

ECONOMIC IMPACTS OF REDUCING THE MARYLAND CORPORATE INCOME TAX RATE



DEPARTMENT OF LEGISLATIVE SERVICES 2013

Economic Impacts of Reducing the Maryland Corporate Income Tax Rate

**Department of Legislative Services
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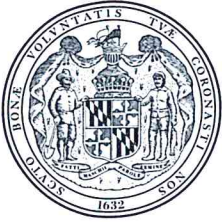
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DEPARTMENT OF LEGISLATIVE SERVICES
OFFICE OF POLICY ANALYSIS
MARYLAND GENERAL ASSEMBLY

Karl S. Aro
Executive Director

Warren G. Deschenaux
Director

October 21, 2013

The Honorable Thomas V. Mike Miller, Jr., President of the Senate
The Honorable Michael E. Busch, Speaker of the House
Members of the Maryland General Assembly

Ladies and Gentlemen:

In recent years, numerous legislative proposals have sought to reduce Maryland's corporate income tax (CIT) rate of 8.25%. Of particular interest to this discussion are the potential economic and budgetary impacts such a tax rate reduction might have. In an effort to illuminate these issues, the Department of Legislative Services has prepared this report which provides background information on Maryland's CIT, reviews methods of affording a CIT reduction, surveys available economic literature for consensus findings, and conducts a comparative economic impact analysis of multiple policy alternatives using the Regional Economic Models, Inc. (REMI) model.

As an illustrative example, the economic impact analysis seeks to determine the net effect on Maryland's economy of reducing the CIT rate from 8.25% to 7.25%, effective beginning in tax year 2014. Holding other factors constant, this equates to a tax decrease for businesses and a revenue loss for government beginning in fiscal 2015. Our analysis finds that a CIT rate reduction – absent offsets – of this magnitude would have positive effects on both employment and income. As shown in **Exhibit 3**, employment increases by 1,226 in fiscal 2015, rising to 2,674 by fiscal 2024. Similarly, disposable personal income increases by \$61.9 million in fiscal 2015, rising to \$226.3 million by fiscal 2024.

However, focusing only on the benefits which might be derived would be misleading in light of the State's balanced budget requirement. Unless the budget is in structural surplus, any sizeable tax revenue reduction would need to be offset by some mix of ongoing spending reductions or additional revenue. When these factors are taken into account, the economic benefits of the CIT rate reduction are attenuated.

The report examines both budget reduction and tax revenue replacement scenarios. As shown in **Exhibit 4**, if government spending is reduced to offset the tax cut, employment decreases by 1,906 in fiscal 2015 but is projected to rise to a net positive by fiscal 2023. Similarly, disposable personal income decreases by \$85.5 million in fiscal 2015 but is projected to only decrease by \$4.2 million by fiscal 2024. But if lost revenue is replaced by revenue from the sales tax as shown in **Exhibit 5**, employment decreases by 338 in fiscal 2015 but could rise

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to a net positive of 1,118 by fiscal 2024. Similarly, disposable personal income decreases by \$51.8 million in fiscal 2015 but is projected to increase to \$11.5 million by fiscal 2024.

These findings do not themselves argue for or against a change in tax policy but do illustrate the inherent complexity of this issue and the range of factors that policymakers may consider when undertaking tax policy changes.

This report was prepared by Stephen Ross with assistance from Joshua Lowery and reviewed by Ryan Bishop; the manuscript was prepared by Nancy Scaggs. The Department of Legislative Services trusts that the report will be useful to the General Assembly and to other persons interested in matters relating to the corporate income tax.

Sincerely,

Warren G. Deschenaux
Director

WGD/jhf

cc: Mr. Karl S. Aro

Economic Impacts of Reducing the Maryland Corporate Income Tax Rate

Recent legislative proposals have sought to reduce the corporate income tax (CIT) rate in Maryland. While these proposals have not passed, there remains considerable interest and debate on the fiscal and economic impacts of such a reduction. This report provides background information on Maryland's CIT, reviews methods of affording a CIT reduction, surveys available economic literature for consensus findings, and conducts a comparative economic impact analysis of multiple policy alternatives using the Regional Economic Models, Inc. (REMI) model.

Maryland's Corporate Income Tax

Every corporation that conducts business within Maryland, including public service companies and financial institutions, is required to pay the CIT. The tax base is the portion of federal taxable income that is allocable to Maryland, adjusted for certain Maryland addition and subtraction modifications. Federal taxable income for this purpose is the difference between total federal income and total federal deductions (including any special deductions).

The Maryland taxable income of a corporation that operates wholly within the State is equal to its Maryland modified income. Corporations engaged in multistate operations are required to determine the portion of their modified income attributable to Maryland based on the amount of their trade or business carried out in Maryland. Corporations are generally required to use a three-factor apportionment formula of payroll, property, and sales, with sales double weighted or, in the case of a manufacturing corporation, a single sales factor formula. The apportionment factor is then multiplied by the corporation's modified income to determine Maryland taxable income. The Maryland tax liability of a corporation equals the Maryland taxable income multiplied by the tax rate, less any tax credits. Maryland currently applies a CIT rate of 8.25% to a corporation's Maryland taxable income, which was increased from 7.0% beginning in tax year 2008.

CIT revenues are allocated to the general fund, the Higher Education Investment Fund (HEIF), and the Transportation Trust Fund (TTF). The allocation is a two step process. First, 6% of the total revenue is allocated to HEIF, and 9.15% is allocated to the general fund. Second, of the remaining revenue, a percentage is allocated to TTF, and the remaining balance is again allocated to the general fund. The percentage allocated to TTF has often varied from year-to-year but is 19.5% for fiscal 2014 through 2016 and 17.2% for fiscal 2017 and 2018. On average, about three quarters of CIT revenue in any given year is allocated to the general fund.

Legislation has been introduced in recent years to reduce the CIT rate or eliminate the tax entirely. For example, Senate Bill 34/House Bill 261 of 2013 would have reduced the CIT rate from 8.25% to 6.0% beginning in tax year 2013. The fiscal and policy note for the bills

estimated that the rate reduction would reduce State revenues by \$381.2 million in fiscal 2014, including \$295.2 million in general fund revenues and \$85.9 million in special fund revenues.

Direct Comparison of State Corporate Income Tax Structures Is Difficult

Corporate income tax structures vary among jurisdictions, making comparisons difficult. For example, some jurisdictions (including Maryland) do not impose the corporate income tax on limited liability corporations or other types of businesses known as pass-through entities; taxable income from these entities is instead subject to the individual income tax. Various factors are used when a business apportions the taxable income attributable to a particular jurisdiction. The 1975 Uniform Division of Income for Tax Purposes Act “established a three-factor apportionment method based on the company’s sales, property, and payroll.”¹ Since then, some states have increased the apportionment weight given to sales, and other states have adopted single sales factor apportionment for some or all corporations. Further, while most states impose a single corporate income tax rate on taxable income, graduated corporate income tax rates are imposed in a handful of states. Lastly, a jurisdiction may provide incentives to certain types of corporations that are not offered in other jurisdictions. These variations between CIT structures make it difficult to compare the impacts of changes considered in one jurisdiction to another jurisdiction.

Accommodating Revenue Reductions in the State Budget

A CIT rate reduction will reduce revenues from the tax; however, Maryland must balance its annual operating budget. Therefore, either the State must raise revenue from other sources or reduce expenditures elsewhere to afford the CIT rate reduction. Studies have considered several methods that may accomplish this goal:

- **Reduce Government Expenditures** – If a jurisdiction lowers its CIT rate, it may elect to reduce government spending instead of raising foregone revenues elsewhere.
- **Raise Revenue from Other Sources** – If a jurisdiction lowers its CIT rate, it may raise other taxes or fees to cover foregone revenues.

¹ Hill, Chad. *Corporate Income Tax Reform: The View from the States*. State Tax Notes, September 26, 2011, Tax Analysts Marginal Impact, page 855.

- **Broaden the Tax Base** – A jurisdiction may reduce the statutory rate and broaden the tax base.² For example, a jurisdiction may broaden its tax base by taxing LLCs or partnerships in addition to S corporations or C corporations. Kawano (2012) found that, across a sample of industrial countries, a decrease in corporate tax rates is accompanied by a broadening of the tax base 39% of the time.³
- **Eliminate Existing Business Incentives** – In order to raise revenues, a jurisdiction may eliminate incentives it provides to corporations for establishing a corporate presence in the area.
- **Alter Apportionment Factors** – Several states have altered the weight of CIT apportionment of income factors, primarily as it relates to sales made in a state.
- **Combined Reporting** – A majority of states with a corporate income tax (but not Maryland) have instituted combined reporting, which attempts to limit opportunities for multistate corporations to shift income to other states in order to avoid the tax.
- **Increase Borrowing** – Bull (2011) explored the possibility of a decrease in the federal CIT and considered the impact on the economy should the foregone revenues be absorbed with increased borrowing. While possible at the federal level, this is unlikely to occur in Maryland, as the State does not fund its operating budget through debt issuances.

The above methods are a sample of the approaches to affording CIT rate changes and are neither all inclusive nor mutually exclusive. The economic and fiscal impacts of a proposed tax policy will vary depending on the approach taken. For example, Senate Bill 34/House Bill 261 of 2013 would have been a relatively straightforward approach by calling for only a reduction in the CIT rate from 8.25% to 6.0% while not providing for a broadened tax base or offsetting revenues from other taxes or fees.

Literature Review

Many studies have considered the economic and fiscal impacts of a reduced CIT on both the federal and state level. These studies employ various methodologies to attempt to quantify these impacts; however, there has been little agreement as to which methodology is the most accurate and the results are largely inconclusive. Still, some broad trends are apparent, as discussed below.

² Bull et al. *Corporate Tax Reform: A Macroeconomic Perspective*. National Tax Journal, December 2011, 64 (4). Study on reforming the federal corporate income tax.

³ Kawano, L and Slemrod, J. *The Effect of Tax Rates and Tax Bases on Corporate Tax Revenues: Estimates with New Measures of the Corporate Tax Base*. Working Paper 18440, NBER Working Paper Series. National Bureau of Economic Research. Available at <http://www.nber.org/papers/w18440>. Page 3.

Success of Corporate Income Tax Rate Reduction Depends on Corporate Response and Opportunity Cost of Foregone Revenue

Studies on the impact of CIT changes have generally found that a reduced CIT rate increases corporate capital and labor investments for the corporations that benefit from the reduced rate. However, many of these studies also find that benefits for these corporations do not translate into a jurisdiction recovering all of the lost revenues. Bull (2011) suggests that the success of CIT change is based on whether and how it encourages corporate spending.⁴ Investments could be made in a number of different categories, including labor, capital, equipment, or raw materials.⁵ Alternatively, profits could be absorbed by owners located within the jurisdiction or elsewhere. Corporate spending habits will determine the ultimate economic impact of reduced CIT savings. Thus, it is important to consider whether a corporation would be more likely to spend the funds on capital, labor, dividends, or elsewhere.⁶

State Corporate Income Tax Less Important Than Other Factors in Corporate Location Decisions

The size of a tax burden factors into how a rate reduction influences corporate location decisions. State CIT rates are significantly lower than the 35% federal CIT rate. Mazerov (2010) found that, combined, “state and local taxes paid by corporations represent between 2% and 3% of their total expenses on average, and that the state CIT represents on average less than 10% of that amount.”⁷ Wheeler (2006) noted that the significance of the state CIT is further reduced by the fact that state taxes are deductible at the federal level – reducing the state CIT burden by as much as 35%.⁸ Thus, while the federal CIT may influence corporate location decisions, it is unlikely that state CITs will play as significant of a role.

In contrast, other state and local taxes appear to have a greater influence on corporate decisions than state CITs. For instance, Wasylenko (1980) found that property taxes had a significant effect on the location decisions of wholesale and manufacturing firms relocating within the Milwaukee suburbs between 1964 and 1974.⁹ Moreover, Mark, McGuire, and Papke

⁴ Bull et al. *Corporate Tax Reform: A Macroeconomic Perspective*. National Tax Journal, December 2011, 64 (4), 923-952, 925. Study on reforming the federal corporate income tax.

⁵ Kawano, L and Slemrod, J. *The Effect of Tax Rates and Tax Bases on Corporate Tax Revenues: Estimates with New Measures of the Corporate Tax Base*. Working Paper 18440, NBER Working Paper Series. National Bureau of Economic Research. Available at <http://www.nber.org/papers/w18440>. Page 6.

⁶ Bull et al. *Corporate Tax Reform: A Macroeconomic Perspective*. National Tax Journal, December 2011, 64 (4), 923-952, 925.

⁷ Mazerov, Michael. (September 14, 2010). *Cutting State Corporate Income Taxes Is Unlikely to Create Many Jobs*. Center on Budget and Policy Priorities. Available at <http://www.cbpp.org/cms/?fa=view&id=3290>.

⁸ Wheeler, L. *The Potential Effect of Eliminating the State Corporate Income Tax on Economic Activity*. State Tax Notes, March 6, 2006, Tax Analysts Special Report, page 705.

⁹ Wheeler, L. *The Potential Effect of Eliminating the State Corporate Income Tax on Economic Activity*. State Tax Notes, March 6, 2006, Tax Analysts Special Report. Page 708.

(2000) found that private employment growth in the Washington, DC metropolitan area is influenced by increases in state sales and personal property tax rates, but not CIT rates.¹⁰

Effect of State Corporate Income Tax Rates on Investment and Hiring Decisions Is Unclear

Regional competition to attract corporations is often heated and corporate tax rates are a factor when considering whether a jurisdiction is “business friendly.” Many proponents of lowering the CIT rate suggest that it would attract corporations to the area. According to Wheeler (2006), two key assumptions must be true to successfully argue that lower CITs increase a state’s economic competitiveness to attract firms: (1) employment and investment are responsive to changes in state corporate tax rates; and (2) the size of the tax change is large enough in absolute terms to cause a significant response.

Wheeler (2006) reviewed several studies which evaluated the impact of CIT reductions at the state level. One such study, Plaut and Pluta (1983), suggests corporate investment decisions are made based on “changes in the business climate,” finding CIT rates are not a “statistically significant determinant of the change in the level of investment.” However, Modifi and Stone (1990) observed that CITs specifically have an impact on manufacturing investment in a state.

Using one approach, Bond and Zing (2010) found a “very strong influence of taxation on investment, particularly investment in equipment.”¹¹ However, other approaches, as observed by Edgerton (2011), have indicated that corporate investment is not as responsive to a reduction in the CIT rate because investors have more information about the financial accounting treatment of the cost of capital than the timing of tax payments.

Additional studies examined by Wheeler (2006) suggest that state taxes, including CITs, may have influenced corporate hiring practices prior to the late 1970s but may no longer possess the same power today. Carroll and Wasylenko (1994) found that “before the late 1970s, taxes, including the corporate tax, had a significant influence on state manufacturing employment levels, but after that time period, they did not.” Newman (1983), evaluating manufacturing employment data between 1957 and 1973, “found that increases in the state corporate tax rate over time lead to small but statistically significant reductions in state employment.” In addition, Wasylenko and McGuire (1985), which evaluated the impact of taxes and public expenditures on employment growth between states, found that changes in state corporate taxes had no effect on employment.

¹⁰ *Id.* at 708.

¹¹ Bull et al. *Corporate Tax Reform: A Macroeconomic Perspective*. National Tax Journal, December 2011, 64 (4), 923-952, 925. Study on reforming the federal corporate income tax.

Mazerov (2010) also provides a brief survey of other state findings that considered CIT rate reductions.¹² For example, the Oregon Legislative Revenue Office projected that a 30% (\$100 million) reduction “in state CITs would create, after five years, a 0.06% increase in employment, a 0.2% increase in personal income, and a 0.5% increase in investment.” A similar study by the California Department of Finance projected that a 20% reduction in the bank and corporation tax rate would generate a 0.1% increase in employment in the form of in-migration and a 0.2% increase in state personal income. Both studies found that this economic activity would recover 16% of the original revenue loss. In other words, even under a modeling approach which includes dynamic scoring, there is a net revenue loss of 84%.

Government Revenues Support Services Valued in Corporate Location Decisions

A reduced state CIT rate for private businesses also reduces state government revenues. In the absence of new revenue sources, government expenditures must decrease to compensate for these foregone revenues. A reduction in government expenditures likely reduces or eliminates government services. According to Mazerov (2010), “[b]usinesses need and demand high-quality education systems to educate and train their workers and well-functioning infrastructure to get their employees and supplies to their plants and their products to customers.” If states reduce spending to offset some or all of the revenue loss attributable to CIT rate reductions, that may impair the quality of those services, which could potentially offset a portion of the benefit to businesses.

Wheeler (2006) points to a study by Wasylenko and McGuire which found that public spending on education had a positive impact on employment growth, while increases in personal income taxes caused a “generally negative response” in employment growth. Similarly, Wheeler observes “businesses value more than a low-tax jurisdiction. Because taxes are used to fund public services, businesses may be willing to locate in high-tax areas if those areas are associated with a high level of desirable public service provision.”

Analysis Methodology

As an illustrative example, this analysis seeks to determine the net effect on Maryland’s economy of reducing the CIT rate from 8.25% to 7.25%, effective beginning in tax year 2014. Holding other factors constant, this equates to a tax decrease for businesses and a revenue loss for government beginning in fiscal 2015.

First, tax return data is analyzed to determine which industries in Maryland pay CIT and in what proportion. Second, the revenue loss attributable to a 1% rate reduction is calculated using estimates of CIT revenues from the Board of Revenue Estimates (BRE) within the

¹² Mazerov, Michael. (September 14, 2010). *Cutting State Corporate Income Taxes Is Unlikely to Create Many Jobs*. Center on Budget and Policy Priorities. Available at <http://www.cbpp.org/cms/?fa=view&id=3290>.

Comptroller's Office. The tax decrease (revenue loss) is then applied proportionately across the affected industries which currently pay CIT. Similarly, the revenue loss to the State is also accounted for, either through a reduction in government spending or an increase in other tax revenues.

Both the cost to government and benefit to businesses are used as inputs into the REMI macroeconomic impact model to estimate the effects on Maryland's employment, disposable personal income, and population levels. The combined effect of the CIT rate reduction and its fiscal offset approximates the net effect of a CIT rate reduction on the Maryland economy.

Determining Which Industries Pay the Corporate Income Tax

The Comptroller's Office produces an annual *State of Maryland Corporate Statistics of Income Report* with detailed information on Maryland's CIT base. The most recent report contains information for tax year 2010 and is the basis for this analysis. Among other information, the report contains the net tax liability of various industries, as shown in **Exhibit 1** below. The predominant industries in terms of CIT liability are (1) manufacturing; (2) retail trade; (3) finance and insurance; and (4) professional, scientific, and technical services. Combined, these four industries accounted for more than 62% of net CIT liabilities in tax year 2010.

Exhibit 1
Net Corporate Income Tax
Liability by Industry
Tax Year 2010
(\$ in Thousands)

	Number of Returns*	Federal Taxable Income	Maryland Modified Income	Net Tax Liability	% Share
Agriculture	119	\$734,059	\$843,699	\$1,148	0.15%
Mining	68	2,785,854	3,895,256	914	0.12%
Utilities	347	2,595,147	4,394,666	18,353	2.34%
Construction	1,837	2,497,409	3,239,696	15,581	1.99%
Manufacturing	2,371	120,790,640	145,555,048	154,874	19.74%
Wholesale Trade	1,375	19,444,249	24,335,746	38,686	4.93%
Retail Trade	1,434	31,563,755	49,825,758	88,882	11.33%
Transportation and Warehousing	742	14,299,427	19,036,504	29,263	3.75%
Information	761	32,016,724	36,741,409	49,288	6.28%
Finance and Insurance	2,243	81,320,229	85,603,441	142,332	18.14%
Real Estate	2,704	3,392,666	16,580,694	40,644	5.18%
Professional/Scientific/Technical Services	3,977	32,581,957	40,496,794	102,058	13.01%
Management of Companies	519	20,342,961	26,579,072	34,594	4.41%
Administrative Support/Waste Management	1,079	4,472,961	5,614,774	11,713	1.49%
Educational Services	161	3,050,990	3,674,031	8,455	1.08%
Health Care and Social Assistance	929	3,353,058	3,819,260	17,875	2.28%
Arts, Entertainment, and Recreation	232	530,750	821,617	2,175	0.28%
Accommodation and Food Services	595	1,317,190	2,548,944	10,475	1.34%
Other Services	836	1,617,235	1,909,742	4,201	0.54%
Missing or Misreported	857	3,641,855	3,911,464	13,046	1.66%
Total	23,186	\$382,349,116	\$479,427,615	\$784,557	100%

*Number of returns reflects filings by corporations with a net tax liability.

Note: Numbers may not sum to total due to rounding.

Source: *State of Maryland Corporate Statistics of Income*, Comptroller's Office

Estimating Foregone Revenues from the CIT Rate Reduction

In order to estimate foregone (reduced) revenues, BRE's most recent estimates of fiscal year CIT receipts were adjusted to account for the timing of CIT payments.¹³ The difference between BRE estimates of CIT revenue under current law and those at 7.25% were then calculated, as shown in **Exhibit 2**. The estimated difference in net receipts peaks in fiscal 2024 at \$186.7 million in foregone revenues.

Exhibit 2 Difference in Net Receipts – 1% CIT Rate Reduction Fiscal 2015-2024 (\$ in Millions)

2015	-\$162.2*
2016	-\$130.8
2017	-\$138.8
2018	-\$143.3
2019	-\$148.9
2020	-\$154.9
2021	-\$161.8
2022	-\$169.2
2023	-\$177.0
2024	-\$186.7

*The fiscal 2015 revenue loss reflects all of the tax year 2014 revenue loss and a portion of the tax year 2015 revenue loss due to the timing of CIT payments.

Source: Comptroller's Office; Department of Legislative Services

Allocation of Corporate Income Tax Reduction Effects

To estimate the impact on businesses, the annual difference in net receipts was allocated to each industry category according to its proportion of net tax liability in tax year 2010 (see Exhibit 1). For example, the retail trade industry accounted for 11.3% of tax year 2010's net tax liability and thus is allocated 11.3% of the total nominal tax reduction. This allocation assumes that the future relative industry proportions of the total net tax liability do not change from those in tax year 2010.

Conversely, the effect on government was modeled either as a reduction in government spending or as an increase in tax revenue. As discussed above, CIT revenues are allocated to the general fund, HEIF, and TTF, and on average about three quarters of CIT revenue in any given year is allocated to the general fund. Thus, for a reduction in government spending, the annual difference in net receipts was allocated as either a decrease in general government spending

¹³ CIT payments are made quarterly and are based on tax year liabilities (January 1 through December 31) while fiscal year revenue is calculated based on the State's fiscal year (July 1 through June 30).

(representing the general fund and HEIF) or a reduction in highway, street, tunnel, and bridge construction spending (representing TTF). To model an increase in tax revenue, the annual difference in net receipts was allocated across a broad variety of consumer goods subject to Maryland's sales and use tax.

The REMI Model

The REMI model is a macroeconomic impact model that incorporates and integrates aspects of four major modeling approaches: (1) input-output; (2) general equilibrium; (3) econometric; and (4) economic geography. The REMI model, at its core, has the inter-industry relationships found in input-output models. As a result, the industry structure of a particular region is captured within the model, as well as transactions between industries. Changes that affect industry sectors that are highly interconnected to the rest of the economy will often have a greater economic impact than those for industries that are not closely linked to the regional economy.

The REMI model generates year-by-year estimates of the total regional effects of a specific policy initiative or combination of initiatives. The model used by the Department of Legislative Services is calibrated to the Maryland and District of Columbia region. Each calibrated region has economic and demographic variables as well as policy variables so that a policy that affects a local economy can be tested. Model simulations can estimate comprehensive economic and demographic effects of policies and programs for economic development, infrastructure, environment, energy, natural resources, and state and local tax changes. The primary national, state, and county data source for the REMI model is the Bureau of Economic Analysis State Personal Income and Local Area Personal Income series (which also include employment and total population data). This data is available for the nation and states at the summary level (94 industries), and for counties at the sector level (24 industries).

The Positive Effects of a Corporate Income Tax Reduction

The effects of *only* the 1% CIT rate reduction – which would reduce the taxes paid by corporations by \$162.2 million in fiscal 2015 and by over \$130 million annually thereafter – are shown in **Exhibit 3** below. Both private nonfarm and government employment increase every year relative to a baseline employment estimate. Private nonfarm employment increases by 1,124 in fiscal 2015, increasing to 2,434 by 2024. In other words, the CIT reduction increases private employment by 1,124 “jobs”¹⁴ in fiscal 2015 relative to the baseline scenario employment forecast. State and local government employment, which in the REMI model is a function of population and gross domestic product, increases by 102 “jobs” in fiscal 2015, increasing to 240 by 2024.

¹⁴ REMI defines a “job” as a unit of labor equivalent to 12 months of employment in a given year. REMI determines the number of jobs based on the amount of output for an industry and the labor productivity of the area. Specifically, the number of “jobs” in any given year is an industry’s output divided by the average labor productivity of the industry. Effectively what this means is that “jobs” are relative to the average labor productivity of an industry and do not represent specific individuals in that industry.

Exhibit 3
Impacts on Employment, Income, and Population
From CIT Reduction Only
Difference from Baseline Forecast
Fiscal 2015-2024

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Employment (Individuals)										
Private Nonfarm	1,124	1,370	1,664	1,875	2,025	2,141	2,233	2,308	2,371	2,434
State and Local Government	102	131	160	181	198	210	220	228	234	240
Total*	1,226	1,501	1,825	2,056	2,223	2,351	2,453	2,536	2,606	2,674
Disposable Personal Income (\$ in Millions)	\$61.9	\$80.5	\$104.9	\$126.0	\$144.8	\$162.1	\$178.8	\$194.7	\$210.2	\$226.3
Population (Individuals)										
Economic Migrants	494	378	382	354	327	299	273	245	222	203
Total Population	499	891	1,294	1,677	2,040	2,382	2,703	3,001	3,281	3,546

*May not sum to total due to rounding.

Note: REMI defines a “job” as a unit of labor equivalent to 12 months of employment in a given year. REMI determines the number of jobs based on the amount of output for an industry and the labor productivity of the area. Specifically, the number of “jobs” in any given year is an industry’s output divided by the average labor productivity of the industry. Effectively what this means is that “jobs” are relative to the average labor productivity of an industry and do not represent specific individuals in that industry.

Source: Department of Legislative Services

Similarly, disposable personal income across the entire State increases by \$61.9 million (0.02% overall increase) in fiscal 2015 and increases each year thereafter, peaking at \$226.3 million (0.05% overall increase) in fiscal 2024. Net economic migrants, or those people under 65 who respond to economic and amenity factors, increase by nearly 500 in fiscal 2015 with that annual amount slowly decreasing over time to approximately 200 in fiscal 2024. In addition, while the REMI model does not explicitly address the allocation of the tax reduction in terms of labor versus capital, broadly, personal income rises between 37% and 42% of the increase of total output (where output is a function of capital, labor, intermediate inputs, and fuel). In other words, approximately 40% of the economic impact falls on labor in the form of increased compensation.

Offsetting Foregone Corporate Income Tax Revenue to Maintain Balanced Budget

As shown above, a CIT rate reduction has a positive effect on the local economy when looked at independent of other factors: reduced industry production costs are passed on to workers in the form of additional jobs, the region's personal disposable income rises, and people migrate to the area to seek employment. However, to accurately reflect the full economic impact – which includes the State's requirement to maintain a balanced budget – a reduction in CIT revenue from a rate decrease must be offset by (1) decreasing government spending; (2) increasing revenue from other sources; or (3) a combination of both revenue increases and spending decreases.

Alternative One: Reduce Government Spending to Reflect Reduced Revenues

A straightforward approach to balancing the State budget in the absence of CIT revenue is to simply reduce government spending by the amount of the revenue decrease. For example, revenues are estimated to decline by \$162.2 million in fiscal 2015 from a 1% CIT rate reduction. Reducing government spending by \$162.2 million in that year may balance the budget, but not without its costs. Government spending is relatively labor intensive: more of each dollar spent by the State and local government is allocated to employee compensation than in most private-sector industries. Thus, reducing government spending tends to reduce government employment and, through lower overall demand in the economy, some private-sector jobs.¹⁵

When the positive effects of a 1% CIT rate reduction are combined with the negative economic effects induced by a reduction in government spending, the net effects are initially negative. In fiscal 2015, total employment decreases by 1,906 jobs, disposable personal income declines by \$85.5 million, and population (due largely to economic migration) decreases by 130. However, the long-term positive benefits of the tax reduction eventually outweigh the negative effects of the government spending offset. Net private employment moves to positive beginning in fiscal 2016, and by fiscal 2023 even net total employment is projected to be positive. Further, while personal disposable income is projected to be negative throughout the period of this analysis, it does rise over time. Similarly, the State sees a net inflow of economic migrants beginning in fiscal 2016. The results are summarized below in **Exhibit 4**.

¹⁵ The effect of *only* reducing government spending by the projected foregone revenues from a 1% CIT rate reduction can be found in **Appendix 1**.

Exhibit 4
Impacts on Employment, Income, and Population
From CIT Reduction and Government Spending Offset
 Difference from Baseline Forecast
 Fiscal 2015-2024

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Employment (Individuals)										
Private Nonfarm	-213	288	574	815	997	1,142	1,252	1,339	1,406	1,458
State and Local Government	-1,693	-1,291	-1,345	-1,333	-1,332	-1,335	-1,347	-1,363	-1,382	-1,415
Total*	-1,906	-1,003	-772	-518	-335	-194	-96	-25	24	43
Disposable Personal Income (\$ in Millions)	-\$85.5	-\$56.0	-\$49.5	-\$40.0	-\$31.5	-\$23.7	-\$17.3	-\$11.7	-\$7.2	-\$4.2
Population (Individuals)										
Economic Migrants	-129	19	64	98	117	125	126	123	117	109
Total Population	-130	-114	-51	47	166	296	430	562	692	816

*Numbers may not sum to total due to rounding.

Note: REMI defines a "job" as a unit of labor equivalent to 12 months of employment in a given year. REMI determines the number of jobs based on the amount of output for an industry and the labor productivity of the area. Specifically, the number of "jobs" in any given year is an industry's output divided by the average labor productivity of the industry. Effectively what this means is that "jobs" are relative to the average labor productivity of an industry and do not represent specific individuals in that industry.

Source: Department of Legislative Services

Alternative Two: Increase Other Taxes to Replace Foregone Revenues

The State could also increase other taxes rather than decreasing government spending. Maryland's 6% sales tax effectively raises consumer prices in the region for the goods to which it applies. Therefore, for this alternative, consumer prices were increased across a broad array of goods currently subject to the sales tax, raising government revenue to directly offset the revenue loss from the CIT reduction. This alternative has a more positive effect on employment and personal income than reducing government spending. Net total employment turns positive beginning in fiscal 2016, rising to over 1,100 jobs by fiscal 2024. After being negative from fiscal 2015 through 2020, disposable personal income turns positive in fiscal 2021, rising to \$11.5 million in fiscal 2024. However, this alternative does reduce the population through economic migration (people leave due to higher prices for goods subject to the sales tax). The combined results are shown in **Exhibit 5**.

Exhibit 5
Impacts on Employment, Income, and Population
From CIT Reduction and Sales Tax Offset
 Difference from Baseline Forecast
 Fiscal 2015-2024

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Employment (Individuals)										
Private Nonfarm	-332	120	352	558	709	822	900	955	989	1,006
State and Local Government	-6	30	51	69	83	93	101	106	110	112
Total*	-338	150	403	628	792	915	1,001	1,061	1,099	1,118
Disposable Personal Income (\$ in Millions)	-\$51.8	-\$32.8	-\$26.9	-\$18.4	-\$11.0	-\$4.0	\$1.5	\$6.0	\$9.4	\$11.5
Population (Individuals)										
Economic Migrants	-887	-395	-291	-182	-120	-73	-47	-28	-16	-14
Total Population	-896	-1,312	-1,632	-1,848	-2,005	-2,117	-2,204	-2,272	-2,329	-2,383

*Numbers may not sum to total due to rounding.

Note: REMI defines a “job” as a unit of labor equivalent to 12 months of employment in a given year. REMI determines the number of jobs based on the amount of output for an industry and the labor productivity of the area. Specifically, the number of “jobs” in any given year is an industry’s output divided by the average labor productivity of the industry. Effectively what this means is that “jobs” are relative to the average labor productivity of an industry and do not represent specific individuals in that industry.

Source: Department of Legislative Services

Conclusion

As numerous studies have shown, the impacts of reducing the CIT rate are both numerous and difficult to determine. A Maryland CIT rate reduction of 1% is estimated to reduce State revenues by \$162 million in fiscal 2015, assuming the rate reduction takes effect beginning in tax year 2014. This analysis finds that a reduction of this magnitude would have positive effects on both private-sector employment and income. However, in light of the State's balanced budget requirement, this would necessitate that the lost revenue be offset by spending reductions or additional revenue. When these factors are taken into account, the economic benefits of the CIT rate reduction are attenuated in both the short and longer terms.

These findings do not themselves argue for or against a change in tax policy but do illustrate the inherent complexity of this issue and the range of factors that policymakers must consider when considering tax policy changes.

Appendix 1

Impacts on Employment, Income, and Population Government Spending Reduction Only Difference from Baseline Forecast Fiscal 2015-2024

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Employment (Individuals)										
Private Nonfarm	-1,334	-1,082	-1,090	-1,059	-1,029	-1,000	-982	-970	-968	-979
State and Local Government	-1,796	-1,422	-1,506	-1,515	-1,530	-1,545	-1,567	-1,591	-1,616	-1,655
Total*	-3,130	-2,504	-2,596	-2,574	-2,558	-2,545	-2,550	-2,562	-2,584	-2,634
Disposable Personal Income (\$ in Millions)	-\$147.4	-\$136.5	-\$154.5	-\$166.0	-\$176.3	-\$185.9	-\$196.1	-\$206.6	-\$217.9	-\$231.2
Population (Individuals)										
Economic Migrants	-622	-359	-318	-256	-212	-175	-149	-124	-108	-96
Total Population	-629	-1,004	-1,344	-1,630	-1,875	-2,087	-2,276	-2,444	-2,597	-2,741

*Numbers may not sum to total due to rounding.

Note: REMI defines a "job" as a unit of labor equivalent to 12 months of employment in a given year. REMI determines the number of jobs based on the amount of output for an industry and the labor productivity of the area. Specifically, the number of "jobs" in any given year is an industry's output divided by the average labor productivity of the industry. Effectively what this means is that "jobs" are relative to the average labor productivity of an industry and do not represent specific individuals in that industry.

Source: Department of Legislative Services