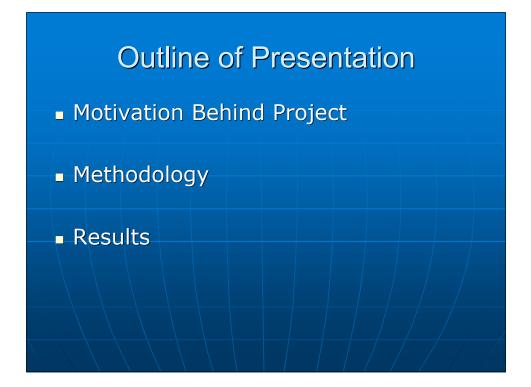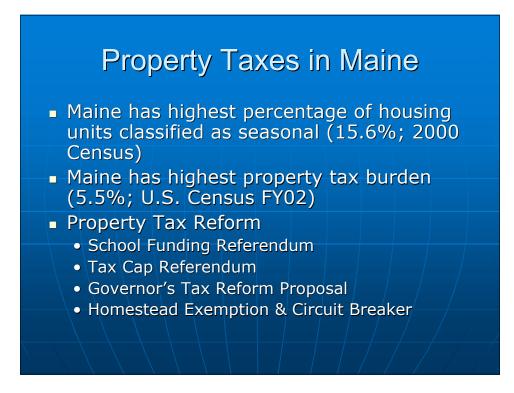# Analyzing Local Residential Tax Burdens

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FTA Revenue Estimating and Tax Research
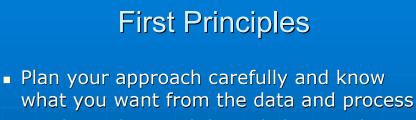Conference 2005

Legal Disclaimer

- The views expressed in this presentation are those of the presentation team and reflect services performed by and for the State of Maine's Department of Administration and Financial Services.

Outline of Presentation

- Motivation Behind Project

- Methodology

- Results

Property Taxes in Maine

- Maine has highest percentage of housing units classified as seasonal (15.6%; 2000 Census)
- Maine has highest property tax burden (5.5%; U.S. Census FY02)
- Property Tax Reform
  - School Funding Referendum
  - Tax Cap Referendum
  - Governor's Tax Reform Proposal
  - Homestead Exemption & Circuit Breaker

Questions Needing Answers

- What percentage of residential property taxes paid by owner-occupied units?
- How is the property tax burden distributed across the state and the income distribution?
- How do the competing tax reform proposals impact the different regions of the state and households?

First Principles

- Plan your approach carefully and know what you want from the data and process
- Use base data and direct linkages where possible
  - Income data, ZIP codes, municipal valuations
- Perform repeated tests against control totals
- Try to remove known cases to reduce the uncertainty

Basic Data Characteristics

- Individual income data have some level of geographic identification
- Sales and property data of aggregate transactions, with no direct location data
- Requires household characteristics to be matched with tax concepts
- Data warehouse was found to be very useful in this task

Census Control Totals

- Housing is one of the chief concerns of the Census
  - Wealth of solid information available
- Myriad of tabulations by county and townships for homeowner, rental, and vacant housing units
- Use American Fact Finder to produce customized tabulations of Census data

Required Items

- Using state and Census information, compile a consolidated list of municipalities by ZIP code
  - List will detail total housing units, owner-occupied units, rental units, and vacant units for each municipality and the county
- Microdata file with ZIP code field and TENURE variable from Census
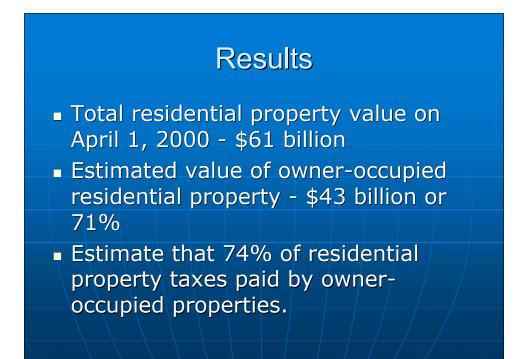
Algorithm

- Loop through Census data using TENURE variable by homeowners and renters
- Iterate in first 100 attempts to randomly assign to towns within the ZIP area
- Decrement housing counts for matches
- Remaining non-matches select a random start point, then iterate searching for a match sequentially through entire list

Final Adjustments

- Statewide values and tax looked reasonable
- But individual municipal property values and tax amounts varied from reported values
- Adjusted municipal values based on relative percentage of owner-occupied housing while maintaining the proportional Census reported values of residential property

Conclusions

- Most effort is spent on initial tasks, including the setup of the data files
- Computing makes the mechanics easier, but careful data analysis is essential
- We had **few** expectations of being able to use these initially
- Required several wholesale attempts before arriving at our final set of location data

Results

- Total residential property value on April 1, 2000 - $61 billion
- Estimated value of owner-occupied residential property - $43 billion or 71%
- Estimate that 74% of residential property taxes paid by owner-occupied properties.

Property Tax Burden by County – PTY03

COUNTY	<4.0%	4-5%	5-6%	6-8%	8-10%	10-12%	12-15%	15-20%	>=20%
Androscoggin	49.7%	11.6%	8.8%	10.0%	6.4%	3.4%	3.1%	2.6%	4.5%
Aroostook	65.3%	7.5%	5.4%	6.7%	4.0%	2.8%	2.3%	2.0%	3.9%
Cumberland	34.9%	11.6%	9.4%	13.4%	8.1%	5.1%	4.9%	4.3%	8.2%
Franklin	63.8%	8.2%	5.5%	7.4%	4.3%	2.6%	1.7%	1.9%	4.7%
Hancock	39.8%	9.6%	7.1%	10.6%	8.2%	5.5%	5.3%	4.8%	9.1%
Kennebec	54.1%	10.0%	6.8%	9.5%	5.2%	3.0%	3.4%	2.6%	5.6%
Knox	40.1%	9.4%	7.8%	11.1%	7.4%	5.3%	4.3%	4.6%	10.0%
Lincoln	45.5%	9.9%	7.9%	10.1%	6.8%	4.0%	4.1%	4.1%	7.6%
Oxford	57.9%	8.8%	6.4%	8.1%	5.0%	3.4%	3.1%	2.4%	4.8%
Penobscot	56.6%	8.8%	5.9%	8.0%	5.2%	3.1%	3.1%	3.4%	5.9%
Piscataquis	63.1%	9.9%	5.0%	7.9%	3.6%	2.2%	2.8%	1.6%	3.9%
Sagadahoc	41.0%	10.9%	8.3%	11.0%	6.9%	4.3%	4.6%	4.1%	8.9%
Somerset	67.0%	7.1%	5.3%	6.0%	3.9%	2.4%	2.2%	2.2%	3.8%
Waldo	51.0%	8.9%	6.9%	8.6%	7.3%	3.7%	3.7%	4.0%	5.9%
Washington	56.8%	8.6%	6.3%	8.4%	5.7%	3.2%	3.4%	2.3%	5.2%
York	43.5%	10.6%	8.3%	11.3%	6.7%	4.0%	3.7%	3.6%	8.2%
Total	48.7%	9.9%	7.5%	10.1%	6.3%	3.8%	3.7%	3.4%	6.6%