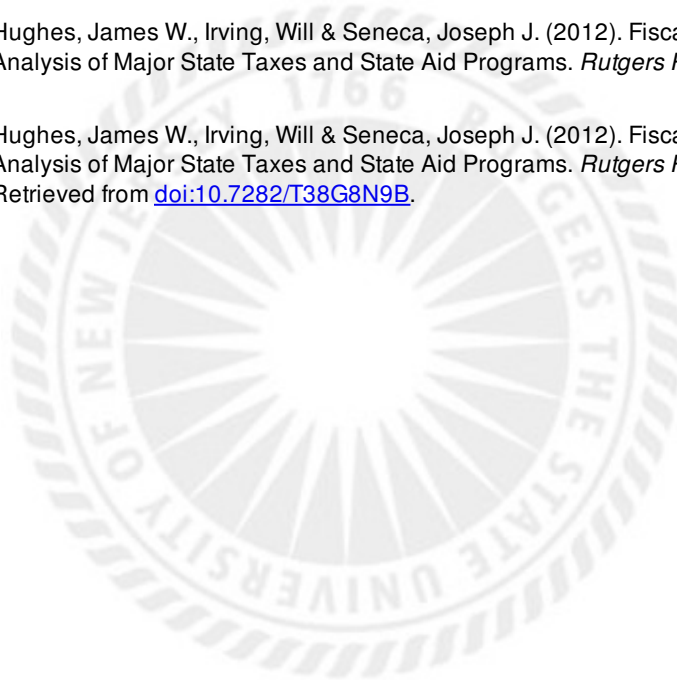


Fiscal Flows in New Jersey: A Spatial Analysis of Major State Taxes and State Aid Programs

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Fiscal Flows in New Jersey

A Spatial Analysis of Major State Taxes and State Aid Programs

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Executive Summary

New Jersey's large number of school districts and municipal and county governments, together with its major, constitutionally based involvement in school aid and its extensive intergovernmental aid programs, result in significant tax revenue flows from the counties and regions to state government and a return flow of aid from the state to the counties and regions.

This report examines the *spatial distribution* of two major taxes (the gross income tax and the state sales tax) and three major state aid programs (school, county, and municipal aid) in fiscal year 2010. That is, where do the revenues come from and where does the aid go by county and region?

- As expected, high-income counties generate gross income tax (GIT) revenues that are disproportionate to their population shares (table 1). This is the result of the progressivity of the gross income tax. Bergen, Hunterdon, Morris and Somerset Counties are noteworthy with respect to this result.
- Sales tax revenues are less related to county income levels than income tax revenues but exhibit a similar pattern (table 1). Again, Bergen, Hunterdon, Morris and Somerset Counties reflect sales tax shares above their population shares, along with Atlantic County (in large part due to significant out-of-county tourism purchases).
- Counties with per capita incomes higher than the state average generate per capita sales tax and per capita income tax revenues higher than state averages (table 2). Bergen County, for example, had an average per capita income (\$65,486 in fiscal year 2010) that was 128.1 percent of the state average and generated an average per capita income tax (\$1,663) that was 141.8 percent of the state average and an average per capita sales tax (\$1,135) that was 126.4 percent of the state average. Table 2 lists these relations for all 21 counties.
- Due to long-standing constitutionally based school aid formulas, school aid varies significantly across counties with respect to enrollment shares (table 3). Atlantic, Camden, Cumberland, Essex, Hudson, Mercer, Passaic, Salem, and Union Counties received larger school aid shares than their respective enrollment shares. They also received larger average aid per pupil than the statewide average.
- Municipal and county aid, each composed of myriad, complex programs, also varies significantly across the counties and regions. Table 4 provides the dollar amount and the share of municipal and county aid for the 21 counties.
- By combining both the sales and income taxes and all three aid programs, a comparison of tax share, aid share, and population share across the counties can be made (table 5). The progressive nature of the GIT and to some extent the sales tax, along with a progressive distribution of school aid, leads to differences across counties and regions.
- Bergen, Hunterdon, Monmouth, Morris, and Somerset Counties all had aid shares less than, and tax shares greater than, their respective population shares. Atlantic, Camden, Cumberland, Essex, Hudson, Passaic, Ocean, Salem, Union and Warren Counties all had aid shares greater than, and tax shares less than, their respective population shares. Table 5 reports these shares for the 21 counties.
- An analysis in the appendix estimates the dollar flows among the counties using the total aid distributed (\$11.3 billion) (appendix table A-1) and a matching amount of tax revenue consisting of legislatively dedicated gross income tax revenues (\$8.9 billion), plus an assumed amount (\$2.4 billion) from the sales tax to balance aid with tax revenues. Bergen, Hunterdon, Middlesex, Monmouth, Morris, Ocean, and Somerset Counties all had significant net dollar outflows, while Atlantic, Camden, Cumberland, Essex, Gloucester, Hudson, Passaic, and Union Counties had significant net dollar inflows.

Introduction

It is well-known and often cited that New Jersey's public sector is both extensive and complex. The state has 603 school districts (590 active, 13 inactive),¹ 566 municipalities, and 21 counties, all of which can raise property taxes.² It also has a legacy of active, engaged, and extensive public expenditure programs that provide myriad and diverse services in addition to its allocation of large amounts of school aid and intergovernmental transfers.

For many decades the state and local government tax structure supporting these programs has been a focus of policy debate, legislation, litigation, and, in the case of school aid, significant judicial intervention and direction. In *Robinson v. Cahill*, the New Jersey Supreme Court determined that the state was not in compliance with its constitution's guarantee of a "thorough and efficient system" of education. After considerable and difficult debate, the Public School Education Act of 1975 was passed (P.L. 1975, c. 212 N.J.S.A. 18A; 76 to 33). Subsequent further legal actions resulted in the enactment of the New Jersey Gross Income Tax (P.L. 1976, c.47, N.J.S.A. 54A:1-1) as a mechanism to fund the provisions of the Public School Education Act.³ The initial tax rates were nearly proportional with respect to income (2 percent on incomes below \$20,000 and 2.5 percent on incomes above).⁴

1. New Jersey Department of Education (<http://www.nj.gov/education/data/fact.htm>).

2. There are over 300 other local and county public agencies that raise revenue through user fees (authorities). In addition, over 180 fire districts raise small amounts of revenues via property taxes. These units are not included in this report.

3. Article I of the Public School Education Act stated that the education system ". . . should be in part locally funded to encourage involvement of and assure the financial supervision by the residents of the local unit, and in part State funded, to equalize Statewide the tax effort required for a thorough and efficient system of free public schools" (P.L. 1975, c. 212, A I, 2.a.7); italics added.

4. Thus, while the initial Gross Income Tax generated more dollars from higher-income households, it did not take that much more as a percentage of income at higher incomes. Over time, however, rates were increased significantly and became much more progressive. Thus, what started as a nearly proportional tax evolved to one that taxed incomes at significantly higher rates the higher the level of income. This generated much more revenue from households in higher-income brackets. These tax proceeds (dedicated by formula

Recent tax policy debate, particularly with respect to the state income tax, has focused on issues of equity and the impact of tax rates on economic growth, job creation, and the competitiveness of the state's business climate. In addition, the state's property taxes, consistently among the highest in the nation, have long generated enormous and often acrimonious attention from policymakers, the political process, and the public.⁵

The purpose of this report is straightforward: to examine the flow of major tax revenues from the counties and regions within New Jersey to the state government, and the return flow of fiscal resources for three major programs from the state government to the counties and regions. The analysis provides an update to a report done by the authors eight years ago.⁶

Two major taxes are analyzed—the *personal income tax* and the *sales tax*.⁷ Together, these two revenue sources generated \$18.2 billion in fiscal year 2010, or 70.2 percent of major state revenue collections reported by the New Jersey Division of Taxation.⁸ On the expenditure side of the budget, the report examines *school*, *county*, and *municipal* aid. These expenditures totaled \$12.1 billion and comprised 40.5 percent of the state budget in

and established in law) were distributed to needier school districts, contributing significantly to the spatial distributional results across New Jersey documented later in this report.

5. According to data from the U.S. Census Bureau's 2010 *American Community Survey*, of the top 10 counties with the nation's highest median real estate taxes, seven are located in New Jersey. New Jersey counties account for 10 of the top 15 counties, and 15 of the top 25. For perspective, there are 3,033 counties, or county equivalents, in the nation.

6. See, *Tri-State Affluence: Losing by Winning* (James W. Hughes and Joseph J. Seneca, *Rutgers Regional Report* No. 22, November 2004), especially, pp. 13-24.

7. The state's Gross Income Tax (GIT) is progressive, with marginal rates starting at 1.4 percent at taxable incomes up to \$20,000 in calendar year 2011, and rising to 8.97 percent for taxable incomes at or above \$500,000 for married taxpayers filing jointly. The definition of income is broad (hence the use of the word "Gross" in the name of the tax), with few exemptions and deductions. All sources of income—wages and salaries, bonuses, dividends, interest, and capital gains—are generally treated as ordinary income. The state sales tax is 7 percent and covers most consumer goods and services, with major exemptions for clothing and for food purchased for home consumption.

8. *2010 Annual Report*, Division of Taxation, New Jersey Department of the Treasury (available at <http://www.nj.gov/treasury/taxation/pdf/annual/2010.pdf>).

fiscal year 2010.⁹ The core of the analysis seeks to determine the spatial distribution of the sources of the tax revenues and of the recipients of the return flow of expenditures.

The report is organized as follows: Section 1 provides data on the geographic sources of income and sales taxes and their relation to county and regional population and income levels. Section 2 analyzes the spatial allocation of state aid for schools, municipalities, and counties. Section 3 examines these fiscal flows of tax revenues and expenditures with respect to population and income shares across the counties and regions. Section 4 provides a brief summary and conclusions. An appendix estimates the dollar flows of aid and tax revenues within the state's regions and counties. Footnotes throughout the report provide detailed explanations of the complexities of the fiscal data.

SECTION 1

Geographic Distribution of Income and Sales Tax Revenues

Figure 1 provides a geographic division of New Jersey's 21 counties into six regions. The authors have previously used these regions to examine the spatial distribution and trends in property values and income within the state.¹⁰ This delineation of the state into six regions attempts to identify areas of common economic, demographic, and land-use conditions. Alternative spatial configurations are possible, but these six regions are a useful framework for examining economic and related trends within the state.

Table 1 provides data for the six regions and the 21 counties on the share of total state population, the share of state income tax paid, total income tax revenues, the share of state sales tax paid, and

9. The \$12.1 billion is the total of the three categories of state aid as reported in the CY 2009/FY 2010 Statements of State Aid available from the Department of Community Affairs, Division of Local Government Services. The 40.5 percent estimate is based on the \$29.84 billion budget recommendation in the FY 2010 Budget in Brief published by the New Jersey Department of Treasury's Office of Management and Budget (see <http://www.nj.gov/treasury/omb/publications/10bib/BIB.pdf>).

10. See, *The Emerging Wealth Belt: New Jersey's New Millennium Geography* (James W. Hughes and Joseph J. Seneca, *Rutgers Regional Report No. 17*, September 1999); see, especially, page 4 for a description of the regions.

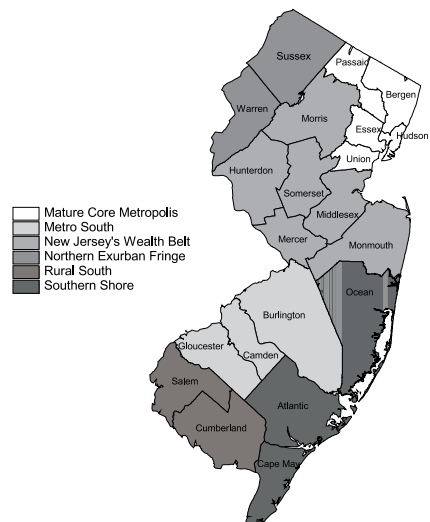


FIGURE 1. New Jersey Regions

total sales tax revenues paid.¹¹ Income and sales tax revenues are for Fiscal Year 2010, as reported by the Division of Taxation in its *2010 Annual Report*. Population data are U.S. Census Bureau estimates for 2010.

The five-county Mature Core Metropolis region has the largest population share (38.2 percent) and within that, Bergen County was the state's most populous county, with 10.3 percent of the state's population, or 906,184 people. New Jersey's Wealth Belt region of six counties had the second largest population share (31.3 percent), and Middlesex County had the largest population share (9.2 percent, or 810,747 people) within this region.

Since the New Jersey income tax is progressive, the high-income counties were responsible for proportionately larger shares of income tax revenues.¹² This is evident from the difference

11. Allocation by county of origin of revenues from other tax sources is not possible, nor appropriate, in most cases. For example, the Corporate Business Tax (CBT) provided approximately 8.2 percent of state tax revenues in fiscal year 2010, but its allocation to county of origin is not meaningful due to the complexity of the business tax code and the fact that significant CBT revenues are collected from firms with multiple locations within New Jersey and from other firms headquartered outside the state but with multiple-site New Jersey operations. Also, the incidence of the CBT is highly complex in terms of who ultimately pays it—owners, suppliers, consumers.

12. A regression of the log of per capita income tax collections on the log of per capita income across the counties yields a strong positive correlation (adjusted R-square of 0.87), and the coefficient of the log of income per capita is 2.32 and highly significant ($t = 11.5$). The size of the coefficient indicates that a 10 percent increase in per capita income results in a 23.2 percent increase in per capita income tax revenues. Thus, New Jersey's GIT is highly income-elastic.

TABLE 1
Income and Sales Tax Revenues by Region and County, FY 2010

County	(1) Population	(2) Population Share (%)	(3) Share of Income Tax (%)	(4) Income Tax Revenue (\$ millions)	(5) Share of Sales Tax (%)	(6) Sales Tax Revenue (\$ millions)
New Jersey Total	8,799,593	100.0	100.0	\$10,192.1	100.0	\$7,898.2
Mature Core Metropolis	3,364,343	38.2	35.9	3,663.0	35.3	2,787.9
Essex	784,099	8.9	9.3	949.7	6.4	502.2
Hudson	634,979	7.2	2.9	291.0	4.7	373.6
Union	537,475	6.1	5.8	593.6	6.0	471.3
Bergen	906,184	10.3	14.8	1,507.3	13.0	1,028.4
Passaic	501,606	5.7	3.2	321.5	5.2	412.5
Northern Exurban Fringe	257,869	2.9	2.7	274.9	2.3	185.2
Sussex	149,198	1.7	1.7	172.8	1.3	100.6
Warren	108,671	1.2	1.0	102.1	1.1	84.6
New Jersey's Wealth Belt	2,753,713	31.3	43.3	4,415.1	37.2	2,936.7
Hunterdon	128,354	1.5	2.9	299.0	2.0	155.9
Mercer	366,933	4.2	5.2	532.8	3.9	309.0
Middlesex	810,747	9.2	6.8	694.3	8.8	697.3
Monmouth	630,920	7.2	9.8	1,000.3	8.6	680.6
Morris	492,681	5.6	10.9	1,115.0	7.3	577.2
Somerset	324,078	3.7	7.6	773.6	6.5	516.7
Metro South	1,251,277	14.2	10.4	1,059.9	12.6	991.8
Camden	513,601	5.8	3.6	368.0	4.4	347.3
Burlington	449,119	5.1	4.7	474.1	5.1	399.3
Gloucester	288,557	3.3	2.1	217.7	3.1	245.2
Southern Shore	949,540	10.8	6.5	664.1	10.9	860.2
Atlantic	274,666	3.1	1.8	180.1	3.6	284.6
Cape May	97,250	1.1	0.7	71.7	1.3	103.5
Ocean	577,624	6.6	4.0	412.2	6.0	472.1
Rural South	222,851	2.5	1.1	115.1	1.7	136.4
Cumberland	156,855	1.8	0.7	72.1	1.3	100.8
Salem	65,996	0.7	0.4	43.1	0.5	35.6

Notes:

a. FY 2010 Gross Income Tax revenues reported in the New Jersey Division of Taxation Annual Report for FY 2010 are allocated by county according to the distribution of GIT revenues by county for CY 2009 reported in the Division of Taxation's Statistics of Income for CY 2009. Total GIT collections for FY 2010 were \$10.32 billion; \$10.19 billion is allocated here. The \$130.8 million excluded from the analysis results from allocation of 1.27 percent of GIT revenue to "unknown" sources in the Statistics of Income for CY 2009.

b. FY 2010 Sales and Use Tax revenues are allocated by county based on 2011 sales tax allocation data provided by the Division of Taxation, New Jersey Department of the Treasury, and county allocation of total sales for the retail sector (NAICS 44-45) in 2007 as reported by the 2007 Economic Census.

Sources: U.S. Census Bureau (population, sales tax distribution); New Jersey Division of Taxation (income and sales tax revenues).

between the Wealth Belt's population share (31.3 percent) and its income tax share (43.3 percent). Five of the six counties within that region had a similar imbalance. Only Middlesex County had a population share (9.2 percent) greater than its income tax share (6.8 percent). The largest relative difference in shares was in Somerset County, which had an income tax share (7.6 percent) more than twice its population share (3.7 percent).

Only two other counties in the state, both in the Mature Core Metropolis region, had imbalances in the same direction. Bergen County, with 10.3 percent of the state's population, was responsible for 14.8 percent of the income tax revenues, and Essex County, with 8.9 percent of the state's population, generated 9.3 percent of the state's income tax revenue.

Thus, seven of the state's 21 counties were responsible for income tax revenue shares greater than their population shares. These seven counties had 41.4 percent of the state's population and paid 60.5 percent of the state's income tax in 2010. In good economic times, income tax revenues rise sharply with income growth (especially from non-wage and salary income typically associated with booming stock market periods). However, when such incomes decline (as happened during the stock market busts of 2001 and 2008-09), GIT revenues decrease significantly.

Table 1 also provides similar data for the generation of sales tax revenues by region and county.¹³ Once again, the Wealth Belt region was responsible for a large share of sales tax revenues (37.2 percent) relative to its population share (31.3 percent). However, the imbalance between tax share

and population share is much less pronounced than it was for the region's income tax share (43.3 percent). Within the region, both Mercer and Middlesex Counties had population shares greater than their sales tax share, contrary to the regionwide relation.

The relationship between income levels and sales tax revenue is much weaker than it is for income tax revenues.¹⁴ Other factors (e.g., the location of major retail concentrations, significant tourist activity, cross-state and cross-county border retail attractions) affect the spatial distribution of sales tax revenue. As a result, three other counties in the state—Bergen County in the Mature Core Metropolis region, and Atlantic County and Cape May County in the Southern Shore region—had sales tax shares greater than their population shares. Thus, seven out of the 21 counties generated sales tax shares greater than their population shares. Those seven counties, with 32.5 percent of the state's population, were responsible for 42.3 percent of the state's sales tax. This is a weaker relation than was the case for the income tax, where seven counties, with 41.4 percent of the state's population, generated a much higher share of the state's income tax revenues (60.5 percent).

Table 2 presents income and sales tax data on a per capita basis by region and county. Calculations of each county's per capita income, per capita income tax paid, and per capita sales tax paid relative to the state average are also given.

As expected, the Wealth Belt region had the highest per capita income (\$58,092) of any of the regions and also paid the highest income tax per capita (\$1,603). That region's income per capita was 13.6 percent higher than the statewide average

13. Sales tax revenues in FY 2010 were \$7.898 billion. The allocation of sales tax revenues by county is considerably less straightforward than it is for income tax revenues (which are identifiable by county of residence of the taxpayer). This is because sales taxes are not necessarily remitted from the location (i.e., county) in which the purchaser resides or in which the transaction for which they are paid occurs. A business entity with multiple locations in the state may remit sales tax from a single corporate headquarters within, or even outside of, the state. Allocation of the \$7.898 billion in sales tax collections for FY 2010 is based on data provided by the New Jersey Division of Taxation, together with county retail industry sales data available from the Economic Census of 2007 of the United States Census Bureau.

14. A regression of the log of per capita sales tax collections on the log of per capita income across the counties yielded a positive relation, but at a much lower level of correlation (adjusted R-square of 0.50) compared with the similar income tax regression (adjusted R-square of 0.87) previously reported for per capita income tax revenues. The coefficient of the log of per capita income was 0.972 and statistically significant at 0.05 ($t = 4.58$). The size of the coefficient indicates that a 10 percent increase in income per capita results in a 9.72 percent increase in sales tax revenues per capita. This indicates that a less-sensitive relation exists between income and sales tax revenues.

TABLE 2
Per Capita Income and Sales Tax Revenues by Region and County, FY 2010

County	(1) Per Capita Income (2010) (\$)	(2) Percentage of State Average Per Capita Income (%)	(3) Per Capita Income Tax (\$)	(4) Percentage of State Average Income Tax (%)	(5) Per Capita Sales Tax (\$)	(6) Percentage of State Average Sales Tax (%)
New Jersey Total	\$51,139	100.0	\$1,173^a	100.0	\$898	100.0
Mature Core Metropolis	52,311	102.3	1,089	92.8	829	92.3
Essex	50,791	99.3	1,211	103.2	640	71.4
Hudson	44,926	87.9	458	39.1	588	65.5
Union	50,448	98.6	1,104	94.1	877	97.7
Bergen	65,486	128.1	1,663	141.8	1,135	126.4
Passaic	42,228	82.6	641	54.6	822	91.6
Northern Exurban Fringe	47,090	92.1	1,066	90.9	718	80.0
Sussex	49,207	96.2	1,158	98.7	674	75.1
Warren	44,183	86.4	940	80.1	778	86.7
New Jersey's Wealth Belt	58,092	113.6	1,603	136.7	1,066	118.8
Hunterdon	67,053	131.1	2,330	198.6	1,215	135.3
Mercer	52,496	102.7	1,452	123.8	842	93.8
Middlesex	48,256	94.4	856	73.0	860	95.8
Monmouth	56,955	111.4	1,585	135.1	1,079	120.2
Morris	69,811	136.5	2,263	192.9	1,171	130.5
Somerset	69,886	136.7	2,387	203.5	1,594	177.6
Metro South	44,078	86.2	847	72.2	793	88.3
Camden	42,720	83.5	717	61.1	676	75.3
Burlington	47,391	92.7	1,056	90.0	889	99.1
Gloucester	41,337	80.8	755	64.3	850	94.7
Southern Shore	40,871	79.9	699	59.6	906	100.9
Atlantic	39,746	77.7	656	55.9	1,036	115.5
Cape May	47,498	92.9	737	62.8	1,064	118.5
Ocean	40,291	78.8	714	60.8	817	91.1
Rural South	35,624	69.7	517	44.0	612	68.2
Cumberland	33,907	66.3	459	39.2	643	71.6
Salem	39,704	77.6	652	55.6	540	60.2

Note:

a. The state per capita income tax is calculated on the base of the \$10.323 billion in total income tax collections reported for FY 2010 in the New Jersey Division of Taxation's 2010 Annual Report. This includes the \$130.8 million in unallocated income tax collections that was excluded from the county distribution of total income tax collections used in table 1.

For the analysis of per capita income tax collections by county relative to the state level, the full FY 2010 collections were used to derive the state per capita estimate of \$1,173, in order to more accurately depict the ratio of county per capita collections to the state average.

Source: U.S. Bureau of Economic Analysis; U.S. Census Bureau; New Jersey Division of Taxation.

(\$51,139). However, due to the progressivity of the GIT, the region's income tax payments per capita were 36.7 percent higher than the statewide average (\$1,173).

Within the region, Hunterdon, Morris, and Somerset Counties all had per capita incomes more than 30 percent higher than the statewide average. Only Middlesex County within the Wealth Belt region had an average income per capita (\$48,256) below the statewide average. Somerset County had the highest per capita income (\$69,886) in the state, closely followed by Morris County (\$69,811). Per capita income tax payments for the Wealth Belt Counties were, again due to the progressivity of the GIT, significantly higher compared with the statewide average than was the region's income per capita. Somerset County's per capita income tax (\$2,387) was 103.5 percent higher than the state average. Hunterdon County's (\$2,330) was 98.6 percent higher than the state average, and Morris County's (\$2,263) was 92.9 percent higher.

Outside of the five Wealth Belt counties, only Bergen County in the Mature Core Metropolis region had an average income per capita (\$65,486) greater than the statewide average. The county next closest to the statewide average was Essex County, also in the same region, with a per capita income of \$50,791 (99.3 percent of the state average). Each of these counties also had per capita income tax payments relatively higher than the statewide average. Bergen County's per capita income tax (\$1,663) was 41.8 percent higher than the statewide average, and Essex's (\$1,211) was 3.2 percent greater.

Symmetrically, all the counties in the Metro South, the Southern Shore, and the Rural South had per capita incomes below the state average and per capita income tax payments proportionally even further below the state average. For example, the Metro South counties of Camden, Burlington, and Gloucester had a per capita income (\$44,078) that was 86.2 percent of the statewide average, but a per capita income tax payment (\$847) that was 72.2 percent of the statewide average. The pattern repeats with an even greater disparity for the Southern Shore

region (Atlantic, Cape May, and Ocean Counties). That region's income per capita (\$40,871) was 79.9 percent of the statewide average while its income tax per capita (\$699) was 59.6 percent of the statewide average.¹⁵

The sales tax data follow a similar pattern although the relation between sales tax paid by county and per capita income is much weaker (see footnotes on regressions of per capita income tax and sales tax revenues on per capita income). In part this is because sales taxes paid in a county are not necessarily paid by county residents.¹⁶ Thus, the analysis here is less precise with respect to the incidence of the sales tax on county residents. With that important caution, table 2 indicates that the Wealth Belt region had the highest per capita sales tax paid (\$1,066), which was 118.8 percent of the state average (\$898). Four counties within the Wealth Belt region—Hunterdon, Monmouth, Morris, and Somerset—all had per capita sales tax payments significantly higher than the state average. Other counties outside of the Wealth Belt with per capita sales tax payments that exceeded the state average were Bergen (126.4 percent), Cape May (118.5 percent), and Atlantic (115.5 percent).

15. A direct comparison between the regions is possible by calculating the ratio of the region's percentage of the state average per capita income tax payment to the region's percentage of the state average per capita income. For example, this ratio is 0.838 for the Metro South (with its per capita income of \$44,078) and 0.746 for the Southern Shore (with its lower per capita income of \$40,871). This indicates that the lower the per capita income, the (disproportionately) lower is the per capita income tax payment. In contrast, the ratio for the Wealth Belt region is 1.203. A proportional income tax would yield the same ratio at all income levels. Thus, the degree of progressivity of a tax can be measured by how this ratio (of relative tax paid to relative income) changes as income changes.

16. This contrasts with the income tax data, where income taxes paid are assigned to the taxpayers' counties of residence. As noted previously, significant purchases by out-of-county and out-of-state residents in any given New Jersey county (e.g., in the shore counties, or in counties with marquee retail opportunities), will mean that a sizeable share of the sales tax attributed to the county is not paid by county residents.

SECTION 2

The Spatial Distribution of School, Municipal, and County Aid

The New Jersey State Budget was \$29.84 billion in fiscal year 2010. Of this total, 40.5 percent, or \$12.1 billion, consisted of school, municipal, and county aid. School aid comprised \$9.3 billion and was the single largest item in the State Budget.¹⁷

The level and allocation of school aid has been a major and frequently controversial public policy issue over many decades in New Jersey. A consistent goal of state education policy, often expressed in decisions by the New Jersey State Supreme Court and then subsequently embodied in state school aid budgets, has been to bring parity in educational opportunity across the state regardless of residence. Extensive litigation, periodic judicial interpretations of the state constitution, and, in response, changing school aid formulas, have led to a complex and still evolving system of financing for public education. For many years, significant amounts of school aid were allocated to a relatively small number of large urban school districts identified as Abbott Districts following rulings by the New Jersey Supreme Court. This distribution and its legacy significantly affect the spatial distribution of school aid across the state.

Distribution of School Aid

Table 3 provides data on the regional and county distribution of total state school aid, the share of this aid, total student enrollment, the share of enrollment, state school aid per pupil, and aid per pupil as a

percentage of the state average.¹⁸ Total school aid of \$9.3 billion in fiscal year 2010 was allocated to 603 school districts.¹⁹

Given the analysis in Section 1, the broad pattern revealed by table 3 indicates that the relatively lower-income counties and regions receive disproportionately (with respect to their enrollments) higher amounts of school aid. Symmetrically, the higher-income counties and regions had disproportionately less school aid relative to their enrollments as a result of the Public School Education Act, as noted earlier.

The Mature Core Metropolis region, consisting of five counties, had 36.7 percent of the state's enrollment and received 46.1 percent of the state school aid. There was wide variation within the region, as four of the five counties followed the prevailing regional pattern of receiving shares of school aid larger than their shares of enrollment. Bergen County, however, with 9.9 percent of student enrollment, received only 3.3 percent of state school aid.

The Wealth Belt region of six counties had 32.4 percent of student enrollment but received 21.1 percent of state school aid. Five of the six counties followed this pattern, with especially large differentials in shares for Somerset County (4 percent of enrollment and 1.7 percent of state school aid) and for Morris County (5.9 percent of enrollment and 2.4 percent of state school aid). Only Mercer County within this region had an opposite relation (4.2 percent of enrollment and 4.6 percent of state school aid).

17. Total School Aid in the FY 2010 Appropriations Act was \$11.13 billion, including \$1.1 billion in federal stimulus funding. This total was distributed across Direct School Aid, Direct State Payments for Education (comprising Teachers' Pension and Annuity Fund contributions, Post-Retirement Medical contributions, Debt Service on Pension Bond Obligations, and Teachers' Social Security contributions), and School Building Aid. The \$9.3 billion accounted for here represents the distributions reported in the Statements of State Aid for CY 2009/FY 2010 available from the Division of Local Government Services, New Jersey Department of Community Affairs. These allocations are for Direct School Aid, the Teachers Social Security component of Direct State Payments for Education, and Debt Service Aid provided as part of School Building Aid.

18. The analysis in table 3 is presented at the county level. School aid is distributed to school districts and depends on multiple factors specific to each district and its students. These factors vary significantly within counties and, as a result, there is significant variation in school aid across districts within the same county. Thus, the regional and county school aid data presented here (both total and per pupil) represent only broad spatial patterns.

19. This is the total of the amounts reported by municipality in the Statements of State Aid provided on the website of the New Jersey Department of Community Affairs, Division of Local Government Services.

TABLE 3
School Aid by County and Region:
Calendar Year 2009 / State Fiscal Year 2010

County	(1) School Aid (\$ millions)	(2) Percentage of Total Aid (%)	(3) Enrollment (# of Pupils)	(4) Percentage of Total Enrollment (%)	(5) Aid per Pupil (\$)	(6) Percentage of State Average (%)
New Jersey Total	\$9,299.8	100.0	1,362,019	100.0	\$6,828	100.0
Mature Core Metropolis	4,286.0	46.1	499,361	36.7	8,583	125.7
Essex	1,452.5	15.6	119,443	8.8	12,160	178.1
Hudson	1,014.8	10.9	77,386	5.7	13,114	192.1
Union	692.3	7.4	87,318	6.4	7,929	116.1
Bergen	310.4	3.3	135,116	9.9	2,297	33.6
Passaic	816.0	8.8	80,099	5.9	10,187	149.2
Northern Exurban Fringe	258.1	2.8	43,321	3.2	5,958	87.3
Sussex	133.6	1.4	25,049	1.8	5,332	78.1
Warren	124.5	1.3	18,272	1.3	6,815	99.8
New Jersey's Wealth Belt	1,959.0	21.1	441,541	32.4	4,437	65.0
Hunterdon	66.8	0.7	22,740	1.7	2,936	43.0
Mercer	431.9	4.6	57,781	4.2	7,476	109.5
Middlesex	554.8	6.0	120,335	8.8	4,611	67.5
Monmouth	518.1	5.6	105,553	7.7	4,909	71.9
Morris	225.4	2.4	80,127	5.9	2,813	41.2
Somerset	161.9	1.7	55,007	4.0	2,943	43.1
Metro South	1,577.5	17.0	204,376	15.0	7,719	113.0
Camden	790.5	8.5	81,400	6.0	9,711	142.2
Burlington	467.5	5.0	73,246	5.4	6,383	93.5
Gloucester	319.5	3.4	49,731	3.7	6,425	94.1
Southern Shore	731.1	7.9	134,806	9.9	5,423	79.4
Atlantic	343.3	3.7	45,439	3.3	7,554	110.6
Cape May	78.8	0.8	13,608	1.0	5,792	84.8
Ocean	309.0	3.3	75,759	5.6	4,079	59.7
Rural South	488.1	5.2	38,615	2.8	12,639	185.1
Cumberland	393.3	4.2	26,792	2.0	14,681	215.0
Salem	94.7	1.0	11,823	0.9	8,011	117.3

Sources:

Aid Totals: New Jersey Department of Community Affairs, Division of Local Government Services, CY 2009/FY 2010 Statements of State Aid.

Enrollment: New Jersey Department of Education, Annual State Aid Summaries.

Of the remaining 10 counties in the four other regions, four counties had aid shares that exceeded their enrollment shares, and six received aid shares that were less than their enrollment shares (Warren County's aid share was slightly less than its enrollment share, though both are shown as 1.3 percent in table 3 due to rounding).²⁰

There is significant variation in state school aid per pupil across the counties and regions. Columns 5 and 6 of table 3 give the amount of aid per pupil and as a percentage of the state average aid per pupil (\$6,828).

Cumberland County, in the Rural South region, had the highest state aid per pupil, \$14,681, or 215 percent of the statewide average.²¹ Hudson County was second with \$13,114 per pupil, or 192.1 percent of the state average, and Essex County was third at \$12,160 per pupil, or 178.1 percent of the state average. Bergen County received the lowest aid per pupil, \$2,297, or only 33.6 percent of the state average. All the Wealth Belt counties, with the exception of Mercer County, had per pupil aid significantly below the state average. Morris County had \$2,813 in per pupil aid (41.2 percent of the state average), Hunterdon County received \$2,936 per pupil (43 percent of the state average), and Somerset County had \$2,943 in per pupil aid (43.1 percent of the state average).

Distribution of Municipal and County Aid

In Fiscal Year 2010, New Jersey also distributed \$1.78 billion in municipal aid and nearly another billion dollars in county aid.²² Together, municipal and county aid totaled \$2.78 billion, or 9.3 percent

of the state budget in fiscal year 2010. This aid is allocated according to a variety of criteria (e.g., population, income) and funding mechanisms (e.g., block grants) specified in individual programs and legislation.²³ Table 4 provides the distribution of municipal and county aid by region and county. The five counties of the Mature Core Metropolis region, with 38.2 percent of the state's population in 2010 (see table 1), received 45.1 percent of the municipal aid and 50 percent of the county aid. Within the region, four of the five counties—Essex, Hudson, Union and Passaic—all received larger shares of municipal and county aid than their respective population shares. However, the reverse relation held for Bergen County, which had 10.3 percent of the state's population, but received 6.8 percent of the municipal aid and 9.6 percent of the county aid.

The Wealth Belt region, consisting of six counties with 31.3 percent of the state's population, received 27 percent of the municipal aid and 19.5 percent of the county aid. Within the region, only Mercer County received a higher share of municipal aid than its population share. In terms of county aid, all six counties individually received a lower share of aid than their population shares.

The three-county Metro South region had 14.2 percent of the population and received 16.2 percent of the municipal aid and 17.9 percent of the county aid. However, this relation was entirely due to Camden County. Burlington and Gloucester Counties both received smaller shares of municipal and county aid than their population shares.

The Southern Shore region, consisting of three counties, had 10.8 percent of the state's population and received 6.8 percent of the municipal aid and 6.9 percent of the county aid. However, Cape May County within the region had a contrary pattern, receiving municipal and county aid shares that exceeded its population share.

20. A regression of the log of per pupil school aid on the log of per capita income for each county yielded a statistically significant coefficient of -1.963 ($t = -5.05$; adjusted R-square = 0.55). This indicates that a 10 percent higher per capita county income is associated with 19.6 percent less in county school aid.

21. Cumberland County's three cities—Bridgeton, Millville, and Vineland—qualified for higher aid based on need. These three cities had approximately 73 percent of the county's population in 2010.

22. This is the sum for the fiscal year and incorporates the fact that most municipalities and all counties budget on a calendar-year basis.

23. Regression analysis revealed no statistically significant correlation of municipal aid per capita with per capita county income, and only a weak negative relation of county per capita aid with per capita county income ($t = -1.8$ and adjusted R-square of 0.10).

TABLE 4
Municipal and County Aid by County and Region:
Calendar Year 2009 / State Fiscal Year 2010

County	CY 2009/SFY 2010		CY 2009/SFY 2010	
	(1) Municipal Aid (\$ millions)	(2) Share of Municipal Aid (%)	(3) County Aid (\$ millions)	(4) Share of County Aid (%)
New Jersey Total	\$1,780.7	100.0	\$999.4	100.0
Mature Core Metropolis	802.9	45.1	500.0	50.0
Essex	237.6	13.3	169.4	17.0
Hudson	196.0	11.0	99.4	9.9
Union	123.7	6.9	64.0	6.4
Bergen	121.9	6.8	95.9	9.6
Passaic	123.7	6.9	71.2	7.1
Northern Exurban Fringe	34.4	1.9	24.1	2.4
Sussex	17.6	1.0	11.8	1.2
Warren	16.9	0.9	12.3	1.2
New Jersey's Wealth Belt	480.6	27.0	195.0	19.5
Hunterdon	20.1	1.1	9.1	0.9
Mercer	113.7	6.4	36.8	3.7
Middlesex	123.9	7.0	44.0	4.4
Monmouth	113.5	6.4	50.3	5.0
Morris	66.3	3.7	33.0	3.3
Somerset	43.2	2.4	21.8	2.2
Metro South	288.7	16.2	179.0	17.9
Camden	189.9	10.7	107.5	10.8
Burlington	64.5	3.6	45.7	4.6
Gloucester	34.3	1.9	25.8	2.6
Southern Shore	121.5	6.8	68.6	6.9
Atlantic	40.6	2.3	28.2	2.8
Cape May	22.9	1.3	13.0	1.3
Ocean	57.9	3.3	27.4	2.7
Rural South	52.6	3.0	32.7	3.3
Cumberland	28.3	1.6	20.4	2.0
Salem	24.3	1.4	12.3	1.2

Source: New Jersey Department of Community Affairs, Division of Local Government Services, CY 2009/FY 2010 Statements of State Aid.

SECTION 3

Fiscal Flows

State Taxes, State Aid, and Population Shares

Table 5 summarizes the shares of tax revenues coming from, and the state aid going to, the counties and regions. Again, it is important to note that not all state taxes and all state expenditures have been analyzed as to their spatial dimensions. The two taxes—income and sales—generated 70.2 percent of state tax revenues in fiscal year 2010, and the three aid programs—school, municipal, and county—represented 40.5 percent of state expenditures. Thus, the spatial analysis of this report is confined to only parts, though significant parts, of the overall state budget.²⁴

Table 5 provides the population share, the combined income plus sales tax share, and the state aid share of the counties and regions. Since the state income tax is highly progressive and since consumer expenditures (and hence sales tax revenues) are also related to income levels, the higher-income counties, as expected, generate shares of income and sales tax revenues that are disproportionate to their population shares. These results are consistent with the findings of the previous analysis done in 2004.

Five of the six Wealth Belt counties had income and sales tax revenue shares greater than their population shares. The disparity was particularly pronounced for Somerset County (7.1 percent versus 3.7 percent) and for Morris County (9.4 percent versus 5.6 percent). Only Middlesex County had a contrary relation (a 7.7 percent income and sales tax share versus a 9.2 percent population share). For the entire Wealth Belt, the six counties generated 40.6 percent of the income and sales tax revenues and had 31.3 percent of the state's population. None of the other regions had a tax share in excess of its population share.

The Mature Core Metropolis region accounted for 35.7 percent of the tax revenues, with 38.2 percent of the state's population. That relation held for four of the five counties within the region. However, Bergen County was different. As a high-income county, it generated 14 percent of the income and sales taxes with 10.3 percent of the state's population.

The Metro South region provided 11.3 percent of the income and sales tax revenues and had 14.2 percent of the state's population. All three counties in the region exhibited this same pattern. The Southern Shore region similarly was responsible for 8.4 percent of income and sales tax revenues with 10.8 percent of the state's population. Its three counties all had an imbalance in the same direction.

School aid is the largest component (77 percent) of the state aid analyzed. Since school aid is inversely related to income, the distribution of total aid from all three programs followed a similar spatial relation: Higher-income regions and counties received lower shares of aid relative to their population shares.

The Wealth Belt region received 21.8 percent of the state aid (for the three programs analyzed) and had 31.3 percent of the state's population. Only Mercer County within the region had an opposite result. It received 4.8 percent of the aid with 4.2 percent of the state's population. The Mature Core Metropolis region received 46.3 percent of the state aid and had 38.2 percent of the state's population. Bergen County was a significant (and only) exception to that pattern within the region. It received 4.4 percent of the state aid and had 10.3 percent of the state's population. The Metro South region received 16.9 percent of the state aid with 14.2 percent of the state's population. However, Camden County (with 9 percent of the state aid and 5.8 percent of the state population) was responsible for this relation since both Burlington County and Gloucester County had aid shares less than their population shares. The Southern Shore region had the opposite pattern, with 7.6 percent of the state aid and 10.8 percent of the state's population.

The analysis in the appendix examines the spatial distribution of aid and expenditures in terms of *dollars*, rather than in terms of shares of population.

24. As previously noted, other state revenue sources either do not lend themselves to a spatial analysis, or a spatial analysis is not appropriate.

TABLE 5
State Aid versus Income and Sales Tax
by County and Region, FY 2010

County	(1) Population Share (%)	(2) Share of State Income and Sales Taxes (%)	(3) Share of Total State Aid (%)
New Jersey Total	100.0	100.0	100.0
Mature Core Metropolis	38.2	35.7	46.3
Essex	8.9	8.0	15.4
Hudson	7.2	3.7	10.8
Union	6.1	5.9	7.3
Bergen	10.3	14.0	4.4
Passaic	5.7	4.1	8.4
Northern Exurban Fringe	2.9	2.5	2.6
Sussex	1.7	1.5	1.3
Warren	1.2	1.0	1.3
New Jersey's Wealth Belt	31.3	40.6	21.8
Hunterdon	1.5	2.5	0.8
Mercer	4.2	4.7	4.8
Middlesex	9.2	7.7	6.0
Monmouth	7.2	9.3	5.6
Morris	5.6	9.4	2.7
Somerset	3.7	7.1	1.9
Metro South	14.2	11.3	16.9
Camden	5.8	4.0	9.0
Burlington	5.1	4.8	4.8
Gloucester	3.3	2.6	3.1
Southern Shore	10.8	8.4	7.6
Atlantic	3.1	2.6	3.4
Cape May	1.1	1.0	1.0
Ocean	6.6	4.9	3.3
Rural South	2.5	1.4	4.7
Cumberland	1.8	1.0	3.7
Salem	0.7	0.4	1.1
<p><i>Source:</i> Authors' calculations based on data from U.S. Bureau of Economic Analysis; U.S. Census Bureau; New Jersey Department of Community Affairs, Division of Local Government Services, CY 2009/FY 2010 Statements of State Aid; and New Jersey Division of Taxation.</p>			

SECTION 4

Summary and Conclusions

Historical fiscal practices of New Jersey have involved the redistribution of large amounts of state expenditures and state tax revenues among taxpayers and across the geography of the state. These practices are grounded in constitutional mandates and subsequent legislative responses for school funding aimed at achieving equality of resources and opportunity across schools. They are also the result of legislative directives for assistance to local and county governments and a progressive income tax structure whose revenues are dedicated to property tax relief (largely school aid). The decisions behind these expenditure and tax structures are the responsibility of the governor and legislature over time, with ultimate accountability to the electorate. Those decisions are, to a large extent, made individually on the merits of the programs and in the prevailing political context at the time, as assessed and acted upon by elected officials. The aggregate fiscal effects of those decisions are embodied in the size and content of the state budget. One important fiscal aspect of the state budget (and only one of many) is the subject of this report: Where does the money come from, and where does it go?

The purpose of this report has been to examine the spatial incidence of two key state taxes and three significant state aid programs. The relation of the taxes and the aid expenditures to county population shares and income levels is estimated. The general finding, as expected, is that both the taxes and the aid are progressively distributed with respect to income. An accompanying result is that there is a significant redistribution of resources for the two taxes and three aid programs examined here from the relatively high-income areas of the state to those with relatively moderate and low income. As a result, the profile of tax shares, aid shares, and population shares varies significantly across the regions and counties.

Appendix

This appendix examines the fiscal flows among the regions and counties in terms of the dollar amounts of aid received, taxes generated, and the net difference by region and county. Appendix table A-1 provides an analysis. However, it is most important to stress again that this analysis applies to only part of all state tax revenues generated and part of all state expenditures. Thus, large amounts of the budget, for both revenues and expenditures, are not included.²⁵ *It is an analysis of the spatial incidence of two major taxes and three major state aid expenditure programs. Therefore, the analysis below is not a definitive, all-inclusive study of the spatial incidence of the entire state budget.* With that vital caveat, the logic of the analysis follows.

The total of school, municipal, and county aid considered in this report is \$12,079,000 in FY 2010. Of this, municipal aid is \$1.78 billion, and of that total approximately 41.3 percent (\$0.735 billion) is funded by a legislatively dedicated source of revenue, the Energy Tax Receipts Fund. This leaves \$1.045 billion in municipal aid to be funded by other general revenue sources (i.e., the income and sales taxes).²⁶ Thus, the total aid analyzed is \$11.3 billion. Appendix table A-1, column 2, provides the spatial distribution of this aid by county and region.²⁷

25. Many tax revenue sources cannot be accurately identified by county or region, and many state expenditure programs do not have identifiable county or region recipients. For other taxes and expenditures (e.g., human services, transportation, and corrections, among others) county and region recipients can be identified in principle, but there are no readily available comprehensive public data sources for this information.

26. See note “a” to appendix table A-1 for further detail.

27. This allocation is obtained by summing the dollar amount of school, county, and municipal aid by county and region given in tables 3 and 4, with the municipal total adjusted downward as described.

Next, it is appropriate to consider the spatial distribution of the resources used to fund this amount of aid. By law, the proceeds of the Gross Income Tax (GIT) are dedicated to property tax relief.²⁸ This analysis examines aid allocated to school, municipal, and county governments. However, additional significant direct property tax relief is provided by payments or property tax credits to individual residential property owners who live in the residence (referred to as “homestead” in the law) and tenants.

In Fiscal Year 2010, funding for direct property tax relief programs totaled \$1.4 billion dollars.²⁹ The analysis here does not include direct property tax relief programs because information on its allocation by county or municipality is not publicly available. Also, the total amount of direct property tax relief is highly variable from year to year and sensitive to the prevailing condition of the state budget. For example, according to the New Jersey Treasury’s FY 2011 Budget in Brief, in fiscal year 2009, expenditures for direct property tax relief totaled \$1.928 billion. This relief declined to \$1.399 billion (-27.4 percent) in the adjusted appropriation for fiscal year 2010, and fell further to \$516.9 million (-63.1 percent) in the recommended appropriation for fiscal year 2011.

The spatial distribution of direct property tax relief is generally expected to be related to income levels (i.e., lower-income homeowners receive proportionately higher direct relief), but the criteria

28. Section 54A:9-25 of Title 54A, New Jersey Gross Income Tax Act, indicates, “Taxes collected under the provisions of this act shall be deposited by the State Treasurer in a special account to be known as the Property Tax Relief Fund. Moneys in the Property Tax Relief Fund shall be annually appropriated, pursuant to formulas established from time to time by the Legislature, to the several counties, municipalities and school districts of this State exclusively for the purpose of providing property tax relief and for the purpose of reducing or offsetting property taxes. . . .”

29. This was the adjusted appropriation for FY 2010 as reported in the New Jersey Treasury’s FY 2011 Budget in Brief. Direct property tax relief programs include Homestead Credits/Rebates for Homeowners, Homestead Rebates for Tenants, Senior and Disabled Citizens Property Tax Freeze, Property Tax Deduction Act payments, and two municipal reimbursement programs for Veterans and Senior and Disabled Citizens tax deductions.

APPENDIX TABLE A-1
Net Flow by County, FY 2010

County	(1) Total Revenue (\$ millions)	(2) Total Aid (\$ millions)	(3) Net Flow (\$ millions)	(4) Net Ratio
New Jersey Total	\$11,344.6	\$11,344.6	\$ 0.0	1.00
Mature Core Metropolis	4,061.7	5,257.4	1,195.7	1.29
Essex	985.4	1,761.4	776.0	1.79
Hudson	369.3	1,229.4	860.1	3.33
Union	664.2	828.9	164.7	1.25
Bergen	1,634.9	477.9	-1,157.1	0.29
Passaic	407.9	959.8	551.9	2.35
Northern Exurban Fringe	297.5	302.4	4.9	1.02
Sussex	182.1	155.7	-26.4	0.85
Warren	115.3	146.7	31.4	1.27
New Jersey's Wealth Belt	4,765.7	2,436.2	-2,329.6	0.51
Hunterdon	309.6	87.7	-221.9	0.28
Mercer	561.2	535.6	-25.7	0.95
Middlesex	821.6	671.5	-150.1	0.82
Monmouth	1,084.4	635.0	-449.3	0.59
Morris	1,153.2	297.3	-855.8	0.26
Somerset	835.8	209.0	-626.7	0.25
Metro South	1,232.0	1,926.0	694.0	1.56
Camden	428.7	1,009.4	580.7	2.35
Burlington	537.5	551.2	13.6	1.03
Gloucester	265.8	365.5	99.7	1.37
Southern Shore	845.1	871.0	26.0	1.03
Atlantic	245.0	395.3	150.3	1.61
Cape May	94.5	105.3	10.8	1.11
Ocean	505.6	370.4	-135.2	0.73
Rural South	142.6	551.6	409.0	3.87
Cumberland	94.0	430.3	336.3	4.58
Salem	48.6	121.3	72.7	2.49
<i>Notes:</i>				
<p>a. Based on the adjusted appropriations reported for FY 2010 in the New Jersey Treasury's FY 2011 Budget in Brief (BIB), Consolidated Municipal Property Tax Relief Aid (CMPTRA) and Energy Tax Receipts allocated to Municipal Aid accounted for 82 percent of all Municipal Aid. Based on Estimated FY 2010 revenues reported in the FY 2011 BIB, Energy Tax Receipts accounted for approximately 50.4 percent of the combined CMPTRA/Energy Tax Receipts portion of Municipal Aid, or 41.3 percent of all Municipal Aid. In order to estimate the net flow of GIT and sales tax revenues versus state (municipal, school, and county) aid for each county, this analysis subtracts that portion of Municipal Aid that is covered by Energy Tax Receipts and redistributes the remaining \$1.045 billion in Municipal Aid across the counties according to the same proportion as the original allocation of the \$1.8 billion shown in table 4. Because the CMPTRA/Energy Tax Receipts portion accounts for 82 percent of Municipal Aid, but the reallocation is done uniformly for all Municipal Aid, the redistribution of aid may slightly misrepresent the actual allocation of the 18 percent of total Municipal Aid not included in CMPTRA/Energy Tax Receipts. However, the authors believe that this will not have significant impact on the balances shown in appendix table A-1.</p>				
<p>b. In table 1 and the accompanying text, \$130.8 million of GIT revenues was excluded from the analysis, as the most recent available distribution of GIT revenues available from the New Jersey Division of Taxation leaves 1.27 percent of revenues unallocated to specific counties. In order to accurately represent the amount of state aid balanced by GIT revenues from each county in the net flow analysis, the \$130.8 million previously excluded from the analysis was included in the initial GIT total for appendix table A-1. Then, \$1.4 billion was subtracted from that amount to account for Direct Property Tax Relief provided for by the Property Tax Relief Fund. This amount was not allocable by county.</p>				
<p>Sources: Authors' calculations based on data from New Jersey Department of Community Affairs, Division of Local Government Services, CY 2009/FY 2010 Statements of State Aid; New Jersey Department of the Treasury, FY 2011 Budget in Brief; and New Jersey Division of Taxation.</p>				

of eligibility across the various component programs of direct property tax relief have changed frequently in the recent past due to budget conditions and changes in the programs themselves. Thus, a single year's analysis of the spatial distribution of direct property tax relief would not necessarily generalize to other years with markedly different eligibility criteria, programs, and available fiscal resources. However, the lack of inclusion in this analysis of direct property tax relief could affect the conclusions and is another caveat to the results presented in this appendix.

In Fiscal Year 2010 the GIT generated \$10.3 billion.³⁰ As noted above, \$1.4 billion of the Property Tax Relief Fund was allocated to direct property tax relief programs, but since it is not possible to allocate this amount by county, the \$1.4 billion has been subtracted from the \$10.3 billion in GIT revenues. This leaves \$8.9 billion in GIT revenues allocable to state aid, totaling \$11.3 billion. Because GIT revenues in FY 2010 are thus insufficient (by \$2.4 billion) to fully fund the aid total (\$11.3 billion), this analysis assumes that the differential was funded by sales tax revenues from the General Fund.³¹ The

county share of sales tax revenues generated (table 1, column 5) is applied to the \$2.4 billion in order to allocate that amount by county and region. This is added to the county distribution of income tax revenues to obtain the distribution of the entire \$11.3 billion by county and region (appendix table A-1, column 1). The difference between tax revenues and state aid by county and region is given in column 3 of appendix table A-1.

As expected, there is a net negative balance for the high-income regions and counties. The Wealth Belt region had a balance of -\$2.3 billion, with all six counties having negative balances, led by Morris County's -\$855.8 million and Somerset County's -\$626.7 million. The Mature Core Metropolis had a positive balance of \$1.2 billion, but it was the result of divergent results among its five counties. Four of the counties had positive balances, led by Hudson County (\$860.1 million) and Essex County (\$776 million). However, Bergen County, as the most populous county in the state and one with relatively high income, had a large negative balance (-\$1.1 billion), the highest balance (positive or negative) among all of the state's 21 counties. The Metro South region had a positive balance of \$694 million, dominated by Camden County's positive balance of \$580.7 million. The Southern Shore region's positive balance of \$26 million consisted of positive balances for Atlantic County (\$150.3 million) and Cape May County (\$10.8 million), partially offset by a negative balance of \$135.2 million for Ocean County. The Rural South region had a positive balance of \$409 million, led by Cumberland County's balance of \$336.3 million.

30. This consists of \$10.192 billion in receipts which the New Jersey Division of Taxation has allocated by county and whose spatial distribution appears in table 1, column 4, plus an additional \$130.8 million (or 1.27 percent of the total GIT revenues) that the Division of Taxation was not able to allocate by county. Thus, this \$130.8 million was not included in table 1.

31. The Property Tax Relief Fund is funded almost entirely by state gross income tax and one-half of 1 percent of the 7 percent state sales tax rate. Sales tax is used as the secondary revenue source as it is the next largest source of state revenue after the gross income tax.

Finally, the net ratio of aid received to tax revenues generated appears in column 4 of appendix table A-1. The value of this ratio—i.e., whether it is above or below 1.0, indicates, respectively, if the county or region receives a return of more, or less, than a dollar in state aid for each dollar in state taxes that it generates. The only region that receives less than a dollar for each dollar of taxes generated is, as expected, the Wealth Belt (0.51). All six counties in that region had ratios below 1.0, led by Morris and Somerset Counties at 0.26 and 0.25, respectively, and Hunterdon County at 0.28. Morris and Somerset Counties had the lowest ratios in the state. Middlesex County (0.82) and Mercer County (0.95) within the Wealth Belt region came close to having an even balance of aid received per tax dollar generated.

The Rural South region had the highest ratio of the six regions (3.87), led by Cumberland County (4.58), the largest ratio of any county in the state. The Metro South region had a positive balance (1.56) led by Camden County (2.35). The Mature Core Metropolis region had a positive balance (1.29), but it also had the largest variation within the six regions. Its overall positive balance was the result of sizeable positive balances for four counties (Essex, 1.79; Hudson, 3.33; Union, 1.25; Passaic, 2.35) and a low ratio for Bergen County (0.29). ■

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