000 | 24,500 | 24,885 | 25,439 |
| MFS    | CPI_U         | 12,000 | 12,274 | 12,491 | 12,794 |
|        | Chained CPI_U | 12,000 | 12,250 | 12,443 | 12,719 |
| HOH    | CPI_U         | 18,000 | 18,411 | 18,737 | 19,192 |
|        | Chained CPI_U | 18,000 | 18,375 | 18,664 | 19,079 |

## C. Applying JCT Estimates to Minnesota

- Shift from federal to state fiscal years
- Identify Minnesota's share of impact
- Split impact into corporate and individual portions
- Adjust for difference between federal and state tax rates

# Federal and State Fiscal Years

|                     | Start   | End       | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|---------------------|---------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Federal Fiscal Year | October | September |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| MN Fiscal Year      | July    | June      |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

- Federal fiscal year begins October 1
- Minnesota fiscal year begins July 1
- Three quarters of the Federal fiscal year fall in the current MN fiscal year
- The last quarter falls in the next fiscal year

Note: Allocation of the first fiscal year depends on when the federal legislation was enacted and the assumed date of conformity

# Apportionment Factors

What share of the impact falls in Minnesota?

Common apportionment factors include:

- Population
- Number of income tax returns
- Amount of flow-through business income
- Amount of wage income
- Assumed 1% apportionment for corporate provisions

## Apportionment: Flow-Through Income 2015

### United States

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|                                     |                   |
|-------------------------------------|-------------------|
| Business Income from Sch. C:        | \$323,702,465,000 |
| Partnerships / S Corps from Sch. E: | \$579,491,578,000 |
| Total                               | \$903,194,043,000 |

### Minnesota

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|                                     |                  |
|-------------------------------------|------------------|
| Business Income from Sch. C:        | \$5,088,826,000  |
| Partnerships / S Corps from Sch. E: | \$12,068,869,000 |
| Total                               | \$17,157,695,000 |

Apportionment Rate: 1.9%

Source: IRS Statistics of Income, Table 2. Individual Income data by state



# Adjustment for Tax Rates

- Using new federal rates, microsimulation model was used to estimate average federal and state tax liability by income.
- Individual ratio was mostly between 36% and 31%.
- Ratio was adjusted for each provision based on the expected income of those affected.
- Corporate ratio was assumed to be 40%.

## Example Estimate

### Small business accounting method reform and simplification (beginning TY18)

#### Individuals

| Federal Fiscal Year | Federal Impact (billions) | Individual Portion | Adjusted for MN fiscal years | Apportion to Minnesota (\$000s) | Ratio of Fed to MN tax rates | Rounded  |
|---------------------|---------------------------|--------------------|------------------------------|---------------------------------|------------------------------|----------|
|                     |                           | 86%                |                              | 1.9%                            | 31.0%                        |          |
| 2018                | (7.60)                    | (6.54)             | (0.726)                      | (13,796)                        | (4,277)                      | (4,300)  |
| 2019                | (7.50)                    | (6.45)             | (10.647)                     | (202,263)                       | (62,702)                     | (62,700) |
| 2020                | (3.30)                    | (2.84)             | (3.741)                      | (71,067)                        | (22,031)                     | (22,000) |
| 2021                | (2.10)                    | (1.81)             | (2.064)                      | (39,209)                        | (12,155)                     | (12,200) |
| 2022                | (1.70)                    | (1.46)             | (1.548)                      | (29,407)                        | (9,116)                      |          |
| 2023                | (1.50)                    | (1.29)             | (1.333)                      | (25,323)                        | (7,850)                      |          |
| 2024                | (1.60)                    | (1.38)             | (1.355)                      | (25,731)                        | (7,977)                      |          |
| 2025                | (1.70)                    | (1.46)             | (1.441)                      | (27,365)                        | (8,483)                      |          |
| 2026                | (1.70)                    | (1.46)             | (1.462)                      | (27,773)                        | (8,610)                      |          |
| 2027                | (1.80)                    | (1.55)             | (1.527)                      | (28,998)                        | (8,990)                      |          |
| Total               | (30.50)                   | (26.23)            |                              |                                 |                              |          |

## Example Estimate (Cont.)

### Small business accounting method reform and simplification (beginning TY18)

#### C Corporations

| Federal Fiscal Year | Federal Impact (billions) | Corporate Portion | Adjusted for MN fiscal years | Apportion to Minnesota (\$000s) | Ratio of Fed to MN tax rates | Rounded |
|---------------------|---------------------------|-------------------|------------------------------|---------------------------------|------------------------------|---------|
|                     |                           | 14%               |                              | 1.0%                            | 40.0%                        |         |
| 2018                | (7.60)                    | (1.06)            | (0.118)                      | (1,182)                         | (473)                        | (500)   |
| 2019                | (7.50)                    | (1.05)            | (1.733)                      | (17,333)                        | (6,933)                      | (6,900) |
| 2020                | (3.30)                    | (0.46)            | (0.609)                      | (6,090)                         | (2,436)                      | (2,400) |
| 2021                | (2.10)                    | (0.29)            | (0.336)                      | (3,360)                         | (1,344)                      | (1,300) |
| 2022                | (1.70)                    | (0.24)            | (0.252)                      | (2,520)                         | (1,008)                      |         |
| 2023                | (1.50)                    | (0.21)            | (0.217)                      | (2,170)                         | (868)                        |         |
| 2024                | (1.60)                    | (0.22)            | (0.221)                      | (2,205)                         | (882)                        |         |
| 2025                | (1.70)                    | (0.24)            | (0.235)                      | (2,345)                         | (938)                        |         |
| 2026                | (1.70)                    | (0.24)            | (0.238)                      | (2,380)                         | (952)                        |         |
| 2027                | (1.80)                    | (0.25)            | (0.249)                      | (2,485)                         | (994)                        |         |
| Total               | (30.50)                   | (4.27)            |                              |                                 |                              |         |

## D. Other Issues

### Bonus Depreciation and Section 179 Expensing

- Minnesota requires 80% of the federal amount to be added back to taxable income in the first year
- The 80% addback may be deducted in equal parts over the next five years
- Our estimates are based on JCT estimates with adjustments for MN treatment
- Addbacks and subtractions are calculated for each tax year
- The result is compared to the revenue under normal depreciation schedules

# International Income

- Estimates were based on JCT estimates and additional information from JCT staff
- We assumed that businesses would respond to the federal law by actually repatriating some portion of deferred foreign income
- To the extent that foreign income is actually returned to the U.S., it would be taxable under current law
- Our estimate included some automatic revenue from actually repatriated income which was included in the state forecast
- The remainder requires legislative action

# Deduction for Qualified Business Income

- Estimates were based on JCT estimates
- Unable to model the provision accurately using the microsimulation model
- Details from Schedule K1 are not in our sample, including information on NAICS codes, value of property, and wages needed to calculate the deduction
- Major proposals did not conform to the deduction

# Minnesota did not adopt federal changes

Major proposals would have:

- Switched to AGI starting point for calculating taxable income
- Kept old federal standard deduction and exemptions
- Allowed most old federal itemized deductions
- Conformed to most business-related provisions (except 20% QBI deduction)
- Differed on treatment of foreign income