

# What Are the Effects of Utah Income Tax Rate Cuts?

**Richard W. Evans** 

March 2023 Research in Focus

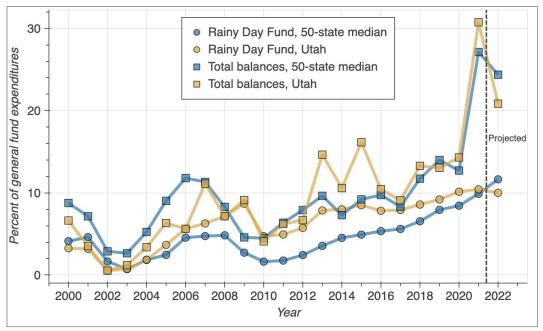
#### 1. Introduction

With state budget surpluses and record high state reserve account balances, Utah lawmakers are considering policy reforms for the 2023 legislative session that continue to support the state's growth while leaving some reserves available for potential economic downturn in the future. For the third time since 2018, a cut in the Utah individual income tax rate is on the agenda, in addition to a number of one-time rebates and credits.<sup>1</sup>

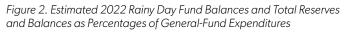
An intermediate proposal is to cut the state individual income tax rate by two-tenths of a percentage point, from its current 4.85% to 4.65%.<sup>2</sup> Some legislators are advocating for a smaller cut, and some are advocating for larger cuts.<sup>3</sup> Revenue generated from the Utah individual income tax represents about 43% of the total state tax revenue (see table 3). Although the proposed tax cut to 4.65% represents a small reduction in the individual income tax rate, it may have a large impact on total state tax revenue. In this article, I use the Center for Growth and Opportunity's FiscalSim open source model of federal and state personal income taxes and benefits to quantify and compare the effects of three sizes of potential Utah personal income tax rate cuts. Because all of our modeling structure is open source, I provide all of our code and source data in a way that is easy to replicate and customize.<sup>4</sup>

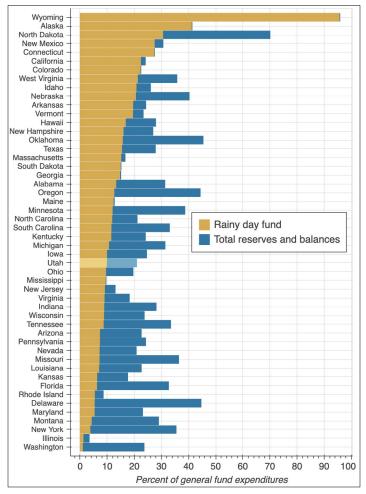
Budget surpluses, tax revenues, and rainy day funds are projected to be at 20-year highs in most states for year end 2022, thanks to a surprisingly resilient US economy.<sup>5</sup> Utah is no exception, with a projected record high rainy day fund balance of \$1.03 billion and total reserves and balances of \$2.62 billion at the end of 2022.<sup>6</sup> Figure 1 shows the time series from 2000 to 2022 of the rainy day fund balance and the total reserves and balances as a percentage of general-fund expenditures for both the State of Utah and the 50-state median values.

Figure 1. Rainy Day Fund and Total Reserves as Percentages of General-Fund Expenditures, Utah and 50-State Median: 2000–2022



Source: Pew Charitable Trusts, "Fiscal 50: State Trends and Analysis," December 16, 2022, accessed December 31, 2022.





Source: Pew Charitable Trusts, "Fiscal 50: State Trends and Analysis," December 16, 2022, accessed December 31, 2022.

Note: For states in which the blue bar is not visible for total balances and reserves, the value equals the rainy day fund balance percentage.

Figure 2 shows the estimated 2022 rainy day fund balances and total reserves and balances as percentages of general fund expenditures for each state, ranked in descending order by rainy day fund balances. Despite Utah's estimated record 2022 rainy day fund balance of \$1.03 billion, Utah's balance ranks 29th among US states. If I rank states in descending order by total balances and receipts as a percentage of general-fund expenditures, Utah has the 38th-highest balance among US states. Table 1 shows the number of states that had record highs in either of these two reserve categories in either 2021 or 2022. For rainy day fund balances, 36 states had record highs in 2022, and 29 states had record highs in 2021. Utah had record-high rainy day fund balances in both 2021 and 2022. For total balances and reserves, 26 states had record highs in 2022, and 42 states had record highs in 2021. Utah had a record high in its total balances and reserves in 2021, with 2022 values being slightly lower.

Tempering the optimism from the current surpluses and reserve balances are the continuing risks in 2023 of high interest rates, inflation, and potential economic slowdown. As many state legislatures come into session in the first quarter of 2023, these policymakers are balancing the opportunity to draw down these reserves with the risk of needing the rainy day funds in a downturn.

In this vein, Utah legislators have proposed a two-tenths-of-a-percentage point reduction from its current 4.85% to 4.65%. This proposed cut would follow a one-tenth-of-a-percentage point tax rate cut in the previous year. As I show in section 2, Utah individual income tax revenue is a significant portion of total tax revenue in the state, including business tax revenue. In section 3, I use the open source FiscalSim microsimulation model of federal and state income tax and benefits to simulate the effects of three potential Utah individual income tax rate cuts on three different types of Utah households as well as to estimate the effect of each reform on Utah 2023 tax revenue.<sup>7</sup>

My simulations in section 3 show that the 0.2 percentage point cut in the Utah individual income tax rate to 4.65% has no effect on the lowest income Utah households, but would give a \$160 tax break to the median Utah household, with a more than \$400 tax break to households with incomes over \$200,000. The larger tax cut to a rate of 4.5% also does not change the zero tax liability of the lowest earners, but provides tax breaks from \$280 to the median household to more than \$600 for Utah's highest earners.

Based on estimates from the Utah Office of the Legislative Fiscal Analyst, the 0.2 percentage point tax cut will cost state revenue \$333.4 million annually. I estimate the larger cuts to 4.5% and 4.0%, respectively, would cost the state \$565 million and \$1.4 billion annually.<sup>8</sup>

Table 1. Number of States for Which Estimated 2022 Amounts Represent 23-year High for Select Categories of Rainy Day Fund and Total Balances and Reserves Statistics: 2000–2022

Category	Number of states for which estimated 2022 is 23-year high	Number of states for which 2021 was 22-year high	Utah 2022 is 23-year high	Utah 2021 was 22-year high	
Rainy day fund balance	36	29	Yes	Yes	
Rainy day fund balance as percent- age of general fund expenditures	20	26	No	Yes	
Total balances and reserves	26	42	No	Yes	
Total balances and reserves as percentage of general fund expen- ditures	20	32	No	Yes	

Source: Pew Charitable Trusts, "Fiscal 50: State Trends and Analysis: Reserves and Balances," updated December 16, 2022, accessed December 31, 2022.

#### 2. Utah Individual Income Tax Rate Landscape

The Utah individual income tax rate has been cut twice since 2008, reduced by 0.05 percentage points (five-hundredths of a percent) in 2018 and reduced further by 0.10 percentage points (one-tenth of a percent) in 2022. Table 2 shows the progression

Table 2. Utah Individual Income Tax Rate History and Projected Annual Revenue Loss Since 2008

Date range	Tax rate <sup>a</sup>	Estimated annual revenue loss
Jan. 1, 2008 to Dec. 31, 2017	5.00%	
Jan. 1, 2018 to Dec. 31, 2021	4.95%	\$51.7 million <sup>ь</sup>
Jan. 1, 2022 to Dec. 31, 2022	4.85%	\$143.8 million <sup>c</sup>
Proposed cut for 2023	4.65%	\$333.4 million <sup>d</sup>
Larger proposed cut for 2023	4.50%	\$565.1 million <sup>e</sup>
Largest proposed cut for 2023	4.00%	\$1,398.6 million <sup>e</sup>

a Utah.gov, "Tax Rates," Utah Income Taxes, accessed January 8, 2023, https://incometax.utah.gov/paying/ tax-rates.

b See Office of the Legislative Fiscal Analyst, Fiscal Note, Tax Rebalancing Revisions, Utah H.B. 293, 62nd Leg., 2018 General Session, https://le.utah.gov/lfa/fnotes/2018/HB0293SO5.fn.gdf.The estimate of total revenue loss from the corporate and individual income tax cut was \$56.3 million annually starting in FY 2020. Individual income tax revenue in FY 2020.

c See Office of the Legislative Fiscal Analyst, Fiscal Note, Utah S.B. 59, https://le.utah.gov/lfa/fnotes/2018/ HB0293S05.fn.pdf. The estimate of total revenue loss from the corporate and individual income tax cut was \$163.7 million annually starting in FY 2023. Individual income tax revenue was 87.8% of corporate plus individual income tax revenue in FY 2022.

d See Office of the Legislative Fiscal Analyst, Fiscal Note, Utah H.B. 240, https://le.utah.gov/lfa/ fnotes/2023/HB0240.fn.pdf. The estimate of total revenue loss from the corporate and individual income tax cut was \$379.5 million annually starting in FY 2024. Individual income tax revenue was 87.8% of corporate plus individual income tax revenue in FY 2022.

e Estimated annual revenue losses for the two larger Utah individual income tax rate cuts are calculated in Appendix A using the simulations from the open source FiscalSim model shown in table 5.

of the rate cuts and the estimated annual loss in revenue from the rate cuts. For tax years 2008 to 2017, the individual income tax rate was 5%. The rate was then cut to 4.95% for tax years 2018 to 2021, and cut again to 4.85% for tax year 2022.

The 2018 individual income tax rate cut of 0.05 percentage points, from 5.00% to 4.95% was estimated to cost \$51.7 million in tax revenue annually, as shown in table 2.<sup>9</sup> It is interesting to note that the 2022 individual income tax rate cut of 0.10 percentage points to the current value of 4.85%—exactly double the percentage point size of the 2018 rate cut and slightly more than double in percentage change terms—was estimated to cost \$143.8 million in tax revenue annually, nearly three times the amount of the 2018 rate cut.<sup>10</sup>

Table 3 shows that Utah individual income tax revenue is a significant percentage Utah's total tax revenue. In fiscal year 2021, individual income tax revenue was 43.8% of total revenue. That percentage declined only slightly in 2022 to 42.3%, with half the fiscal year affected by the 0.1 percentage point tax cut to a Utah individual income tax rate of 4.85%.<sup>11</sup>

Table 3. Utah Individual Income Tax Revenue as Percentages of Total Revenue

	FY 2021	FY 2022	Percentage change 2021–2022
Total individual income tax revenue (\$ millions)	\$6,110.5	\$6.771.9	+10.8%
Total Utah tax reve- nue (\$ millions)	\$13.965.6	\$16.020.1	+14.7%
Percentage of total state tax revenue	43.8%	42.3%	-3.4%
Individual income tax rate	4.95%	4.85%	-0.1%

Source: Utah State Tax Commission, "Revenue Summary," 2021–2022 Annual Report, p. 10, December 2022, https://tax.utah.gov/commission/reports/fy22report.pdf, and Utah.gov, "Tax Rates," Utah Income Taxes, accessed January 8, 2023, https://incometax.utah.gov/paying/tax-rates.

## 3. Effects of Different Size Rate Cuts

In this section, I compare the effects of three different-sized rate cuts-the proposed cut to 4.65%, as well as two larger cuts to 4.50% and 4.00%—on three different types of Utah tax filers. I also estimate the revenue loss for each policy. To perform these simulations, I use the FiscalSim open source microsimulation model of federal and state income tax and benefits on house-holds and individuals.<sup>12</sup>

I start with the three different types of tax filers. My purpose is to show the effects of the three different-sized individual income tax rate cuts on state tax filers that are high income, middle income, and low income. Table 4 shows the details of each of the three household types that I simulate with the FiscalSim model.

Each of the households is married filing jointly, each has spouses that are age 38 and 35, and each has two children ages 10 and 6.

- The low-income tax filer household has a total before-tax employment income of \$25,000, which is below the Utah poverty line of \$27,479 in 2021 as well as the current federal standard deduction of \$27,700 for married filing jointly filers.<sup>13</sup>
- The middle-income tax filer household has a total before-tax employment income of \$80,000 that is very close to the Utah median household income of \$79,133 in 2021.<sup>14</sup>
- The high-income tax filer household has a total before-tax employment income of \$200,000, which is just above the 95th percentile of \$193,200 in Utah in 2021.<sup>15</sup>

The various costs, which are relevant to different federal and Utah taxes, are meant to be in line with each corresponding household type.

Table 4. Details of Three Utah Tax Filer Household Types

Characteristic	Low income household	Middle income household	High income household
Total before-tax household annual employment income	\$25,000	\$80,000	\$200,000
Spouse 1	\$25,000	\$45,000	\$100,000
Spouse 2	\$0	\$35,000	\$100,000
Marital and filing status	Married filing jointly	Married filing jointly	Married filing jointly
Spouse 1 age	38	38	38
Spouse 2 age	35	35	35
Child 1 age	10	10	10
Child 2 age	6	6	6
Takes federal standard deduction <sup>a</sup>	Yes	Yes	No
Annual housing costs	\$8,000	\$20,000	\$36,000
Annual child care expenses	\$0	\$1,000	\$1,500
Annual phone costs	\$700	\$1,500	\$2,400
Annual broadband	\$600	\$900	\$1,200
Annual medical out-of-pocket expenses	\$200	\$2,000	\$4,000
Annual charitable cash donations	\$0	\$6,000	\$20,000

a The federal standard deduction in 2023 is \$27,700 for filers with status "married filing jointly." See Jessie Seaman, "2022 Federal Income Tax Brackets, Rates, & Standard Deductions," IRS.com, February 21, 2022, https://www.irs.com/en/articles/2022-federal-income-tax-brackets-rates-standard-deductions.

Table 5 shows the effect of the three different levels of Utah individual income tax rate cut on each of the three Utah tax filer household types. The smallest reform I simulate, the 0.2 percentage point cut in the Utah personal income tax rate to 4.65%, has no effect on the lowest income Utah households, but would

give a \$160 tax break to the median Utah household, with a \$400 tax break to households with incomes of \$200,000. The larger tax cut to a rate of 4.5% also does not change the zero tax liability of the lowest earners, but provides tax breaks from \$280 to the median household to more than \$656 for Utah filers

Table 5: Effect of Different-Sized Tax Cuts on Three Example Tax Filer Households

		Currer	nt law	Refo	Reform		
Household type	Before tax income	After tax income	Total tax liabilityª	After tax income	Total tax liabilityª	Change in tax liability	Percentage change in tax liability
Rate cut to 4.65%							
High-income household	\$200,000	\$150,505	\$49,095	\$150,905	\$49,295	-\$400	-0.8%
Middle-income household	\$80,000	\$69,766	\$10,234	\$69,686	\$10,314	-\$160	-1.5%
Low-income household	\$25,000	\$42,138	-\$17,138	\$42,138	-\$17,138	\$0	0.0%
Rate cut to 4.50%							
High-income household	\$200,000	\$150,505	\$49,495	\$151,161	\$48,839	-\$656	-1.3%
Middle-income household	\$80,000	\$69,606	\$10,394	\$69,886	\$10,114	-\$280	-2.7%
Low-income household	\$25,000	\$42,138	-\$17,138	\$42,138	-\$17,138	\$O	0.0%
Rate cut to 4.00%							
High-income household	\$200,000	\$150,505	\$49,495	\$152,161	\$47,839	-\$1,656	-3.3%
Middle-income household	\$80,000	\$69,606	\$10,394	\$70,286	\$9,714	-\$680	-6.5%
Low-income household	\$25,000	\$42,138	-\$17,138	\$42,138	-\$17,138	\$0	0.0%

Note: These reforms were simulated using the open source FiscalSim model of federal and state household tax and benefit policy.

a Total tax liability includes federal and state taxes, credits, and benefit programs (See Appendix B).

earning \$200,000. The largest tax cut to a rate of 4.0% results in very large reductions in tax liability for middle-income and high-income earners, but again changes nothing for low-income earners.

From the estimates from the Utah Office of the Legislative Fiscal Analyst, the 0.2 percentage point tax cut will cost state state revenue \$333 million annually. I estimate that the larger cuts to 4.5% and 4.0%, respectively, would cost the state \$565 million and \$1.4 billion annually, which values are reported in table 2.<sup>16</sup>

#### 4. Conclusion

The 2023 Utah legislative session includes many important initiatives with the backdrop of record-high reserves and rainy day fund balances as well as a significant risk of recession in 2023. In this setting, Utah legislators are debating proposals to cut the Utah personal income tax rate.

I simulate the effects of three different tax rate cuts using the open source FiscalSim microsimulation model and show the effect of those reforms on after-tax earnings of Utah tax filers at the low, middle, and high ends of the income spectrum. I use that output to estimate the revenue loss from the two larger tax cut policies.

I find that none of these rate cuts have any effect on tax liability for the low-income household. The smallest rate cut to 4.65% decreases tax liability by \$160 for the middle-income household and \$400 for the high-income household. Those cuts in tax liabilities from the larger rate cut to 4.5% for the middle- and high-income households rise to \$280 and \$656, respectively. And they are significantly larger for the largest rate cut to 4.0% at \$680 and \$1,656, respectively.

The estimated annual revenue losses for the three respective reforms of cutting the state income tax rate to 4.65%, 4.50%, and 4.00% are \$333 million, \$565 million, and \$1.4 billion, respectively. The revenue lost by any reform will be balanced against the current record-high balances of Utah reserves, the rainy day fund, and the risk of economic hardship in 2023.

**Richard Evans** is a senior research fellow and director of open policy at the Center for Growth and Opportunity. He is leading a new project to build a 50-state microsimulation model of individual tax and benefit policy in which all of the project will be open source and open-access.

The Center for Growth and Opportunity at Utah State University is a university-based academic research center that explores the scientific foundations of the interaction between individuals, business, and government.

We support research that explores a variety of topics from diverse perspectives. Research In Focus pieces are published to stimulate timely discussion on topics of central importance in economic policy and provide more accessible analysis of public policy issues.

The views expressed in this paper are those of the authors and do not necessarily reflect the views of the Center for Growth and Opportunity at Utah State University or the views of Utah State University.

### **Appendix A. Calculation of State Revenue Changes**

In this appendix, I detail how I estimate in table 2 the 2023 Utah tax revenue loss of cutting the state individual income tax rate to 4.5% and 4.0%. Ideally, I would use a representative dataset of Utah tax filers, run them through the FiscalSim model, and add up their tax liability to calculate the revenue effect of a policy reform. We are currently working on adding this data to FiscalSim. Until then, the method below provides the most accurate revenue estimates possible with the model.

To estimate the net revenue losses associated with the larger and largest Utah income tax rate cuts to 4.5% and 4.0%, respectively, I use the following steps. Table 7 shows the components and results of this procedure.

- 1. I use my cost estimate of the rate cut to 4.65% of \$333.4 million from table 2 as the basis for my cost estimates of the two larger rate cuts of 4.5% and 4.0%, respectively.
  - Associated with the rate cut to 4.65% are decreases of tax liabilities to the low-, middle-, and high-income earners of \$0, \$160, and \$400, estimated by the FiscalSim model and shown in table 5.
- 2. The FiscalSim model shows that the tax rate cut to 4.5% results in tax liability decreases to the middle- and high-income earners of \$280 and \$656, respectively.
  - The middle-income earner's tax liability decrease of \$280 is 1.75 times larger than the decrease of \$160 with the smaller tax cut to 4.65%.
  - The high-income earner's tax liability decrease of \$656 is 1.64 times larger than the decrease of \$400 with the smaller tax cut to 4.65%.
  - The average factor increase in tax liability for the middle- and high-income filers in the case of the rate cut to 4.5% is 1.695 times that of the tax liability changes from the lower rate cut to 4.65%. I estimate the revenue loss from the rate cut to 4.5% to be \$565.1 million, which is 1.695 times the \$333.4 million revenue loss from the rate cut to 4.65%.

- In table 6, I calculate a lower bound of \$546.8 million and an upper bound of \$583.4 million based on the minimum factor of 1.64 for the high-income household and the maximum factor of 1.75 for the middle-income household.
- 3. The FiscalSim model shows that the tax rate cut to 4.0% results in tax liability decreases to the middle- and high-income earners of \$680 and \$1,656, respectively.
  - The middle-income earner's tax liability decrease of \$680 is 4.25 times larger than the decrease of \$160 with the smaller tax cut to 4.65%.
  - The high-income earner's tax liability decrease of \$1,656 is 4.14 times larger than the decrease of \$400 with the smaller tax cut to 4.65%.
  - The average factor increase in tax liability for the middle- and high-income filers in the case of the rate cut to 4.0% is 4.195 times that of the tax liability changes from the lower rate cut to 4.65%. I estimate the revenue loss from the rate cut to 4.0% to be \$1,398.6 million (\$1.40 billion), which is 4.195 times the \$333.4 million revenue loss from the rate cut to 4.65%.
  - In table 6, I calculate a lower bound of \$1,380.2 million (\$1.38 billion) and an upper bound of \$1,416.9 million (\$1.42 billion) based on the minimum factor of 4.14 for the high-income household and the maximum factor of 4.25 for the middle-income household.

Rate cut from 4.85%	Change in tax liability for low earner	Change in tax liability for middle earner	Factor above 4.65% rate cut change in tax liabili- ty for middle earner	Change in tax liability for high earner	Factor above 4.65% rate cut change in tax liabil- ity for high earner	Average factor above 4.65% rate cut	Estimated revenue loss from tax cut reform (average, \$ millions)	Estimated revenue loss from tax cut reform (low, \$ millions)	Estimated revenue loss from tax cut reform (high, \$ millions)
4.65%	\$O	-\$160		-\$400			\$333.4		
4.50%	\$0	-\$280	1.75	-\$656	1.64	1.695	\$565.1	\$546.8	\$583.4
4.00%	\$0	-\$680	4.25	-\$1,656	4.14	4.195	\$1,398.6	\$1,380.2	\$1,416.9

## Table 6. Calculation of Revenue Loss Estimates for Rate Cuts to 4.5% and 4.0%

#### Appendix B. Detail of After-Tax Income of Low-Income Household Under Current Law

As an illustration of the detail of the open source FiscalSim model, I include the detail of the baseline calculation of the after-tax income and total tax liability from table 5 of the low-income household described in table 4. For more detail, go to the executable notebook documentation and code for this article or use the FiscalSim model directly.

Broad category	Subcategory	Category totals	Category subtotals
Before-tax income		\$25,000	
Total benefits		+\$9,247	
	SNAP allotment		+\$6,861
	Free school meals		+1,915
	Lifeline broadband subsidy		+\$111
	Affordable Connectivity Program (ACP) subsidy		+\$360
Refundable tax credits		+\$9,804	
	Earned Income Tax Credit (EITC)		+\$6,604
	Refundable portion of the Child Tax Credit (CTC)		+\$3,200
Tax liability		-\$1,913	
	Social Security payroll tax	•	-\$1,550
	Medicare payroll tax		-\$363
	UT state tax liability		\$0
After-tax income		\$42,138	
Net tax liability		-\$17,138	

Table 7. Detail Calculation of Low-Income Household's After-Tax Income

Note: More details of the low-income household are specified in table 4.

# Endnotes

- See Katie McKellar, "Tax Cuts, Water, Housing and Transgender Surgeries for Minors: What to Expect from Utah Legislature in 2023," *Deseret News*, January 5, 2023, https://www.deseret.com/utah/2023/1/5/23520817/ utah-republican-lawmakers-legislature-2023-session.
- 2 See Tax Revisions, Utah H.B. 54, 65th Leg., 2023 General Session, https://le.utah.gov/~2023/bills/static/HB0054.html, and Income Tax Amendments, Utah H.B. 240, 65th Leg., 2023 General Session, https:// le.utah.gov/~2023/bills/static/HB0240.html.
- 3 For a list of Utah individual income tax rates and the time periods for which they were in effect, from January 2008 to present, see Utah.gov, "Tax Rates," Utah Income Taxes, accessed January 8, 2023, https://incometax. utah.gov/paying/tax-rates. See also Katie McKellar, "Utah Leaders Want 'Historic' Tax Cut—But Gov. Cox Balks at Slashing Income Tax Rate to 4.5%," Deseret News, January 10, 2023, https://www.deseret.com/ utah/2023/1/10/23547497/utah-tax-cuts-2023-legislature.
- 4 The open source FiscalSim microsimulation model of federal and state income tax and benefits simulates the effect of changes to personal tax and benefit policies on households in each state as well as on federal and state tax revenues. FiscalSim documentation and its source code is available at https://github.com/TheCGO/fiscalsim-us. All data, analyses, and images in this article can be reproduced using the resources in the GitHub repository for this article at https://github.com/TheCGO/UT-RateCut. The code for replicating the analyses and creating the images can be run locally on your machine using the Jupyter notebook UT\_RateCut. ipynb or can be run from your browser using resources in the cloud from this Google Colab notebook: https://colab.research.google.com/ drive/1zDjvfUdlfxA8piAHBJwcesIVoRzspKBO?usp=sharing.
- 5 To account for accumulated state surpluses, I use two accounting concepts that are common across states. Total reserves and balances are states' intentional savings as well as dollars left over in the general fund. See Justin Theal and Joe Fleming, "Budget Surpluses Push States' Financial Reserves to All-Time Highs," Pew Charitable Trusts, May 10, 2022, https://www. pewtrusts.org/en/research-and-analysis/articles/2022/05/10/budget-surpluses-push-states-financial-reserves-to-all-time-highs. Rainy day funds, also called reserve funds or stabilization accounts, are a subset of total reserves and balances. See Tax Policy Center, *What Are State Rainy Day Funds, and How Do They Work?* Urban Institute and Brookings Institution, accessed December 30, 2022, https://www.taxpolicycenter.org/briefing-book/what-are-state-rainy-day-funds-and-how-do-they-work. Rainy day funds are accounts to which state budget surpluses are automatically transferred, subject to varying rules across states.
- 6 See Pew Charitable Trusts, "Fiscal 50: State Trends and Analysis," December 16, 2022, accessed December 31, 2022, https://www.pewtrusts.org/en/ research-and-analysis/data-visualizations/2014/fiscal-50#ind5.
- 7 The open source FiscalSim microsimulation model of federal and state income tax and benefits simulates the effect of changes to personal tax and benefit policies on households in each state as well as on federal and state tax revenues. FiscalSim documentation and its source code is available at https://github.com/TheCGO/fiscalsim-us.
- 8 See table 2. Appendix A details how the estimates for the revenue loss for the tax rate cut to 4.5% and 4.0% were performed.
- 9 Office of the Legislative Fiscal Analyst, Fiscal Note, Tax Rebalancing Revisions, Utah H.B. 293, 62nd Leg., 2018 General Session, https://le.utah.gov/lfa/ fnotes/2018/HB0293S05.fn.pdf. The estimate of total revenue loss from the corporate and individual income tax cut was \$56.3 million annually starting in FY 2020. Individual income tax revenue was 91.8% of corporate plus individual income tax revenue in FY 2020.
- 10 See Office of the Legislative Fiscal Analyst, Fiscal Note, Utah S.B. 59, https:// le.utah.gov/lfa/fnotes/2018/HB0293S05.fn.pdf. The estimate of total revenue loss from the corporate and individual income tax cut was \$163.7 million annually starting in FY 2023. Individual income tax revenue was 87.8% of corporate plus individual income tax revenue in FY 2022.
- 11 The Utah fiscal year is July 1 to June 30 of the next year. So the 2021–2022 fiscal year (referred to as FY 2022) was July 1, 2021 to June 30, 2022. Only during the last six months of that fiscal year was the 4.85% Utah individual income tax rate in effect.
- 12 All data, analyses, and images in this article can be reproduced using the resources in the GitHub repository for this article at https://github.com/

TheCGO/UT-RateCut. The code for replicating the analyses and creating the images can be run locally on your machine using the Jupyter notebook UT\_RateCut.ipynb or can be run from your browser using resources in the cloud from this Google Colab notebook: https://colab.research.google.com/drive/1zDjvfUdIfxA8piAHBJwcesIVoRzspKBO?usp=sharing.

- 13 Utah.gov, "Health Indicator Report Utah Population Characteristics: Poverty, All Persons," Public Health Indicator Based Information System (IBIS), accessed January 8, 2023, https://ibis.health.utah.gov/ibisph-view/ indicator/view/Pov.UT\_US.html.
- 14 US Census, "QuickFacts: Utah," accessed January 9, 2023, https://www.census.gov/quickfacts/UT.
- 15 "Household Income in Utah," The Demographic Statistical Atlas of the United States, accessed January 9, 2023, https://statisticalatlas.com/state/Utah/ Household-Income.
- 16 Appendix A details how the estimates for the revenue loss were performed for the tax rate cuts to 4.5% and 4.0%.