Independent Fiscal Office

ANALYSIS OF REVENUE PROPOSALS

April 2021

FY 2021-22 Executive Budget

Independent Fiscal Office

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INDEPENDENT FISCAL OFFICE

April 22, 2021

The Honorable Members of the Pennsylvania General Assembly:

This report provides an analysis of the tax and revenue proposals included in the *2021-22 Executive Budget* released in February 2021. The Independent Fiscal Office (IFO) publishes this report to fulfill its statutory duties as provided under Section 604-B (a)(4) of the Administrative Code of 1929. The statute requires that the IFO "provide an analysis, including economic impact, of all tax and revenue proposals submitted by the Governor or the Office of the Budget."

This report uses various data sources to derive estimates of the revenue proposals included in the budget. All data sources and methodologies used to derive those estimates are noted in the relevant sections of this document.

The IFO would like to thank the various agencies and organizations that provided data or input for this report. Questions or comments regarding the contents of this report can be submitted to contact@ifo.state.pa.us.

Sincerely,

Dr. Matthew J. Knittel
Director

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Introduction

This report provides revenue estimates for the tax and revenue proposals contained in the *2021-22 Executive Budget* released in February 2021. The Independent Fiscal Office (IFO) publishes this report to fulfill its statutory duties as provided under Section 604-B (a)(4) of the Administrative Code of 1929. The statute requires that the IFO "provide an analysis, including economic impact, of all tax and revenue proposals submitted by the Governor or the Office of the Budget."

The report contains three sections. The first section analyzes the proposal to lower the corporate net income tax rate (CNIT) and enact combined reporting. The second section examines the proposal to increase the personal income tax (PIT) rate from 3.07% to 4.49% and raise the tax forgiveness thresholds. The third section analyzes the proposal to increase the state minimum wage from $7.25 to $12.00 per hour. It discusses potential employment effects, income effects and implications for General Fund revenues and expenditures. Currently, no state has a $15.00 minimum wage that could be used to inform potential outcomes from further increasing the minimum wage to that level. Hence, the section provides only general comments on the proposed increase in the state minimum wage from $12.00 to $15.00 per hour over a six-year period.

The analyses contained in this report are based on descriptions from the *2021-22 Executive Budget* and, where applicable, legislative language provided by the administration. As necessary, assumptions to assess the potential revenue implications of the proposals are noted in the text.

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Corporate Net Income Tax

Proposal Highlights

The administration's proposal requires corporations that are members of a unitary business group to apportion their income via a combined annual report for tax purposes, a filing method known as combined reporting, effective for tax years (TY) beginning in 2022 and thereafter. Key points are as follows:

- At the current tax rate of 9.99%, the IFO estimates that the adoption of combined reporting would expand the tax base by 12% ($435 million) in TY 2022, while the Department of Revenue (DOR) estimates a tax base expansion of 29% ($839 million).
- Through fiscal year (FY) 2025-26, the IFO estimates that combined reporting would increase CNIT revenues by $1.6 billion, while the DOR estimates $3.8 billion.
- An IFO survey of 11 other states that enacted or proposed combined reporting since 2008 reveals that only one other state estimated a similar expansion of the tax base from combined reporting (Rhode Island at 28%). Eight other states estimated a base expansion from 5% to 10%, while two states noted combined reporting would have an indeterminable positive impact.

The administration's proposal also reduces the CNIT rate from 9.99% to 8.99% for tax years beginning in 2022; 8.29% for tax years beginning in 2023; 7.49% for tax years beginning in 2024; 6.99% for tax years beginning in 2025; and 5.99% for tax years beginning in 2026 and thereafter. Key points are as follows:

- Pennsylvania (9.99%) has the second highest CNIT rate in the country behind New Jersey (11.50%). For TY 2021, the median CNIT rate across the United States is 6.63%.
- By FY 2025-26 (and after enactment of combined reporting), the IFO estimates that the rate reduction reduces CNIT revenues by $3.3 billion, while the DOR estimates a reduction of $3.7 billion.

Comparison of Combined Reporting and Rate Reduction Estimates

	21-22	22-23	23-24	24-25	25-26	Total
Independent Fiscal Office						
Combined Reporting	$65	$300	$419	$424	$431	**$1,639**
Rate Reduction	-74	-337	-676	-1,006	-1,255	**-3,348**
Total	**-9**	**-37**	**-258**	**-582**	**-824**	**-1,709**
Department of Revenue						
Combined Reporting	$255	$798	$869	$930	$996	**$3,848**
Rate Reduction	-46	-462	-720	-1,049	-1,400	**-3,678**
Total	**208**	**336**	**149**	**-120**	**-404**	**170**

Note: Amounts in dollar millions. Both estimates assume combined reporting is enacted first, followed by a rate reduction. Department of Revenue estimate as of February 2021.

Background and State Comparison

The administration's CNIT proposal was analyzed in the following order: (1) combined reporting and (2) rate reduction. The stacking order does not affect the total net impact of the proposal, but it does change the relative magnitudes of the individual combined reporting and rate reduction estimates.

Under mandatory combined reporting, multi-state businesses that form a unitary group are required to file a combined return as if the related entities were a single corporation. The combined return reflects the net income or loss associated with the business operations of all members of the unitary group and income is apportioned to the taxing jurisdiction based on the activity of the combined group in that jurisdiction. Supporters assert that this filing method reduces a multistate firm's ability to shift profits to lower- or no-tax states through related-party transactions and is subject to less manipulation by firms. Supporters also note that the filing method "levels the playing field" because Pennsylvania-only firms are unable to shift profits to other states. Opponents assert that it subjects profits to tax that have little or no economic connection to the state, constrains economic growth and introduces significant administrative complexity.

Determination of the unitary group is a key component of combined reporting and is generally based on the ownership of the group, as well as the relationships between the corporations within the group. Estimating the impact from the enactment of combined reporting is subject to uncertainty, largely because taxing authorities lack full information regarding the composition and characteristics of potential unitary groups. The determination of the unitary group can also be complicated and subjective, and the composition of a unitary group could be subject to lengthy litigation. Despite this uncertainty, tax administrators and most academics believe that combined reporting increases tax collections in high-rate states because it eliminates some methods that can be used to shift profits to low- or no-tax states.

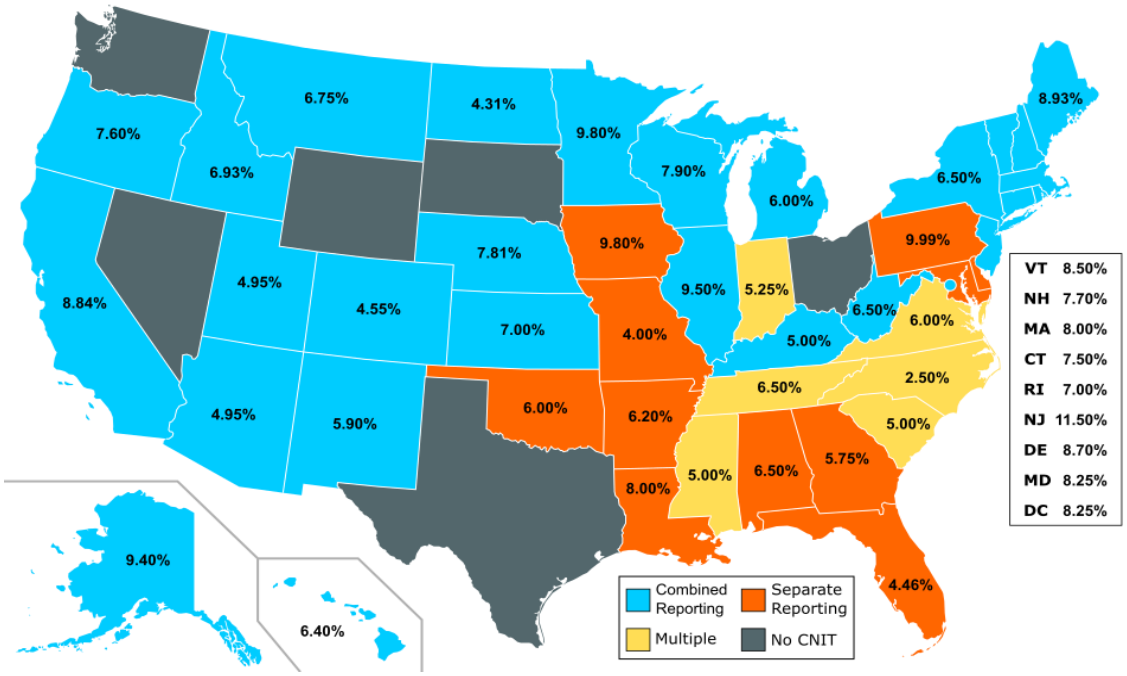
By contrast, the negative revenue impact from the proposed rate reduction is known with much greater certainty. The estimate applies the proposed rate reduction to the IFO's most recent CNIT baseline projection after adjusting for combined reporting. The estimate includes a behavioral impact that partially offsets the static revenue loss due to the lower tax rate. When fully phased in, the 40% reduction in the tax rate should be sufficient to have a positive impact on firms' location decisions.

Figure 1.1 compares (1) state CNIT rates and (2) applicable reporting methods. Forty-four states and the District of Columbia levy a CNIT. The highest statutory rate is levied by New Jersey (11.50%, includes a 2.0% surtax) followed by Pennsylvania (9.99%). Fourteen states use a graduated rate structure, while 30 levy a flat rate. Since 2008, 20 states and the District of Columbia have reduced the top corporate tax rate.[1]

As of 2021, 27 states and the District of Columbia require combined reporting for businesses that meet unitary group standards. The most recent states to enact combined reporting were New Mexico (2019), Kentucky and New Jersey (both in 2018). The remaining 17 states that levy a CNIT require separate reporting. Six states that require separate reporting have processes in place where (1) a taxpayer can elect to use a different filing method (e.g., consolidated) or (2) the state tax authority can require a taxpayer to file a combined return based on audit results.

[1] Wolters Kluwer, Commerce Clearing House State Tax, 2021.

Figure 1.1
Corporate Net Income Tax States by Reporting Method



Note: States designated as "multiple" generally require separate reporting, but either allow taxpayers to elect another form of reporting, or may require combined reporting based on audits. Tax rate reflects top rate in states that have a graduated corporate income tax structure. Indiana's rate decreases to 4.90% on July 1, 2021.

Source: CCH State Tax SmartCharts (April 2021).

Combined Reporting Base Expansion Analysis

In 2013, the IFO issued a report which used research from states that implemented combined reporting during the previous decade to examine the revenue impact from the enactment of that filing method.[2] The report found that combined reporting could increase revenues by roughly 9% to 13%. As an update to that analysis, the IFO reviewed CNIT collections and GDP data for three large states (Massachusetts, New York and Wisconsin) that implemented combined reporting since 2006 to determine the impact that a change to that filing method had on state tax collections.[3]

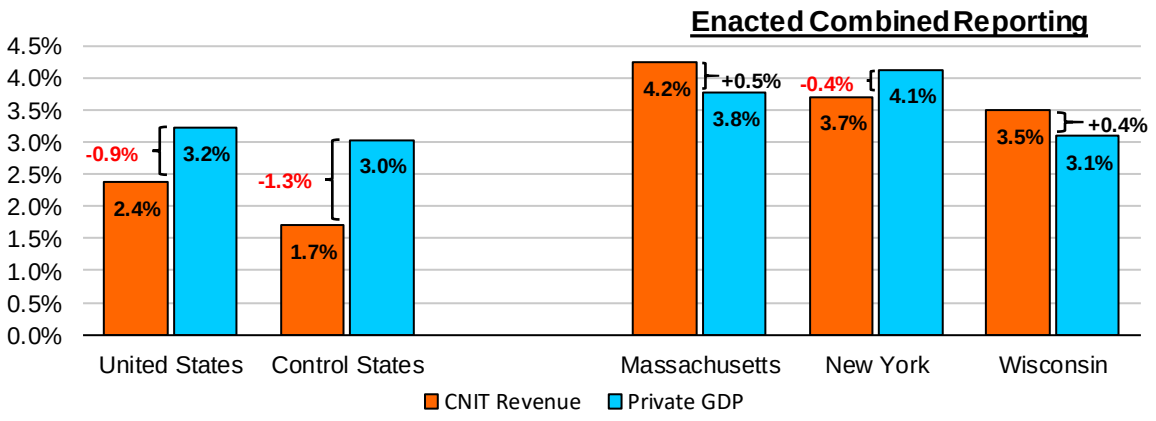
The analysis uses a basic statistical comparison to estimate the potential net tax base expansion attributable to the enactment of combined reporting. The outcome is detailed in **Figure 1.2**. The test compares the difference in average growth rates for private state gross domestic product (GDP) and CNIT revenues for three combined reporting states, 11 control states and the U.S. from 2005 to 2017 using a three-year

[2] See "Corporate Tax Base Erosion: Analysis of Policy Options," Independent Fiscal Office (March 2013) http://www.ifo.state.pa.us/releases.cfm?id=103.

[3] If applicable, revenues were adjusted for any tax rate change that combined reporting or control states enacted during the time period used by the analysis.

average.[4,5] There should be a positive relationship between state economic growth and CNIT tax revenues over the 12-year period: higher state economic growth should be positively correlated with corporate profits and CNIT revenues. For the 11 control states and the U.S., the analysis finds that average CNIT revenue growth underperformed private GDP growth by an average of -1.1 percentage points during the period under consideration. By comparison, revenue growth for the three states that enacted combined reporting during this period outperformed private GDP growth by an average of +0.1 percentage points.[6]

Figure 1.2
Average Annual Growth Rate of CNIT Revenues and GDP (2005-2017)



Note: See footnote 5 for the growth rate computation. Differences may not sum due to rounding.

Source: FY 2004-05 to FY 2016-17 data from the U.S. Census Bureau's Annual Survey of State Government Tax Collections. Data for the U.S. is based on U.S. corporate domestic profits from the U.S. Bureau of Economic Analysis.

This comparison suggests that the change in filing method may have expanded the tax base in combined reporting states and led to higher CNIT revenue growth rates than would otherwise be expected. Given average state GDP growth rate of 3.0% to 3.5% per annum, a reduction in the growth rate differential of 1.0 percentage point between state GDP and CNIT revenues is roughly equivalent to a 12% tax base expansion for combined reporting states. In other words, if combined reporting increases the average CNIT growth rate by 1.0 percentage point per annum, it is similar to a 12% base expansion for most states.

[4] The 11 control states are economically diversified states that are not highly dependent on natural resources or any other particular sectors (e.g., high tech). Control states include Pennsylvania, Alabama, Florida, Georgia, Iowa, Indiana, Maryland, Missouri, New Jersey (prior to implementation of combined reporting), Tennessee and Virginia.

[5] The analysis used three-year averages at the start and end of the period due to the inherent volatility of CNIT revenues and, by extension, the tax base. For example, the starting level for CNIT revenues is the average of FY 2004-05 to FY 2006-07 and the end point is the average of FY 2014-15 to FY 2016-17. For GDP, the starting point is the average of calendar year (CY) 2005 to CY 2007 and the end point uses CY 2015 to CY 2017. The GDP computation excludes the government sector.

[6] The three states enacted combined reporting effective for tax years as follows: New York (2006), Massachusetts (2008) and Wisconsin (2008). Because the analysis tracks the impact many years following the enactment of combined reporting, it reflects any long-term actions undertaken by firms in response to the new filing method. It also allows for the final determination of the unitary group, which may require several years due to legal challenges.

Combined Reporting Revenue Impacts in Other States

Since 2006, 11 states have adopted combined reporting. During the 2021-22 legislative session, bills have been introduced in Maryland, Virginia and Florida to require combined reporting. **Table 1.1** displays the revenue estimates related to the adoption of combined reporting in each state. The estimates only reflect the impact from combined reporting and exclude other tax policy changes adopted simultaneously as part of larger tax reform packages. Estimates in Table 1.1 represent the first full fiscal year of revenue impacts except for Pennsylvania and Rhode Island, which were measured on a tax year basis.

The table illustrates state revenue estimators' consensus regarding the fiscal impact of adopting combined reporting. Since 2006, the majority of states that adopted combined reporting estimated a base expansion between 5% and 10%. In 2003, Wisconsin's Department of Revenue employed an estimation methodology that used tax return data from Minnesota to match taxpayers based on federal taxpayer identification numbers.[7] Using this method, Wisconsin estimated a base expansion of 4% for non-bank corporate tax collections. In 2007, the Wisconsin Legislative Fiscal Bureau updated the combined reporting base expansion estimate to approximately 11% of all corporate income tax collections (includes banks).

Maryland and Rhode Island analyzed *pro forma* reports to estimate the fiscal impact from the adoption of combined reporting. Both states enacted legislation that required corporate taxpayers that were part of a unitary group to file an additional return that showed the combined income of the unitary group and its state CNIT liability if combined reporting had been in effect. In Maryland, the results of the *pro forma* reports indicated that combined reporting could increase tax collections as much as 23% in TY 2006, falling to an increase of approximately 4% by TY 2010. In 2021, Maryland updated this estimate to reflect changes in the economy and corporate income tax revenues and estimated an 8% increase in fiscal year CNIT collections due to the adoption of combined reporting.[8] In Rhode Island, a post-implementation study completed in 2018 estimated that combined reporting increased corporate tax revenues by 28%, or $37.8 million, after it became effective in TY 2015. However, Rhode Island's size makes it an outlier with state CNIT collections totaling $148.5 million in FY 2019-20.

West Virginia and New Jersey based their combined reporting revenue estimates on the experience of states that adopted the filing method. Kentucky and New Mexico were unable to score a revenue impact related to combined reporting. Both states assumed an indeterminable positive impact. In 2021, Virginia estimated that mandatory combined reporting would have an "unknown and potentially significant positive General Fund revenue impact."[9] Based on the estimate produced by Maryland, Virginia estimated that combined reporting could increase General Fund revenue by $60 to $80 million annually, or a 6% to 8% increase in CNIT revenues.

[7] This is similar to the approach utilized by the DOR for the estimate included in the Governor's Executive Budget.
[8] Maryland S.B. 511, 2021, Fiscal Note. See: http://mgaleg.maryland.gov/2021RS/fnotes/bil_0001/sb0511.pdf.
[9] Virginia S.B. 1353, 2021, Fiscal Note. See: https://lis.virginia.gov/cgi-bin/legp604.exe?211+oth+SB1353F161+PDF. While S.B. 1353 did not move out of committee, Virginia adopted two amendments to the budget bill to study the impact of combined reporting. One bill requires corporations operating in Virginia that are members of a unitary group to file an informational combined report on or before July 1, 2021. The second bill establishes a work group to access the feasibility of transitioning to mandatory combined reporting.

Table 1.1
Combined Reporting Base Expansion Estimates in Other States

State	Tax Year CR Effective	Year Est. Prepared	Est. Impact ($ Millions)	Est. Base Expansion
Pennsylvania (IFO)	**--**	**2021**	**$435**	**12%**
Pennsylvania (DOR)	**--**	**2021**	**839**	**29%**
Virginia	--	2021	60-80	6-8%
Maryland	--	2021	125	8%
New Mexico	2020	2019	--	--
New Jersey	2018	2016	115-280	5-10%
Kentucky	2018	2018	--	--
Connecticut	2016	2015	39	5%
Rhode Island	2015	2018	38	28%
West Virginia	2009	2007	24-28	8-10%
Massachusetts	2008	2007	188	9%
Wisconsin	2008	2007	76	11%
New York	2007	2008	315-420	6-8%

Note: Base expansion and dollar impact estimates relate to the first full fiscal year of tax impact, except for Pennsylvania and Rhode Island, which reflect full tax year impact. The base expansion estimate relates to the impact of combined reporting only and does not incorporate the impact of other simultaneous tax law changes. Vermont and Michigan adopted combined reporting after 2006 but were not included in this table because detailed revenue impact analyses could not be located. Texas also adopted mandatory combined reporting for its Margin Tax during this period, but this state is not included because it does not collect a traditional corporate income tax.

Source: Other state estimates come from a survey of select states by the National Conference of State Legislatures, various state fiscal notes, analyses and reports.

Revenue Impact

Table 1.2 displays the estimated net revenue impact of the CNIT proposal over the next five fiscal years using baseline estimates from the IFO's *Five Year Economic and Budget Outlook* for FY 2020-21 to 2025-26. The proposal has no impact on FY 2020-21 and reduces revenue by $9 million for FY 2021-22. By the end of the five-year window, the net impact of the proposal is a revenue reduction of $824 million due to the CNIT rate reduction. The DOR anticipates that the proposal will require updates to the business tax system and additional staff training at a one-time cost of $1 million (not included in table).

Table 1.2
IFO Corporate Net Income Tax Estimate Detail

	20-21	21-22	22-23	23-24	24-25	25-26
Combined Reporting	--	$65	$300	$419	$424	$431
Rate Reduction	--	-74	-337	-676	-1,006	-1,255
Total	**--**	**-9**	**-37**	**-258**	**-582**	**-824**

Note: Amounts in dollar millions. Combined reporting base expansion is stacked first, then the rate reduction is calculated from the new tax base.

Factors that Impact the Revenue Estimate

The analysis concludes with a comparison of the IFO revenue estimate to the DOR estimate included in the Governor's Executive Budget, and a discussion of four factors that could impact the revenue estimates. **Table 1.3** provides fiscal year detail for the estimated revenue impact of combined reporting and rate reduction developed by the IFO and DOR.

The estimated base expansion due to combined reporting drives the difference between the estimates. For TY 2022, IFO estimates a combined reporting base expansion of 12% (approximately $435 million revenue impact) while DOR estimates a base expansion of 29% ($839 million revenue impact). The IFO's estimated revenue loss from the rate reduction is lower than DOR due to the lower estimated revenue collections from combined reporting.

Table 1.3
Comparison of Combined Reporting and Rate Reduction Estimates

	21-22	22-23	23-24	24-25	25-26	Total
Independent Fiscal Office						
Combined Reporting	$65	$300	$419	$424	$431	**$1,639**
Rate Reduction	-74	-337	-676	-1,006	-1,255	**-3,348**
Total	**-9**	**-37**	**-258**	**-582**	**-824**	**-1,709**
Department of Revenue						
Combined Reporting	$255	$798	$869	$930	$996	**$3,848**
Rate Reduction	-46	-462	-720	-1,049	-1,400	**-3,678**
Total	**208**	**336**	**149**	**-120**	**-404**	**170**

Note: Amounts in dollar millions. Both estimates assume combined reporting is enacted first, followed by a rate reduction. Department of Revenue estimate as of February 2021.

Four additional factors could impact the amount of revenue generated from the adoption of combined reporting: (1) the timing of payments, (2) proposed treatment of prior and future net operating losses (NOLs), (3) any pre-existing addback provisions and (4) taxpayer behavior related to changes in liability. The text that follows discusses the potential impact of these factors.

Timing of Estimated Payments

The IFO estimate assumes that only 15% of firms' net additional TY 2022 liability under combined reporting would be remitted with the March and June estimated payments in FY 2021-22. The switch to combined reporting creates uncertainty regarding final state tax liability, especially in the first tax year, as unitary group members and apportionable income are determined. The administration's proposal does not include language that requires taxpayers to remit estimated payments in equal installments, and current law only requires that the safe harbor must be met prior to the end of the tax year.[10] The IFO estimate does not assume that firms will voluntarily remit significantly higher payments until required.

The IFO estimate also assumes that 20% of firms' net TY 2022 change in tax liability from the rate reduction will impact the March and June estimated payments in FY 2021-22. This is consistent with historic CNIT payment patterns. Unlike combined reporting, firms can more readily calculate the impact of a rate reduction on their tax liability and adjust tax year payments.

The DOR estimate assumes a different pattern of payments based on their analysis of 2018 tax returns after passage of the federal Tax Cuts and Jobs Act (TCJA), as discussed in a memo transmitted to the House Appropriations Committee (February 28, 2020). The DOR observed that 62% of firms anticipating a higher tax liability due to the TCJA increased March and June estimated payments by 26% overall. The 26% increase in estimated payments was used to apportion the impact from firms with higher tax liability to the March and June payments as part of the revenue impact of combined reporting. The memo does not discuss how firms with a tax liability reduction were treated, but it appears that more of the revenue loss hits in the latter part of the year (i.e., September or December estimated payments or final payments).

Treatment of Net Operating Losses

The treatment of NOL deductions for unitary group members can have a significant impact on the revenue estimate for combined reporting. The administration's proposed application of NOLs is generally more narrow than other states and would likely have a positive impact on any revenue attributable to the enactment of combined reporting. The proposal allows the same treatment of NOLs by members of the unitary group generated prior to and after the enactment of combined reporting. At the unitary group level, total NOL deductions are capped at 40% of the unitary group's taxable income after apportionment. At the individual member level, there is no restriction in the application of NOLs, but NOL deductions are limited to the "member's share of combined unitary income after the apportionment."[11]

[10] The safe harbor is the total minimum amount of estimated payments that must be made during a tax year to protect taxpayers from penalties for underpayments. The current year safe harbor is the value of actual tax due from the second preceding tax year recomputed using current year rates and base. Prepayments for first-year corporations that have no harbor must be based on 90% of actual tax liability.

[11] Pennsylvania H.B. 1222, Sec. 4(h), 2021. See https://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2021&sessInd=0&billBody=H&billTyp=B&billNbr=1222&pn=1261.

Addback Provision

Addback provisions are adopted predominately by separate reporting states to isolate and disallow certain deductions for intercompany transactions such as royalties, interest and management fees. These are the same types of transactions that combined reporting seeks to address. Academic studies of addback provisions (both broad and narrow) generally find a weak to modest positive impact on CNIT collections in states that adopt these provisions.[12]

For TY 2015, an addback provision for intangible expenses became effective for Pennsylvania CNIT filers. The DOR estimates that the addback provision generates roughly $40 to $50 million in additional CNIT revenue annually. The addback provision denies certain tax shifting transactions that combined reporting is designed to prevent, thereby reducing the potential revenue impact from the enactment of mandatory combined reporting. Nine of the 12 states listed in Table 1.1 (page 8) enacted an addback provision prior to the enactment of combined reporting, the exceptions being New Mexico and West Virginia. Therefore, in this regard, these states are similar to Pennsylvania and the revenue estimates for combined reporting reflect the enactment of a historical addback provision.

Taxpayer Behavior

Tax policy changes such as combined reporting and rate reductions alter firms' decisions. The IFO estimate includes behavioral adjustments that attempt to reflect taxpayer response to increasing/decreasing Pennsylvania tax liabilities. This is accomplished in two ways. First, the IFO's combined reporting estimate uses a 12-year window to consider the long-term impact of the policy change on corporations' operations for states that enacted combined reporting. Second, the revenue loss estimate from rate reduction is reduced to reflect the fact that lower tax rates should attract more economic activity. While the complete phase-in of the rate reduction will reduce net tax liability for some firms by nearly one-half, combined reporting will increase tax liability for a relatively small group of firms by a factor of two, three, four or more. For combined reporting, it is reasonable to assume that certain firms will attempt to adjust their long-term operations, to the extent they are able, in response to the tax law change.

The 2020 DOR analysis of 2015 tax return data detailed in **Table 1.4** illustrates the impact of the tax law changes on Pennsylvania firms. The analysis examined the impact from the enactment of (1) combined reporting and (2) a rate reduction to 5.99%. These are the figures from the first four columns of the table.[13] The final two columns reflect the impact of combined reporting only.

[12] Gupta et al., (2009) finds a weak positive impact from addback provisions on CNIT revenues, Fox and Luna (2010) find addback provisions have a statistically significant positive impact on CNIT revenues. In the IFO's (2013) regression analysis of combined reporting, addback provisions do not attain statistical significance, but the report notes these provisions could increase corporate income tax revenues by 2% to 5%.

[13] See pages 15 and 18 of DOR written responses to FY 2020-21 Budget Hearing Questions, Feb. 28, 2020, https://www.pahouse.com/files/BudgetHearingTestimony/2020-21/03-09/REV_BdgHearingResponse_022820.pdf.

For combined reporting only, the analysis finds that:

- 62% of firms would be unaffected because they had no tax liability for the tax year;
- 34% of firms would realize, on average, a 25% reduction in liability;
- 5% of firms would realize, on average, a 543% increase ($1.2 billion) in Pennsylvania tax liability.

The simulation shows that the potential revenue gains from combined reporting are very concentrated across a relatively small number of firms that will have significantly higher tax liability under the new filing regime.

Table 1.4
Pennsylvania DOR Estimated Winners/Losers

			CNIT Liabilities			
Class	Count	Share of Firms	Current	CR and 5.99%	CR Only	% Change CR Only
No Impact	74,427	62%	$0	$0	$0	0%
Winners	40,650	34	2,136	958	1,597	-25
Losers	5,863	5	224	863	1,439	543
Total	**120,940**	**100**	**2,359**	**1,821**	**3,037**	**29**

Note: Amounts in dollar millions. Combined Reporting (CR) Only liabilities and Percent Change in CR Only do not consider the impact of a rate reduction. The columns Share of Firms, CR Only, and % Change CR Only are IFO calculations based on data provided by DOR in its budget hearing responses. The figures for CR Only, were generated by reversing the rate reduction impact, or multiplying the CR and 5.99% column by 9.99/5.99.

Source: Pennsylvania Department of Revenue, Budget Hearing Responses, February 28, 2020.

Table 1.5 concludes the analysis with industry detail from a DOR presentation regarding changes in Pennsylvania tax liability across selected industries due to combined reporting. Tax liabilities increase across most industries, other than agriculture and transportation/warehousing. The DOR estimates that the mining, manufacturing and retail trade industries would realize the largest percentage increase in tax liability (49%, 43% and 43%, respectively). These estimates reflect the impact of combined reporting only and exclude any proposed rate reduction.

Table 1.5
PA DOR Estimated Combined Reporting Impact by Industry

Industry	Current	Combined	Difference	% Change
Agriculture	$6	$5	-$1	-19%
Mining	33	49	16	49
Utilities	116	144	28	24
Construction	60	67	7	12
Manufacturing	328	468	141	43
Wholesale Trade	418	570	152	36
Retail Trade	238	342	103	43
Transportation/Warehousing	79	71	-8	-10
Information	208	216	8	4
Finance/Insurance/Real Estate	216	238	22	10
Services	361	464	103	29
Other/Miscellaneous	297	403	106	36
Total	**2,359**	**3,037**	**677**	**29**

Note: Amounts in dollar millions.

Source: Pennsylvania Department of Revenue, presentation to the Federation of Tax Administrators Revenue Estimating Conference, September 24, 2019.

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Personal Income Tax Proposal

Proposal Highlights

The administration's personal income tax (PIT) proposal has two parts. The first part raises the tax rate from 3.07% to 4.49%. The second part significantly raises the income limits for tax forgiveness (SP). The rate increase is effective July 1, 2021 and the higher SP limits are effective January 1, 2021. Combined, the two provisions effectively make the state personal income tax much more progressive. Key points from the analysis are as follows:

- The analysis in this section uses the latest tax data from tax year (TY) 2018. The imposition of the rate increase alone would generate $5.8 billion in that year. The analysis assumes that would grow to $6.7 billion by TY 2022, an average growth rate of 3.5% per annum.
- Under the rate increase, nearly all filers reporting taxable income of $100,000 or more would remit more than 100% of new revenues. For filers reporting more than $250,000 of taxable income, net profits (i.e., small business income) and capital gains comprise 35% of taxable income and those income sources would bear a larger share of the change in tax burden.
- When combined with the higher SP thresholds, the net revenue impact is $2.83 billion for TY 2018, and that grows to $3.8 billion for TY 2022. The analysis finds that nearly two-thirds of filers would realize a tax cut or no change in tax liability.
- Although a flat rate is levied, the effective rate would vary greatly across taxpayers based on taxable income. The analysis finds the following average effective tax rates across taxable income groups: under $20,000 (near zero); $20,000 to $40,000 (0.94%); $40,000 to $60,000 (2.32%); $60,000 to $80,000 (3.54%); $80,000 to $100,000 (4.18%) and more than $100,000 (near 4.49%). The much higher SP thresholds reduce the overall effective PIT rate from 4.49% (statutory) to 3.70% (effective).

Raise PIT Rate and SP Thresholds

	21-22	22-23	23-24	24-25	25-26
DOR Estimate	$2,964	$3,960	$3,970	$4,106	$4,259
IFO Estimate	2,589	3,745	3,913	4,089	4,272
Difference	**375**	**215**	**57**	**17**	**-14**

Note: Amounts in dollar millions.

Personal Income Tax Rate and SP Threshold Changes

Current Law

The current PIT system levies a flat rate of 3.07% on the taxable income of resident and non-resident individuals, estates and trusts and pass-through business entities. Eight income categories comprise taxable income: (1) compensation for labor services (e.g., wages, salaries, options, bonuses), (2) net business profits (sole proprietors, partnerships, S corporation shareholders, self-employed), (3) net capital gains, (4) rent and royalty income, (5) dividends, (6) interest, (7) gambling and lottery proceeds and (8) gains or income distributed from estates or trusts. Losses may only be used to offset gains within the same category of income and cannot be carried forward to future years. Single filers ($6,500) and married filers ($13,000) can qualify for full SP, and each declared dependent increases the threshold by $9,500. Tax forgiveness phases out by 10% for each $250 that taxable income exceeds the threshold. Hence, SP fully phases out at $9,000 (single) and $15,500 (married) for filers with no dependents. For TY 2018, 1.12 million returns claimed $248 million of tax forgiveness, an average of $222 per return.

Proposed Law

The proposal makes two changes to the current tax system. First, the statutory tax rate increases from 3.07% to 4.49%. Second, the SP thresholds increase to $15,000 (single and head of household) and $30,000 (married filing joint) and each dependent increases the threshold by $10,000. Full tax forgiveness phases out by 10 percentage points as taxable income exceeds the threshold by $5,000. Hence, SP fully phases out at $65,000 (single) and $80,000 (married) for filers with no dependents.

Tax Forgiveness History

Table 2.1 displays a select history of SP income thresholds and exemption amounts since implementation in 1974.[14] The most recent increase in the income thresholds was 1998, and the latest change to the exemption amount was 2003. The fifth and sixth columns display the highest taxable income amount for a single filer with one dependent or two dependents to qualify for full tax forgiveness. Under current law, those taxpayers would eliminate all tax liability for taxable income less than or equal to $16,000 or $25,500 but would lose all SP benefits once taxable income reaches $18,500 or $28,000.

Because the SP thresholds and exemption amounts have not been adjusted since 2003, the real value of the benefit has eroded over time. The dollar amount of erosion depends on the comparison year that is used. The lower portion of Table 2.1 displays the difference between the current SP parameters and thresholds and inflation-adjusted values based on the Philadelphia Consumer Price Index for All Urban Consumers (CPI-U) through 2021. If the comparison is made to the year of enactment (1974), then the current value of the income threshold for a single filer is much lower (-$8,670) in real terms but the value of the first dependent exemption is higher ($3,430). Overall, the current threshold for full tax forgiveness for a single

[14] Not all SP changes are included in the table. The years selected for the table is the year of implementation, the year of final change and two other years that included significant adjustments to SP thresholds and exemptions.

taxpayer with one dependent is $5,230 lower compared to the inflation-adjusted amount from 1974. However, for two dependents, the difference is positive ($480) because the current law parameters are more generous. The differentials are largest relative to 2003 because no changes have been made since that year.

Table 2.1
SP History and Real Value Over Time

	Income Threshhold		Exemption Amount		Start Phase Out (Single)	
Year	Single	Married	First	Others	1 Depend	2 Depend
1974	$3,000	n.a.	$1,200	$750	$4,200	$4,950
1994	6,300	$12,600	4,000	4,000	10,300	14,300
1998	6,500	13,000	6,000	6,000	12,500	18,500
2003	6,500	13,000	9,500	9,500	16,000	25,500
2021 CL	6,500	13,000	9,500	9,500	16,000	25,500
2021 PL	15,000	30,000	10,000	10,000	25,000	35,000
If Values Had Been Inflation Adjusted Since						
1974	$15,170	n.a.	$6,070	$3,790	$21,230	$25,020
1994	10,810	$21,630	6,870	6,870	17,680	24,550
1998	10,260	20,510	9,470	9,470	19,720	29,190
2003	9,140	18,270	13,350	13,350	22,490	35,850
Difference: 2021 Current Amount Less Inflation-Adjusted Values						
1974	-$8,670	n.a.	$3,430	$5,710	-$5,230	$480
1994	-4,310	-$8,630	2,630	2,630	-1,680	950
1998	-3,760	-7,510	30	30	-3,720	-3,690
2003	-2,640	-5,270	-3,850	-3,850	-6,490	-10,350
Difference: 2021 Proposed Amount Less Inflation-Adjusted Values						
1974	-$170	n.a.	$3,930	$6,210	$3,770	$9,980
1994	4,190	$8,370	3,130	3,130	7,320	10,450
1998	4,740	9,490	530	530	5,280	5,810
2003	5,860	11,730	-3,350	-3,350	2,510	-850

Note: Inflation-adjusted values use Philadelphia CPI-U. CL is current law and PL is proposed law. Assumes that inflation increases by 2.5% for 2021.

Source: CPI-U from U.S. Bureau of Labor Statistics.

The final portion of the table makes the same comparison but relative to the proposal. Based on those higher thresholds, the proposal is considerably more generous for all comparison years. The exception is the comparison for the dependent exemption amount relative to 2003 because the proposal only increases the exemption amount by $500 relative to that year.

The analysis also compared SP thresholds to federal poverty levels (FPL). The ratio of the threshold for full tax forgiveness relative to the FPL for a head of household under age 65 with one or two child dependents is as follows:[15]

- For 1974, the ratios are 1.25 (one dependent) and 1.25 (two dependents). A ratio above 1.0 implies that the relevant SP threshold for full SP is above the FPL. A ratio of 1.25 implies that it is 25% higher than the FPL threshold.
- For 1998, the ratios are 1.11 and 1.41.
- For 2003, the ratios are 1.26 and 1.72.
- For 2021 current law amounts, the ratios are 0.88 and 1.19. For a single filer with one dependent, the amount that qualifies for full SP is below the FPL.
- For 2021 proposed law amounts, the ratios are 1.37 and 1.64, significantly above the FPL.

Overview of Personal Income Tax Data

Table 2.2 provides a summary of PIT data for TY 2018. The top portion of the table displays income sources by taxable income level. The data show that:

- Nearly two-thirds (62.8%) of filers reported taxable income under $50,000. Those returns include dependents who report modest amounts of wages and retirees who report modest amounts of capital gains, interest or dividend income.
- Filers reporting $100,000 or more of taxable income comprised 17.2% of returns and 61.7% of taxable income.
- Filers reporting $500,000 or more of taxable income (not itemized in table) comprised 1.0% of returns and 19.7% of taxable income.

These data reveal that most returns would qualify for some portion of tax forgiveness even if the filer has no dependents. The bottom portion of the table displays the composition of taxable income for each income group. The data show that:

- The great majority of taxable income for filers reporting less than $100,000 of taxable income was wages or salaries (referred to as taxable compensation, weighted average of 88.0%), followed by net profits (5.2%).
- For filers reporting between $100,000 and $500,000 (not itemized in table) of taxable income, wages and salaries comprised 82.8% of taxable income and net profits 8.4%.
- For the two highest income groups, the shares were as follows: wages and salaries (40.3%), net profits (27.0%) and capital gains (18.6%).

[15] Historical FPL data are from the U.S. Census Bureau.

Because filers that report more than $100,000 of taxable income will generally not qualify for SP under the proposal, these data show that certain forms of income (net profits, capital gains) will effectively be taxed at higher rates than other forms (wages, dividends and interest).

Table 2.2
PIT Data for Tax Year 2018

Taxable Income Low	Taxable Income High	Number Filers	Taxable Comp	Net Profits	Dividend & Interest	Capital Gains	All Other	Taxable Income	Share of Tax Base
$1	$9,999	1,488	$3,866	$415	$955	$129	$214	$5,578	1.3%
10,000	19,999	768	8,823	1,084	938	223	249	11,316	2.7
20,000	29,999	634	13,540	979	801	244	246	15,811	3.8
30,000	39,999	556	17,240	927	707	244	238	19,355	4.6
40,000	49,999	443	17,860	896	629	250	234	19,869	4.8
50,000	74,999	762	42,210	2,083	1,332	605	565	46,794	11.2
75,000	99,999	478	37,333	1,895	1,086	569	532	41,414	9.9
100,000	249,999	852	109,148	7,823	3,789	2,644	2,252	125,657	30.1
250,000	or more	210	69,180	28,997	8,511	17,711	7,471	131,870	31.6
Total		**6,192**	**319,200**	**45,099**	**18,747**	**22,618**	**12,000**	**417,664**	**100.0**

Taxable Income Low	Taxable Income High	Taxable Comp	Net Profits	Dividend & Interest	Capital Gains	All Other	Taxable Income
$1	$9,999	69.3%	7.4%	17.1%	2.3%	3.8%	100.0%
10,000	19,999	78.0	9.6	8.3	2.0	2.2	100.0
20,000	29,999	85.6	6.2	5.1	1.5	1.6	100.0
30,000	39,999	89.1	4.8	3.7	1.3	1.2	100.0
40,000	49,999	89.9	4.5	3.2	1.3	1.2	100.0
50,000	74,999	90.2	4.5	2.8	1.3	1.2	100.0
75,000	99,999	90.1	4.6	2.6	1.4	1.3	100.0
100,000	249,999	86.9	6.2	3.0	2.1	1.8	100.0
250,000	or more	52.5	22.0	6.5	13.4	5.7	100.0
Weighted Average		**76.4**	**10.8**	**4.5**	**5.4**	**2.9**	**100.0**

Note: Number of filers in thousands and amounts in dollar millions.

Source: Pennsylvania Department of Revenue, PIT Statistics for TY 2018.

Revenue Estimate Methodology

The analysis uses the latest PIT micro data file for TY 2018. The file contains 6.2 million individual records and includes data from all fields on the PA-40 personal income tax return. In order to simulate the proposal, the analysis used the following steps:

- Allow certain filers that did not claim SP but appear to qualify to claim SP for TY 2018. For example, a number of married filers with taxable income under $13,000 appear to qualify for SP but did not

claim it.[16] If this adjustment is not made, then the proposal appears to generate a tax cut for these filers because it assumes that all filers who qualify for SP claim it under the proposal.[17]

- Create an identifier field for returns that are likely filed by dependents. The analysis assumes that all returns with wage compensation only with less than $8,000 of taxable income are dependent returns.[18]
- Impute all dependents to returns. Those claiming SP already report roughly 740,000 exemptions. Federal tax data show 3.3 million dependents (children under age 17 and others) claimed on the tax return. The residual 2.5 million dependents are imputed to state income tax returns. While many returns have no dependents, others will report one, two or more dependents.
- Apply the higher tax rate to all returns from TY 2018. Compute the change in tax liability under the current SP thresholds.
- Allow the SP thresholds to increase under the proposal. Recompute tax liability based on income level and number of dependents. The analysis assumes that all who are eligible for SP claim it.
- Include an adjustment for residents from whom tax is collected but do not file a tax return, possibly because they are perfectly withheld. Data suggest there are a sizable number of these individuals. The analysis assumed that one-half would start to file due to more generous SP and higher tax rates, but the other half would not file and be subject to the higher tax rate.[19]

It is noted that the analysis does not include behavioral responses due to the higher tax rate. Academic studies find that workers will supply less labor at higher tax rates. It also does not include any macroeconomic feedback, or dynamic, effects. In order to estimate those impacts, the analysis must also specify how the new tax revenues would be spent and that is beyond the scope of this analysis.

Simulation Results

Table 2.3 displays the results of the simulation described in the previous subsection. Detail is not shown for filers above $100,000 because all such filers will generally be subject to the 4.49% statutory tax rate. Key outcomes are as follows:

- Nearly all returns reporting less than $20,000 of taxable income have no change in tax liability or a tax reduction. The effective tax rate (tax paid / taxable income) for this group is nearly zero (0.07%). Filers that pay more are dependents whose parents do not qualify for SP under the

[16] These filers may have other forms of income (e.g., nontaxable interest and insurance proceeds) that are included in the SP computation but are not listed on the tax return if the filer does not claim SP. Therefore, the number of filers affected by this adjustment will be overstated.
[17] Due to this assumption, the estimate for this analysis is a lower bound. In practice, not all eligible filers will claim SP but would be subject to the higher tax rate.
[18] This income level yields a reasonable number of dependent returns based on the number of residents age 16 to 21 and labor force participation rates.
[19] This adjustment reduced the overall revenue estimate by roughly $100 million for TY 2018. These individuals are not included in any tabulations of tax returns in this section because it is unclear how many neglect to file a return, or their income level. This adjustment is a "bottom line" adjustment and deducted from the model simulation results.

proposal.[20] All other filers should realize a tax cut or no change as the higher SP thresholds more than offset the higher tax rate.

- Nearly all returns with taxable income between $20,000 and $40,000 realize a tax reduction of two-thirds on average. The average effective tax rate for this group is 0.94%.
- Most tax returns (77%) with taxable income between $40,000 and $60,000 realize a tax reduction. The average effective tax rate is 2.32%.
- Approximately 30% of tax returns between $60,000 and $80,000 realize a tax reduction. The average effective tax rate is 3.54%.
- The great majority of returns above $80,000 pay more tax. The highest group pays the statutory tax rate of 4.49% and taxes increase by $3.7 billion.[21]

Table 2.3
Simulation Results Using Tax Year 2018

Taxable Income		Number of	Change in	Effective
Low	High	Returns (000s)	Liability	Tax Rate
$1	$19,999	2,338	-$339	0.07%
20,000	39,999	1,187	-713	0.94
40,000	59,999	807	-301	2.32
60,000	79,999	519	169	3.54
80,000	99,999	364	362	4.18
100,000	or more	1,062	3,657	4.49
Total		**6,277**	**2,835**	**3.70**

Note: Amounts in dollar millions. Count of returns does not match PIT published data as micro file includes roughly 75,000 more returns. Effective Tax Rate is tax liability divided by taxable income for entire income group.

As noted, these results are based on a simulation using TY 2018 data. Assuming that taxable income grows by 3.5% per annum and fewer filers would qualify for current law SP but the same number and amount qualify for SP under the proposal, the analysis projects that the net revenue gain would increase from $2.83 billion to $3.68 billion by TY 2022. This reflects the fact that most of the total income growth will occur for filers that report more than $100,000 of taxable income and generally do not qualify for SP. That result occurs because (1) the entire income distribution shifts to the right (i.e., increases) over time due to inflation and real income gains and (2) income tends to accrue disproportionately to the higher end if a recession does not occur (i.e., capital gains, dividends and net profits).

[20] Similar to current law, dependents can also qualify for SP if their parents are able to claim it. The computations are separate and both the parent and dependents can benefit from full SP if their income falls below the relevant threshold.
[21] Although the table shows all returns above $100,000 would pay more, a small number of returns with many dependents would receive a tax cut. For example, a family with five dependents and $110,000 of taxable income would receive a tax cut of $414. The same family with seven dependents would receive a tax cut of $2,389.

Average Effective Tax Rates on Income Sources

Because certain types of income flow disproportionately to low- and high-income filers, the proposal effectively taxes the eight categories of taxable income at different effective tax rates. For example, wages will have a lower effective tax rate because most of the taxable income reported by lower-income filers that will qualify for SP is wage income. For the main income sources that comprise taxable income, the analysis finds the following effective tax rates (weighted average for across all filers) which are all lower than the statutory tax rate of 4.49% due to tax forgiveness:

- Wage and salary income (3.59%)
- Net profits of businesses (4.06%)
- Interest and dividends (3.55%)
- Capital gains or sales of property (4.27%)

The effective tax rates for wage and salary income and interest-dividend income are far below the statutory rate due to the higher SP thresholds. For interest and dividends, many retirees and elderly filers only report those types of income on the tax return and all tax liability is eliminated under the proposal for many of those filers.[22] Capital gains income faces a much higher average effective tax rate because a large share (roughly 90%) flows to filers above $100,000.

Net profits of businesses have an average effective tax rate of 4.06%. Roughly 82% of that income flows to filers with taxable income above $100,000. The tax data from 2018 show that 266,500 returns with taxable income over $100,000 reported positive net profits of $36.8 billion. All of that income would generally be subject to the new 4.49% statutory tax rate. Therefore, the tax increase on that income would be (4.49% - 3.07%) * $36.8 billion = $523 million, or 18.4% of the net tax increase. Those data reflect small business owners such as S corporation shareholders, partners, sole proprietors and self-employed. The tax data generally cannot be used to identify the number of small businesses.

For filers under $100,000 of taxable income, 581,500 tax returns reported a positive amount for net profits, and many of those filers would receive a net tax cut under the proposal. Those returns reported $8.3 billion of positive net profits. Under current law, the tax liability for that income would be $240 million. The net effect of the proposal is to reduce tax liability for those filers to $178 million, a tax cut of $62 million. For all net profits income, the net tax increase is $461 million based on TY 2018 data.

Impact on State Migration

During the recent budget hearings, several members inquired about the impact of the higher PIT rate on migration. The text that follows reviews the main findings and results from four prominent tax migration studies that have been published recently. The studies appear in chronological order.

[22] Due to the exclusion of retirement income, retirees could have significant income and remit no state personal income tax. While this is true under current law, the proposal would provide more tax relief to retirees.

Giertz and Tosun (2012)[23]

A paper in the *National Tax Journal* uses a simulation model to examine the effectiveness of state attempts to redistribute personal income via progressive state income tax policies. The authors found that state tax policies that attempt to redistribute income negatively impact state tax revenues, increase costs and reduce overall welfare due to out-migration of high-income taxpayers. However, these same policies implemented at the federal level were found to have little to no effect on costs or welfare loss.

Young et al. (2016)[24]

A study published in the *American Sociological Review* used IRS tax return data to examine how top tax rates influence millionaire migration patterns. The analysis found that millionaires have lower rates of migration than the general population because they are more likely to (1) be married and have family responsibilities, (2) own a business and (3) have significant social and network capital in the areas they have achieved success. However, the authors also note that "the transitory millionaire hypothesis, in its simple form, contains a grain of truth: millionaires pay more attention to tax rates than does the general population." The core migration estimates translated into an elasticity of -0.1, or a 1% decrease in millionaire population for a state when the top tax rate is raised by 10%. The authors noted that much of their results were driven by migration to Florida or the "Florida effect." Florida does not have a state personal income tax, but also has other desirable qualities (e.g., climate) that may be difficult to control in a statistical analysis.

Varner, Young and Prohofsky (2018)[25]

A Stanford University working paper examined three waves of tax reform in California that affected top earners using administrative tax data to analyze how high-income taxpayers respond to changes in top tax rates. Statistical significance on migration occurred only for the largest of these tax reforms (a 2012 voter-enacted tax increase). However, that effect translates to an estimated 0.04% of millionaire population loss over two years following the tax change. The authors further note that migration accounts for only 1.2% of the annual change in the millionaire population, with the other 98.8% due to income dynamics where residents move into the millionaire bracket or fall out of it. The authors cite the temporary nature of high earnings (e.g., transitory capital gains) for many taxpayers as a reason for the modest tax migration effect.

Kleven et al. (2020)[26]

A study in the *Journal of Economic Perspectives* cites small sample sizes as a key limitation to the measurement of high-income taxpayer mobility. The analysis looked at foreign and domestic residents affected by the top marginal tax rates of various countries and found that the migration elasticities (i.e., response) varied depending on other factors such as (1) whether the taxpayer is a foreign or domestic citizen, (2)

[23] "Millionaire Migration Elasticities, Fiscal Federalism, and the Ability of States to Redistribute Income," Giertz, S. H. and Tosun, M. S., *National Tax Journal*, 65(4), p. 1069-1092 (December 2012).
[24] "Millionaire Migration and Taxation of the Elite: Evidence from Administrative Data," Young et al., *American Sociological Review*, 81(3), p. 421-446 (June 2016).
[25] "Millionaire Migration in California: Administrative Data for Three Waves of Tax Reform," Varner, C., Young, C. and Prohofsky, A., Working Paper (July 2018).
[26] "Taxation and Migration: Evidence and Policy Implications," Kleven et al., *Journal of Economic Perspectives*, 34(2), p. 119-142 (2020).

the type of industry the taxpayer works in (e.g., sports or entertainment versus business management) and (3) the ratio of labor to capital income that comprises their income. The authors emphasize that mobility responses may appear significantly large in other research because top marginal tax rates pertain to only a specific group of taxpayers, and that other outside factors may play a more substantial role in migration decisions, including local or national amenities, agglomeration effects and the provision of public goods and services.

Summary

This analysis was based on PIT data from TY 2018. Due to the COVID-19 pandemic, there is more uncertainty regarding both the distribution of income and income sources for TY 2022. The analysis implicitly assumes that the income distribution will largely revert back to former patterns. However, to the extent that prior jobs are not recouped, the data tabulations presented in this section could look different for TY 2022. Specifically, if lower-income jobs are not recouped, then fewer filers will benefit from the proposal and receive a tax cut, since they no longer report taxable income.

The main findings of the analysis can be summarized as follows:

- The proposal will generate $3.7 to $4.3 billion of new revenues. The net impact on state economic growth is indeterminate. By itself, higher taxes cause lower economic growth, but higher government spending can generate higher economic growth.
- The state income tax burden is shifted away from labor income and towards capital income such as net profits, capital gains and dividends. For example, although wage and salary income is 76% of the tax base (TY 2018), it bears 65% of the tax increase. Conversely, while capital gains is 5% of the tax base, it bears 10% of the tax increase.
- The state income tax burden is shifted away from lower-income taxpayers towards upper-income. Under current law, most upper-income taxpayers would not be able to deduct the higher taxes on the federal tax return. Hence, the federal government would not effectively subsidize the proposed tax increase unless changes are made to federal tax law.
- Many retirees who report a material amount of non-wage income will benefit from the proposal.
- Some dependents who are in high school and college and work part-time jobs will pay the higher statutory rate under the proposal. Others will receive a tax cut if their parents qualify for SP.

Raising the Minimum Wage

Proposal Highlights

Impact from a $12 Minimum Wage

	CY 2022
Workers Affected (000s)	
Directly affected (earn <$12/hr)	765
Indirectly affected (earn $12-$15/hr)	696
Employment reduction	-16
Gender of Directly Affected Workers	
Share female	58%
Share male	42%
Age of Directly Affected Workers	
Share under age 20	28%
Share age 20 to 64	60%
Share age 65 and older	12%
Income and Revenue Impact ($ millions)	
Income gain - directly affected	$1,598
Income gain - indirectly affected	$841
General Fund revenues	$60

The administration proposes to raise the state minimum wage from the federal minimum of $7.25 to $12.00 per hour on July 1, 2021 and increase that amount by 50 cents every year until the minimum wage is $15.00 beginning on July 1, 2027. Every July 1 thereafter, the minimum wage would increase by an annual cost-of-living adjustment based on the regional Consumer Price Index for All Urban Consumers (CPI-U). For tipped workers, employers must also pay workers the state minimum, regardless of tip income.

Key points are as follows:

- Compared to the same analysis released in April 2020, dramatic changes have occurred in the labor market. Due to COVID-19, the analysis projects that there will be 230,000 fewer jobs in 2022 than 2019, and most jobs lost will be low-wage and part-time jobs. As a result, fewer workers benefit from the higher minimum wage and fewer lose employment.
- The analysis estimates that 749,000 workers will receive a pay raise and employment will contract by 16,000 compared to the current minimum wage. Most job loss would occur through attrition over one or two years as vacant positions are not filled or departures are not replaced.
- Females would comprise 58% of workers who gain from the higher wage, while workers under age 20 would comprise 28%.
- Low-wage workers would receive a net wage gain of $1.6 billion (includes employment losses). The average annual gain for those workers would be $2,090 (average part- and full-time).
- Workers indirectly affected who earn between $12.00 and $14.99 per hour would receive a modest pay raise (5%). If that holds, income gains for that group would be $841 million.
- General Fund revenues would increase by $60 million once all impacts of the higher wage reverberate through the state economy.

Raising the Minimum Wage

Since 2015, the IFO has published six analyses of various minimum wage proposals, with the most recent analysis released April 2020. The following bullets list major changes from last year's analysis that will impact the updated estimates:

- The analysis uses data from the U.S. Bureau of Labor Statistics' (BLS) Occupational Employment Statistics (OES) survey of employers for 2019.[27] Although data for 2020 are now available, those data were not used due to the dramatic employment reduction from COVID-19 reflected in those data. Rather, the analysis projects the 2019 data forward to 2022 and assumes there will be 230,000 fewer jobs largely concentrated in lower-wage sectors such as retail trade, food service and accommodation.[28]
- New data from the Social Security Administration were used to provide additional information for employment characteristics based on the age and gender of workers. Those data suggest there are a greater share of workers under age 20 and over age 65 than other data sources used previously.
- For the impact on General Fund revenues, a more extensive analysis was undertaken that includes the use of the IMPLAN input-output model.

The analysis begins with a comparison of state minimum wage rates and a review of recent minimum wage studies. The analysis then examines the characteristics of lower-wage workers based on hourly wage rates, gender and age. Following these descriptive statistics, the analysis computes the impact of the higher proposed minimum wage on employment, incomes and General Fund revenues and expenditures. The analysis concludes with sections that examine tipped workers and the proposed phased-in increase from $12.00 to $15.00 per hour.

The focus of this analysis is on the immediate movement to a $12.00 minimum wage, and it provides only a brief discussion for the phased-in increase to $15.00 over the six years that follow. This approach is used to keep the analysis tractable and focused on near-term outcomes. Moreover, no state has increased its current minimum wage to $15.00 per hour. Hence, no state data exist that could be used to inform possible outcomes.

Minimum Wage Across States

As of January 1, 2021, Pennsylvania and 20 other states do not require employers to pay a wage that exceeds the federal minimum of $7.25 per hour. (See **Table 3.1**.) By contrast, 20 states and the District of Columbia require employers to pay an hourly wage of $10.00 or more. By January 1, 2025, 18 states and the District of Columbia will require employers to pay an hourly wage of $12.00 or more under current law.

[27] The OES program conducts a semi-annual survey designed to produce estimates of nonfarm employment and wages for about 800 specific occupations. Data from self-employed persons are not collected and are not included in the estimates. The OES program produces these occupational estimates for the nation as a whole, by state, by metropolitan or nonmetropolitan area, and by industry or ownership.

[28] For March 2021, total payroll employment was 384,000 below the level for March 2019.

Table 3.1
Minimum Wage Rates by State (as of January 1st)

State/Territory	2021 Rank	2021	2022	2023	2024	2025
Washington D.C.	1	$15.00	$15.30	$15.60	$15.90	$16.20
California	2	14.00	15.00	15.30	15.60	15.90
Washington	3	13.96	14.24	14.52	14.81	15.11
Massachusetts	4	13.50	14.25	15.00	15.00	15.00
New York	5	12.50	12.75	13.01	13.27	13.54
Colorado	6	12.32	12.57	12.82	13.08	13.34
Arizona	7	12.15	12.40	12.65	12.90	13.15
Maine	7	12.15	12.40	12.65	12.90	13.15
Oregon	9	12.00	12.75	13.50	13.75	14.05
Connecticut	9	12.00	13.00	14.00	15.00	15.30
New Jersey	9	12.00	13.00	14.00	15.00	15.30
Maryland	12	11.75	12.50	13.25	14.00	15.00
Vermont	12	11.75	12.55	12.80	13.06	13.32
Rhode Island	14	11.50	11.50	11.50	11.50	11.50
Arkansas	15	11.00	11.00	11.00	11.00	11.00
Illinois	15	11.00	12.00	13.00	14.00	15.00
New Mexico	17	10.50	11.50	12.00	12.00	12.00
Alaska	18	10.34	10.55	10.76	10.98	11.20
Missouri	19	10.30	11.15	12.00	12.25	12.50
Hawaii	20	10.10	10.10	10.10	10.10	10.10
Minnesota	21	10.08	10.28	10.49	10.70	10.91
Michigan	22	9.87	10.10	10.33	10.56	10.80
South Dakota	23	9.45	9.65	9.85	10.05	10.25
Delaware	24	9.25	9.25	9.25	9.25	9.25
Nebraska	25	9.00	9.00	9.00	9.00	9.00
Nevada	25	9.00	9.75	10.50	11.25	12.00
Ohio	27	8.80	9.00	9.20	9.40	9.60
West Virginia	28	8.75	8.75	8.75	8.75	8.75
Montana	28	8.75	8.95	9.15	9.35	9.55
Florida	30	8.56	10.00	11.00	12.00	13.00
Virginia	31	7.25	11.00	12.00	12.00	13.50
Pennsylvania	**31**	**7.25**	**7.25**	**7.25**	**7.25**	**7.25**
Other	31	7.25	7.25	7.25	7.25	7.25

Note: Over 50 localities have adopted a minimum wage above their state's minimum wage. Projections use a 2.0% growth rate to estimate inflation adjustments for future years.

Source: The Economic Policy Institute. Minimum Wage Tracker (published January 7, 2021).

The federal minimum wage was last raised to $7.25 per hour in 2009. Due to inflation, the real value of the wage rate has eroded over time. From 2009 through 2021, the Philadelphia CPI-U increased by 18.9%, an average rate of 1.5% per annum. If the minimum wage had been adjusted for inflation through the current year, then the wage rate would be $8.62 in 2021.

Currently, all border states have a minimum wage that exceeds Pennsylvania by at least $1.50 per hour, and four states (New York, Maryland, New Jersey and Delaware) have a minimum wage that is at least $2.00 higher. If Pennsylvania increases the minimum wage to $12.00 in 2021, it would be exceeded only by seven states and the District of Columbia and tied with three other states for the ninth highest minimum wage. If Pennsylvania continues to increase the minimum wage to $15.00 over the subsequent six years, on January 1, 2028, it will join nine other states and the District of Columbia with a minimum wage that meets or exceeds $15.00.

Recent Minimum Wage Studies

The text that follows provides the main findings and results from recent minimum wage studies. Prominent studies prior to 2019 can be found in the IFO analysis from last year. To interpret results, it is necessary to define the term "employment elasticity." The employment elasticity is the percentage change in employment divided by the percentage change in the statutory minimum wage. For example, an elasticity of -0.1 implies that a 10.0% increase in the minimum wage would reduce employment by 1.0% (-1.0 / 10.0).

Cengiz et al. (2019)[29]

The authors employ a new methodology to examine 138 state-level minimum wage changes from 1979 to 2016 where the mean real increase in the minimum wage was 10.1%. The analysis uses the Merged Outgoing Rotation Group dataset from the U.S. Census Bureau's Current Population Survey. The authors discuss three main results. First, higher minimum wages do not appear to impact employment, assuming that the ratio of the new minimum wage to the state median wage does not exceed 55%. The study found that job gains at or slightly above the new minimum wage closely matched those lost that were below the new minimum wage. Second, impacts varied across sectors: employment in the manufacturing and retail/wholesale trade sectors could be adversely impacted, while workers in other sectors are largely unaffected. Third, positive wage "spillovers" extend up to $3.00 above the new minimum wage and can account for up to 40% of the overall income gains from a higher minimum wage.

Reich et al. (2019)[30]

The authors use a highly detailed approach that traces the impact of a higher minimum wage through the economy. The authors first examine how firms would substitute capital for labor under a higher wage rate. Next, they estimate the reduction in demand from higher consumer prices in sectors affected by a higher minimum wage. Finally, they estimate the income effects that would result from low-wage workers having higher income. The authors assume that employers pass all of the increase in operating costs stemming from a minimum wage increase onto prices, after accounting for turnover savings, increased automation and productivity growth. The analysis finds that U.S. employment remains unchanged at a phased-in $15.00

[29] Cengiz et al. "The Effect of Minimum Wages on Low-Wage Jobs: Evidence from the United States Using a Bunching Estimator," NBER Working Paper 25434 (January 2019).
[30] "The Employment Effects of a $15 Minimum Wage in the U.S. and in Mississippi: A Simulation Approach," Reich et al., Center on Wage and Employment Dynamics, Institute for Research on Labor and Employment (March 2019).

minimum wage, there are significant income gains for low-wage workers and a "small price increase borne by all consumers." Therefore, some of the higher wage is financed by reduced real consumption by workers who do not benefit from the higher minimum wage.

Congressional Budget Office (2019)[31]

Based on a review of a large body of research, a CBO study used the following median estimates for elasticities for workers directly affected by a minimum wage increase to $12.00 per hour: (1) -0.234 (adults), (2) -0.721 (teenagers) and (3) -0.25 (all workers). It is noted that these elasticities apply only to workers who earn less than the new minimum wage. If phased in by 2025 in six annual increments starting in January 2020 (roughly 80 cents per increment), the analysis found that a $12.00 minimum wage would (1) reduce employment by 0.2% (0.3 million jobs), (2) boost earnings for 5.0 million directly affected workers, (3) provide a modest wage boost for 6.4 million workers earning just above $12.00 per hour and (4) reduce the number of people in poverty by 0.4 million. It is noted that many states will already have minimum wages that are $12.00 or higher by 2025, which greatly mutes the national employment impact of a higher federal minimum wage.

Congressional Budget Office (2021)[32]

Using a methodology similar to the 2019 study, the CBO estimated the budget impact of the Raise the Wage Act of 2021, which would increase the federal minimum wage to $15.00 by 2025. In addition to shifting the analysis forward to cover the 2021 to 2031 period, the agency accounted for a larger range of economic variables and employment effects from the COVID-19 pandemic by assessing whether the results could be different during a period of high unemployment. The study noted that economic models reach conflicting conclusions regarding how higher minimum wages affect employment in periods of high unemployment. For 2025, the agency estimates that employment would fall by 1.4 million workers (0.9% of total employment), 15.6 million workers would receive a higher wage and 0.9 million fewer people would have income below the federal poverty line.

Workers Affected by a $12 per Hour Minimum Wage

This analysis uses data from the 2019 OES dataset from the U.S. Bureau of Labor Statistics. The OES is a semi-annual survey sent to a sample of non-farm establishments across all industries and produces estimates for employment and wages for specified occupations by state. Additional detail on hours worked and demographic characteristics are from the Merged Outgoing Rotation Group dataset from the 2018 Current Population Survey (CPS) and the Annual Statistical Supplement published by the Social Security Administration for 2018.[33]

[31] "The Effects on Employment and Family Income of Increasing the Federal Minimum Wage," Congressional Budget Office (July 2019). See Tables 1, A-1 and A-2.
[32] "The Budgetary Effects of the Raise the Wage Act of 2021," Congressional Budget Office (February 2021).
[33] The CPS is a survey sponsored jointly by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics. It provides data on the labor force, employment levels, unemployment rates and various demographic characteristics.

For 2019, the OES dataset for Pennsylvania represents 5.90 million jobs, including secondary jobs.[34,35] The majority of workers affected by an increase in the minimum wage are hourly-paid workers. The dataset also includes workers employed in occupations that typically receive tips. The impact of the higher minimum wage on those workers is discussed in a later subsection.

Table 3.2 provides a breakdown based on wage level for all non-tipped jobs.[36,37] For 2019, the analysis includes 5.73 million non-tipped jobs. For employment status, 998,000 were part-time (less than 35 hours per week) and 4.73 million were full-time jobs. However, for "directly affected" workers who earn less than $12.00 per hour, roughly one-half of primary jobs were part-time.

Table 3.2
PA Worker Distribution by Hourly Wage Rates

	Number of Payroll Employees (000s)		
	CY 2019	CY 2022	Change
Non-Tipped Workers			
$7.25 to $9.99	506	310	-196
$10.00 to $10.99	260	250	-11
$11.00 to $11.99	278	205	-72
$12.00 to $14.99	764	696	-68
$15.00 or more	3,916	4,065	149
Total Non-Tipped Workers	**5,725**	**5,526**	**-198**
Tipped Workers	177	147	-30
Total All Workers	**5,902**	**5,673**	**-228**
Directly Affected by $12 Minimum Wage			
Non-Tipped Workers	1,044	765	-279
Tipped Workers	119	105	-14

Note: Excludes self-employed. Thousands of full- and part-time jobs.

Source: Occupational Employment Statistics (OES), 2019. Projection for 2022 by IFO.

[34] Excludes independent contractors and self-employed individuals.
[35] The OES data reflect the number of jobs in Pennsylvania as opposed to the number of residents employed. Secondary jobs are typically part-time jobs held by persons who also have a primary job. This figure is somewhat lower than the published payroll employment figure by the U.S. Bureau of Labor Statistics because the data are based on a three-year moving average.
[36] Wages for certain occupations are suppressed in the OES dataset. For primary and secondary school employees, wage data from the Pennsylvania Department of Education was used to calculate the wage distribution. For all other occupations with suppressed wages, this analysis assumed that the employees earned above $15.00 per hour.
[37] For this analysis, tipped occupations include: bartenders, wait staff, food servers, hosts/hostesses, barbers, hair-dressers, miscellaneous personal appearance workers, miscellaneous personal care and service workers, baggage han-dlers and gaming service workers.

For part- and full-time jobs, the 2019 data show that 1.04 million non-tipped workers would be impacted by a $12.00 minimum wage (i.e., directly affected) and another 764,000 workers earning between $12.00 to $14.99 would likely also be affected due to wage compression or spillovers (indirectly affected). Researchers find that workers earning just above the minimum wage will likely also receive a higher hourly wage rate as employers attempt to maintain some wage differentials.

Due to COVID-19, the analysis assumes that the labor market will look different in 2022. Specifically, the analysis assumes that:

- There will be 230,000 fewer jobs in 2022 than 2019. The analysis removes those jobs from certain sectors and assumes that the entire wage distribution shifts to the right by roughly 2% per annum.[38]
- Job losses will be concentrated in lower-wage sectors that include the food service, retail trade, administration (includes temporary workers) and hospitality-leisure sectors. Hence, younger workers who are disproportionately employed in those sectors will be impacted most.
- There will be a nominal amount of non-tipped workers that earn under $8.00 per hour. This occurs because many low-wage jobs were eliminated, and many employers raised wage rates during the pandemic to attract workers.
- Due to early retirements, older workers will comprise a smaller share of the total work force.
- Due to exits from the labor force, females will comprise a smaller share of the total work force.

Table 3.3 displays the composition of the hourly wage groups based on gender and age. (Note: the individual shares for gender and age sum to 100%.) The top portion of the table shows results using the data sources noted previously. For 2019, females comprised a larger share of workers who earned wages under $12.00 per hour. Based on age, workers under age 20 (35.9%) comprised a much larger share of the lowest wage group compared to their share of total jobs (5.0%). The same is true for older workers, but the gap is much smaller. Overall, the data show that roughly one-quarter of workers that would have been directly impacted by a $12.00 minimum wage were under age 20 and one-tenth were age 65 or older.

Based on the above assumptions, the bottom portion of Table 3.3 displays the demographic characteristics used for 2022. Although the analysis projects that COVID-related job loss will be relatively heaviest for the under 20 age group, they comprise a higher share of workers that would be directly affected by a $12.00 minimum wage in 2022 because they are more heavily weighted towards the lower end of the under $12.00 group and are more likely to have turnover (i.e., the positions are less likely to receive a pay raise because new workers rotate in on a regular basis). By contrast, those age 20 to 64 are more likely to migrate up to a group above $12.00 because they are more likely to be permanent workers and full-time.

[38] From 2015 to 2019, the OES data show that the median wage grew by roughly 2.0% per annum across all occupations.

Table 3.3
Age and Gender Impact of Minimum Wage Increase

	Share by Gender		Share by Age		
	Male	Female	< 20	20 to 64	65+
Data for 2019					
$7.25 to $9.99	43.6%	56.4%	35.9%	55.7%	8.4%
$10.00 to $11.99	40.4	59.6	13.0	75.2	11.8
$12.00 to $14.99	43.8	56.2	3.8	89.5	6.7
$15.00 or more	52.8	47.2	0.2	93.6	6.2
Total	**49.6**	**50.4**	**5.0**	**88.0**	**7.0**
Directly Impacted	42.0	58.0	24.1	65.8	10.2
Projection for 2022					
$7.25 to $9.99	44.4%	55.6%	49.6%	38.2%	12.2%
$10.00 to $11.99	41.1	58.9	13.1	74.4	12.6
$12.00 to $14.99	44.6	55.4	3.6	89.8	6.6
$15.00 or more	53.0	47.0	0.1	94.5	5.4
Total	**50.5**	**49.5**	**4.4**	**89.1**	**6.5**
Directly Impacted	42.4	57.6	27.9	59.7	12.4

Source: Data for 2019 based on OES, Social Security Administration and U.S. Census Bureau Quarterly Workforce Indicators (QWI). 2022 is a projection by IFO based on assumptions in text.

The analysis also examined available wage data based on race. For that purpose, the only data available are from the U.S. Census Bureau's QWI application. However, those data only provide the number of employees by race and the sector of employment. They do not contain breakouts by race and wage rate. Because the minimum wage disproportionately impacts employees in the retail and food service sectors, the IFO examined Pennsylvania data for those two sectors. That comparison did find that minority workers were employed disproportionately in the food service-accommodation sector, but less disproportionately in the larger retail sector. Hence, the analysis is unable to draw any definitive conclusions on whether a $12.00 minimum wage would impact minority workers more or less than non-minority workers.

Employment Impact from a $12 per Hour Minimum Wage

Table 3.4 displays the projected employment impact due to the enactment of a $12.00 minimum wage. The top third of the table shows the average wage by wage group and the percentage change if the minimum wage increases to $12.00 per hour. For the lowest paid workers, the proposal increases the hourly wage by roughly one-third. For the highest paid workers directly affected, the increase is nearly 7%. While not directly affected by the proposal, the analysis assumes that workers earning $12.00 to $14.99 per hour would also realize a modest wage increase of 5%.

Table 3.4
Employment Impact: $12 Minimum Wage in 2022

	Average Wage	Percent Increase to Higher Wage
$7.25 to $9.99	$9.05	32.6%
$10.00 to $10.99	10.52	14.1
$11.00 to $11.99	11.23	6.9
$12.00 to $14.99	13.39	5.0
	Number of Workers (000s)	**Response Parameter**
$7.25 to $9.99	310	-0.125
$10.00 to $10.99	250	-0.075
$11.00 to $11.99	205	-0.050
$12.00 to $14.99	696	0.000
Total	**1,461**	
	Projected Change (000s)	**Retain Jobs (000s)**
$7.25 to $9.99	-13	297
$10.00 to $10.99	-3	247
$11.00 to $11.99	-1	205
$12.00 to $14.99	0	696
Total	**-16**	**1,445**

Note: Data do not include tipped workers. Indirectly affected workers earn $12.00 to $14.99 per hour.

Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics 2019. Data projected to 2022 by IFO based on assumptions discussed in text.

The middle portion of the table displays the number of workers and the employment response parameters, based on a review of minimum wage studies. For very low-wage workers who are mostly high school and college age, the analysis assumes an elasticity of -0.125, which implies a 1.25% employment reduction for a 10.0% increase in the (average) wage paid for that group. Research finds that employment of this age cohort is more sensitive to wage changes because they are part-time, less experienced and have a high degree of turnover. Moreover, the percentage increase in the wage is very large for this group, and employers would be especially sensitive to their employment compared to other groups under a $12.00 minimum.

It is noted that the elasticities used by the analysis are lower than those in the most recent CBO report that derived employment elasticities.[39] For that report, CBO estimated a median short-run elasticity of -0.25 for directly affected teenage and adult workers.[40] That estimate is for labor markets that operate under normal conditions and is based on research prior to the COVID-19 pandemic. For this analysis, the IFO applied a lower elasticity. The lower elasticity is used for two reasons:

- The forecast assumes that employment will be 230,000 lower in 2022 than 2019. Many of those job losses are in low-wage sectors that would be materially impacted by a higher minimum wage. It is likely that those employers have already implemented various productivity enhancements and have released their least productive employees. If that holds, then they would be less sensitive to a higher wage for remaining employees.
- Data show that younger workers were disproportionately impacted by the pandemic, and research finds that employment elasticities are considerably higher for younger workers.

The analysis assumes that the elasticities would decline as the percentage increase in the wage paid declines. The projected employment impact is equal to: number employed * percent change in wage * responsiveness parameter or elasticity. The analysis finds a reduction of 9,500 part-time jobs and 6,500 full-time jobs, for an overall reduction of 16,000 (2.1% of directly affected workers). The proposal disproportionately affects part-time jobs because the 2019 data show that nearly 60% of jobs that pay under $10.00 per hour were part-time. The analysis also assumes a modest reduction in total hours worked. Studies find that some of the negative employment impact would manifest itself in reduced work hours, as opposed to fewer jobs. This effect is included in the computation of the income gains in the subsection that follows.

Two caveats are noted regarding the modeling used for this analysis.

- Despite the appearance of a linear and stable relation between the percentage increase in the minimum wage and projected job loss, that does not occur in practice. The negative employment impact would generally increase more rapidly as the minimum wage is raised to higher levels because employers become relatively more responsive to larger percentage increases in the minimum wage (i.e., elasticities increase). For example, it is likely that a $10.00 minimum wage would have a very minor or no material impact on employment levels because the elasticities would be somewhat lower than those used for the increase to $12.00 per hour.
- The projected employment contraction would not all occur at the same time or in the same manner. While some part-time workers might be released, other firms might simply defer filling vacant positions or not replace workers who depart or retire. Research finds that higher minimum wages have a greater negative impact on new entrants to the labor market than current employees.

[39] "The Effects on Employment and Family Income of Increasing the Federal Minimum Wage," Congressional Budget Office (July 2019).
[40] Ibid. Table A.2 p. 27.

Income Effects for Affected Workers

Table 3.5 displays the projected impact on income levels from the higher minimum wage for affected workers. The top portion of the table displays the current wage distribution, number of workers and total income of those workers. Based on data from the CPS, the analysis finds the following weighted average workweek for employees based on the lowest wage group: 28.3 hours per week ($7.25 to $9.99); 30.8 hours ($10.00 to $10.99) and 32.2 hours ($11.00 to $11.99). Total wage income for all workers shown is $28.5 billion.

Table 3.5
Income Impact from a $12 Minimum Wage in 2022

	Average Wage	Number of Jobs (000s)	Total Income
Current Minimum Wage			
$7.25 to $9.99	$9.05	310	$3,966
$10.00 to $10.99	10.52	250	4,049
$11.00 to $11.99	11.23	205	3,708
$12.00 to $14.99	13.39	696	16,814
Total		**1,461**	**28,537**
$12.00 Minimum Wage			
$7.25 to $9.99	$12.00	297	$4,894
$10.00 to $10.99	12.00	247	4,478
$11.00 to $11.99	12.00	205	3,949
$12.00 to $14.99	14.06	696	17,654
Total		**1,445**	**30,975**
Change Based on Current Wage Levels			
$7.25 to $9.99		-13	$928
$10.00 to $10.99		-3	429
$11.00 to $11.99		-1	241
$12.00 to $14.99		0	841
Total		**-16**	**2,439**
Average Gain - Directly Affected Workers (in dollars)		**$2,090**	--

Note: Amounts in dollar millions. Data exclude tipped workers. Indirectly affected workers earn $12.00 to $14.99 per hour.
Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics 2019.

The middle portion of the table adjusts the minimum wage to $12.00 per hour and includes the projected employment contraction from Table 3.4. Based on recent studies, the computations also assume that workers who previously earned less than $11.00 per hour would work roughly six to seven hours less per quarter (0.5 hours per week). As noted, the analysis also assumes a 5% wage increase for workers earning between $12.00 to $14.99 per hour. Total wage income increases to $31.0 billion.

The bottom portion of the table displays the differential. Total wage income increases by $2.4 billion. If federal payroll taxes are deducted (7.65%, employee share only), then the increase declines to $2.2 billion. The bottom of the table shows an average annual net income gain of $2,090 for directly affected workers only. That does not include the modest gains for indirectly affected workers.

It is noted that the presentation in Table 3.5 is an oversimplification because it assumes that all workers under $12.00 per hour would receive exactly $12.00 per hour under the proposal. In practice, while there would be some "wage compression" due to the higher minimum wage, employers would likely attempt to maintain some of the wage differentials that were effective prior to the higher minimum wage. Therefore, the estimates in Table 3.5 could be viewed as a lower bound. However, to the extent those wages are raised above $12.00 per hour, it would also imply a larger negative employment response.

Impact on General Fund Revenues

In order to estimate the impact from the higher minimum wage on General Fund revenues, the analysis must specify the source of the net income gains to low-wage workers ($2.4 billion) plus the additional employer payroll taxes and workers' compensation premiums ($0.2 billion) that would be paid on those higher wages.[41] Based on recent studies, this analysis makes the following assumptions regarding the source of the wage gains:

- 10% is exported to out-of-state consumers or paid by tourists;
- 10% is lower profits of pass-through entities (partnerships, S corporations and sole proprietors);
- 10% is lower profits of C corporations; and
- 70% is higher prices paid by Pennsylvania consumers.

The first bullet represents a funding source that does not need to be offset by less spending or lower incomes elsewhere in the state economy. (This may also include internet sales to non-residents.) The last three bullets do require offsets because the gains from the additional taxable income that flows to low-wage workers would have flowed to other residents or businesses in the absence of the higher minimum wage.[42]

Direct Effects

Table 3.6 displays the detail for the General Fund revenue impact from the higher minimum wage. The top portion of Table 3.6 estimates the direct effects of the higher employee incomes and employer taxes. This does not yet include any multiplier effects as the monies circulate through the state economy:

- All of the income that now flows to affected workers is subject to state PIT at 3.07% and the

[41] The analysis assumes that there are no higher costs attributable to health or retirement plans for these workers. It is also possible that employers could reduce those benefits to fund the higher wages.

[42] It should be noted that firms would also realize savings if current workers became more productive or there is less employee turnover under the higher minimum wage, as much research corroborates. In theory, those impacts, which would manifest as employment reductions, are captured by the application of employment elasticities based on minimum wage studies. Those savings were recognized because the analysis tracks a net wage gain figure for low-wage workers, which reflects job losses, and the business savings from lower employment have already been reflected. The elasticities also reflect the substitution of capital for labor, which has become relatively more expensive.

analysis assumes that tax forgiveness would fall by 10% of that amount as fewer filers qualify for the program. Line 1: gain of $82 million.[43]

- The analysis assumes that all after-tax income (PIT and employee payroll tax) is spent, 90% is spent in-state, and of that 30% is spent on items subject to the state sales and use tax (SUT of 6.0%). Line 1: gain of $35 million.
- The higher employer payroll taxes and workers' compensation premiums can be deducted from taxable income and reduce profits. The analysis assumes an even split between pass-through entities and C corporations. For pass-through entities, the lower profits would have been taxed at the PIT rate of 3.07%. For C corporations, an effective tax rate of 8.0% is used due to firms with net losses, loss carryforwards and apportionment. Line 2: loss of $12 million.
- Higher employee compensation costs are $2.66 billion (line 3).

As noted, the analysis assumes that 70% of the higher labor compensation due to the minimum wage is financed by higher prices in the affected sectors and spending is shifted from other parts of the economy. For the $1.87 billion shifted to sectors affected by the minimum wage, the analysis assumes that 35% of that spending is subject to SUT. A slightly higher SUT taxable share is used because a disproportionate number of affected workers are employed in the food service industry, which is subject to SUT. Line 4: gain of $39 million.

The analysis then examines how the monies would have been spent or received if they had not been used to finance the higher minimum wage. Again, this does not include any multiplier effects at this point. It is only the direct effects.

- The first portion is the 70% shifted from other sectors of the economy due to higher prices. The analysis assumes that 90% would have been spent in state and 10% out of state either through tourism or online sales. The portion spent on in-state sales would have also generated SUT and the analysis assumes that 25% would have been spent on taxable items. A lower SUT share is used because the shifted spending comes from all consumers (not just low-wage consumers) and is spread across all non-affected sectors of the economy (which excludes food service). Line 5: loss of $25 million.[44]
- Line 7 is the impact from lower business profits to employers that pay the higher minimum wage (20% of total cost). The lower profits are split evenly between C corporations and pass-through entities. Loss of $34 million.[45]
- Line 8 is the cost financed by tourists and exports. The analysis assumes that one-third of this amount is due to higher spending by tourists. Gain of $2 million.

[43] The analysis excludes the proposed changes to the PIT rate and SP eligibility thresholds.
[44] The 10% out-of-state portion may have generated SUT too if they were taxable internet sales. That adjustment is minor and is omitted.
[45] The analysis also assumes those entities (or their owners/shareholders) would have spent 80% of the profits and generated SUT. Finally, the analysis assumes that one-half of the reduced C corporation profits would have flowed out of state to non-resident shareholders and does not require an offset.

Indirect Effects

The third part of the analysis traces the indirect effects related to monies that would have been spent at in-state firms ($1.68 billion). Those monies would have flowed to employees as compensation, business owners as profits and firms in the supply chain for materials and inputs. The impacts are as follows:

- 30% flows to state residents as labor compensation that would have been subject to PIT and spent on taxable items. Line 10: loss of $22 million.
- 10% flows to sellers as profits split evenly between pass-throughs and C corporations. Line 11: loss of $11 million.
- 60% flows to suppliers of those firms. Based on data from the IMPLAN model, 65% would have been in-state suppliers and those amounts are input into the model to determine the net impact. The 35% that would have flowed to out-of-state suppliers can be disregarded.

For the impact on in-state suppliers, the analysis uses the IMPLAN input-output model to derive the economic multiplier impacts on firms in the supply chain. This will have a negative impact. The model is also used to estimate the multiplier effects of the higher labor income that flows to low-wage employees (positive impact) and lower business profits both in the affected and non-affected sectors of the economy and lower wages of individuals who work in other parts of the economy due to reduced demand (negative impact). Line 14: net gain is $4 million.

The final adjustment is for miscellaneous taxes not explicitly modeled such as cigarette, liquor and gross receipts. The model applies a 5% gross up for those taxes. Line 15: gain of $3 million. Overall, the analysis projects a revenue gain of $60 million once the impacts of the $12.00 hourly wage are fully phased-in.

Table 3.6
Impact on General Fund Revenues ($ millions)

		Dollar Amount	Total Tax Revenue Impact PIT	CNIT	SUT
1	Income gains affected workers	$2,440	$82	--	$35
2	Employer payroll tax and workers compensation	224	-3	-$9	--
3	**Higher labor compensation costs**	**2,664**			
4	Spending shifted to affected sectors	1,865	--	--	39
5	Shifted spending from in-state firms	1,679	--	--	-25
6	Shifted spending from out-of-state firms	187	--	--	--
7	Lower business profits	533	-8	-21	-5
8	Tourism and exports	266	--	--	2
9	**Higher labor compensation costs**	**2,664**			
10	Wages paid to employees	504	-15	--	-7
11	Profits to sellers	168	-3	-7	-2
12	Cost of inputs (supplies)	1,007	--	--	--
	In-state supplier	655	--	--	--
	Out-of-state supplier	353	--	--	--
13	**Shifted spending from in-state firms**	**1,679**			
14	Net multiplier impacts		2	--	2
15	All other taxes		3	--	--
16	**Total General Fund revenue impact**	**60**	**58**	**-37**	**40**

The proposal has a positive revenue impact for these reasons:

- Lower-wage workers have a higher propensity to spend any income they receive compared to middle- and upper-income workers. They also tend to disproportionately work in sectors subject to SUT so that corresponding price increases in those sectors generate relatively more tax revenues.
- Some of the monies that are shifted to the low-wage sectors would have flowed to out-of-state firms or suppliers. Under the proposal, they are shifted to in-state, lower-wage workers who generally spend the extra funds locally.
- A significant portion of C corporation profits, which are reduced under the proposal, likely do not remain in the state. Lower profits would affect shareholders in other states too.
- A small amount of the higher minimum wage is paid by tourists or exported.

Impact on State Government Expenditures

For the Executive Budget, the Department of Human Services (DHS) estimated the budgetary impact of a $12.00 minimum wage. All savings and costs presented in this subsection pertain to state programs. Any federal net savings for Medical Assistance (MA), Temporary Assistance for Needy Families (TANF) and SNAP are not included. For FY 2021-22, DHS projects that the department would realize net savings of $4.0 million, which will become a net cost of $85.5 million by FY 2025-26 (reflecting the proposed minimum

wage increases up to $14.00 in July 2025). (See **Table 3.7**.) Due to staggered eligibility screenings and payment processing timeframes, the FY 2021-22 estimate does not represent a full year of impacts.

As a condition of receiving the enhanced federal medical assistance percentage (FMAP) under the public health emergency, DHS is required to maintain individuals on Medicaid, and the services available to them, except in limited circumstances. The original DHS analysis assumed that the COVID-19 public health emergency would end September 30, 2021, but that the enhanced FMAP would remain available through FY 2021-22 to support economic recovery. In other words, the analysis assumed individuals who would not otherwise be eligible for Medicaid absent the public health emergency would begin to leave the Medicaid program beginning October 1, 2021.

The largest state savings result from individuals who are no longer eligible for Medical Assistance due to increased wages. The department estimates that roughly 7,200 adults and 4,800 children would no longer qualify for Medical Assistance based on income eligibility at the $12.00 minimum wage level in the first year of implementation. This increases to 64,100 adults and 42,100 children in FY 2025-26 as the minimum wage increases to $14.00 per hour. Those savings are offset by an increase in CHIP spending and higher reimbursement rates to childcare and direct care workers. For community-based programs for persons with physical disabilities and seniors, DHS assumed that direct care workers receive an average wage of slightly over $12.00 per hour based on current data for Workforce Information and Analysis, Occupational Employment, and DHS would incur additional costs over time as the minimum wage phases in to $15.00 per hour. For the childcare subsidy programs, DHS assumed that (1) the average wage of childcare workers is $11.35 and (2) 40 percent of children in childcare receive a subsidy. It is assumed that federal funds can be used to cover nearly all childcare program costs in the analysis period, which total $124.5 million by FY 2025-26. Compared to prior estimates, net DHS program costs have decreased due to assumptions relating to average wages and the ability to use federal funds to cover required spending for the Child Care Services and Child Care Assistance line items.

Table 3.7
Impact of Minimum Wage on DHS Program Expenditures

Program	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Proposed minimum wage	**$12.00**	**$12.50**	**$13.00**	**$13.50**	**$14.00**
Programmatic cost ($ millions)					
CHIP	$4.6	$23.7	$31.0	$35.9	$40.3
Medical Assistance - Capitation	-10.8	-55.9	-73.1	-89.3	-104.9
Community HealthChoices	0.0	5.6	37.4	71.6	105.7
Autism Intervention and Services	0.0	0.8	2.3	3.9	5.4
Community Waiver/ID	0.0	0.0	0.0	15.2	30.4
ICF/ID	0.0	1.4	3.0	4.5	6.1
Child Care Services[1]	0.0	0.0	0.0	0.0	0.0
Child Care Assistance[1]	0.1	0.1	0.1	0.1	0.1
County Child Welfare	2.1	2.2	2.3	2.4	2.5
Total	**-4.0**	**-22.0**	**3.1**	**44.4**	**85.5**

Note: Estimates are for state expenditures only. CHIP is Children's Health Insurance Program. ICF is intermediate care facilities and ID is intellectual disabilities.

1 It is assumed that federal funds will be used to cover the child care program costs each year.

Source: Pennsylvania Department of Human Services.

The department is currently revising the estimated impacts of the proposed minimum wage increase to assume the COVID-19 public health emergency will remain in place through FY 2021-22. This change in assumption will impact the savings to MA capitation as DHS cannot disenroll individuals from Medicaid while receiving the pandemic-related enhanced FMAP, and will also lower the cost for CHIP because children would not be transferred to the CHIP program as a result of losing MA-eligibility.

Impact on Tipped Workers

Many hourly-paid workers report compensation that falls below the federal minimum and most are employees who earn tips, such as food servers and bartenders. Under current law, employers may pay less than the federal minimum if a tipped worker earns at least $30 per month in tips or commissions and total compensation yields an hourly wage rate of $7.25 or more. For Pennsylvania, such employees can be paid a wage as low as $2.83 per hour.

Table 3.8 details the minimum wage for tipped workers by state as of January 1, 2021. The table contains three groups of states:

- Eight states (Washington, California, Oregon, Alaska, Hawaii, Minnesota, Nevada and Montana) set their tipped minimum wage at the regular state minimum wage and do not allow employers to include tips in the calculation of the minimum wage. For those eight states, three have a lower tipped wage for small businesses (Minnesota and Montana) and/or businesses that provide health insurance to their employees (Nevada).

- Twenty-six states and the District of Columbia have tipped minimum wages above the federal minimum cash wage of $2.13, including Pennsylvania and all border states. All of these states require employers to pay a cash wage between $2.23 (Delaware) and $9.30 (Colorado).
- The remaining 16 states only require employers to pay the federal minimum tipped cash wage ($2.13). One state (Nebraska) has a combined cash and tipped minimum wage greater than the federal minimum of $7.25 per hour.

Under the proposal, tipped workers would be paid $12.00 per hour, regardless of tips. Due to the dramatic increase in wage rates, the analysis does not attempt to analyze the impact of this proposed change. Nor are there any studies on which to base an analysis.

Table 3.8
State Minimum Wages for Tipped Employees (as of January 1, 2021)

Jurisdiction	Combined Cash & Tip Minimum Wage	Minimum Cash Wage
State requires employers to pay tipped employees full state minimum wage before tips		
Washington	$13.96	$13.96
California	14.00	14.00
Oregon	12.00	12.00
Alaska	10.34	10.34
Hawaii	10.10	10.10
Minnesota	10.08	10.08
Nevada	9.00	9.00
Montana	8.75	8.75
State requires employers to pay tipped employees a min. cash wage above the federal min. ($2.13/hr)		
Colorado	$12.32	$9.30
Arizona	12.15	9.15
New York	12.50	8.35
Illinois	11.00	6.60
Connecticut	12.00	6.38
Maine	12.15	6.08
Vermont	11.75	5.88
Massachusetts	13.50	5.55
Florida	8.56	5.54
Missouri	10.30	5.15
Washington D.C.	15.00	5.00
North Dakota	7.25	4.86
South Dakota	9.45	4.73
Ohio	8.80	4.40
Iowa	7.25	4.35
New Jersey	12.00	4.13
Rhode Island	11.50	3.89
Michigan	9.87	3.75
Maryland	11.75	3.63
Idaho	7.25	3.35
New Hampshire	7.25	3.26
Pennsylvania	7.25	2.83
Arkansas	11.00	2.63
West Virginia	8.75	2.63
New Mexico	10.50	2.55
Wisconsin	7.25	2.33
Delaware	9.25	2.23
State minimum cash wage payment is the same as the federal Fair Labor Standards Act ($2.13/hr)		
Nebraska	$9.00	$2.13
Other	7.25	2.13

Note: Other includes Alabama, Georgia, Indiana, Kansas, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Utah, Virginia and Wyoming.

Source: The Economic Policy Institute. Minimum Wage Tracker (published January 7, 2021).

Moving from a $12 to $15 per Hour Minimum Wage

Following the enactment of a $12.00 minimum wage, the proposal increases the minimum wage by 50 cents per annum beginning July 1, 2022. By July 1, 2027, the minimum wage reaches $15.00 and is indexed to inflation annually thereafter. Currently, no state has a $15.00 per hour minimum wage, so it is not possible to assess the potential implications for Pennsylvania. However, a few items can be noted:

- For 2019, there were 1.81 million positions that paid less than $15.00 per hour. That figure represented 30.6% of all payroll jobs (tipped and non-tipped) in the state.
- For those workers, the phased-in increase would represent a moderate to strong wage gain. For example, for the first year the increase would be 4.2% ($0.50 / $12.00). By the final year, the increase would be 3.4% ($0.50 / $14.50).
- Although current workers receive moderate wage gains, new workers benefit the most because it is likely they would have been paid a wage considerably lower than the higher minimum, and therefore, the implicit wage gain is much larger. New entrants to the labor market are penalized because securing employment will be more difficult.

Each year of the phase-in, there would be potential for further employment contraction (relative to the counterfactual without a phased-in higher wage) and income gains. For example, moving from $12.00 to $12.50 per hour is a 4.2% increase in the wage. Without the 50-cent increase, it is likely that employers would have paid something considerably less on average, perhaps 1% to 2%, to the large concentration of workers clustered at the new minimum wage. There would also likely remain a fair degree of turnover at that hourly wage. For many positions, there would have been no change in the wage rate without the 50-cent phase-in as new employees replace existing ones. For this first year, using typical employment elasticities, employment could contract another few thousand jobs relative to the counterfactual level without the mandatory 50-cent increase. Affected workers that received the 50-cent increase but would have received a 1.5% raise would realize annual income gains of $480.

This trend would continue as the higher wage is phased in to $15.00. Each year, the minimum wage would increase by 50 cents, but the counterfactual wage that these positions would have been paid (recalling that many are not the same workers, but are new workers) would increase by something much less, or possibly not increase at all. Employment contraction would continue to occur, as would the income gains that flow to lower-wage workers. Most of the negative employment impact would be borne by new entrants to the labor market who could not find employment.