

## Projecting Economic Impacts of Legalizing Marijuana

## in Connecticut

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### **Executive Summary**

Core findings: CCEA projects, depending on which tax regime Connecticut adopts and how the state chooses to spend those new revenues, legalization generating direct state tax revenues growing from the range of \$35-\$48 million in the first year of operations to \$188-\$223 million in year five. Including indirect and induced impacts, CCEA predicts total state tax revenues reaching \$235-\$314 million in the fifth year. Aggregate new state tax revenues over five years range from \$784 to \$952 million (See Table 6). In addition, direct local tax revenue is projected at \$71 million over five years, with \$21 million in year five alone. New employment expands from the range of 5,669-7,418 in year one of operations to 10,424-17,462 in year five. Also, in year five, state GDP grows between \$953 million to \$1,737 million, depending on the scenario. Higher impacts result if the state chooses to expand or preserve services in the face of impending fiscal challenges (see Table E-1 below).

To establish a range of likely economic impacts and fiscal outcomes, this report considers two tax systems and then evaluates two scenarios: one in which the state spends all new net revenues to expand or preserve government services that would otherwise be cut in the face of impending fiscal deficits and one in which it saves all net new revenue (i.e., puts it into a rainy day fund).

A multiple tax policy (MTP) imposes both percentage and per unit taxes; the alternative, a percentage tax policy (PTP), imposes only percentage excise or sales taxes. As currently structured, MTP generates more government revenues. After the first two years, it would result in higher prices than the PTP approach, but given the typical pattern of falling prices as marijuana becomes more readily available, MTP would tend to limit future growth of the legal marijuana market and weaken resulting economic development. MTP taxes become high relative to the pre-tax price, forcing relatively high retail prices; this likely translates into a wider gap between prices in the legal market versus the illegal one. Consumers would both be less likely to buy in-state legal marijuana and less likely to move consumption to legal purchases.

Two scenarios then consider how the state spends the new tax revenues to project the range of likely outcomes. In one scenario, CCEA assumes the state chooses to save all of the new revenues, spending nothing on new state services or maintaining current services, thus minimizing impacts in employment and GDP. In the second scenario, CCEA assumes the state chooses to spend all new revenues on expanded state services — or on preserving services that would otherwise be cut, thereby maximizing economic impacts. Realistically, the latter scenario is closer to the likely outcome, given large deficits that Connecticut faces in the next few fiscal years. Providing both scenarios permits full understanding of the range of potential outcomes and clearly establishes that even the pessimistic scenario for legalization — where the state absorbs all new revenues — is a solid choice in terms of job creation, growth in state GDP, and benefits to Connecticut's fiscal health.

Table E-1 summarizes the impacts of legalization under the MTP, including fixed taxes per gram. In year zero, cannabis businesses would perform necessary start-up preparations, but cannabis distribution would not begin until year one. The final line provides annual revenue impacts if the state spends the new revenues to preserve or create new services, which generate the incremental revenues shown on that line.



No matter which tax regime the state chooses and no matter how it spends the new revenues, legalization will generate significant job creation, strong growth in GDP, and hundreds of millions in new tax revenues. In the face of the challenge of recovering from the COVID-19 pandemic, legalization offers a path to a stronger recovery.

See the full report below for a detailed delineation of the CCEA analysis.



Table E-1: Summary Annual Economic Impacts of Connecticut Legalizing Marijuana,MTP

| Vear of Operations  | Start un | 1     | 2      | 2       | 4       | E       |
|---|----------|-------|--------|---------|---------|---------|
|   | Start-up | L     | 2      | 3       | 4       | 5       |
| Employment impact (new or preserved jobs)/years           | 2021     | 2022  | 2023   | 2024    | 2025    | 2026    |
| Government saves all net tax revenues*                    | 1,869    | 5,686 | 7,212  | 8,358   | 8,440   | 10,424  |
| Government spends all tax net revenue                     | 2,111    | 7,238 | 10,242 | 12,879  | 14,151  | 17,462  |
|   |          |       |        |         |         |         |
| Added GDP (Millions Current \$)                           |          |       |        |         |         |         |
| Government saves all net tax revenues                     | 189.9    | 497.3 | 620.0  | 718.3   | 707.7   | 953.2   |
| Government spends all tax net revenue                     | 213.7    | 653.0 | 932.4  | 1,197.2 | 1,327.9 | 1,737.2 |
|   |          |       |        |         |         |         |
| Added Personal Disposable<br>Income (Millions Current \$) |          |       |        |         |         |         |
| Government saves all net tax revenues                     | 127      | 331   | 432    | 522     | 542     | 729     |
| Government spends all tax net revenue                     | 142      | 437   | 653    | 872     | 1,015   | 1,340   |
|   |          |       |        |         |         |         |
| Fiscal Impacts if Revenue Saved<br>(Millions Current \$)  |          |       |        |         |         |         |
| Direct state taxes  |          | 35.20 | 86.70  | 139.10  | 185.10  | 223.10  |
| Indirect state taxes                                      | 9.01     | 21.92 | 27.82  | 32.77   | 32.86   | 47.69   |
| Total state revenues                                      | 9.01     | 57.12 | 114.52 | 171.87  | 217.96  | 270.79  |
| State expenditures  | 1.27     | 3.99  | 6.22   | 8.04    | 8.98    | 10.89   |
| Net state savings   | 7.74     | 53.13 | 108.30 | 163.83  | 208.98  | 259.90  |
| Gross fiscal impacts if revenue is                        | 10.12    | 64.42 | 129.67 | 195.71  | 249.74  | 313.82  |
| spent/jobs preserved                                      |          |       |        |         |         |         |

Note: \*These are tax revenues generated by the project net of any state government expenditures required to bring the initiative to fruition. Alternatively, the following line projects what would happen if governments rather than saving these funds spent them either on new initiatives or preservation of existing operations which would have otherwise had to be cut.



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### Projecting Economic Impacts of Legalizing Marijuana in Connecticut

#### Introduction

Connecticut citizens now have easy access to legal marijuana in neighboring states as well as an active illicit market in the state; legalization would significantly reframe cannabis consumption, delivering multiple benefits. CCEA projects the dynamic economic impacts of legalization and development of cannabis production and retailing within Connecticut will:

- divert illicit purchases of marijuana to licit markets;
- transfer out-of-state purchases into the state; and
- impose quality controls in markets for adult marijuana consumption.

In this report, CCEA examines two approaches to taxation of adult marijuana sales in wholesale and retail markets. Gov. Ned Lamont's 2020 bill, SB 16, proposed fixed taxes per gram at \$1.25 on dry flower and \$0.50 on trim,<sup>1</sup> in addition to the usual 6.35% state sales tax and municipal tax rates of 3%. An alternative approach is a straightforward percentage tax that combines state sales tax with a special 20% tax at retail and a 3% municipal tax where sales occur, for an aggregate percentage tax of 29.35%. To project dynamics in the cannabis market (adult consumption and medical consumption) of the two tax frameworks, CCEA assumes that per capita Connecticut retail market growth from legalization over the next five years will grow at the same pace as Colorado's markets did from legalization there.

Proceeding from this base, CCEA developed expansion paths of wholesale and retail sales for these products under the two differing taxation frameworks. Fixed taxes per gram mean that effective percentage tax rates on marijuana rise with falling prices and vice versa. That means that the lower the price, *the higher tax burden* that impacts consumer behavior: it reduces demand relative to a simple percentage tax. Because this tax proposal contains a mix of fixed and variable tax rates, CCEA refers to it as the Multiple Tax Proposal (MTP).

The alternative tax structure would impose the same 6.35% state and 3% municipal sales taxes, supplemented by a further 20% tax on retail sales. In this case, effective tax rates are a constant share of retail prices — i.e., taxes are *a constant relative burden*. As with all set percentage sales tax rates, government revenues bear the brunt of variations in final prices. CCEA refers to this tax system as Percentage Tax Proposal (PTP).

In assessing market behavior since 2014, CCEA drew upon actual market experience in Colorado. Basically, Connecticut residents are assumed to participate in licit marijuana consumption at the same pace as Coloradoans have while expecting the same rate of reduction in prices as more retail outlets become available. During the first five years of operations,

<sup>&</sup>lt;sup>1</sup> SB 16 also proposed a \$0.28 tax per gram of wet cannabis, which is excluded from this study due to data shortcomings.



market prices of cannabis declined in Colorado; CCEA assumes Connecticut prices will follow the same dynamic.<sup>2</sup>

The two tax frameworks on Connecticut's marijuana market outlined above have different implications for state and local government revenues raised directly from marijuana sales, in addition to pricing pressures imposed on consumers, as noted in Table 1.

| Year of Operations                  | 1     | 2     | 3     | 4     | 5     |
|-------------------------------------|-------|-------|-------|-------|-------|
| РТР                                 |       |       |       |       |       |
| Connecticut retail sales, pre-taxes | 180.7 | 336.9 | 496.6 | 631.0 | 713.2 |
| 20% ad valorem (percentage) tax     | 36.1  | 67.4  | 99.3  | 126.2 | 142.6 |
| 6.35% sales tax                     | 11.5  | 21.4  | 31.5  | 40.1  | 45.3  |
| State excise and sales tax revenues | 47.6  | 88.8  | 130.9 | 166.3 | 187.9 |
| 3% local tax                        | 5.4   | 10.1  | 14.9  | 18.9  | 21.4  |
| Total direct cannabis tax revenue   | 53.0  | 98.9  | 145.8 | 185.2 | 209.3 |
| Effective total tax rate (%)        | 29.35 | 29.35 | 29.35 | 29.35 | 29.35 |
| МТР                                 |       |       |       |       |       |
| Connecticut retail sales, pre-taxes | 180.7 | 336.9 | 496.6 | 631.0 | 713.2 |
| Bud and trim excise tax revenues    | 23.7  | 65.3  | 107.6 | 145.0 | 177.8 |
| 6.35% sales tax                     | 11.5  | 21.4  | 31.5  | 40.1  | 45.3  |
| State excise and sales tax revenues | 35.2  | 86.7  | 139.1 | 185.1 | 223.1 |
| 3% local tax                        | 5.4   | 10.1  | 14.9  | 18.9  | 21.4  |
| Total direct cannabis tax revenues  | 40.6  | 96.8  | 154.0 | 204.0 | 244.5 |
| Total effective tax revenue (%)     | 22.5  | 28.7  | 31.0  | 32.3  | 34.3  |

Table 1: Direct Taxes from Licit Connecticut Marijuana Sales, Years 1-5(Millions of Current \$)

Note: This table shows no consumer reaction to higher prices in the MTP case relative to PTP after year two. The



<sup>&</sup>lt;sup>2</sup> Colorado's pre-legalization use rate was lower than the current situation in Connecticut. In addition, Connecticut has large populations near its borders with New York and Rhode Island, where adult-use marijuana is not yet legal. Thus, modeling on the basis of the Colorado experience is conservative relative to what the situation is likely to be due to larger in-state demand and more demand from border residents.

literature suggests that likely reactions would be \$4,000 - too small to show in the table.

Effective tax rates under the PTP alternative remain constant at 29.35% of pre-tax sales prices. The MTP system results in a lower effective tax rate the first two years — the time when legal cannabis prices have been highest and when consumers are transitioning to new stores from the illicit market or out-of-state stores. After that, PTP imposes the lower effective tax rate. In the first two years, the proposed MTP rates are best positioned to encourage movement of consumption from illicit to licit markets or discourage out-of-state purchases. In subsequent years, PTP holds the advantage over MTP and can be expected to result in fewer out-of-state purchases and thus more economic growth than with MTP.

The MTP approach raises more revenues for the state government, amounting to \$139.1 million in year three to \$223.1 million in year five. For the most price-sensitive consumers, the higher tax rate may result in more out-of-state or illicit purchases.

In addition to adult marijuana retail sales are medical marijuana sales, which swell producer revenues as noted in Table 2, which includes pre-tax sales projection by year. Connecticut's 2021 demand for medical marijuana is expected to be slightly above a third of sales of its adult marijuana consumption. What qualifies as medical marijuana is highly controlled by the legislature, so changes can occur. Legal medical cannabis sales are already established in Connecticut. Based on projections from Colorado, which also had a medical cannabis program before legalization, we anticipate an initial surge in medical cannabis sales, followed by a decrease in later years.

Table 2: Retail, Medical, and Connecticut Expected Pre-Tax Sales(Millions Current \$)

| Year of Operations          | 1     | 2     | 3     | 4     | 5     |
|-----------------------------|-------|-------|-------|-------|-------|
|                             |       |       |       |       |       |
| Connecticut adult-use sales | 180.7 | 336.9 | 496.6 | 631.0 | 713.2 |
| Connecticut medical sales   | 119.7 | 147.7 | 146.7 | 148.6 | 118.6 |
| Total marijuana sales       | 300.4 | 484.5 | 643.3 | 779.7 | 831.8 |

CCEA's analysis looks at market reactions not only directly but also through the general dynamic equilibrium model REMI (Regional Economic Models, Inc.)<sup>3</sup> provides — one that projects the future impacts from each tax structure. This approach broadens the analysis to include impacts of Connecticut start-up costs prior to marijuana production as well as

<sup>&</sup>lt;sup>3</sup> See the Appendix for an explanation of REMI.



operational linkages throughout the Connecticut economy. It is, therefore, a better, more holistic approach upon which to base emerging policies.

This analysis begins with estimates of the capitalization of the industry in Connecticut followed by operations. Because marijuana production and consumption have been legalized in Canada, four large producers, capitalized at over \$18.5 billion, are traded publicly on the Toronto Stock Exchange. From their public information, CCEA has estimated an industry capital output ratio of 1.2587 relative to pre-tax industry sales. This is a conservative approach because it only includes investments by successful firms that have experienced rapid growth. Capital expenditures by others who may have invested unwisely and failed are excluded.

Based on the last line of Table 2 and using the above ratio, annual expected capitalization is significant, as Table 3 shows. Conservatively, CCEA has assumed perfect foresight by investors — that is, the new processing facilities are finished just in time to meet expanding market demands. CCEA allocated half the capitalization to plants and buildings, i.e., "non-residential construction," and the other half to machinery and equipment. Because the numerically dominated years refer to operations, year zero (start-up) refers to investments made during the year prior to initial production.

|                              |          | •     |      |      |      |       |
|------------------------------|----------|-------|------|------|------|-------|
| Year of Operations           | Start-up | 1     | 2    | 3    | 4    | 5     |
|                              |          |       |      |      |      |       |
| Non-residential construction | 94.5     | 115.9 | 99.9 | 85.8 | 32.8 | 133.3 |
| Machinery and equipment      | 94.5     | 115.9 | 99.9 | 85.8 | 32.8 | 133.3 |

Table 3: Capitalization of the Connecticut Marijuana Industry, Years 0-5 (Millions \$)

Note: Aside from the start-up year, the above are simply half of the capital/output ratio times the prior differences in output. Start-up is approximated by half the initial year's output, implying that the other half has already been invested. Investment in the fifth year is based on demand expanding during the sixth year at the annual average compound rate in the previous five years.

Similarly, Table 4 delineates the direct impacts into the REMI model operation. This table traces the immediate sector impacts of marijuana consumption in each case. Because manufacturing and processing of marijuana has not yet been integrated as an industry in REMI, CCEA approximates those activities as a mixture of existing industries:

- Electricity power generation (15%)
- Soybean and other processing (9%)
- Pharmaceutical preparations (14%)
- Greenhouse, nursery, and floriculture operations (18%)
- Professional, technical, and scientific services (16%)



- Wholesale margins (18%)
- Other retail margins (10%)

In Connecticut, pharmaceuticals dominate the chemical industry, so parallels with marijuana are stronger there than they would be in states with significant fossil fuel refining.

## Table 4: Sector Allocation of Marijuana Industry Operations Expenditures(Millions \$)

| Year of Operations                                    | 1     | 2     | 3     | 4     | 5     |
|---|-------|-------|-------|-------|-------|
| РТР   |       |       |       |       |       |
| Utilities   | 45.1  | 72.7  | 96.5  | 116.9 | 124.8 |
| Manufacturing and processing                          | 123.2 | 198.7 | 263.8 | 319.7 | 341.0 |
| Professional and technical services                   | 48.1  | 77.5  | 102.9 | 124.7 | 133.1 |
| Retail margins  | 54.1  | 87.2  | 115.8 | 140.3 | 149.7 |
| Wholesale margins                                     | 30.0  | 48.5  | 64.3  | 78.0  | 83.2  |
| Total   | 300.4 | 484.5 | 643.3 | 779.7 | 831.8 |
| State and local government cannabis tax revenue — PTP | 53.0  | 98.9  | 145.8 | 185.2 | 209.3 |
| State and local government cannabis tax revenue — MTP | 40.4  | 96.4  | 153.1 | 204.0 | 244.5 |

State and local revenues are the direct wholesale and direct retail taxes, as well as, in the MTP case, per unit charges accruing directly to the state and local governments. They do not include any indirect and induced impacts generated later in REMI. Because retail employees have special product knowledge, they enjoy wages better than most others in retail. To accommodate this reality, the CCEA analysis assumed a 12% increment to their average wages.

Total annual government revenues are higher in the MTP case due to the higher levels of taxation — the amounts paid by consumers. Prior to higher taxes, the opposite is true of revenues accruing to both manufacturing and processing and retail margins because the modeling takes into account the contraction of demand caused by the higher taxes.

#### First Five Years of Operations

This section utilizes the most recent version of CCEA's forecasting model of Connecticut, REMI v. 2.4.1, to establish total economic impacts on the state under both PTP and MTP with a parallel variation on each scenario. Usage of this version of REMI assumes a snapback recovery



within two years. CCEA's own outlook for a slower recovery over 10 years would allow more room in Connecticut for slightly larger impacts and implies that a larger number of the jobs generated by the state spending its incremental revenues would preserve economic activity rather than destroy it through otherwise necessary expenditure cuts. This again underlines the conservative nature of the CCEA projections.

Colorado has set an interesting precedent by earmarking certain marijuana revenues for specific expenditures such as building schools. Without presuming a shift in how the Connecticut Legislature might spend these new revenues, CCEA ran two scenarios to establish the full range of possible impacts — a situation where the state saves all of its new revenues and the more likely situation where the state spends all its incremental revenues for new or preserved services that would otherwise be eliminated by budget cuts. CCEA based state preserved expenditure patterns on its current annual shares.

This section is organized to present the differences between the two tax systems — PTP and MTP — as if all new revenues are saved and none are spent on services, or alternatively where revenues are spent on either new services or services preserved from being cut were it not for the cannabis tax revenue. The first of these is the most conservative set of scenarios that CCEA developed.

#### PTP and MTP Employment Impacts: Revenues Saved

Job opportunities in the marijuana industry, its supply chain, and induced demands from improved incomes are captured for both residents of Connecticut and non-residents. This distinction is important because non-residents pay taxes in the state but demand fewer state and local services than do residents, as well as having different expenditure patterns by locale. Chart 1 illustrates growth in residential and total employment for each of the cases with no incremental matching of state and local government expenditures under each tax system. The differences between total and residential employment are incremental jobs filled by non-residents.







Connecticut jobs under PTP rise from 1,825 during start-up to 10,459 in the fifth year of operations. Of these jobs, Connecticut residents hold 1,729 during the initial year of start-up preparations and 9,830 in the fifth year of operations. During the first two operating years, taxes are generally more onerous under the PTP system than the MTP system, while over the last three years, the opposite is true. This explains why the employment impacts are slightly dissimilar between the two taxation systems, even if governments save rather than spend the additional revenues.

#### Revenues Spent to Preserve or Expand Programs and Jobs

Should Connecticut follow Colorado's pattern and spend some or all of its incremental tax revenues accruing from the marijuana industry and trade, job impacts could be considerably larger. Chart 2 reveals the implications of spending all incremental state revenues.





## Chart 2: Total Job Impacts With and Without State and Local Government Matching Expenditures (#)

In the PTP case, by 2026 there would be an additional 16,002 jobs in the Connecticut economy, well above the 10,459 without matching spending. Because state revenues from the MTP case are higher, spending those revenues has a larger new and preserved job impact than in the PTP case — from 10,244 jobs if not spent to 17,462 jobs with spending all incremental (the sum of new and preserved) revenues. Spending all the additional revenue illustrates the importance of committing some state and local government expenditures from those revenues generated by shifting from the illicit to licit marijuana trade. The results are based on the expansion of general government expenditures or, more likely, a smaller contraction of expenditures than would otherwise be necessitated due to falling state revenue and thus budget cuts. It is possible to tailor those expenditures to encourage further growth of the economy.

#### **Income Impacts**

Economists use several metrics to measure income impacts. Gross Domestic Product (GDP) measures economic growth prior to depreciation. Because only the sum of the value added at each stage in the supply chain through to final purchase is included, it avoids double counting. It is not a perfect measure because environmental costs or benefits are frequently overlooked. Growth in personal income measures how individuals in society are faring, and net of personal income presents a measure of the increased freedom of consumers generated by growth.

#### GDP

Chart 3 captures incremental impacts on current-dollar GDP. By 2025, impacts in the MTP case nearly double from state and local governments matching spending with their marijuana trade tax collections. Over time, annual GDP increases are disproportionate to employment because



of ongoing inflation and improving labor productivity. The gains are significant, reaching \$953 to \$957 million in 2026 without matching and \$1,574 to \$1,737 million with matching expenditures. In all but the first year of operations, with spending of the revenues by the state government, current-dollar annual GDP impacts exceed \$900 million. Because the MTP raises more taxes than the percentage tax policy case, matching spending delivers more impacts so that the larger GDP impacts come from the MTP case rather than the percentage tax scenario.



### Chart 3: GDP Impacts with and without Matching State and Local Government Expenditures (Millions Current \$)

#### DPI

Because disposable personal income (DPI) is a subset of personal income (PI) and PI is a subset of GDP, their increments are smaller than those in GDP, and DPI is smaller than PI, with the difference being personal income taxes. For purposes of this study, DPI is the relevant number because it provides the basis for incremental household consumption. If Connecticut saves the new tax revenue instead of spending it, the legalization of marijuana is projected to result in an increase in disposable personal income of \$722 to \$729 million in 2026 depending on the tax method. DPI more than doubles results from the first year of operations. Legalizing marijuana adds not only to choices concerning its consumption but also generally expands consumer choice by as much as 0.3% in 2025, inclusive of matching government expenditures. With government using these funds to preserve its expenditures by 2026, annual DPI impacts swell to \$1,209 million to \$1,340 million — over a billion dollars a year for Connecticut citizens to exercise freedom of choice over their expenditures.



# Chart 4: Disposable Personal Income Impacts with and without Matching State and Local Government Expenditures (Millions Current \$)



#### **Fiscal Considerations**

As Chart 5 indicates, by 2026 legalization of marijuana will generate additional income taxes of \$29 to \$55 million to the state depending on the chosen tax structure and whether or not money generated from those new revenues are spent by governments. Of the personal income taxes raised, 23.5% go to the state government and the remainder goes to the federal government.





#### Chart 5: Marijuana Impacts on Personal State Income Taxes (Millions Current \$)

In addition to personal income tax revenues, CCEA has also estimated increased sales tax revenues arising from incremental personal consumption and other incremental state taxes accruing from heightened production to meet cannabis sales,<sup>4</sup> summarized in Table 5. Personal income taxes in this table pertain to those accruing from earnings of an expanded labor force and increased output attributable to increased economic activity. Similarly, sales taxes exclude those collected on marijuana but include them on personal consumption from incremental wages being earned by the expanded labor force.

<sup>&</sup>lt;sup>4</sup> In previous work, CCEA established that rather than putting selected items under sales tax a 3.9% rate on personal consumption would raise an equal amount of revenues, so that rate was applied to incremental personal consumption, identified in REMI to estimated state sales taxes. The two main sources of state revenues account for 66.6% of revenues raised by the state, so that information was used to estimate incremental state revenues.



| МТР                                     | 2021  | 2022  | 2023  | 2024  | 2025  | 2026  |
|---|-------|-------|-------|-------|-------|-------|
| Saved surpluses                         |       |       |       |       |       |       |
| Personal income tax                     | 5.18  | 13.06 | 16.95 | 20.19 | 20.58 | 29.52 |
| Sales taxes from additional consumption | 0.85  | 1.62  | 1.69  | 1.77  | 1.43  | 2.43  |
| Other state revenues                    | 2.97  | 7.23  | 9.18  | 10.81 | 10.84 | 15.74 |
| Total state revenues                    | 9.01  | 21.92 | 27.82 | 32.77 | 32.86 | 47.69 |
|   |       |       |       |       |       |       |
| Spent surplus                           |       |       |       |       |       |       |
| Personal income tax                     | 5.82  | 17.25 | 25.72 | 34.03 | 39.09 | 54.76 |
| Sales taxes from additional consumption | 0.96  | 2.32  | 3.07  | 3.90  | 4.22  | 6.02  |
| Other state revenues                    | 3.34  | 9.64  | 14.18 | 18.68 | 21.33 | 29.94 |
| Total state revenues                    | 10.12 | 29.22 | 42.97 | 56.61 | 64.64 | 90.72 |
|   |       |       |       |       |       |       |
| РТР                                     |       |       |       |       |       |       |
| Saved surpluses                         |       |       |       |       |       |       |
| Personal income tax                     | 5.40  | 13.02 | 16.92 | 20.16 | 20.56 | 29.22 |
| Sales taxes from additional consumption | 0.80  | 1.62  | 1.68  | 1.76  | 1.42  | 2.49  |
| Other state revenues                    | 3.05  | 7.21  | 9.16  | 10.80 | 10.83 | 15.62 |
| Total state revenues                    | 9.25  | 21.86 | 27.76 | 32.72 | 32.81 | 47.33 |
|   |       |       |       |       |       |       |
| Spent surplus                           |       |       |       |       |       |       |
| Personal income tax                     | 6.04  | 17.74 | 25.15 | 32.28 | 35.94 | 49.28 |
| Sales taxes from additional consumption | 0.91  | 2.41  | 2.97  | 3.62  | 3.74  | 5.34  |
| Other state revenues                    | 3.42  | 9.92  | 13.85 | 17.68 | 19.54 | 26.90 |
| Total state revenues                    | 10.37 | 30.07 | 41.97 | 53.59 | 59.22 | 81.52 |

# Table 5: Incremental Indirect State Revenues Accruing from CannabisProduction (Millions Current \$)

Note: REMI-based estimates excluding direct taxes on marijuana growth and consumption.



Combining the information on direct taxes paid by the integrated marijuana industry in Table 1 and the incremental state revenues estimated in REMI, yields total incremental state revenues in Table 6. While the tax regimes above have little impact on comparative impacts prior to spending the surpluses, expenditures of the surpluses do have an impact because inclusion of the taxes collected under each tax regime do differ.

|                           |        |        |        |        |        |        | -         |
|---------------------------|--------|--------|--------|--------|--------|--------|-----------|
|                           | 2021   | 2022   | 2023   | 2024   | 2025   | 2026   | Total     |
|                           | Start- | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Years 1-5 |
|                           | Up     |        |        |        |        |        |           |
| МТР                       |        |        |        |        |        |        |           |
| Direct                    |        | 35.20  | 86.70  | 139.10 | 185.10 | 223.10 | 667.60    |
| Indirect without spending | 9.01   | 21.92  | 27.82  | 32.77  | 32.86  | 47.69  | 163.06    |
| surplus                   |        |        |        |        |        |        |           |
| Total                     | 9.01   | 57.12  | 114.52 | 171.87 | 217.96 | 270.79 | 830.66    |
|                           |        |        |        |        |        |        |           |
| Indirect w/ spending      | 10.12  | 29.22  | 42.97  | 56.61  | 64.64  | 90.72  | 284.15    |
| surplus                   |        |        |        |        |        |        |           |
| Total                     | 10.12  | 64.42  | 129.67 | 195.71 | 249.74 | 313.82 | 951.75    |
| РТР                       |        |        |        |        |        |        |           |
| Direct                    |        | 47.6   | 88.8   | 130.9  | 166.3  | 187.9  | 621.50    |
| Indirect without spending | 9.25   | 21.86  | 27.76  | 32.72  | 32.81  | 47.33  | 162.48    |
| surplus                   |        |        |        |        |        |        |           |
| Total                     | 9.25   | 69.46  | 116.56 | 163.62 | 199.11 | 235.23 | 783.98    |
|                           |        |        |        |        |        |        |           |
| Indirect w/spending       | 10.37  | 30.07  | 41.97  | 53.59  | 59.22  | 81.52  | 266.37    |
| surplus                   |        |        |        |        |        |        |           |
| Total                     | 10.37  | 77.67  | 130.77 | 184.49 | 225.52 | 269.42 | 887.87    |

Table 6: Incremental State Revenues Accruing Directly and Indirectly fromCannabis Sales (Millions Current \$)

Legalizing marijuana generates significant additional state revenues annually no matter which scenario or variation is chosen. Aggregate state revenues will vary depending on the tax regime adopted and whether initial surpluses are spent or saved to pay debt down. Spending all of the additional revenues will stimulate more growth, increasing total employment and incomes in the state. At a minimum, in year five of operations incremental state revenues will reach \$235 million but could reach \$314 million.

Table 7 contains the net surpluses generated under each tax scheme prior to any decision to spend them. In the fifth year of operations, these net revenues reach between \$224 and \$260



million. When those revenues are spent, annual surpluses remaining over and above the direct taxes paid by the industry are generally positive but under \$4 million.

|                        | 2021 | 2022  | 2023   | 2024   | 2025   | 2026   |
|------------------------|------|-------|--------|--------|--------|--------|
| МТР                    |      |       |        |        |        |        |
| Increased revenues     | 9.01 | 56.92 | 114.12 | 170.87 | 217.96 | 270.79 |
| Increased expenditures | 1.27 | 3.99  | 6.22   | 8.04   | 8.98   | 10.89  |
| Surplus                | 7.74 | 52.93 | 107.90 | 162.83 | 208.98 | 259.90 |
| РТР                    |      |       |        |        |        |        |
| Increased revenues     | 9.25 | 69.46 | 116.56 | 163.62 | 199.11 | 235.23 |
| Increased expenditures | 1.25 | 3.97  | 6.21   | 8.02   | 8.97   | 10.90  |
| Surplus                | 8.00 | 65.48 | 110.36 | 155.60 | 190.15 | 224.34 |

Table 7: State Surpluses (Millions Current \$)

Over the initial start-up year and the first five years of operations, the integrated marijuana industry will generate \$622 to \$669 million in direct tax revenue for the state, depending on the tax regime. Adding in additional revenue from induced and indirect activities raises aggregate state revenues over the six years to \$793 to \$840 million. If the state either uses these new revenues to expand services or to curtail future cutbacks arising from extraordinary expenditures during COVID-19, CCEA estimates the total state revenue impacts for these six years will reach \$898 to \$962 million.

#### Conclusion

This analysis shows that legalization of marijuana will deliver significant benefits to Connecticut in terms of jobs, household income, and both state and local revenues. The analysis is also conservative as CCEA worked on the basis of modest assumptions about the likely pattern of growth. Further, the study does not include other benefits such as those that would result from bringing an illicit business, including quality control over consumables, within the purview of the state. In the face of the staggering disruption the COVID-19 pandemic has caused, this new industry would also enhance the path to economic recovery.



## **Appendix: Regional Economic Models Inc. (REMI)**

The Connecticut Center for Economic Analysis utilizes REMI's general equilibrium model of the Connecticut economy, PI<sup>+</sup>. That model simulates the current economy against which agents of change, such as this initiative, impact Connecticut's economy and generate policy insights through, realistic year-by-year estimates of statewide regional effects.

A wide range of policy variables allows CCEA to represent the policy to be evaluated, while the explicit structure in the model helps the user to interpret the predicted economic and demographic effects.

PI<sup>+</sup> is used by government agencies (including most U.S. state governments), consulting firms, non-profit institutions, universities, and public utilities. It is Connecticut's standard for assessing development projects.

Model simulations estimate comprehensive economic and demographic effects in wide-ranging initiatives, such as: economic impact analysis; policies and programs for economic development, infrastructure, environment, energy and natural resources; and state and local tax changes. Articles about the model equations and research findings have been published in professional national journals, including the American Economic Review, The Review of Economic Statistics, the Journal of Regional Science, and the International Regional Science Review.

