



District of Columbia

DC ORA's Annual "Tax Rate and Tax Burdens" Study

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DC Office of the Chief Financial Officer

Presentation for Federation of Tax Administrators

September 30, 2015



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Overview and Context

What is it? A two-part study:

- Comparison of tax burdens in largest city in each state and DC;
- Comparison of select tax rates, 50 states and DC.

Why do we do it, and when?

- Congressional requirement - [Public Law 93-407](#) (9/3/1974)
- Annually

Who is the audience?

- Congress; DC City Council; media; researchers; states; and cities

How do we produce it?

- Data collection:
 - Survey to states w/ follow up calls & emails;
 - Online research of state web sites;
 - Third-party sources (FTA, CCH, Tax Foundation, etc.)
- In-house calculations
 - Various data sources and methodologies for each type of tax



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Sample Presentation of Results

ESTIMATED BURDEN OF MAJOR TAXES FOR A HYPOTHETICAL FAMILY OF THREE, 2013
\$25,000

RANK	CITY	ST	TAXES				BURDEN	
			INCOME 2/	PROPERTY 3/	SALES 4/	AUTO	AMOUNT	PERCENT
1	Philadelphia	PA	\$1,545	\$1,891	\$543	\$231	\$4,210	16.8%
2	Honolulu	HI	283	3,062	511	254	4,111	16.4%
3	Los Angeles	CA	0	2,371	717	815	3,904	15.6%
4	Chicago	IL	900	1,843	565	369	3,677	14.7%
5	Boston	MA	237	2,700	469	176	3,582	14.3%

\$50,000

RANK	CITY	ST	TAXES				BURDEN	
			INCOME 2/	PROPERTY	SALES 3/	AUTO	AMOUNT	PERCENT
1	Philadelphia	PA	\$3,428	\$6,038	\$718	\$248	\$10,433	20.9%
2	Newark	NJ	553	7,814	719	145	9,231	18.5%
3	Bridgeport	CT	517	7,507	639	439	9,103	18.2%
4	Milwaukee	WI	1,129	5,317	615	303	7,364	14.7%
5	Detroit	MI	1,980	3,939	500	190	6,609	13.2%

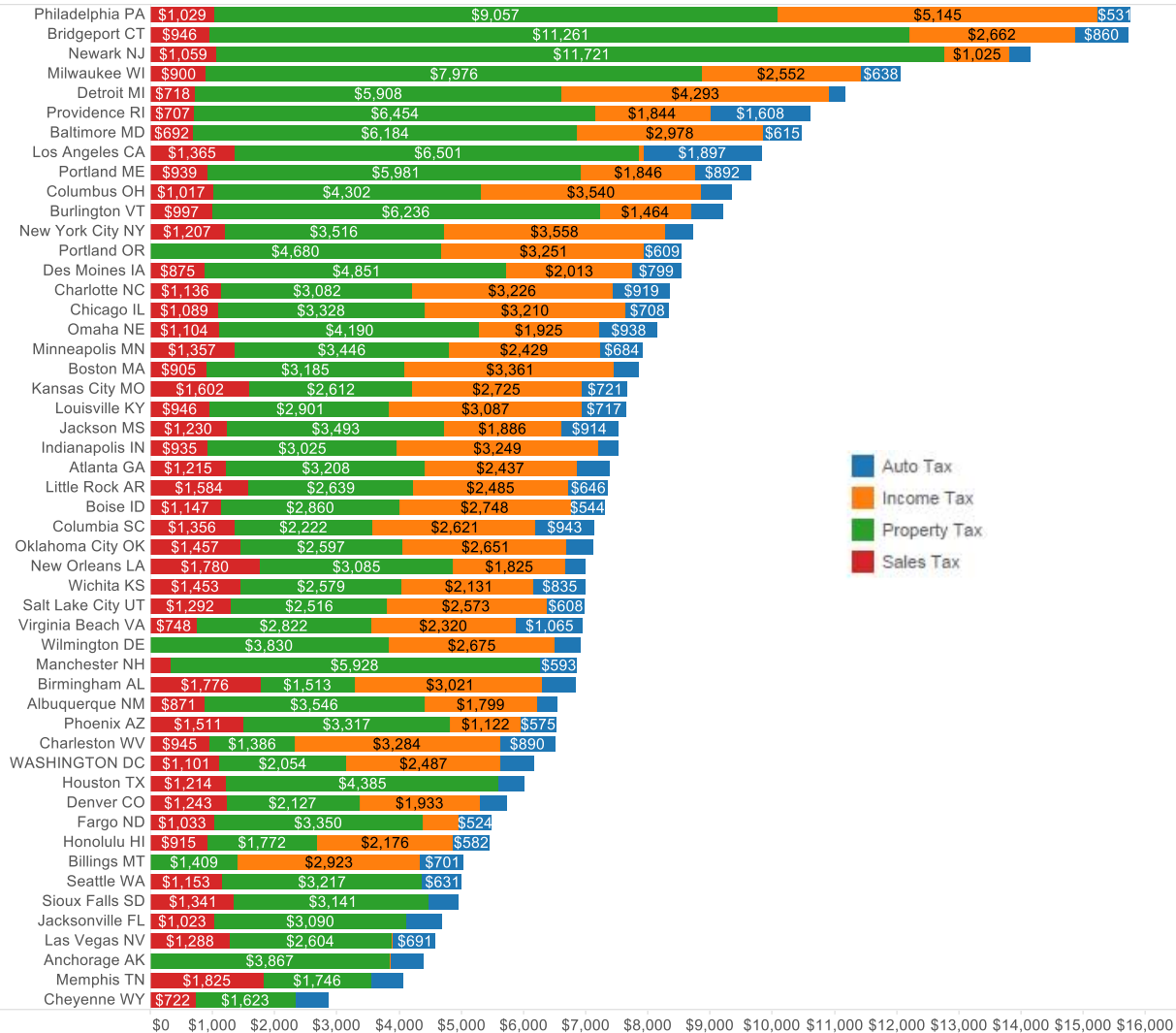
\$75,000

RANK	CITY	ST	TAXES				BURDEN	
			INCOME 2/	PROPERTY	SALES 3/	AUTO	AMOUNT	PERCENT
1	Philadelphia	PA	\$5,145	\$9,057	\$1,029	\$531	\$15,762	21.0%
2	Bridgeport	CT	2,662	11,261	946	860	15,728	21.0%
3	Newark	NJ	1,025	11,721	1,059	344	14,149	18.9%
4	Milwaukee	WI	2,552	7,976	900	638	12,066	16.1%
5	Detroit	MI	4,293	5,908	718	244	11,163	14.9%



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New Presentation of Results All Tax Burdens, 2013, \$75,000





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Property Tax Calculation

- Compile data on general property tax structure in each location:
 - Nominal property tax rates;
 - Assessment levels;
 - Homestead exemptions available to all homeowners (note: not included in chart below)

**RESIDENTIAL PROPERTY TAX RATES IN THE LARGEST CITY IN EACH STATE
2013**

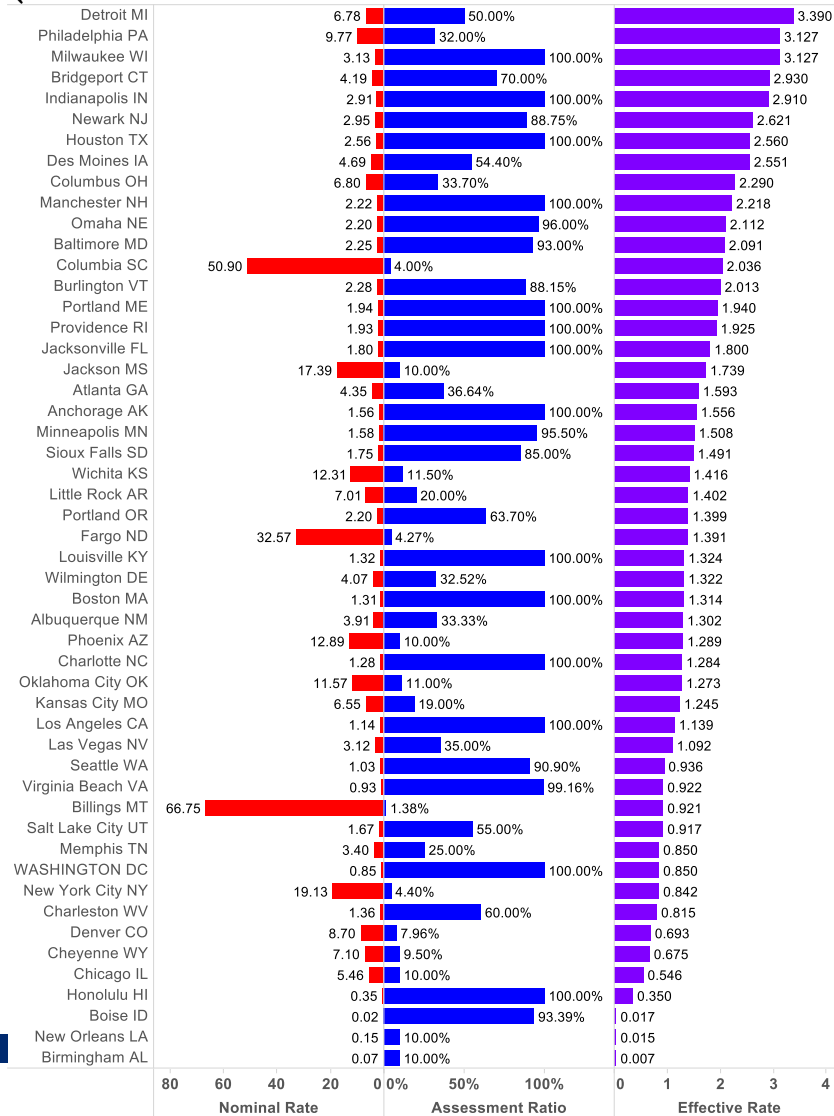
RANK	CITY	ST	NOMINAL RATE PER \$100	ASSESSMENT LEVEL	EFFECTIVE RATE PER \$100
1	Detroit	MI	6.78	50.0%	3.39
2	Philadelphia	PA	9.77	32.0%	3.13
3	Milwaukee	WI	3.13	100.0%	3.13
4	Bridgeport	CT	4.19	70.0%	2.93
5	Indianapolis	IN	2.91	100.0%	2.91

- Collect data from Census (ACS) on median house values and median incomes
 - Calculate house values for each income level in each city, multiplier created by ACS data.
- Calculate property tax on house value at each income in each city.
 - Taking into account assessment level, and homestead exemptions.



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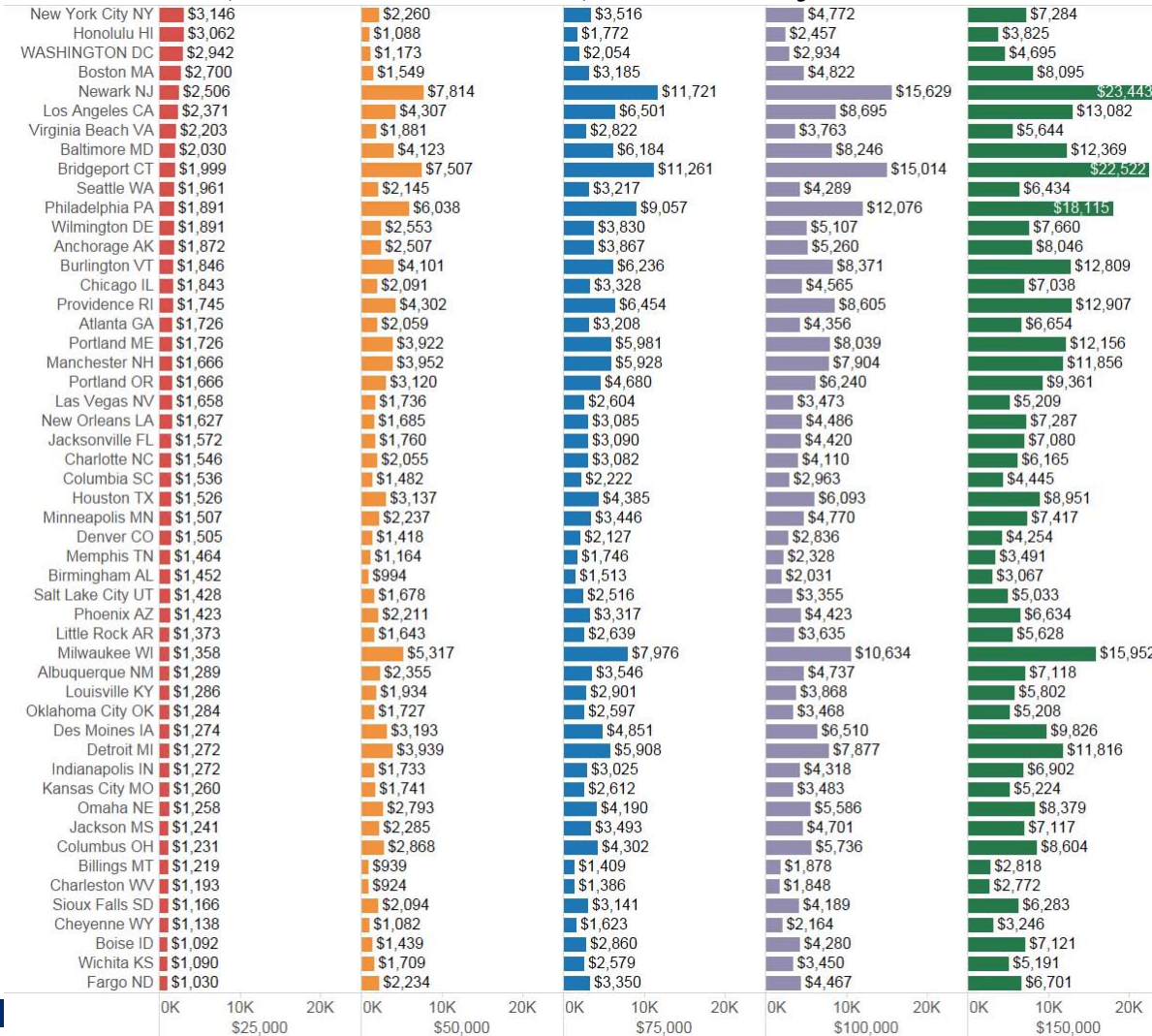
Inputs: 2013 Property Tax Information (Nominal Rate x Assessment Ratio = Effective Rate)





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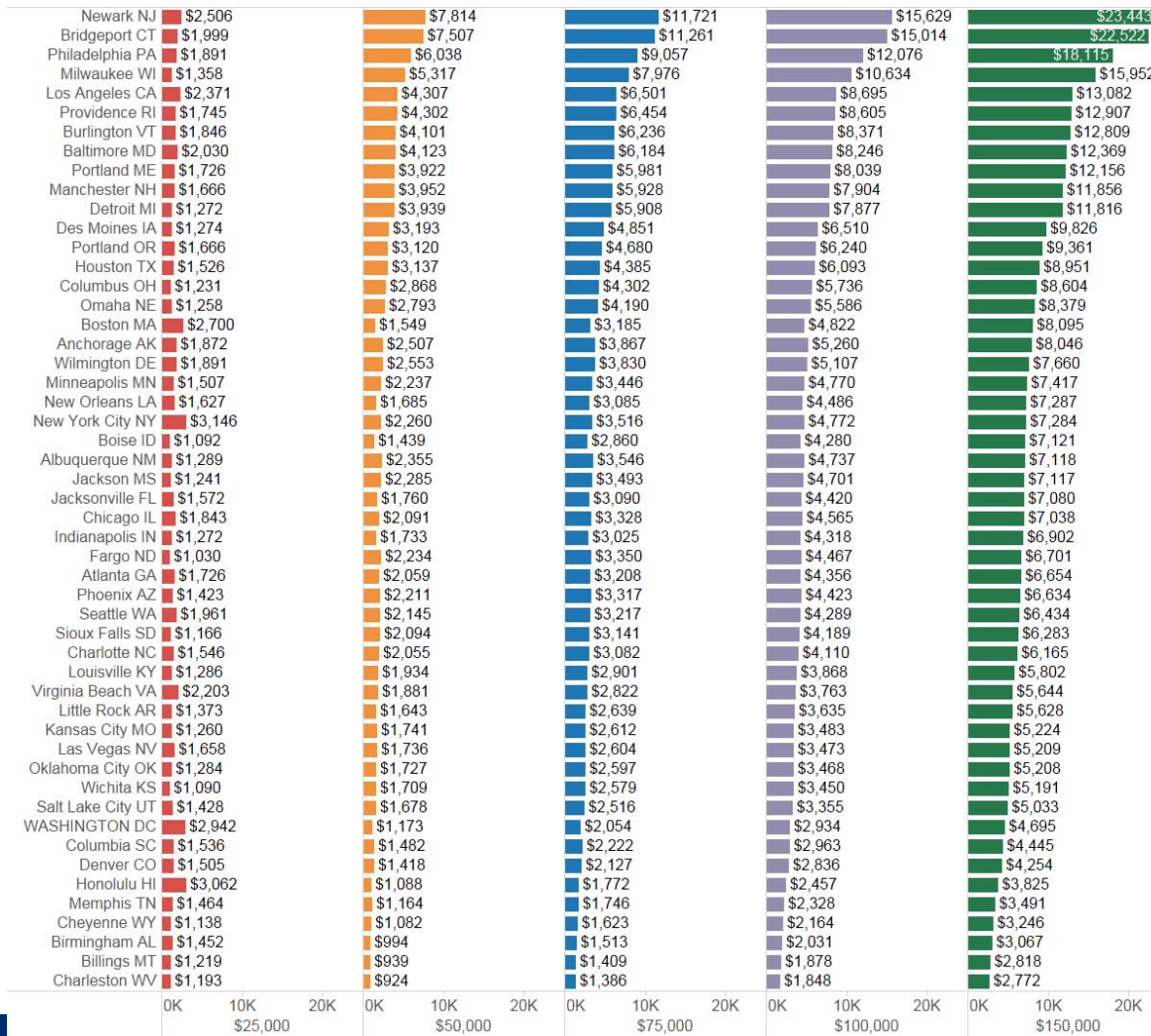
Results: 2013 Property Tax Burdens (\$25,000 = renters) [sorted by renters]





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Results: 2013 Property Tax Burdens (\$25,000 = renters) [sorted by \$150k]





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Income Tax Calculation

- Use tax preparation software to calculate income tax burdens for all 50 states and DC.
 - Itemized deduction information is from IRS Statistics of Income data for DC, and is based on average deduction amounts at each income level for joint filers.
 - Separate calculation is made of the mortgage interest deduction, based on 5th year of interest of home purchase, value of which calculated from ACS data just like for property tax.
 - Deductions allowed for sales taxes paid, state income taxes paid, or property taxes paid are taken from actual burdens calculated in prior year.

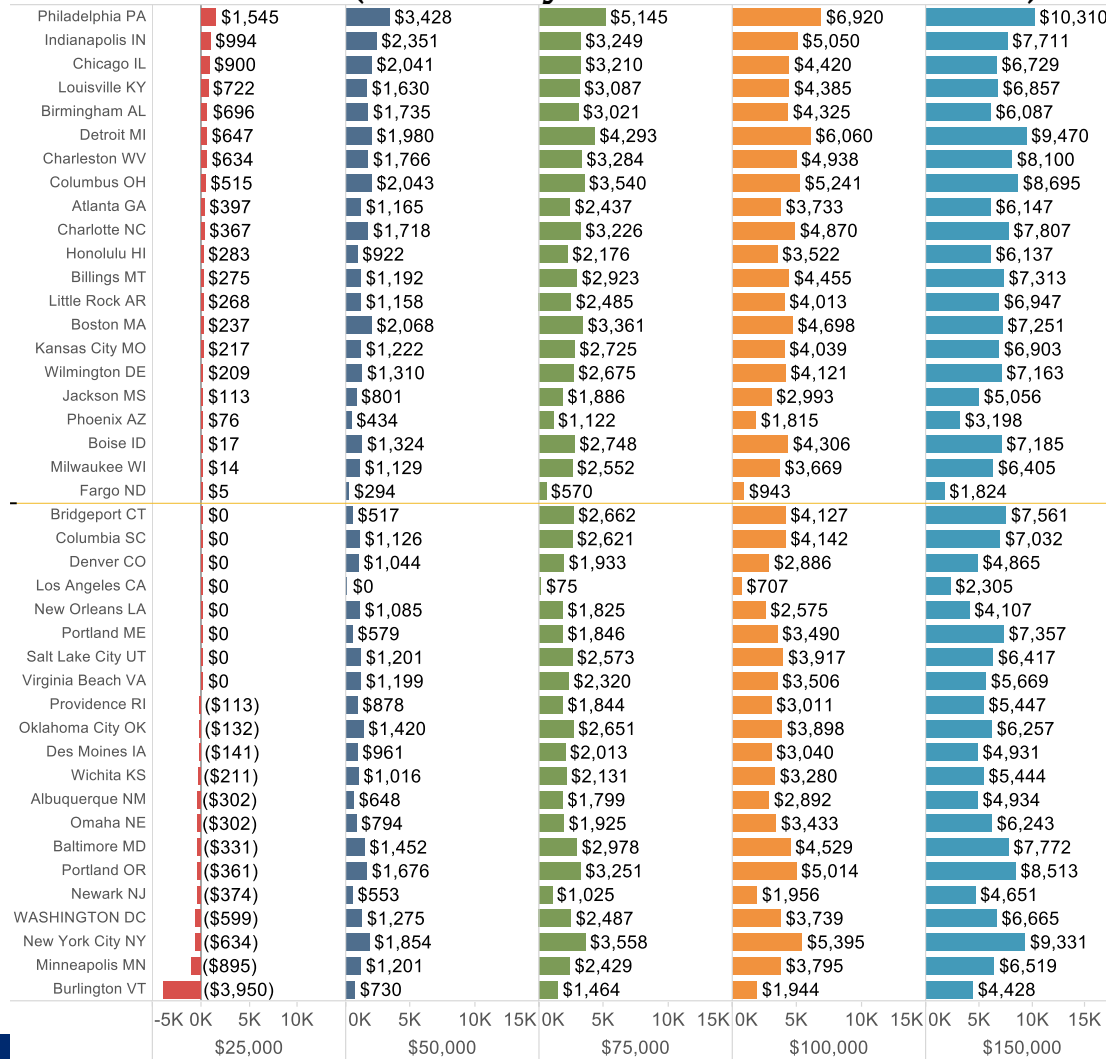
- After calculating state income tax, add any local income tax that is applicable.

- Eight States do not have an income tax. Seven of the cities in our report have a local income tax.



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Results: 2013 Income Tax Burdens (sorted by \$25,000 income level)





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Sales Tax Calculation

- Compile applicable sales tax rates
 - State, city, county, school, and transit tax rates
 - 5 States do not have a general sales tax (AK, DE, MT, NH, OR)

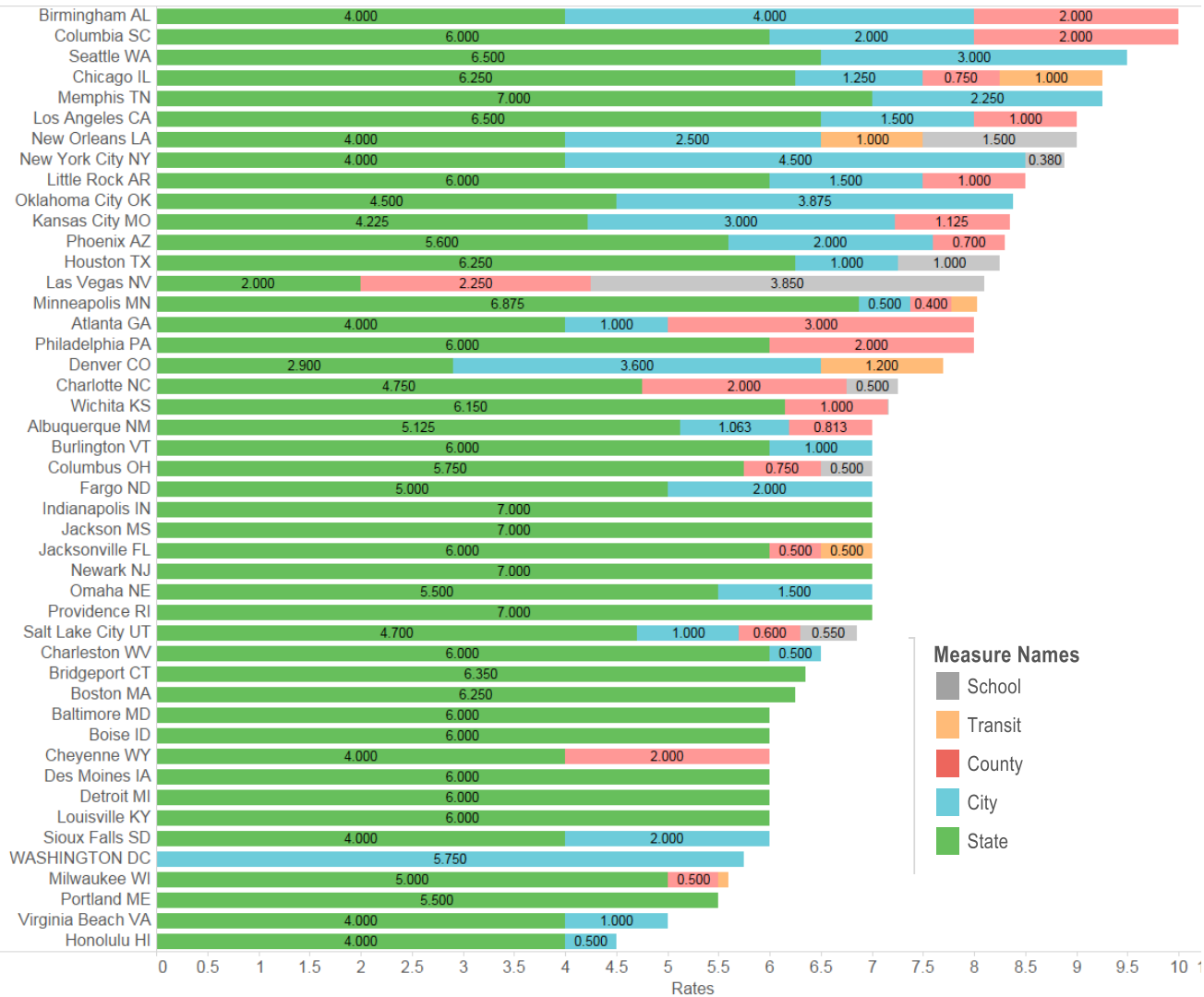
- Download Consumer Expenditure Survey data of average amount spent on various consumer goods (by income level).

- Apply all state and local sales taxes to those amounts.
 - All variation w/in an income level comes from sales tax rates and sales tax bases.



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Input: 2013 Sales Tax Rates



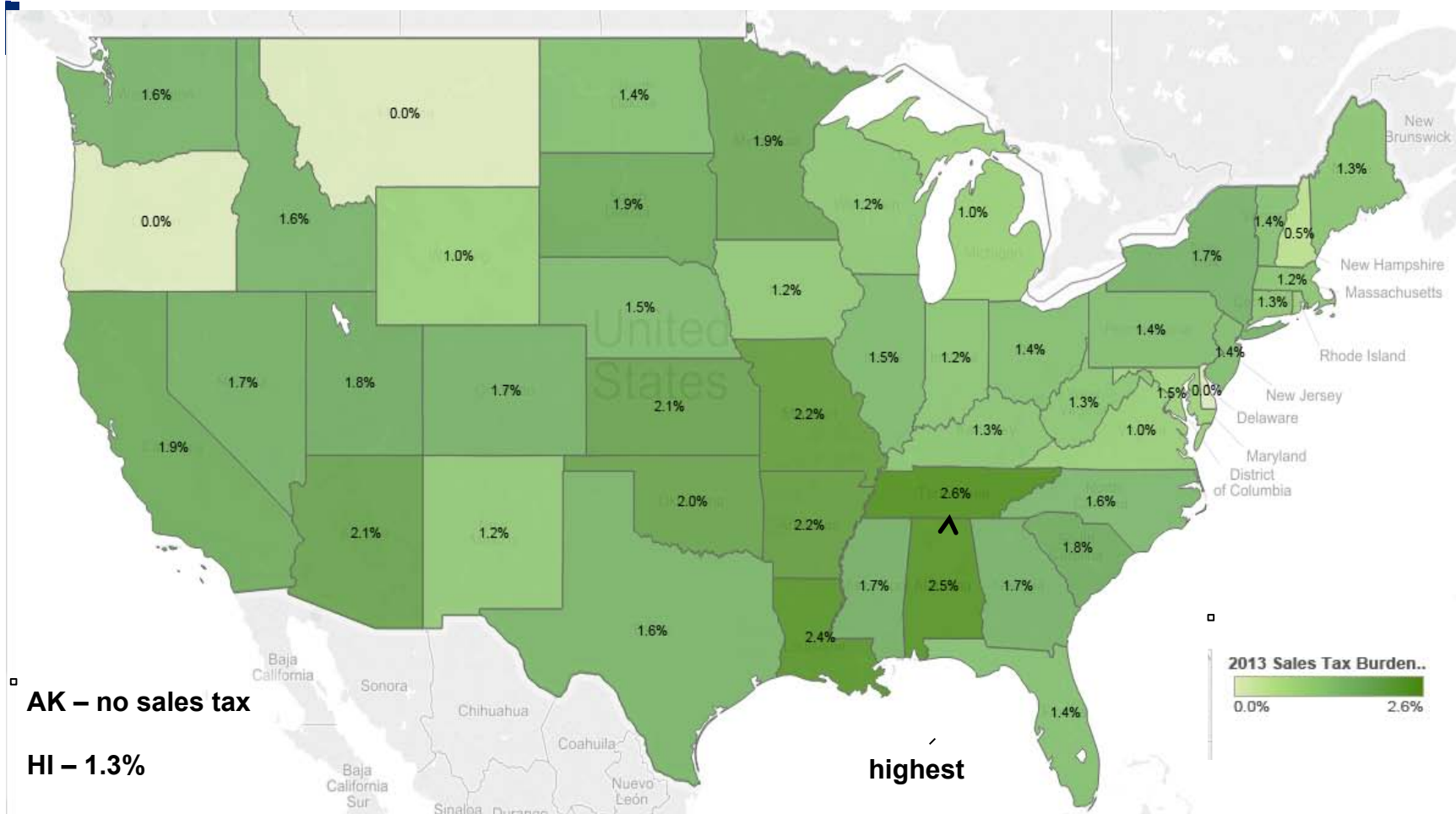
Measure Names

- School
- Transit
- County
- City
- State



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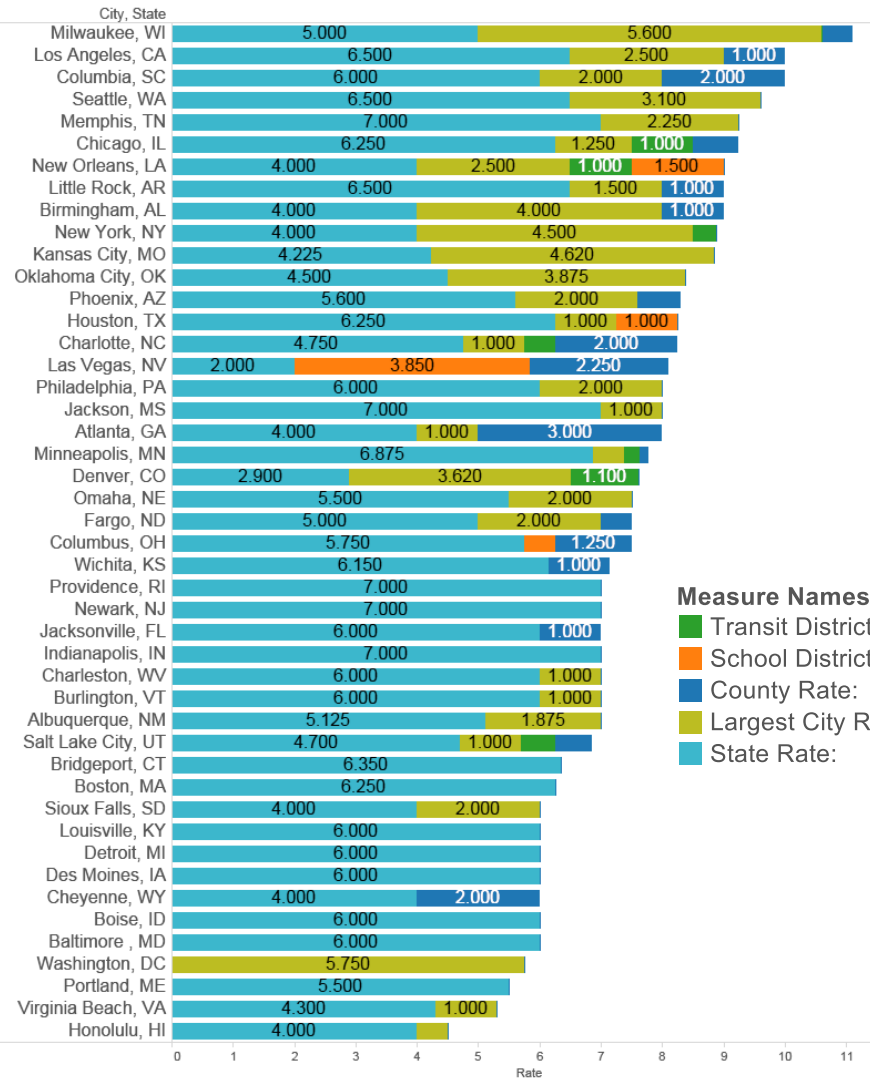
Results: 2013 Sales Tax Burden, \$50,000





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Input: 2014 Sales Tax Rates



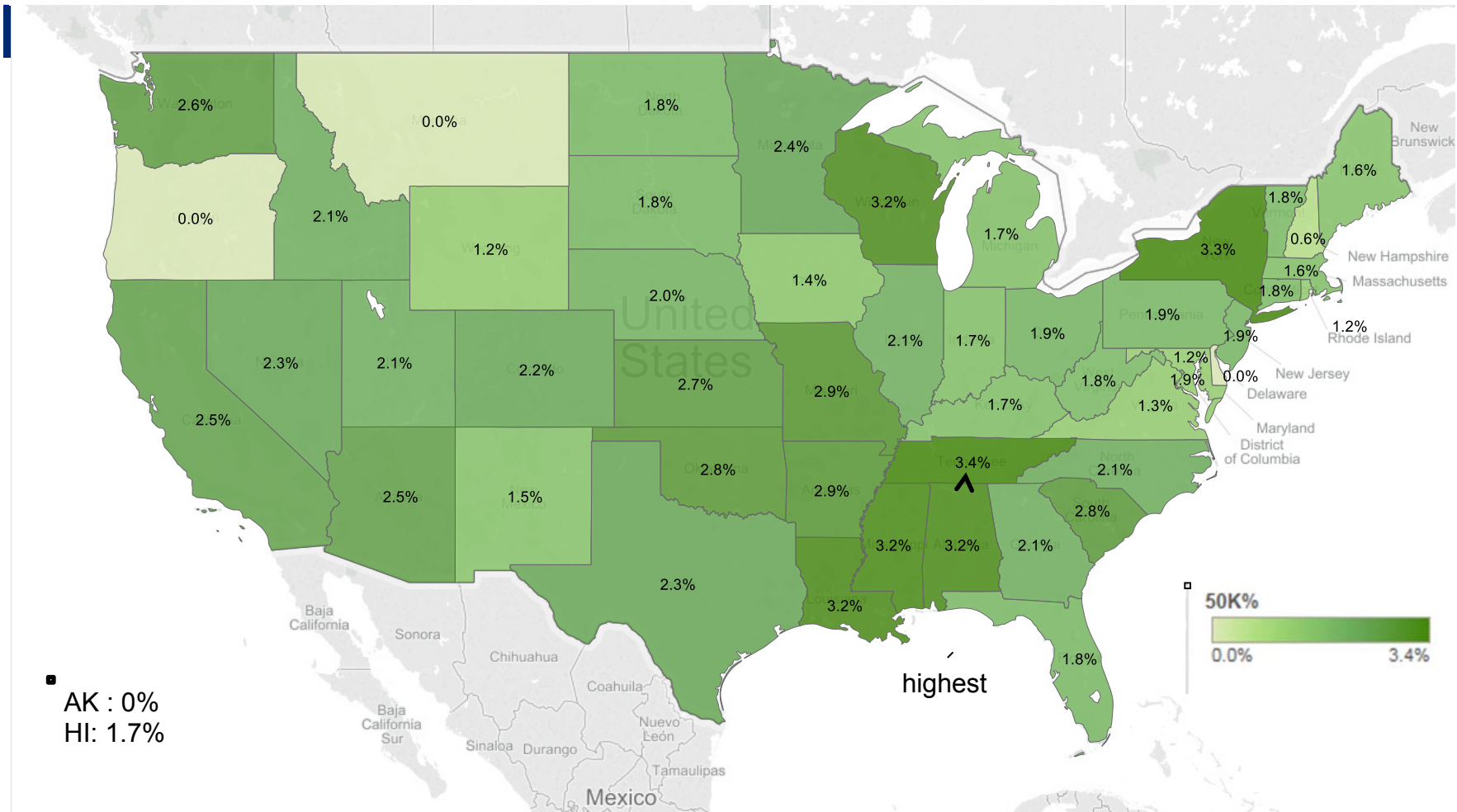
Measure Names

- Transit District Rate:
- School District Rate:
- County Rate:
- Largest City Rate:
- State Rate:



2014 Sales Tax Burdens, Family earning \$50,000

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Auto Tax Calculation

- Applicable personal property taxes, registration and title fees, and auto excise taxes for each city + state

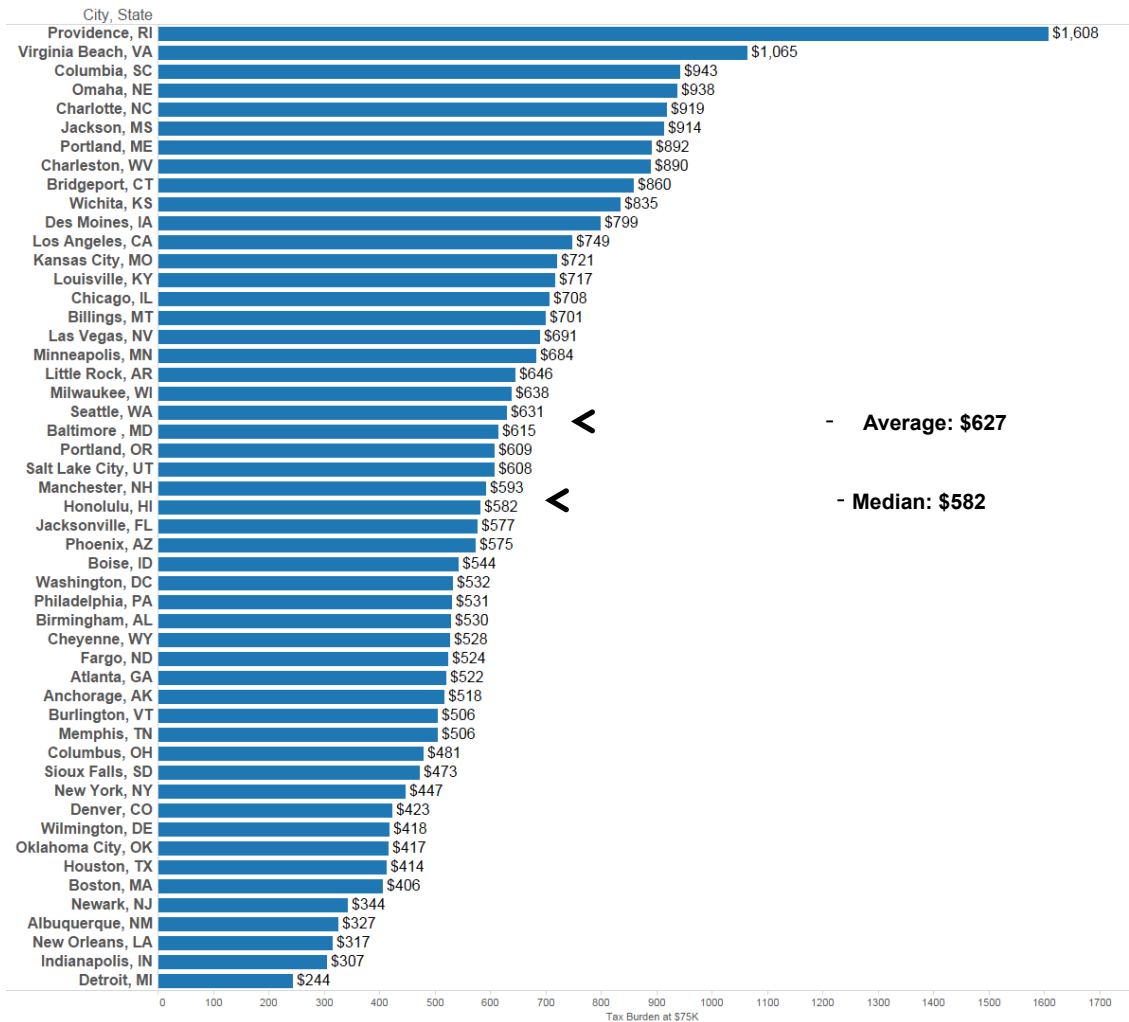
- Assumptions of gasoline usage and applicable taxes for each jurisdiction

- Assumptions of car ownership at each level of income
 - Type of car(s) vary across income level
 - Number of cars owned



2013 Results: Auto Tax Burden, \$75,000/ year

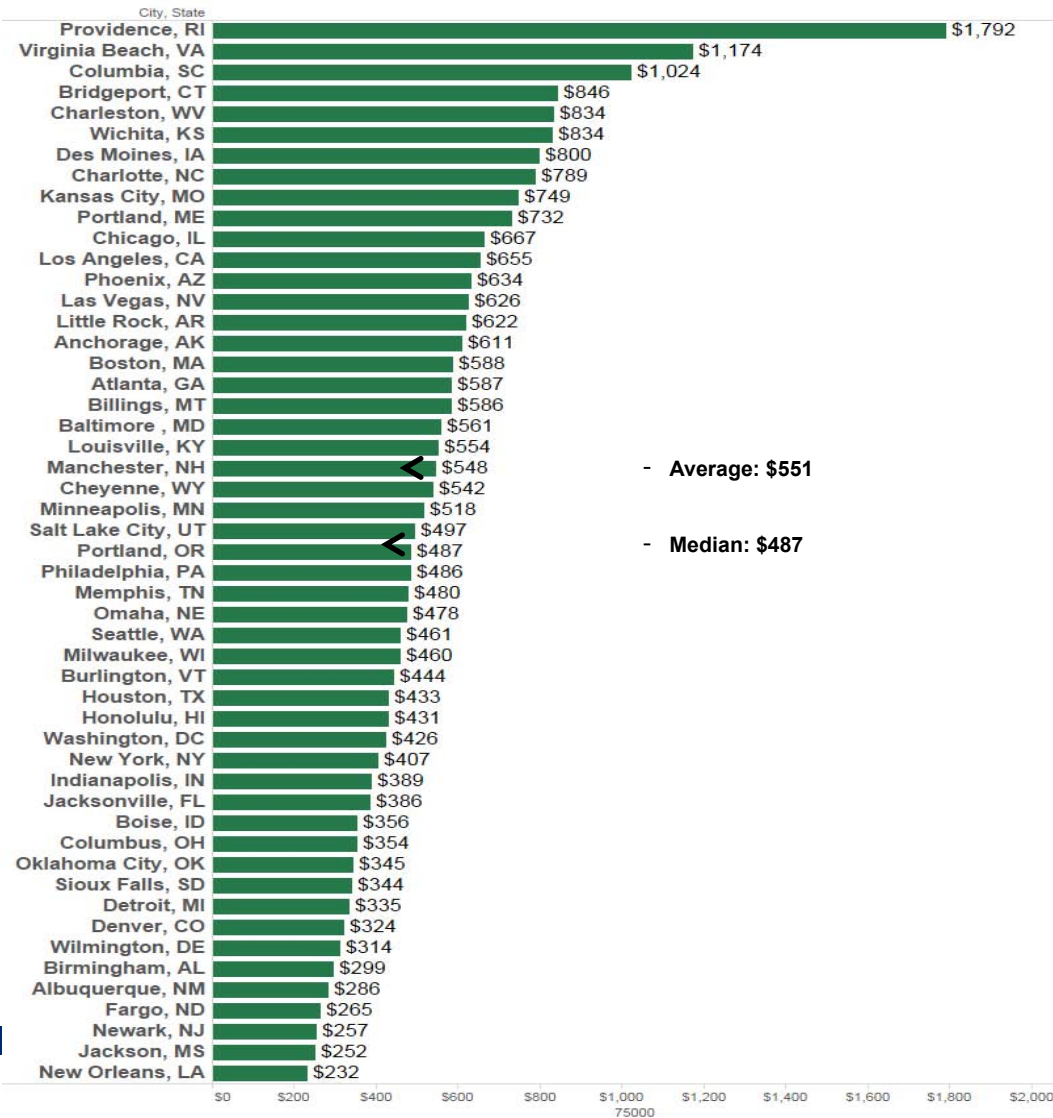
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2014 Results: Auto Tax Burden, \$75,000/ year



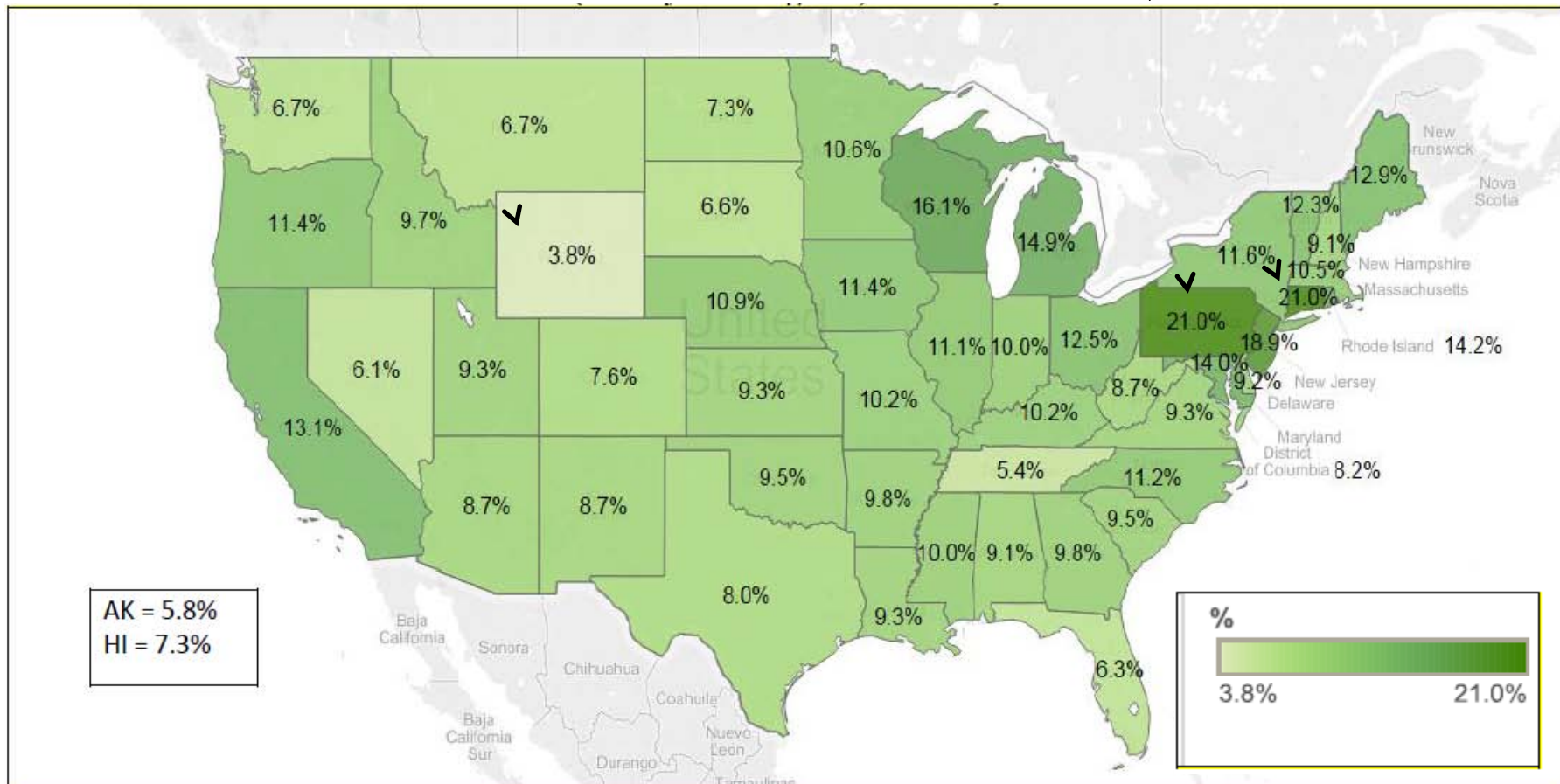


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Results: 2013 Tax Burden, All Taxes Combined, \$75,000

WY: lowest

CT, PA: highest



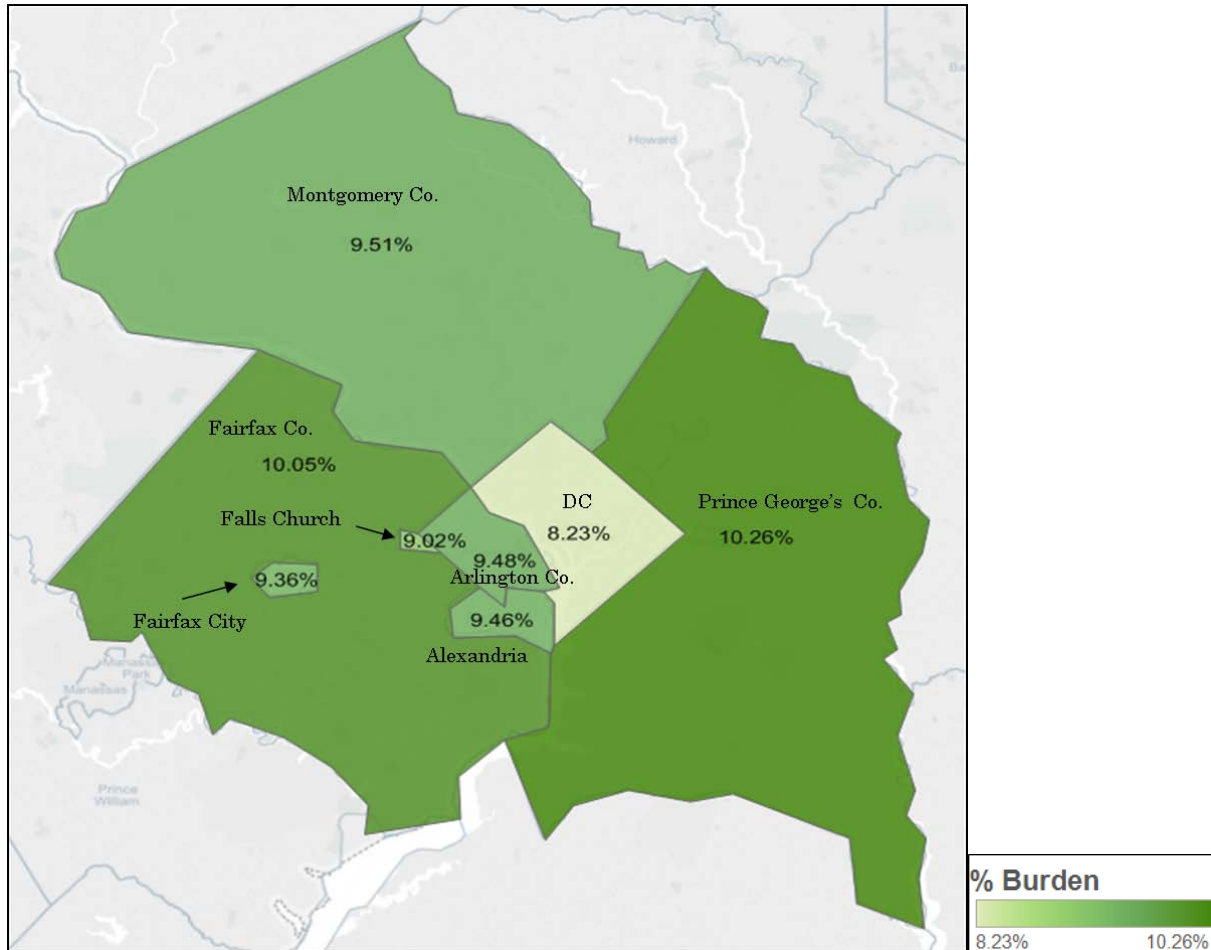
AK = 5.8%
HI = 7.3%





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Results: Total 2013 Metro Area Tax Burdens, \$75,000





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Thank you!

Questions/Comments?





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Extra Slides



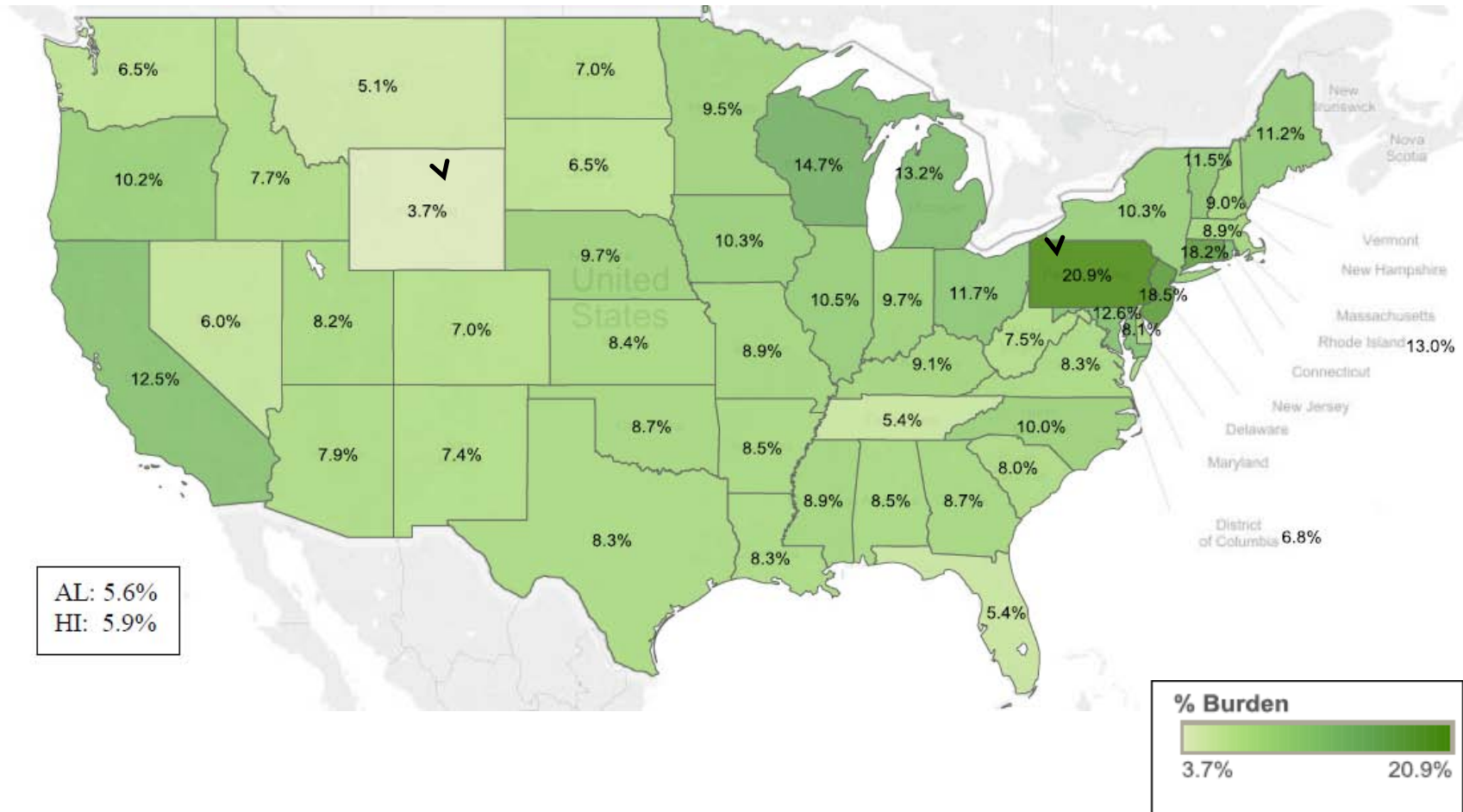


Results: 2013 Tax Burden, All Taxes Combined, \$50,000

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WY: lowest

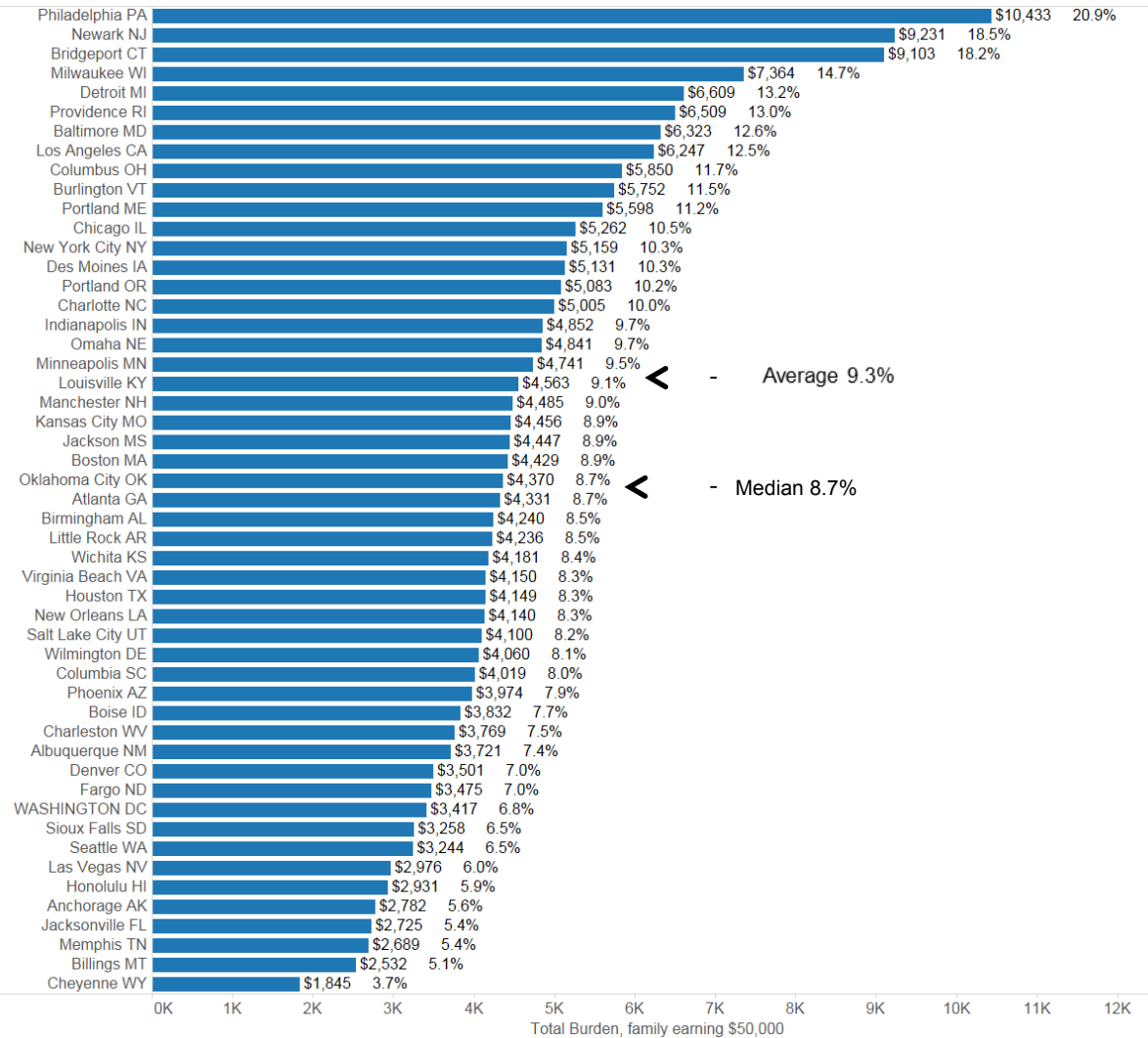
PA: highest





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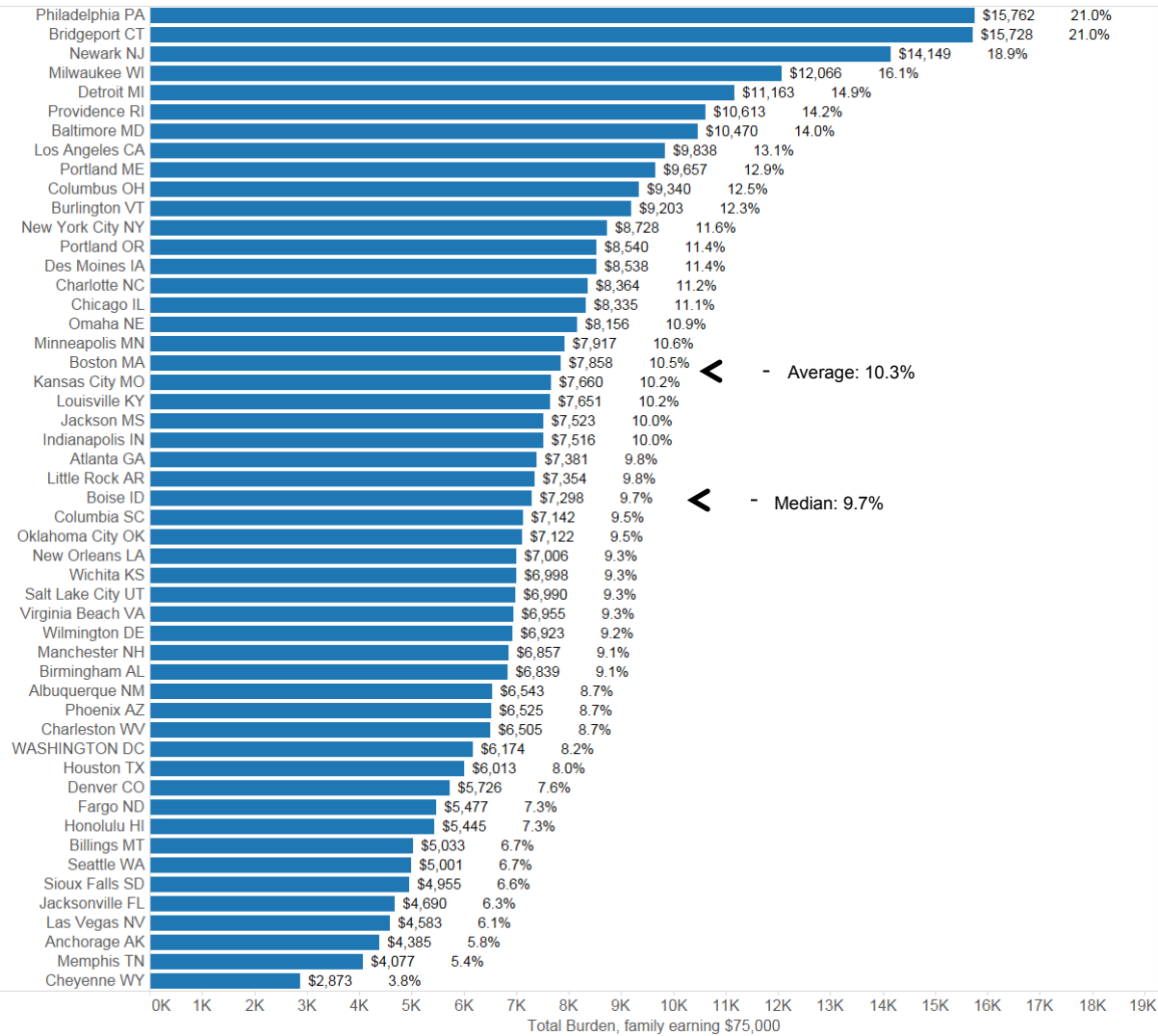
Results: 2013 Tax Burden of All Taxes Combined, \$50,000





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Results: 2013 Tax Burden of All Taxes Combined, \$75,000





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2012, 2013 and 2014 car assumptions

For 2012, they are:

2009 Nissan Sentra
2009 Volkswagen Passat Sedan
2010 Toyota Camry LE
2004 Toyota Highlander Ltd 4WD
2010 Buick LaCrosse CXL
2005 Ford Explorer Ltd
2011 Cadillac CTS Premium AWD
2008 Ford Edge SEL

For 2013, car assumptions:

2010 Nissan Sentra
2010 Volkswagen Passat Sedan
2011 Toyota Camry LE
2005 Toyota Highlander Ltd 4WD
2011 Buick LaCrosse CXI
2006 Ford Explorer Ltd
2012 Cadillac CTS Premium AWD
2009 Ford Edge SEL AWD

For 2014, car assumptions:

2011 Nissan Sentra
2011 Volkswagen Jetta Sedan (no 2011 Passats)
2012 Toyota Camry LE
2006 Toyota Highlander Ltd 4WD
2012 Buick LaCrosse CXI
2007 Ford Explorer Ltd
2013 Cadillac CTS Sedan
2010 Ford Edge SEL Wagon AWD



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New Features and Future Goals

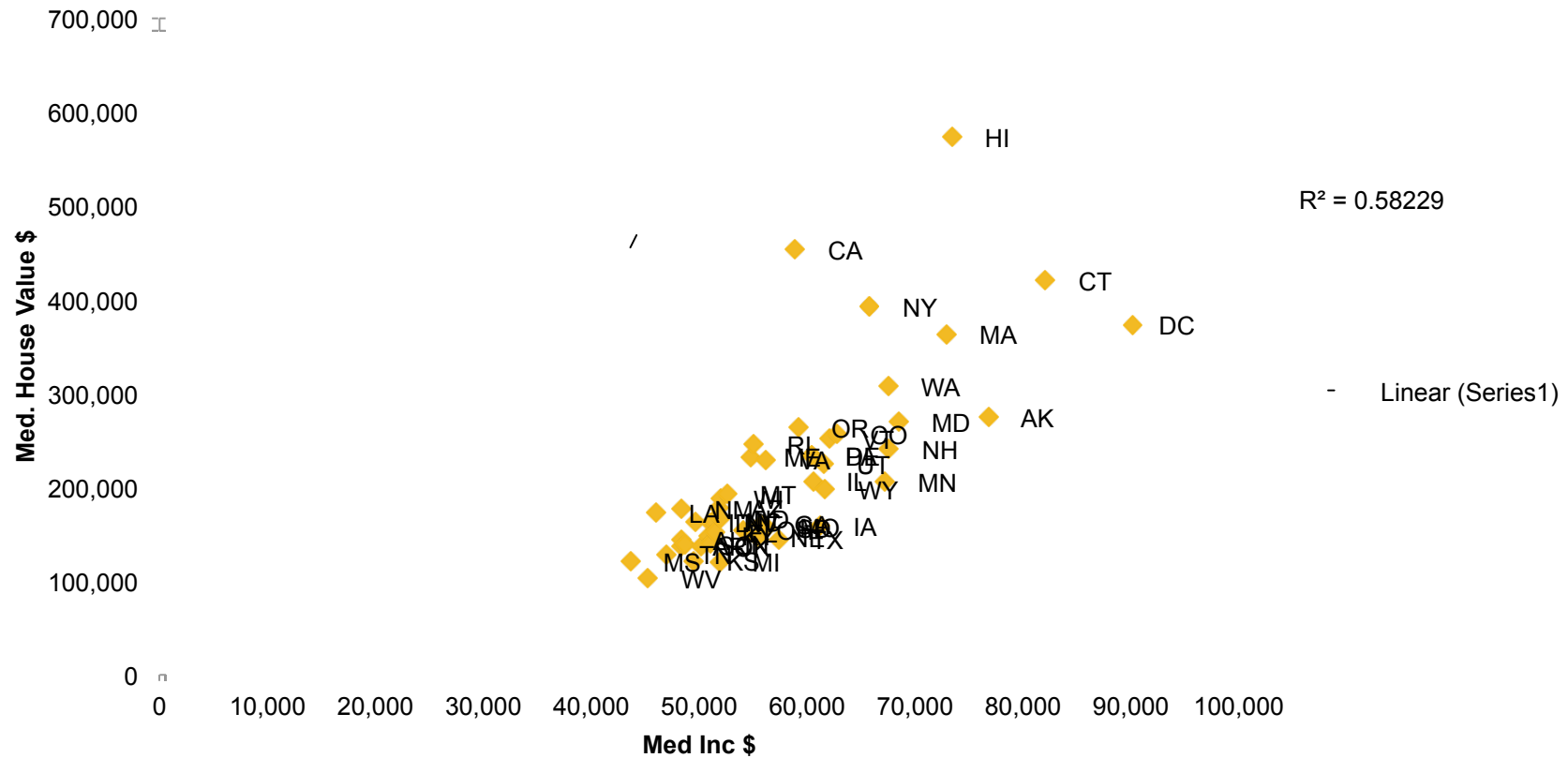
- New graphics: bar charts, maps, etc.;
- Sensitivity analyses of various assumptions;
- Add case studies of major metro areas or various aspects of major tax types;
- Study what is driving the variability; decompose the determinants.



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Property Tax

2013 Median Income and Median House Value





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Comparison of selected state taxes, 2013

TAX	LEVYING TAX 1/	NUMBER OF JURISDICTIONS		
		LOWER THAN DC	SAME AS DC	HIGHER THAN DC
Individual Income	43 2/	36 3/	1	6 3/
Corporate Income	44	42	0	2
Insurance	50	18	17	15
Sales and Use	45	20	1	24
Beer	50	7	1	42
Light Wine	46	5	3	38
Distilled Spirits	33	0	1	32
Cigarette	50	44	0	6
Motor Fuel	50	26	1	23
Motor Vehicle Excise				
Cars < 3,500 lbs.	46	25	7	14
Motor Vehicle Registration	50	46	0	4
Deed Recordation	35	35	0	0



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2013 Income Assumptions

Gross Income		Wages and Salaries	Interest	Long-Term Capital Gains 1/
\$25,000	Spouse 1	\$16,560	\$646	\$697
	Spouse 2	7,097		
\$50,000	Spouse 1	\$33,699	\$1,078	\$781
	Spouse 2	14,442		
\$75,000	Spouse 1	\$51,041	\$906	\$1,179
	Spouse 2	21,875		
\$100,000	Spouse 1	\$68,964	\$760	\$720
	Spouse 2	29,556		
\$150,000	Spouse 1	\$102,823	\$1,026	\$2,085
	Spouse 2	44,067		

1/ Assumes a three-year holding period



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2013 Income Tax Deduction Assumptions

Deduction	Gross Income Level				
	\$ 25,000	\$ 50,000	\$ 75,000	\$100,000	\$150,000
Medical (Gross)	6,754	6,996	8,437	9,643	12,650
Nondeductible Medical 1/	<u>-1,875</u>	<u>-3,750</u>	<u>-5,625</u>	<u>-7,500</u>	<u>-11,250</u>
Net Medical Deduction	4,879	3,246	2,812	2,143	1,400
Deductible Taxes	2/	2/	2/	2/	2/
Mortgage Interest	3/	3/	3/	3/	3/
Contribution Deduction	2,592	3,199	4,119	4,280	3,984
Gross Miscellaneous	2,699	4,578	3,642	3,866	4,503
Nondeductible 4/	<u>-500</u>	<u>-1,000</u>	<u>-1,500</u>	<u>-2,000</u>	<u>-3,000</u>
Net Miscellaneous Deduction	2,199	3,578	2,142	1,866	1,503
Other Miscellaneous Deductions	161	164	147	163	69
Total Deductions-without taxes And mortgage interest	9,831	10,187	9,221	8,452	6,956

- 1/ Nondeductible medical equal 7.5 percent of federal A.G.I. All or part of medical deductions may be allowed in some states.
- 2/ The tax deduction varies from city to city and is based on real and personal property taxes computed in the 2013 study and individual income taxes computed in the 2012 study.
- 3/ Mortgage interest is based on 5th year interest paid on a home purchased in 2008 at an interest rate of 4.0%.
- 4/ Nondeductible miscellaneous deductions equal 2 percent of A.G.I.