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New York City Tax Effort: Historical Tables

This set of [tables and charts](#) traces historical trends in gross taxable resources (GTR) and tax effort in New York City. As in previous IBO reports, [Comparing State and Local Taxes in Large U.S. Cities](#) (2007) and [Tax Effort and Spending Effort Across New York State](#) (2011), tax effort measures the portion of taxable resources in a jurisdiction that is absorbed by tax collections, expressed as taxes per \$100 GTR. The tables also report tax collections and taxable resources in both nominal and real terms.

Our series on New York City GTR and city government tax effort start in fiscal year 1929. We also track state government tax effort in New York City from 1966 (our data are incomplete before this) and Metropolitan Transportation Authority (MTA) tax effort in the city from the MTA's inception in 1968.

Taxes are grouped into six major categories: property, general sales, personal income, business income, real estate-related, and other. We also separate *non-exported* and *exported* taxes, that is, taxes levied on New York City resident households and businesses and taxes levied on nonresidents. Taxes in the former category enter into the calculation of New York City tax effort. The latter category includes sales and other taxes on hotel occupancy, city income taxes paid by commuters into the city, and portions of state and MTA auto rental taxes remitted in the city. We could not, however, estimate and net out non-hotel sales and other taxes paid by visitors to the city. Nor could we account, as we did in our previous report, for any New York City tax imports, that is, taxes of other, non-overlapping jurisdictions paid by city residents.¹

Brief descriptions of the tables and figures follow. Methodological notes are also provided below.

Gross Taxable Resources: Tables 1 and 2 and Figure 1

Gross taxable resources (GTR) comprise the incomes of households residing in the city (“personal income” or PI) and the gross operating surpluses generated by businesses in the city (“business capital value added” or CVA). These are the principal flows of spending power out of which most of a jurisdiction’s taxes are paid—not only taxes on income and consumption, but also taxes on transactions and wealth (such as real property). Our definitions of PI and CVA are based on those of the Bureau of Economic Analysis (BEA), but with modifications that are described in the Methodological Notes.

Table 1 shows New York City GTR and per capita GTR from 1929 through the most recent city fiscal year. The city’s population is also shown, and annual growth rates for all these series are provided.

In Table 2 these series are expressed in real dollars using IBO’s New York City gross domestic product (GDP) deflator (with the most recent fiscal year = 100.0). Figure 1 charts the growth real PI and CVA over time.



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NYC Tax Revenues: Tables 3 and 4 and Figures 2 and 3

Nominal New York City government tax revenues by type of tax are shown in Table 3 and constant dollar revenues in Table 4. Table 3 also shows the shares of total tax revenue accounted for by the major tax types, while Table 4 shows real growth by type of tax.

Figure 2 depicts the city's changing tax mix at intervals since 1929. Figure 3 visualizes the growth of real tax revenue by tax type. Both of these figures are interactive, displaying data with or without exported taxes.

NYC Government Tax Effort: Table 5 and Figure 4

Table 5 shows New York City government tax effort (non-exported taxes per \$100 GTR) and annual growth in tax effort by tax type. Movements in New York City government tax effort since 1929 are visualized in Figure 4.

Overlapping Government Taxes and Tax Effort in New York City: Table 6 and Figures 5 and 6

The amount of tax effort exerted at the municipal level is in part a function of the division of fiscal responsibilities between the city, the state, and other overlapping local government jurisdictions. In most locales the latter include county governments and education districts with independent taxing powers. These do not exist in New York City, but the city does share fiscal responsibilities with a regional entity—the Metropolitan Transportation Authority—and with, of course, New York State.

Table 6 shows summary city, state, and transit district taxes and tax effort by level of government since 1966. This is the earliest year for which we have detailed enough data to estimate shares of state taxes supported by city GTR. MTA regional tax collections date from 1970.² This table is interactive, showing tax data with or without exported taxes.

Tax effort by level of government in New York City is depicted in Figure 5. Figure 6 contrasts graphically the tax effort by tax type for the city and the state and Metropolitan Commuter Transit District, highlighting the state's greater reliance on personal income tax and the city's use of the property tax.

Appendix Tables and Figures

Table A1 provides a crosswalk between gross domestic product (GDP) for New York City and our measure of GTR. Tables A2-A4 are master tables for all the tax and tax effort data. A2 displays city, state, transit district, and total tax revenue for each type of tax, A3 converts these series to constant dollars, and A4 provides tax effort for each level of government and type of tax. Table A5 details the city, state, and transit district taxes subsumed under each major tax category.

Methodological Notes

Gross Taxable Resources. New York City gross taxable resources (GTR) are the sum of resident personal income (PI) and local business capital value added (CVA). PI and CVA are derived from U.S. Commerce Department Bureau of Economic Analysis (BEA) data, but with significant modifications to the PI side to minimize double-counting of income. Our version of PI excludes proprietors' income, because a somewhat broader measure of this is also encompassed within CVA.³ We also net out the estimated share of dividend and interest income in city PI attributable to city CVA, and we remove money rental income from PI on the assumption that it is for the most part an element of real estate value added on the CVA side. Conversely, we have shifted the estimated owner-occupied housing portion of real estate value-added from CVA to PI (net of the imputed rental income component of housing value added that BEA already counts there).

We also drop current personal transfers from PI.⁴ These are almost entirely comprised of transfer receipts of individuals from government (retirement, disability, medical, income maintenance, unemployment, and veterans' benefits) plus transfer receipts of nonprofit institutions on behalf of individuals. Though all this adds to the consumption capacity of households, the personal taxes that pay for these transfers subtract from that capacity. As we do not net out those taxes, we must net out the transfers to avoid overestimating household capacity.⁵ In addition, transfer receipts of individuals from businesses (mostly insurance payments) are netted out, as these come out of the value added we count on the business side of GTR.

BEA excludes capital gains from its income accounts, but gains reflect price appreciation from retained earnings and hence are subsumed in CVA. Insofar as the gains realized by New York City residents exceed (or, on occasion, fall short of) the amounts attributable to city CVA, we add those differentials to our definition of PI.⁶

New York City CVA is estimated by sharing down the capital value-added component of New York State GDP, which is provided by BEA. Capital value added is gross operating surplus (GOS) plus taxes on production and imports net of government subsidies (TXPISX) in the state GDP accounts. Gross operating surplus includes corporate capital charges (comprising distributed and undistributed profits, net interest payments, and the rental income of persons) and, as noted above, proprietors' income (current production income of sole proprietorships, partnerships, and cooperatives).

Apart from housing, NAICS industry CVA is shared down using industry earnings (BEA Table CA5N) ratios. For 1997-2000, CA5N ratios are estimated using Quarterly Census of Employment and Wages (QCEW) wage ratios. For 1969-1996, value added is shared down using SIC industries and CA5 ratios. The result is then adjusted to a NAICS basis.

For 1949-1969 GTR estimates, city PI and CVA are estimated from city and state resident personal income and industry wage data published by the former New York State Department of Commerce. City income and earnings data were adjusted based on comparisons between the old state-level data and the revised time series of state personal income (SPI) and industry wages provided by BEA. Further adjustments were made accounting for annual variations in ratios of CVA to compensation.

New York City personal income was estimated back to 1929 in a research report produced for the Temporary Commission on City Finances in 1966.⁷ This time series is recalibrated and 1929-1949 city PI components and industry compensation and value added are estimated by benchmarking city/state ratios to (a) BEA's revised New York SPI series and (b) state and city wage and value added data from Census Bureau reports, where available. Industry CVA/compensation ratios from the national accounts are also brought to bear in trending city CVA back to 1929.

Housing CVA is estimated separately. Starting from state personal consumption expenditures (PCE) for housing and utilities, we estimate housing PCE which is equivalent to housing gross output (GO), and then remove estimated intermediary inputs (II) and compensation of employees (COMP) to arrive at housing CVA for New York State.⁸ Full market value shares (data from IBO for New York City and from the Office of Real Property Services (ORPS) for the rest of New York State) are used to subdivide this into owner-occupied and rental housing CVA and subsequently to estimate the city's share of owner-occupied and rental housing CVA. These series are trended back to 1929 using Census of Housing data and interpolating changes in CVA shares for the years between Census of Housing reports.

Deflator. For calendar years starting with 1978 we use the New York City GDP deflator provided by Moody's Analytics. For earlier years, we worked backward off the national GDP deflator using the ratios of the growth rates of the U.S. and New York City consumer price indexes (CPI-U).

Adjustments To Tax Definitions. We sort New York City and overlapping government taxes into six broad categories: property, general sales, personal income, business income, real-estate-related, and other. The business gross receipt taxes that were replaced by New York City's modern business income taxes in 1967 are also placed in the business income tax category. For detail on the taxes subsumed in our main categories see Table A5.

In general, we have relied on Comprehensive Annual Financial Reports (CAFRs) for New York City taxes and on New York State Tax and Finance files for state and transit district taxes. (CAFRs included Emergency Relief as well as General Fund taxes from 1935 through 1942.) But in a few cases we have excluded or reclassified revenues reported as taxes in the CAFRs and added taxes not reported in CAFRs (or by State Tax and Finance).

Through 1946, the Special Taxes category in city CAFRs included the city's share of state-imposed taxes on corporate franchises, personal income, real estate brokers, mortgages, motor vehicle licenses, motor fuel, and alcoholic beverages. We did not count these as city taxes unless the city's share was based on (or closely corresponded to) what was actually collected from city residents or businesses. This was the case with real estate and mortgage taxes and the corporate franchise tax. The latter was allocated in proportion to the value of the tangible personal property (machinery, tools,

etc.) of the corporation. On the other hand, city and county shares of the state personal income tax were allocated in proportion to real property assessed values, but this was not a sufficiently close fit to taxable income, so we classify these revenues as intergovernmental transfers (state aid). In 1946 all of these city-share-of-state taxes (except for the mortgage tax) were replaced by a per capita grant from the state.

When the New York City stock transfer tax (STT) was phased out in the early 1980s, the revenue loss was partially offset by an annual payment from the state (usually around \$150 million). This was booked as city tax revenue in city CAFRs, but we treat it as an intergovernmental transfer. Likewise city CAFRs have booked state aid under STAR as revenue replacing portions of the city's real property tax and personal income tax, but we again treat these lines as intergovernmental transfers rather than city tax revenue.

On the other hand, we do count communication (landline, wireless, and VOIP) surcharges as city taxes, even though these are listed only as police department revenues in the CAFR.⁹ We also add back the refundable portions of the earned income and child care credits to the city and state personal income tax, in keeping with the federal practice of counting these on the expenditure side of the budget rather than netting them out on revenue side.

Consistent with the treatment of communications surcharges, state taxes include the off-budget assessments and surcharges that flow from private providers and insurers into the Health Care Reform Act (HCRA) resources fund. This amounted to over \$2.6 billion in New York City (\$0.30 per \$100 GTR) in 2016—almost as much as the state's business income and real-estate related taxes in the city combined.

Exported Taxes. For city government, exported taxes are just those taxes that can be identified as not being paid by city households or businesses, that is to say, not being paid out of city GTR. Exported taxes that can be readily identified include taxes on hotel occupancy and nonresident income taxes. Accounting for the portions of other city taxes that are paid by nonresidents (for example, sales taxes paid by commuters and visitors on retail purchases and meals, property and real estate transfer taxes paid by those whose primary home is outside the city) is beyond the scope of this report. By the same token, we do not here attempt to tabulate tax imports, such as sales taxes paid by city residents shopping outside the city, hotel and meal taxes paid by city residents travelling outside the city, or property taxes paid by city residents on second homes located elsewhere. (For more on this see the Tax Effort section below.)

For overlapping governments (New York State and the MTA transportation district), 'exported taxes' include taxes on hotel occupancy and the estimated "airport" (non-local) share of auto rental taxes. We do not count New York State personal income and MTA payroll taxes attributed to income earned by intrastate and out of state commuters to New York City. These are somewhat analogous to city government exported taxes in the sense that they are related to New York City economic activity but are not paid out of city GTR. But they are not amounts that must be shifted to a tax export column in order to avoid overcounting taxes paid out of city GTR (as with sales taxes on hotel occupancy). Nor are they amounts that must be added to New York City tax exports to account for all the tax dollars commanded by a jurisdiction (as with city government nonresident income taxes).

Tax Effort. Ideally, the calculation of an area's tax effort would include taxes imposed by local and overlapping jurisdictions paid out of the area's gross taxable resources (resident PI and local business VA) plus taxes of nonlocal (non-overlapping) jurisdictions paid out of GTR (tax 'imports'). This measure would exclude taxes of local and overlapping jurisdictions collected in or attributable to an area's economic activity but not paid out of area GTR (various subsets of which might be classified as tax 'exports'). This ideal has been differently approximated in our earlier tax effort studies.

In *Comparing State and Local Taxes in Large U.S. Cities*, we excluded some tax exports (mainly hotel and hotel-related sales taxes, plus taxes paid on income earned by nonresidents), but did not capture any tax imports. In *Comparing Tax Effort and Spending Effort Across New York State*, we again excluded some tax exports, and were able to estimate some intrastate tax imports (second-home property taxes and net sales taxes paid by households in nonresident jurisdictions). We still could not capture interstate (or rest-of-world) tax imports. In the present report, we revert to the treatment of Taxing Metropolis, as we could not estimate a time series for intrastate tax shifts.

The Mobility Tax. The MTA mobility tax is categorized as a kind of personal income tax because payroll taxes are regarded as taxes on labor income. This holds regardless of whether the tax is nominally designated as ‘employee-paid’ or (as in the case of the mobility tax) ‘employer-paid.’ Thus what is shown in the non-exported personal income tax column of Tables A2-A4 is the portion of the regional mobility tax that is levied on the wages of New York City residents, rather than the (larger) amount nominally paid by New York City businesses (on wages of both city residents and nonresidents).

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New York City Tax Effort: Historical Tables available [here](#).

Endnotes

¹For further definitions and explanations of the tax categories see Appendix Table A5 and the Methodological Notes.

²The Metropolitan Transportation Authority (MTA) was established on March 1, 1968, and began collecting revenue from dedicated taxes and surcharges imposed within its operating district (the Metropolitan Commuter Transit District, MCTD) in 1970. The MCTD includes New York City plus Dutchess, Nassau, Orange, Putnam, Rockland, and Suffolk counties. A portion of the state's petroleum business tax (PBT) is also dedicated to the MTA, but we include the entire PBT in state tax revenues (in effect categorizing the MTA portion as an intergovernmental or interfund transfer). We do this because the MTA's share is determined by a formula applied to statewide PBT collections; it is not a function of PBT revenues levied within the transit district. See also [For MTA, Tax & Fee Revenues Not Always on Track](#).

³Proprietors' income as measured in BEA's personal income accounts includes capital consumption adjustments (CCAdj) but excludes capital consumption allowances (CCA).

⁴This is a change from earlier IBO tax effort studies, where transfers were not netted out.

⁵In this our treatment is parallel to the accounting on the business value added or GDP side, where taxes on production and imports are not netted out but subsidies to producers are.

⁶In previous tax effort studies we added all net gains reported in resident tax returns to PI.

⁷Henry M. Levin, "An Analysis of the Economic Effects of the New York City Sales Tax", in Netzer et al, Financing Government in New York City (New York University Graduate School of Public Administration, 1966), Table B-1, pp. 682-683.

⁸BEA provides all the components of housing GO (II, VA, COMP, TXPISX, GOS, etc.) in its national industry accounts, but housing and its components are not broken out from the larger real estate industry category in state GDP accounts.

⁹The same is true of the fire insurance premium tax levied on alien and foreign insurances, which is accounted as fire department revenue in the CAFR but as exported taxes by our reckoning.