



# ESTIMATING THE IMPACT ON NEW JERSEY'S GROSS INCOME TAX OF OTHER STATES' TAXES ON NEW JERSEY RESIDENTS WORKING FROM HOME

## 1. Introduction

On October 19, 2020, the State of New Hampshire filed a bill of complaint in the U.S. Supreme Court against the Commonwealth of Massachusetts and its temporary rule imposing tax on nonresidents working from home (WFH) for in-state employers. This rule is similar to “convenience of employer” (COE)<sup>1</sup> rules in other states. If the Supreme Court rules to invalidate Massachusetts’s rule along with the COE rules in other states (collectively, Tax Rules), this might have future implications for the out-of-state income tax burden of New Jersey residents who telecommute to New York, Massachusetts, and Delaware.<sup>2</sup> Since New Jersey offers a credit for income taxes paid to other jurisdictions (COJ) within its Gross Income Tax (GIT), such a ruling might increase New Jersey’s tax revenue by decreasing the amount of this credit. The purpose of this analysis is to estimate the approximate size of this increase, given different possible full-time WFH rates.

To reach these estimates, the Office of Revenue and Economic Analysis (OREA) proceeded in two stages: calculations from New Jersey tax data (Section 2 below), and further calculations using survey data (Section 3). In the first stage, OREA determined the amount of COJ claimed by New Jerseyans for taxes paid to each of the three aforementioned states (Table 1), and then multiplied these amounts by ratios of line 15 to line 27 on the NJ-1040 (Table 2), to estimate the amount of COJ associated with taxes on employee compensation in each taxing state (Table 3). In the second stage, OREA multiplied these employee-compensation-driven COJ amounts by various WFH percentages derived from surveys, to estimate New Jersey’s annual GIT revenue increase under six scenarios. These scenarios are divided into estimates based on pre-COVID survey responses from 2019 (Table 4), and estimates based on post-COVID survey responses from 2020 (Table 5), which show higher WFH rates.

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<sup>1</sup> States with COE rules (Arkansas, Connecticut, Delaware, Nebraska, New York, and Pennsylvania) tax out-of-state residents performing out-of-state work for an in-state employer, unless that work *must* be performed out-of-state by necessity. For example, workers telecommuting because of the COVID-19 pandemic may still be taxed by their employer’s state, even when they are not physically present in that state. For a primer, see Tax Foundation Fiscal Fact No. 724. (<https://files.taxfoundation.org/20200812115626/Teleworking-Employees-Face-Double-Taxation-Due-to-Aggressive-%E2%80%9CConvenience-Rule%E2%80%9D-Policies-in-Seven-States.pdf>) Currently, it is not possible to determine precisely how much out-of-state work will be deemed “necessary” by the COE states’ tax authorities; therefore, OREA uses work performed at home for employers in these states as a proxy for the work that might be affected by this ruling.

<sup>2</sup> Pennsylvania also has a COE rule, but it does not affect New Jersey residents whose employers are located in Pennsylvania because of the Reciprocal Personal Income Tax Agreement between the two states. Connecticut also has a COE rule, but it only applies when the employee is a resident of another COE state, which New Jersey is not.



## 2. Calculations From New Jersey Tax Data

OREA constructed Table 1 below by joining data from the primary NJ-1040 returns for Tax Year 2018 with the data from the accompanying Schedule COJ, which reports credits for income taxes paid to other jurisdictions. The first column shows the number of returns with COJs where the stated jurisdiction matches the state in question. The second column shows the amount of COJ claimed for taxes paid to each state.

Table 1: Counts and Amounts of New Jersey COJ, by Taxing State

| State         | Returns with COJ | Amount of COJ   |
|---------------|------------------|-----------------|
| New York      | 397,589          | \$2,961,877,467 |
| Massachusetts | 9,683            | \$25,372,076    |
| Delaware      | 11,643           | \$23,108,455    |
| Total         | 418,915          | \$3,010,357,998 |

Source: Tax Year 2018 NJ-1040 Returns

Whereas Table 1 shows the *total* COJ associated with these states, only the COJ claimed for taxes on *employee compensation per se* can be affected by the Tax Rules. Since taxpayers filling out Schedule COJ do not report taxes on employee compensation separately from taxes on other income sources, it is necessary to proceed using a calculation based on population averages. To that end, Table 2 reports employee compensation (per line 15 of the NJ-1040) as a share of total income (per line 27), for all of the NJ-1040 returns that include COJs associated with each of the three taxing states at issue.

Table 2: NJ-1040 Line 15 as Share of Line 27 for New Jersey Schedule COJ Filers

| State         | Line 15          | Line 27          | Line 15 ÷ Line 27 |
|---------------|------------------|------------------|-------------------|
| New York      | \$68,915,815,302 | \$96,711,118,242 | 71.3%             |
| Massachusetts | \$3,032,190,686  | \$10,651,000,405 | 28.5%             |
| Delaware      | \$1,698,231,526  | \$5,296,318,493  | 32.1%             |

Source: Tax Year 2018 NJ-1040 Returns

By applying the employee compensation shares in Table 2 to the COJ amounts in Table 1, Table 3 estimates the COJ amounts that may be attributable to taxes on employee compensation in each taxing state.



Table 3: Estimated COJ for Tax on Employee Compensation

| State         | Amount of COJ   | Line 15 ÷ Line 27 | Est. COJ for Employee Compensation |
|---------------|-----------------|-------------------|------------------------------------|
| New York      | \$2,961,877,467 | 71.3%             | \$2,110,617,726                    |
| Massachusetts | \$25,372,076    | 28.5%             | \$7,223,075                        |
| Delaware      | \$23,108,455    | 32.1%             | \$7,409,582                        |
| Total         |                 |                   | \$2,125,250,383                    |

Source: Calculation from Tables 1 and 2

### 3. Further Calculations Using Survey Data

The last column of Table 3 summarizes what can be estimated using New Jersey returns data alone: the total amount of COJ resulting from taxes on New Jersey residents’ employee compensation levied by New York, Massachusetts, and Delaware. This comes to approximately \$2.11 billion for New York, \$7.22 million for Massachusetts, and \$7.41 million for Delaware, for a total of \$2.13 billion that is dominated by New York’s share. What remains to be estimated in this section is how much of these totals may be attributable to work performed *at home* by New Jerseyans with employers in these states. Since reported WFH rates differ among surveys, we present a range of GIT impact estimates that correspond to the range of survey results. Note that if interstate commuters are more likely than other workers to telecommute, that would not be captured by these estimates. Note also that these estimates assume full compliance, where taxpayers accurately report their WFH time.

Table 4 applies full-time WFH percentages based on 2019 (*pre-COVID*) behavior according to three surveys: the American Community Survey (ACS),<sup>3</sup> the American Time-Use Survey (ATUS),<sup>4</sup> and a working paper that provides WFH data for both the pre- and post-COVID economies.<sup>5</sup> These WFH rates range from 4.9% at the low end, to 19.2% at the high end; correspondingly, the estimates of total budgetary impact range from approximately \$104.14 million to \$408.96 million.

<sup>3</sup> ACS Table S0801: Commuting Characteristics by Sex, 2019 1-Year Estimates Subject Table for New Jersey. (<https://data.census.gov/cedsci/table?q=S0801&g=0400000US34&tid=ACSST1Y2019.S0801>)

<sup>4</sup> As reported in *Monthly Labor Review*, “Where did workers perform their jobs in the early 21st century?” (<https://www.bls.gov/opub/mlr/2019/article/where-did-workers-perform-their-jobs.htm>)

<sup>5</sup> OREA derived WFH percentages from the data underlying Brynjolfsson et al., “COVID-19 and Remote Work: An Early Look at US Data.” (<https://www.nber.org/papers/w27344>)



Table 4: Estimated Annual COJ Driven by Tax Rules, at 2019 Telecommuting Rates

| State         | Est. COJ for Employee Compensation | Estimated Impact                         |  |  |
|---------------|------------------------------------|--|--|--|
|               |                                    | Low Estimate:<br>4.9% WFH <sup>[1]</sup> | Middle Estimate:<br>11.4% WFH <sup>[2]</sup> | High Estimate:<br>19.2% WFH <sup>[3]</sup> |
| New York      | \$2,110,617,726                    | \$103,420,269                            | \$240,610,421                                | \$406,144,105                              |
| Massachusetts | \$7,223,075                        | \$353,931                                | \$823,431                                    | \$1,389,929                                |
| Delaware      | \$7,409,582                        | \$363,070                                | \$844,692                                    | \$1,425,819                                |
| Total         | \$2,125,250,383                    | \$104,137,269                            | \$242,278,544                                | \$408,959,853                              |

<sup>[1]</sup> Source for 4.9% work-from-home rate: American Community Survey (U.S. Census Bureau)

<sup>[2]</sup> Source for 11.4% work-from-home rate: American Time Use Survey (Bureau of Labor Statistics)

<sup>[3]</sup> Source for 19.2% work-from-home rate: Brynjolfsson et al., “COVID-19 and Remote Work: An Early Look at US Data”

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Table 5 applies full-time WFH percentages based on survey responses from 2020 (for which ACS and ATUS responses are not yet available). Again, these data come from three sources: Willis Towers Watson,<sup>6</sup> Gallup,<sup>7</sup> and the aforementioned Brynjolfsson et al working paper.<sup>8</sup> These WFH rates range from 44.0% at the low end, to 57.7% at the high end; accordingly, the estimates of total budgetary impact range from approximately \$935.11 million to \$1.23 billion.

Table 5: Estimated Annual COJ Driven by Tax Rules, at 2020 Telecommuting Rates

| State         | Est. COJ for Employee Compensation | Estimated Impact                          |  |  |
|---------------|------------------------------------|---|--|--|
|               |                                    | Low Estimate:<br>44.0% WFH <sup>[1]</sup> | Middle Estimate:<br>52.0% WFH <sup>[2]</sup> | High Estimate:<br>57.7% WFH <sup>[3]</sup> |
| New York      | \$2,110,617,726                    | \$928,671,799                             | \$1,097,521,218                              | \$1,218,432,315                            |
| Massachusetts | \$7,223,075                        | \$3,178,153                               | \$3,755,999                                  | \$4,169,788                                |
| Delaware      | \$7,409,582                        | \$3,260,216                               | \$3,852,983                                  | \$4,277,456                                |
| Total         | \$2,125,250,383                    | \$935,110,168                             | \$1,105,130,199                              | \$1,226,879,559                            |

<sup>[1]</sup> Source for 44.0% work-from-home rate: Willis Towers Watson

<sup>[2]</sup> Source for 52.0% work-from-home rate: Gallup

<sup>[3]</sup> Source for 57.7% work-from-home rate: Brynjolfsson et al., “COVID-19 and Remote Work: An Early Look at US Data”

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<sup>6</sup> Willis Towers Watson, “North American employers expect most furloughed workers to return by first quarter of 2021.” (<https://www.willistowerswatson.com/en-US/News/2020/08/north-american-employers-expect-most-furloughed-workers-to-return-by-first-quarter-of-2021>)

<sup>7</sup> Gallup, “Reviewing Remote Work in the U.S. Under COVID-19.” (<https://news.gallup.com/poll/311375/reviewing-remote-work-covid.aspx>)

<sup>8</sup> OREA derived WFH percentages from the data underlying Brynjolfsson et al., “COVID-19 and Remote Work: An Early Look at US Data.” (<https://www.nber.org/papers/w27344>)



#### 4. Notes on Interpretation

The estimates above were constructed so as to maximize simplicity and transparency. Here, it remains to discuss the simplifying assumptions that underlie them, and the ways in which they might be used to make inferences about the GIT impact of other states' Tax Rules in particular tax years.

First, these are annualized estimates, based on a mixture of data from 2018, 2019, and 2020. Tables 1–3 were constructed entirely on the basis of Tax Year 2018 data (the most recent complete year), with no adjustments for intervening growth or decline. Tables 4 and 5 were constructed by applying 2019 and 2020 survey data to the 2018 tax return data.

Thus, Table 4 is broadly suggestive of how much GIT revenue may have been lost to other states' Tax Rules in pre-COVID years such as 2018 or 2019, but it is not intended as a direct representation of either. For example, Table 4 includes a row dedicated to Massachusetts, but Massachusetts did not promulgate its rule until 2020. Therefore, estimates of the 2018 or 2019 impact of the Tax Rules should begin by deleting this row and reducing the total accordingly.

Similarly, Table 5 attempts to capture the impact of the COVID-19 pandemic by using survey results from 2020, but the pandemic's economic impact on WFH practices is dynamic rather than static. Thus, an estimate of the GIT impact in Tax Year 2020 would have to account for the fact that during the beginning of the year, the pandemic had not yet had its full effect on WFH rates — and Massachusetts had not yet promulgated its rule. Similarly, estimates for Tax Year 2021 and beyond would have to adjust for the possibility of decreasing WFH rates and changing economic conditions. Recent surveys suggest that WFH rates in 2021 and beyond will fall somewhere between those in 2019 and those in 2020,<sup>9</sup> but it is not possible to predict them with any precision at this time.

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**Prepared By:**

Martin Poethke  
Director, Office of Revenue and Economic Analysis  
New Jersey Department of the Treasury

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<sup>9</sup> For example, see Kristen Senz, “How Much Will Remote Work Continue After the Pandemic?” *Working Knowledge* (<https://hbswk.hbs.edu/item/how-much-will-remote-work-continue-after-the-pandemic>); Megan Brenan, “COVID-19 and Remote Work: An Update” *Gallup* (<https://news.gallup.com/poll/321800/covid-remote-work-update.aspx>); and Ezequiel Minaya, “CFOs Plan To Permanently Shift Significant Numbers Of Employees To Work Remotely — Survey” *Forbes* (<https://www.forbes.com/sites/ezequielminaya/2020/04/03/cfos-plan-to-permanently-shift-significant-numbers-of-employees-to-work-remotely---survey/?sh=5bf5dfd9575b>).