

Generation and Interpretation of IMPLAN's Tax Impact Report

IMPLAN Group LLC

Introduction

This paper describes the wealth of information available in an IMPLAN Social Accounting Matrix (SAM) and how that information can be used to estimate taxes and other payments received by governments. This information is summarized in a Tax Impact report which is generated by the IMPLAN software for each impact analysis. This paper discusses the interpretation of the Tax Impact report, as well as the data sources and assumptions underlying the report.

Essentials to Know

These tips are meant as high-level introductions to some important definitions and assumptions in the tax impact report. The rest of the document reports methods and interpretations in greater detail.

- The “State/Local” tax table estimates taxes paid to all state and local units of government in the study area. The tables for county government, sub-county general government, sub-county special government, and state government together will sum to the values reported in the “State/Local” table.
 - The “County” table estimates revenue collected by county governments.
 - The “Sub County General” table estimates revenue collected by city, township, and village, etc., governments.

- The “Sub County Special” table estimates revenue collected by units of government such as public school districts and fire districts.
 - The “State” table estimates revenue collected by state governments.
- If a particular type of unit of government does not exist in the study area, it will have zero tax impacts.
 - Note that in some places, city and county governments are consolidated. Whether a consolidated government is reported in the “County” or “Sub County General” table depends on how that government is classified according to the Census of Governments.
- The meaning of each line item, e.g. sales tax, is the same across all tax impact tables.
- Notes on TOPI taxes
 - Note that our source data on total TOPI taxes by state and by industry are collected at a more aggregate level (approximately 90 sectors) than the sectoring scheme of IMPLAN. We distribute TOPI by state and industry to detailed industries using national data and other proxy data.
 - Total TOPI taxes are industry- and place-specific, but the allocation of TOPI among its components, e.g., sales tax and property tax, is only place-specific.
 - For these reasons, we recommend constructing your own estimates of direct taxes whenever possible and using the model estimates for indirect and induced tax impacts.
- The tax impact report estimates total taxes paid, by government type and by tax type, by the sectors and institutions affected in an impact scenario. Be careful not to characterize taxes as “new” revenue for a government unless the value of the impact event is net new activity in that government’s taxing jurisdiction. For example, if there is new final demand for cars manufactured in county A, but county B (in the same state as county A) loses an equal amount of final demand for cars, the tax impact report will estimate taxes paid to county government, which reasonably could be characterized as new revenue, but also will report revenue paid to state and federal governments, which should not be characterized as new revenue.

Tax Impact Relationship to the SAM

The Social Accounting Matrix (SAM) of a region tracks the monetary flows, both market and non-market, between industries and institutions.¹ Market flows are the flows between producers of goods and services and their consumers, whether those consumers are industrial or institutional. Non-market flows are the flows between institutions. A traditional input-output (I-O) model, which shows only market flows, is a subset of a SAM. Taxes fall under the category of non-market flows.

IMPLAN software uses data from the SAM combined with data from the results of an analysis to produce the tax impact report. Table 1 shows an excerpt from the detailed industry by industry (Ixl) social accounting matrix (SAM) for Mecklenburg County, NC 2018.

The Taxes on Production and Imports net of subsidies (TOPI) column, for example, shows the distribution of TOPI, by type of tax, to the government. The cell in column 8001, row 12001, transfer type 15020 shows that in Mecklenburg County, NC, state and local governments collected an estimated \$3,015 million in sales taxes. Similarly, the household column shows payments of different types of personal tax to the government. The cell in column 10004, row 12001, transfer type 15027 shows that in Mecklenburg County, NC, households with annual income from \$40-\$50 thousand paid an estimated \$35 million in personal income tax to state and local governments. The column totals displayed are from the entire SAM, not only the values in the excerpt.

The Tax Impact Report adopts the same assumptions used in IMPLAN (and input-output type models in general). Marginal changes (impacts) will use the same distribution as pictured in the base year social accounts. This is the same assumption used in the derivation of predictive multipliers: the current picture of the local economy holds true for marginal changes.

¹ For a detailed description of an IMPLAN SAM, see [Explaining the Type SAM Multiplier](#).

While IMPLAN has industry-specific data on the total amount of TOPI paid (these can be found in the detailed SAM as payments to the row labelled 8001), the distribution of that TOPI among the various types of transfer paid (e.g., Sales Tax, Property Tax, Severance Tax, etc.) is not industry-specific.. Thus, while tourism would have a greater effect on sales and lodging taxes, and mining would be heavily weighted towards severance taxes, these differences would not be captured in the tax impact report. In these cases, we suggest adjusting the direct tax impacts based on your knowledge of the study area and project.

An IMPLAN input-output impact analysis generates changes in Value Added, which consists of Employee Compensation (EC), Proprietor Income (PI), Taxes on Production and Imports net of subsidies (TOPI), and Other Property Income (OPI). The levels of change in these components are unique to the level of direct effects specified in the impact analysis and the industries affected directly or indirectly. IMPLAN creates the tax impact report by first converting the values in the SAM into shares of column totals (so that, for example, TOPI payments of sales tax to State & Local Government, at \$3,015 million, account for 51.6% of the region's \$5,840 million TOPI. IMPLAN then applies these rates to the change(s) in Value Added. For taxes not directly paid from Value Added, such as personal income tax, the percent of Value Added flowing to an institution is first applied (e.g., the percent of Employee Compensation flowing to a household income group) and then personal income tax's share of total household income is applied.

State and Local Tax Impact by Level of Government

The allocation of State/Local Government to its constituent levels – State, County, Sub-County General (e.g., cities and towns), and Sub-County Special (e.g., school and fire districts) – is not reflected in data from the SAM. IMPLAN uses ancillary data, compiled primarily from Census data on State and Local Government finances, to estimate the shares of each type of tax flowing to particular levels of government in each county. The Census data report tax values by unit of government and by type of tax for each county. For State

Government taxes, however, IMPLAN estimates the share of each type of tax flowing to counties. For example, personal income by county is used to estimate each county's share of the parent state's personal income tax revenue. Note that multiple cities within a county can have different taxes; IMPLAN tax impacts effectively show a weighted average of the city tax impacts in the Sub-County General table. IMPLAN does not distinguish individual units of government; rather it distinguishes only the level of government.

Table 1. Aggregated Ixl Social Accounting Matrix (\$M)

		7001	8001	10001	10002	10003	10004	
		Other Property	Tax on Production	Households	Households	Households	Households	
		Income	and Imports	LT15k	15-30k	30-40k	40-50k	
11001 FedGov NonDefense	15006 Business Transfers	\$	204.48					
11001 FedGov NonDefense	15016 Surplus-Subsidy of Government Enterprises	\$	(10.27)					
11001 FedGov NonDefense	15017 TOP1: Excise Taxes		\$	274.81				
11001 FedGov NonDefense	15018 TOP1: Custom Duty		\$	136.17				
11001 FedGov NonDefense	15019 Rents and Royalties	\$	52.06					
11001 FedGov NonDefense	15027 Personal Tax: Income Tax			\$	(12.77)	\$	(54.89)	
11001 FedGov NonDefense	15028 Personal Tax: Estate and Gift Tax					\$	(16.51)	
11001 FedGov NonDefense	15029 Personal Tax: NonTaxes (Fines- Fees)			\$	0.03	\$	4.01	
12001 SL Gov Other Services	15006 Business Transfers	\$	100.37					
12001 SL Gov Other Services	15016 Surplus-Subsidy of Government Enterprises	\$	(1.85)					
12001 SL Gov Other Services	15019 Rents and Royalties	\$	7.59					
12001 SL Gov Other Services	15020 TOP1: Sales Tax		\$	3,014.88				
12001 SL Gov Other Services	15021 TOP1: Property Tax		\$	2,032.68				
12001 SL Gov Other Services	15022 TOP1: Motor Vehicle License		\$	85.06				
12001 SL Gov Other Services	15023 TOP1: Severance Tax		\$	0.52				
12001 SL Gov Other Services	15024 TOP1: Other Taxes		\$	295.14				
12001 SL Gov Other Services	15025 TOP1: Special Assessments		\$	0.10				
12001 SL Gov Other Services	15027 Personal Tax: Income Tax			\$	(4.68)	\$	(1.42)	
12001 SL Gov Other Services	15028 Personal Tax: Estate and Gift Tax					\$	17.36	
12001 SL Gov Other Services	15029 Personal Tax: NonTaxes (Fines- Fees)			\$	0.07	\$	10.37	
12001 SL Gov Other Services	15030 Personal Tax: Motor Vehicle License			\$	4.79	\$	9.50	
12001 SL Gov Other Services	15031 Personal Tax: Property Taxes			\$	0.63	\$	2.43	
12001 SL Gov Other Services	15032 Personal Tax: Other Tax (Fish/Hunt)			\$	0.00	\$	0.59	
		Total: \$	41,730.33	\$	5,839.36	\$	1,616.68	
					\$	3,128.82	\$	2,862.67
							\$	3,057.70

Example Analysis

An example Tax Impact report is shown in Figures 1-5. These are the tax implications of 10 jobs in the Custom computer programming services sector. Looking at Figures 1 and 2 we see that, based on the social accounts of the region, these 10 jobs generated a total (direct, indirect, and induced) of \$119,630 of tax revenue to State/Local Government from all sources and an additional \$277,686 to the Federal Government.

First, we will consider sales taxes, a component of TOPI. The 10 jobs yielded a total (direct, indirect, and induced) regional TOPI of \$95,954. In the TOPI column of the SAM, \$3,015 million flow to State/Local Government as sales taxes, which accounts 51.6% of all TOPI in the region since $\$3,015 / \$5,839 = 0.516$; consequently, the tax impact report shows \$49,541 of total sales tax impact, as 51.6% of \$95,954 is \$49,541. Calculations for other elements of TOPI follow the same logic.

Next, we will consider the more complex case of personal income taxes. The 10 jobs yielded a total (direct, indirect, and induced) regional EC value of \$1,488,060 and PI of \$128,135, for a total of \$1,616,195 Labor Income (LI). In the EC and PI columns of the SAM, some of each flows to households with annual income from \$40-50 thousand. No TOPI flows directly to households, as households do not collect taxes. Some OPI does flow directly to households but flows of OPI are not internalized in the default SAM, so they do not create new personal income. In the SAM (not shown in excerpt), 2.3% of EC and 2.2% of PI are paid to HH\$40-50k. Combined with the EC and PI impact values, this gives \$37,414 of LI flowing to HH\$40-50k. A share of that \$37,414 in income is paid as personal income taxes to State/Local Government and Federal Government. Looking at Figure 1 we see that HH\$40-50k pays \$34,084 million to State/Local Government and \$40,032 million to Federal Government in personal income taxes. These payments represent 1.1% and 1.3%, respectively, of the HH \$40-50k column total of \$3,058 million in the SAM, which accounts for all of that household income group's spending. Note the the implied tax rates here are based on estimates of actual taxes paid, which are not necessarily equal to statutory tax rates. Applying these percentages to the new LI value of \$37,414 flowing to HH\$40-50K, we match the values of \$426 to State/Local Government and \$493 to Federal Government found in the tax impact report.

All of the State/Local Government tax revenue is then allocated to its component levels of government based on regionally- and type-of-tax-specific shares calculated by IMPLAN and held in an ancillary (non-SAM) dataset. In Figure 3, County Tax Impacts show a \$0 impact on personal income taxes; this is because the Mecklenburg County government does not levy income taxes. In contrast, the County Government revenue for Mecklenburg County shows \$6,037 of sales tax revenue, approximately 12% of the S/L Government total. The Sub-County General report in Figure 4 shows \$6,314 of sales tax revenue, approximately 13% of the S/L Government total. Figure 5 shows that State Government would collect \$37,191, the remaining 75% of the total. It is possible that the state government returns some income tax revenue or sales tax revenue to the Mecklenburg County government or to city governments within the county, but those intergovernmental transfers do not appear in the tax impact report.

But how good are these estimates? The data underlying the estimates of the components of Value Added come from state and county level data sources which are at least at the 3-digit NAICS level of detail, so we can be fairly comfortable with these impact estimates. However, as mentioned previously, the distributions of these Value Added impacts (by component) among the types of tax are not industry-specific. The distribution would be the same whether it was computers, tourism, tobacco, or forest products. Logically, forest products or mining would have a higher proportion of severance taxes compared to computers or tobacco, but that would not show up in the tax impact report. It is up to the analyst to make adjustments as necessary.

Figure 1. Sample State and Local Government Tax Impact Report

State and Local Tax Impacts														
Type Code Paying > 0001			10001	10002	10003	10004	10005	10006	10007	10008	10009	10001	Total	
Type Description Paying > Tax on Production and Imports			Households 17126	Households 15_326	Households 30_426	Households 40_626	Households 50_726	Households 70_1026	Households 100_1226	Households 150_2026	Households 27206	Enterprises (Corporations)		
Transfer Code >	Description	Summative	Summative	Summative	Summative	Summative	Summative	Summative	Summative	Summative	Summative	Summative	Summative	
1	10020 TSP Sales Tax	\$45,247.47	0	0	0	0	0	0	0	0	0	0	\$45,247.47	
2	10021 TSP Property Tax	\$38,491.76	0	0	0	0	0	0	0	0	0	0	\$38,491.76	
3	10022 TSP Motor Vehicle License	\$1,307.68	0	0	0	0	0	0	0	0	0	0	\$1,307.68	
4	10023 TSP Severance Tax	\$8.56	0	0	0	0	0	0	0	0	0	0	\$8.56	
5	10024 TSP Other Taxes	\$4,849.82	0	0	0	0	0	0	0	0	0	0	\$4,849.82	
6	10025 TSP Special Assessments	\$1.59	0	0	0	0	0	0	0	0	0	0	\$1.59	
7	10026 Corporate Profits Tax	0	0	0	0	0	0	0	0	0	0	\$1,780.75	\$1,780.75	
8	10027 Personal Tax Income Tax	0	\$8.76	\$8.26	\$189.90	\$406.35	\$1,734.37	\$3,637.16	\$5,896.89	\$4,085.25	\$15,020.02	0	\$26,488.46	
9	10030 Personal Tax Motor Vehicle License	0	\$8.28	\$55.26	\$80.00	\$102.27	\$258.49	\$349.78	\$501.99	\$704.10	\$781.81	0	\$1,245.10	
10	10031 Personal Tax Property Taxes	0	\$1,117	\$14,142	\$17,225	\$22,391	\$58,152	\$88,719	\$80,084	\$48,330	\$80,344	0	\$387,411	
11	10032 Personal Tax Other Tax (Dividends)	0	\$0.01	\$3.45	\$5.74	\$7.52	\$17.12	\$20.75	\$13.43	\$25.02	\$784.75	0	\$278.86	
Total			\$85,000.00	\$1.31	\$84.07	\$209.87	\$552.94	\$2,178.76	\$4,067.82	\$8,175.06	\$4,345.91	\$18,811.50	\$1,780.75	\$115,830.28

Figure 2. Sample Federal Government Tax Impact Report

Federal Tax Impacts

Type Code Paying > 1001		1001	1002	1003	1004	1005	1006	1007	1008	1009	1001	Total	
Type Description Paying >		Employer Compensation	Program Income	Tax on Production and Imports	Households 17.5%	Households 15-40%	Households 40-50%	Households 50-70%	Households 70-100%	Households 100-200%	Households 200-500%	Enterprises (Corporations)	Total
Transfer Code <	Description	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize
1	15014 Social Insurance Tax-Employee Contribution	\$95,219.08	\$5,299.57										\$100,518.65
2	15015 Social Insurance Tax-Employer Contribution	\$95,262.81											\$95,262.81
3	15017 NGR Excise Taxes			\$43,15.84									\$43,15.84
4	15018 NGR Custom Duty			\$2,237.58									\$2,237.58
5	15026 Corporate Profits Tax											\$5,798.43	\$5,798.43
6	15027 Personal Tax Income Tax				\$22,336	\$319,475	\$147,526	\$495,35	\$5,498,27	\$6,128,53	\$15,039,81	\$12,798,46	\$42,747,58
7	15028 Personal Tax Estate and Gift Tax				\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total		\$173,481.89	\$5,299.57	\$6,753.42	\$22,336	\$319,475	\$147,526	\$495,35	\$5,498,27	\$6,128,53	\$15,039,81	\$12,798,46	\$42,747,58

Figure 3. Sample County Government Tax Impact Report

County Tax Impacts

Type Code Paying > 1001		1001	1002	1003	1004	1005	1006	1007	1008	1009	1001	Total	
Type Description Paying >		Tax on Production and Imports	Households 17.5%	Households 15-30%	Households 30-40%	Households 40-50%	Households 50-70%	Households 70-100%	Households 100-150%	Households 150-200%	Households 200%	Enterprises (Corporations)	Total
Transfer Code <	Description	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize
1	15020 NGR Sales Tax	\$4,038.03											\$4,038.03
2	15021 NGR Property Tax	\$32,262.90											\$32,262.90
3	15022 NGR Motor Vehicle License	\$28.87											\$28.87
4	15023 NGR Severance Tax	\$0.00											\$0.00
5	15024 NGR Other Taxes	\$307.85											\$307.85
6	15025 NGR Special Assessments	\$1.59											\$1.59
7	15026 Corporate Profits Tax											\$0.00	\$0.00
8	15027 Personal Tax Income Tax		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
9	15030 Personal Tax Motor Vehicle License		\$0.18	\$1.21	\$1.80	\$2.26	\$5.66	\$7.66	\$7.27	\$3.19	\$4.20		\$23.83
10	15031 Personal Tax Property Taxes		\$0.74	\$9.42	\$11.49	\$14.87	\$27.14	\$46.46	\$51.76	\$42.21	\$58.81		\$264.75
11	15032 Personal Tax Other Tax (Fish/Hunt)		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00
Total		\$28,677.15	\$0.92	\$10.64	\$13.28	\$17.13	\$42.66	\$68.14	\$67.05	\$48.81	\$58.81	\$0.00	\$28,876.72

Figure 4. Sample Sub County General Government Tax Impact Report

Sub County General Tax Impacts -

Type Code Paying > 1001		1001	1002	1003	1004	1005	1006	1007	1008	1009	1001	Total	
Type Description Paying >		Tax on Production and Imports	Households 17.5%	Households 15-30%	Households 30-40%	Households 40-50%	Households 50-70%	Households 70-100%	Households 100-150%	Households 150-200%	Households 200%	Enterprises (Corporations)	Total
Transfer Code <	Description	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize
1	15020 NGR Sales Tax	\$4,113.80											\$4,113.80
2	15021 NGR Property Tax	\$1,138.88											\$1,138.88
3	15022 NGR Motor Vehicle License	\$293.79											\$293.79
4	15023 NGR Severance Tax	\$0.00											\$0.00
5	15024 NGR Other Taxes	\$576.48											\$576.48
6	15025 NGR Special Assessments	\$0.00											\$0.00
7	15026 Corporate Profits Tax											\$0.00	\$0.00
8	15027 Personal Tax Income Tax		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
9	15030 Personal Tax Motor Vehicle License		\$1.38	\$9.12	\$13.53	\$17.05	\$42.67	\$57.74	\$56.80	\$27.09	\$37.66		\$205.04
10	15031 Personal Tax Property Taxes		\$0.37	\$4.72	\$5.76	\$7.44	\$14.88	\$26.25	\$35.91	\$25.12	\$27.52		\$152.46
11	15032 Personal Tax Other Tax (Fish/Hunt)		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00
Total		\$18,224.94	\$1.75	\$13.84	\$19.28	\$24.49	\$61.25	\$77.95	\$67.71	\$48.21	\$58.98	\$0.00	\$18,712.44

Figure 5. Sample State Government Tax Impact Report

State Tax Impacts

Type Code Paying > 1001		1001	1002	1003	1004	1005	1006	1007	1008	1009	1001	Total	
Type Description Paying >		Tax on Production and Imports	Households 17.5%	Households 15-30%	Households 30-40%	Households 40-50%	Households 50-70%	Households 70-100%	Households 100-150%	Households 150-200%	Households 200%	Enterprises (Corporations)	Total
Transfer Code <	Description	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize	Summarize
1	15020 NGR Sales Tax	\$37,191.82											\$37,191.82
2	15021 NGR Property Tax	\$0.00											\$0.00
3	15022 NGR Motor Vehicle License	\$1,044.82											\$1,044.82
4	15023 NGR Severance Tax	\$8.94											\$8.94
5	15024 NGR Other Taxes	\$3,834.32											\$3,834.32
6	15025 NGR Special Assessments	\$0.00											\$0.00
7	15026 Corporate Profits Tax											\$1,780.75	\$1,780.75
8	15027 Personal Tax Income Tax		\$8,186	\$8,276	\$169,90	\$426,35	\$1,734,37	\$5,637,16	\$5,888,88	\$4,099,25	\$10,555,82		\$26,466,46
9	15030 Personal Tax Motor Vehicle License		\$5.81	\$44.93	\$66.47	\$83.97	\$210.17	\$284.39	\$289.85	\$135.42	\$155.95		\$1,236.24
10	15031 Personal Tax Property Taxes		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$0.00
11	15032 Personal Tax Other Tax (Fish/Hunt)		\$0.01	\$3.45	\$0.74	\$1.52	\$7.12	\$20.15	\$13.43	\$25.22	\$104.73		\$239.94
Total		\$42,186.81	\$7.30	\$48.10	\$237.31	\$517.33	\$2,070.60	\$6,941.70	\$6,172.24	\$4,237.89	\$10,769.70	\$1,780.75	\$71,642.72

Definitions & Data Sources for Values

The tax impact report values are based on the existing relationships of the data found in the IMPLAN database. The sources for these data are listed below, followed by a detailed description of each data element in the tax impact report.

- **NIPA Tables.** All items in the IMPLAN data sets are ultimately controlled to the U.S.-level values from the Bureau of Economic Analysis' (BEA) National Income and Product Accounts (NIPA). Section 3 of the NIPA tables covers Government Current Receipts and Expenditures.
- **Consumer Expenditure Survey (CES).** The U.S. Census Bureau annually conducts surveys and diary samplings of household expenditure patterns (the CES). The survey data are reported for nine different categories of household income, which we control to the NIPA's Personal Consumption Expenditure (PCE) totals (which are not split out by income category). From these data, we can establish the tax-to-income relationships for the nine different household income categories. It is based on these relationships that we can distribute many of the national-level tax data to states and state-level tax data to counties, using the number of households in each of the nine household categories in the state or county.
- **Annual Survey of State and Local Government Finances (SLGF).** The U.S. Census Bureau also collects annual State/Local Government receipts and expenditures data. These data act as preliminary controls for state-level values (subject to controlling to the national NIPA values). They also give us the proportional split of the TOPI value among the various types (sales, property, etc.). The actual value of total TOPI (at the state level) comes from the BEA's REA series.
 - The annual survey also provides local government collections by tax type. We use these data to estimate, for the total state/local tax receipts, the share of each type of tax that belongs to different levels of local government. We then use data for each local government to apportion that local total (at the state level) to each county. Since we know the local total for each county, we

can distinguish the state and local tax revenue in the tax impact report. The tax impact report includes 4 types of governments that compose State/Local Government:

- State government
 - County government
 - Sub-county general government, which includes city and township governments, for example
 - Sub-county special government, which includes fire and public school districts, for example
 - We supplement gaps in the SLGF with 5-year Census of Governments data, and supplement the SLGF state tax revenue with current-year state tax collections data from Census.
- **Regional Economic Accounts (REA).** The BEA collects and reports income, wealth, tax, and employment data on a regional state and county basis also. The REA data from these two tables are used to distribute the U.S. NIPA values to states and counties:
 - Table CA05 -- Personal Income by Major Source and Earnings by Industry
 - Table SA50 -- Personal Tax and Non-tax Payments

Figure 6: State/Local Government Tax Impact Report Key

Transfer Code	Description	5001 EC	8001 TOPI	10001-10009 HH (consolidated)	13001 Enterprises
15014	Social Insurance Tax- Employee Contribution	A			
15015	Social Insurance Tax- Employer Contribution	B			
15020	TOPI: Sales Tax		C		
15021	TOPI: Property Tax		D		
15022	TOPI: Motor Vehicle License		E		
15023	TOPI: Severance Tax		F		
15024	TOPI: Other Taxes		G		
15025	TOPI: Special Assessments		H		
15026	Corporate Profits Tax				M
15027	Personal Tax: Income Tax			I	
15030	Personal Tax: Motor Vehicle License			J	
15031	Personal Tax: Property Taxes			K	
15032	Personal Tax: Other Tax (Fish/Hunt)			L	

Figure 7: Federal Government Tax Impact Report Key

		5001	6001	8001	10001-10009	13001
Transfer Code	Description	EC	PI	TOPI	HH (consolidated)	Enterprises
15014	Social Insurance Tax- Employee Contribution	N	P			
15015	Social Insurance Tax- Employer Contribution	O				
15017	TOPI: Excise Taxes			Q		
15018	TOPI: Custom Duty			R		
15026	Corporate Profits Tax					U
15027	Personal Tax: Income Tax				S	
15028	Personal Tax: Estate and Gift Tax				T	

The following definitions and sources provide a key to the tax impact report, with letters corresponding to the positions in Figures 6 and 7. The key in Figure 6 applies to all components of State/Local Government, e.g., County and State governments. For each component level of government's share of all State/Local revenue, the local government amounts are distributed according to data on local collections from SLGF.

A. Employee-paid portion for State/Local social insurance. This represents accident, disability, and death benefits administered by state governments, employee contributions. The U.S. value comes from NIPA Tables 3.3 and 3.6. This value is distributed to states based on each state's share of the following items from the SLGF: Workers Compensation System Contributions and Other State Social Insurance Trust Systems Contributions. This state value is then distributed to the counties based on each county's proportion of the state's Employee Compensation.

B. Employer-paid portion for State/Local social insurance funds. This represents accident, disability, and death benefits administered by state governments, employer contributions. The U.S. value comes from NIPA Tables 3.3 and 3.6. This value is distributed to states based on each state's share of the following items from the SLGF: Workers Compensation System Contributions and Other State Social Insurance Trust Systems Contributions. This state value is then distributed to the counties based on each county's proportion of the state's Employee Compensation.

C. **TOPI sales taxes paid to State and Local Governments.** The U.S. value comes from NIPA Table 3.5. The U.S. value is distributed to states based on each state's proportion of Total General Sales Tax from the SLGF. State government values are then distributed to counties based on total retail output. Local government sales tax collections are distributed to counties using the SLGF.

D. **TOPI property taxes paid to State and Local Governments.** The U.S. value comes from NIPA Table 3.5. The U.S. value is distributed to states based on each state's proportion of Total Property Tax from the SLGF. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government property tax collections are distributed to counties using the SLGF.

E. **TOPI motor vehicle license taxes paid to State and Local Governments.** The U.S. value comes from NIPA Table 3.5. The U.S. value is distributed to states based on each state's proportion of Motor Vehicle Operator's License Tax and Motor Vehicle License Tax from the SLGF. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties using the SLGF.

F. **TOPI severance taxes paid to State and Local Governments.** The U.S. value comes from NIPA Table 3.5. The U.S. value is distributed to states based on each state's proportion of Severance Tax from the SLGF. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties using the SLGF.

G. **TOPI other taxes paid to State and Local Governments.** This item consists largely of business licenses and documentary and stamp taxes. The U.S. value comes from NIPA Table 3.5. The U.S. value is distributed to states based on each state's proportion of the following tax items from the SLGF: Corporation License; Amusement License; Other License; Documentary & Stock Transfer; Public Utility License; Alcoholic Beverage License; Occupation & Business License, NEC; and NEC. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties using the SLGF.

H. TOPI special assessments paid to State and Local Governments. This item includes special assessments. The U.S. value comes from NIPA Table 3.5. The U.S. value is distributed to states based on each state's proportion of the following tax items from the SLGF: Miscellaneous – Special Assessments. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties directly using the SLGF.

I. Personal income tax payments to State and Local Governments. The U.S. value comes from NIPA Table 3.3. The U.S. value is distributed to states based on BEA's SA(50) table. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties using the SLGF.

J. Personal motor vehicle fee payments to State and Local Governments. The U.S. value comes from NIPA Table 3.4. The U.S. value is distributed to states based on each state's proportion of Motor Vehicle Operator's License Tax and Motor Vehicle License Tax from the SLGF. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties using the SLGF.

K. Personal property tax payments to State and Local Governments. The U.S. value comes from NIPA Table 3.4. The U.S. value is distributed to states based on BEA's SA(50) table. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties using the SLGF.

L. Personal other tax payments to State and Local Governments. This item consists largely of hunting, fishing, and other personal licenses. The U.S. value comes from NIPA Table 3.4. The U.S. value is distributed to states based on Hunting and Fishing License Tax from the SLGF. State government values are then distributed to counties based on total Personal Income from the BEA's CA05 table. Local government collections are distributed to counties using the SLGF.

M. **State/Local Government corporate profits tax.** The U.S. value comes from NIPA Table 3.3. The U.S. value is distributed to states based on Corporate Net Income Tax from the SLGF. State government values are then distributed to counties based on counties based on their proportion of the state's Other Property Income (from IMPLAN database). Local government collections are distributed to counties using the SLGF.

N. **Employee-paid portion for Federal social insurance.** This item includes social security, survivors insurance, disability insurance, hospital insurance, supplemental medical insurance, unemployment insurance, veterans' life insurance, and railroad retirement plans. The U.S. value comes from NIPA Table 3.6. The U.S. value is distributed to states and counties based on Personal Contribution for Social Insurance from the BEA's CA05 table.

O. **Employer-paid portion for Federal social insurance.** This item includes social security, survivors insurance, disability insurance, hospital insurance, military medical insurance, unemployment insurance, pension benefit guaranty, veterans' life insurance, and railroad retirement plans. The U.S. value comes from NIPA Table 3.6. The U.S. value is distributed to states and counties based on Personal Contribution for Social Insurance from the BEA's CA05 table.

P. **Self-Employed contribution to Federal social insurance.** This item includes social security, survivors insurance, disability insurance, and hospital insurance. The U.S. value comes from NIPA Table 3.6. The U.S. value is distributed to states and counties based on Personal Contribution for Social Insurance from the BEA's CA05 table.

Q. **TOPI Federal Excise Taxes.** This item includes federally levied excise taxes on alcohol, tobacco, telephones, coal, fuels, air transportation, vehicles, etc. The U.S. value comes from NIPA Table 3.2. The U.S. value is distributed to states and counties based on IMPLAN estimates of total TOPI for all industries in relationship to U.S. total TOPI.

R. **TOPI Federal Custom Duties.** These are gross collections less refunds. The U.S. value comes from NIPA Table 3.2. The U.S. value is distributed to states and counties based on IMPLAN estimates of total TOPI for all industries in relationship to US total TOPI.

S. **Personal Income taxes paid to the Federal Government.** These are taxes paid through withholding, declarations and final settlement less refunds. The U.S. value comes from NIPA Table 3.2. The same value can also be found in NIPA Table 3.4. The U.S. value is distributed to states based on each state's value of "Federal government: Individual Income taxes (net of refunds)" from the BEA's SA50 table. State values are then distributed to counties based on total Personal Income from the BEA's CA05 table.

T. **Federal Corporate profits tax.** The U.S. value comes from NIPA Table 3.2. The U.S. value is distributed to states and counties based on their proportion of U.S. Other Property Income (from IMPLAN database).

Appendix A: IMPLAN Institution Codes and Transfer Type Codes

Institution Receiving		Institution Paying		Type of Transfer	
1001	Industry Total	2001	Commodity Total	15052	Commodity Make
1001	Industry Total	25001	Foreign Trade	15051	Commodity Trade
1001	Industry Total	28001	Domestic Trade	15051	Commodity Trade
2001	Commodity Total	1001	Industry Total	15050	Commodity Use
2001	Commodity Total	10001	Households	15051	Commodity Trade
2001	Commodity Total	11001	Federal Government Non-Defense	15051	Commodity Trade
2001	Commodity Total	11002	Federal Government Defense	15051	Commodity Trade
2001	Commodity Total	11003	Federal Government Investment	15051	Commodity Trade
2001	Commodity Total	12001	State/Local Government Non-Education	15051	Commodity Trade
2001	Commodity Total	12002	State/Local Government Education	15051	Commodity Trade
2001	Commodity Total	12003	State/Local Government Investment	15051	Commodity Trade
2001	Commodity Total	14001	Capital	15051	Commodity Trade
2001	Commodity Total	14002	Inventory Additions/Deletions	15051	Commodity Trade
5001	Employee Compensation	1001	Industry Total	15053	Factor Receipts
6001	Proprietor Income	1001	Industry Total	15053	Factor Receipts
7001	Other Property Income	1001	Industry Total	15053	Factor Receipts
8001	Taxes on Production and Imports	1001	Industry Total	15053	Factor Receipts
10001	Households	2001	Commodity Total	15052	Commodity Make
10001	Households	5001	Employee Compensation	15002	Wages and Salary w/o Social Security
10001	Households	5001	Employee Compensation	15003	Other Labor Income

10001	Households	5001	Employee Compensation	15010	Transfers
10001	Households	6001	Proprietor Income	15004	Proprietor Income and CCA ² w/o Social Security
10001	Households	7001	Other Property Income	15005	Rent with Capital Consumption Adjustment
10001	Households	7001	Other Property Income	15006	Business Transfers
10001	Households	7001	Other Property Income	15008	Net Interest from Industries
10001	Households	7001	Other Property Income	15036	Net Interest from ROW ³
10001	Households	10001	Households	15009	Interest (Gross)
10001	Households	11001	Federal Government Non-Defense	15009	Interest (Gross)
10001	Households	11001	Federal Government Non-Defense	15010	Transfers
10001	Households	12001	State/Local Government Non-Education	15009	Interest (Gross)
10001	Households	12001	State/Local Government Non-Education	15010	Transfers
10001	Households	13001	Enterprises (Corporations)	15007	Dividends
10001	Households	14001	Capital	15011	Surplus or Deficit
10001	Households	25001	Foreign Trade	15051	Commodity Trade
10001	Households	28001	Domestic Trade	15037	Factor Trade
10001	Households	28001	Domestic Trade	15051	Commodity Trade
11001	Federal Government Non-Defense	2001	Commodity Total	15052	Commodity Make
11001	Federal Government Non-Defense	5001	Employee Compensation	15013	Wage Accruals Less Surplus

² CCA = Capital Consumption Adjustment. CCA is the difference between actual capital consumption and the capital consumption allowance calculated by the BEA based on historical-cost depreciation.

³ ROW = Rest of the world

11001	Federal Government Non-Defense	5001	Employee Compensation	15014	Social Security Tax, Employee Contribution
11001	Federal Government Non-Defense	5001	Employee Compensation	15015	Social Security Tax, Employer Contribution
11001	Federal Government Non-Defense	6001	Proprietor Income	15014	Social Security Tax, Employee Contribution
11001	Federal Government Non-Defense	7001	Other Property Income	15008	Interest (Net-from Industries)
11001	Federal Government Non-Defense	7001	Other Property Income	15016	Surplus-Subsidy, Government Enterprises
11001	Federal Government Non-Defense	7001	Other Property Income	15036	Net Interest from ROW
11001	Federal Government Non-Defense	8001	Taxes on Production and Imports	15017	Excise Taxes
11001	Federal Government Non-Defense	8001	Taxes on Production and Imports	15018	Custom Duty
11001	Federal Government Non-Defense	8001	Taxes on Production and Imports	15019	Federal Non-taxes (Fines, Fees)
11001	Federal Government Non-Defense	10009	Households	15009	Gross Interest
11001	Federal Government Non-Defense	10009	Households	15027	Personal Tax: Income Tax
11001	Federal Government Non-Defense	10009	Households	15028	Personal Tax: Estate and Gift Tax
11001	Federal Government Non-Defense	10009	Households	15029	Personal Tax: Non-taxes (Fines, Fees)
11001	Federal Government Non-Defense	13001	Enterprises (Corporations)	15026	Corporate Profits Tax
11001	Federal Government Non-Defense	25001	Foreign Trade	15051	Commodity Trade

11001	Federal Government Non-Defense	28001	Domestic Trade	15051	Commodity Trade
11002	Federal Government Defense	11001	Federal Government Non-Defense	15010	Transfers
11002	Federal Government Defense	14001	Capital	15011	Surplus or Deficit
11003	Federal Government Investment	11001	Federal Government Non-Defense	15010	Transfers
12001	State/Local Government Non-Education	2001	Commodity Total	15052	Commodity Make
12001	State/Local Government Non-Education	5001	Employee Compensation	15013	Wage Accruals Less Surplus
12001	State/Local Government Non-Education	5001	Employee Compensation	15014	Social Security Tax, Employee Contribution
12001	State/Local Government Non-Education	5001	Employee Compensation	15015	Social Security Tax, Employer Contribution
12001	State/Local Government Non-Education	6001	Proprietor Income	15014	Social Security Tax, Employee Contribution
12001	State/Local Government Non-Education	7001	Other Property Income	15008	Interest (Net-from Industries)
12001	State/Local Government Non-Education	7001	Other Property Income	15016	Surplus-Subsidy, Government Enterprises
12001	State/Local Government Non-Education	8001	Taxes on Production and Imports	15020	Sales Tax
12001	State/Local Government Non-Education	8001	Taxes on Production and Imports	15021	Property Tax
12001	State/Local Government Non-Education	8001	Taxes on Production and Imports	15022	Motor Vehicle Licenses
12001	State/Local Government Non-Education	8001	Taxes on Production and Imports	15023	Severance Tax

12001	State/Local Government Non-Education	8001	Taxes on Production and Imports	15024	Other Taxes
12001	State/Local Government Non-Education	8001	Taxes on Production and Imports	15025	State/Local Non-taxes
12001	State/Local Government Non-Education	10001	Households	15009	Interest (Gross)
12001	State/Local Government Non-Education	10001	Households	15027	Personal Tax: Income Tax
12001	State/Local Government Non-Education	10001	Households	15028	Personal Tax: Estate and Gift Tax
12001	State/Local Government Non-Education	10001	Households	15029	Personal Tax: Non-taxes (Fines, Fees)
12001	State/Local Government Non-Education	10001	Households	15030	Personal Tax: Motor Vehicle License
12001	State/Local Government Non-Education	10001	Households	15031	Personal Tax: Property Taxes
12001	State/Local Government Non-Education	10001	Households	15032	Personal Tax: Other Tax (Fish/Hunt)
12001	State/Local Government Non-Education	11001	Federal Government Non-Defense	15010	Transfers
12001	State/Local Government Non-Education	13001	Enterprises (Corporations)	15007	Dividends
12001	State/Local Government Non-Education	13001	Enterprises (Corporations)	15026	Corporate Profits Tax
12001	State/Local Government Non-Education	25001	Foreign Trade	15051	Commodity Trade
12001	State/Local Government Non-Education	28001	Domestic Trade	15051	Commodity Trade
12002	State/Local Government Education	12001	State/Local Government Non-Education	15010	Transfers

12002	State/Local Government Education	14001	Capital	15011	Surplus or Deficit
12003	State/Local Government Investment	12001	State/Local Government Non-Education	15010	Transfers
12003	State/Local Government Investment	14001	Capital	15011	Surplus or Deficit
13001	Enterprises (Corporations)	7001	Other Property Income	15001	Corporate Profits with IVA
14001	Capital	2001	Commodity Total	15052	Commodity Make
14001	Capital	7001	Other Property Income	15033	Capital Consumption Allowance
14001	Capital	7001	Other Property Income	15035	NIPA Statistical Discrepancy
14001	Capital	10009	Households	15011	Surplus or Deficit
14001	Capital	11001	Federal Government Non-Defense	15011	Surplus or Deficit
14001	Capital	11003	Federal Government Investment	15011	Surplus or Deficit
14001	Capital	12001	State/Local Government Non-Education	15011	Surplus or Deficit
14001	Capital	13001	Enterprises (Corporations)	15011	Surplus or Deficit
14001	Capital	14002	Inventory Additions/Deletions	15011	Surplus or Deficit
14001	Capital	25001	Foreign Trade	15051	Commodity Trade
14001	Capital	28001	Domestic Trade	15011	Surplus or Deficit
14001	Capital	28001	Domestic Trade	15051	Commodity Trade
14002	Inventory Additions/Deletions	2001	Commodity Total	15052	Commodity Make
14002	Inventory Additions/Deletions	25001	Foreign Trade	15051	Commodity Trade
14002	Inventory Additions/Deletions	28001	Domestic Trade	15051	Commodity Trade
25001	Foreign Trade	1001	Industry Total	15051	Commodity Trade

25001	Foreign Trade	7001	Other Property Income	15010	Transfers
25001	Foreign Trade	10009	Households	15010	Transfers
25001	Foreign Trade	10009	Households	15051	Commodity Trade
25001	Foreign Trade	11001	Federal Government Non-Defense	15010	Transfers
25001	Foreign Trade	11001	Federal Government Non-Defense	15051	Commodity Trade
25001	Foreign Trade	11002	Federal Government Defense	15051	Commodity Trade
25001	Foreign Trade	11003	Federal Government Investment	15051	Commodity Trade
25001	Foreign Trade	12001	State/Local Government Non-Education	15051	Commodity Trade
25001	Foreign Trade	12002	State/Local Government Education	15051	Commodity Trade
25001	Foreign Trade	12003	State/Local Government Investment	15051	Commodity Trade
25001	Foreign Trade	14001	Capital	15011	Surplus or Deficit
25001	Foreign Trade	14001	Capital	15051	Commodity Trade
25001	Foreign Trade	14002	Inventory Additions/Deletions	15051	Commodity Trade
25001	Foreign Trade	25001	Foreign Trade	15051	Commodity Trade
28001	Domestic Trade	1001	Industry Total	15051	Commodity Trade
28001	Domestic Trade	7001	Other Property Income	15037	Factor Trade
28001	Domestic Trade	10009	Households	15051	Commodity Trade
28001	Domestic Trade	11001	Federal Government Non-Defense	15051	Commodity Trade
28001	Domestic Trade	11002	Federal Government Defense	15051	Commodity Trade
28001	Domestic Trade	11003	Federal Government Investment	15051	Commodity Trade
28001	Domestic Trade	12001	State/Local Government Non-Education	15051	Commodity Trade

28001	Domestic Trade	12002	State/Local Government Education	15051	Commodity Trade
28001	Domestic Trade	12003	State/Local Government Investment	15051	Commodity Trade
28001	Domestic Trade	14001	Capital	15051	Commodity Trade
28001	Domestic Trade	14002	Inventory Additions/Deletions	15051	Commodity Trade

Updated January 4, 2021