Income and Inequality in Montana from 2001 Through 2014

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Outline

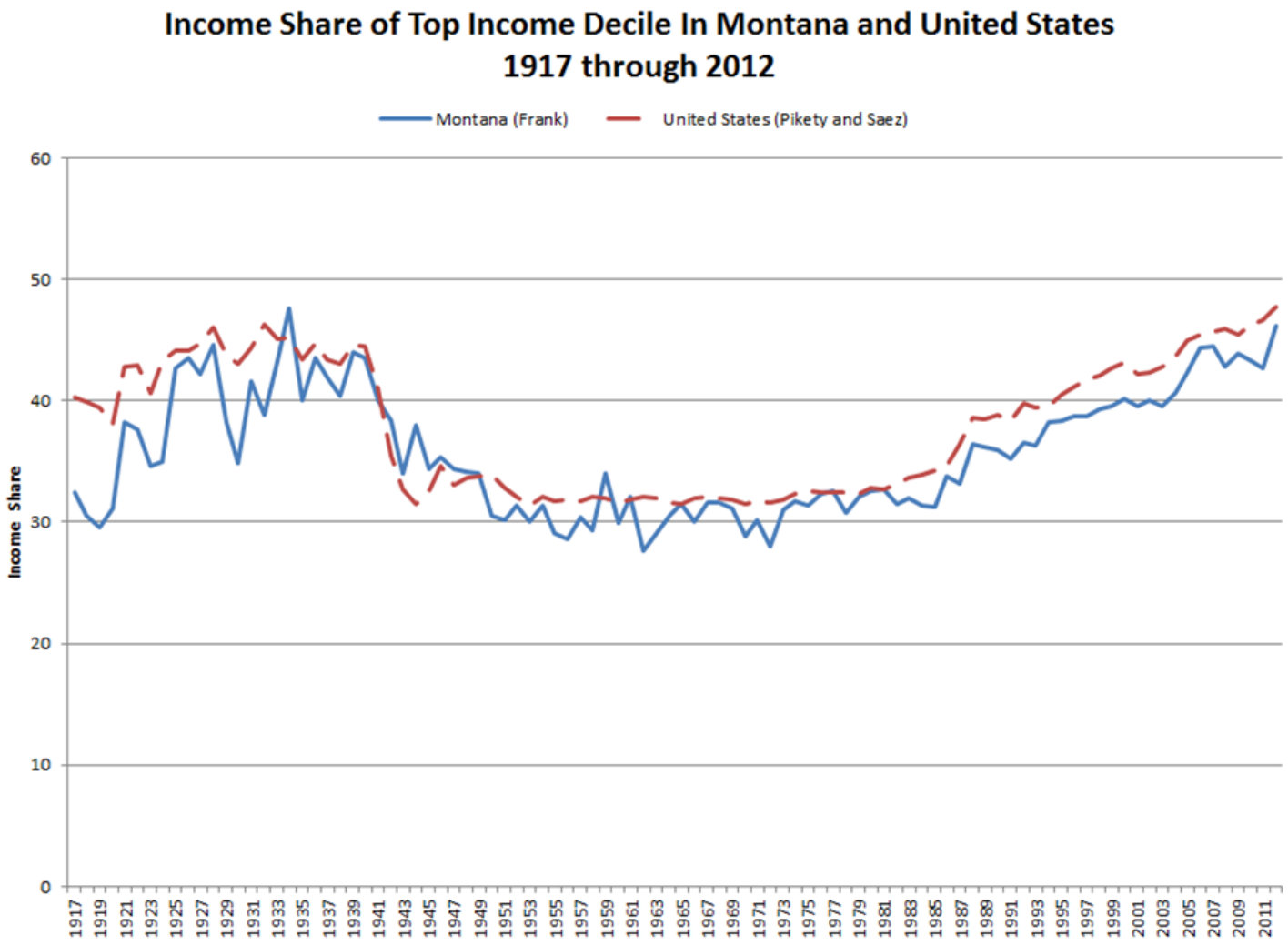
- Why should we care about income and income inequality?
- Who else has examined this issue?
- What did I do?
- What did I find?
- What are some potential implications?

Why Should We Care?

- The amount of economic recourses available to households has a significant impact on their living standards and happiness.
- This is a topic that other people seem to care a lot about.
- The level and distribution of incomes across households may have the potential to impact state income tax revenue.

Who Else Has Examined This Issue?

- Piketty and Saez (2003) and (2007)
  - Estimated the share of income reported by households in the top 10%, 5%, 1%, 0.5%, 0.1% and 0.01% of US taxpayer households.
  - Based on IRS income tax data released on the top 10% of taxpayer households, as well as other income data.
  - Probably the most well known estimate of changes in the incomes of high income households.
  - Estimates updated and expanded through the World Wealth and Income Database.
- Frank (2009), Frank, Sommeiller, Price and Saez (2015)
  - Using the same federal income tax data as Piketty and Saez, Frank developed top income decile estimates at the state level.
  - Estimates are available for Montana, as well as most other states.


Income Share of Top Income Decile In Montana and United States
1917 through 2012
Montana (Frank)
United States (Pikety and Saez)
Income Share
60
50
40
30
20
10
0
1917
1919
1921
1923
1925
1927
1929
1931
1933
1935
1937
1939
1941
1943
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1975
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1979
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1987
1989
1991
1993
1995
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2001
2003
2005
2007
2009
2011

What Did I Do?

- Montana's Department of Revenue has digital personal income tax records going back to 2001.
- Using total taxable income, I broke the income tax records into income deciles and income types for full-year residents.
- I did this for tax years 2001 through 2014.

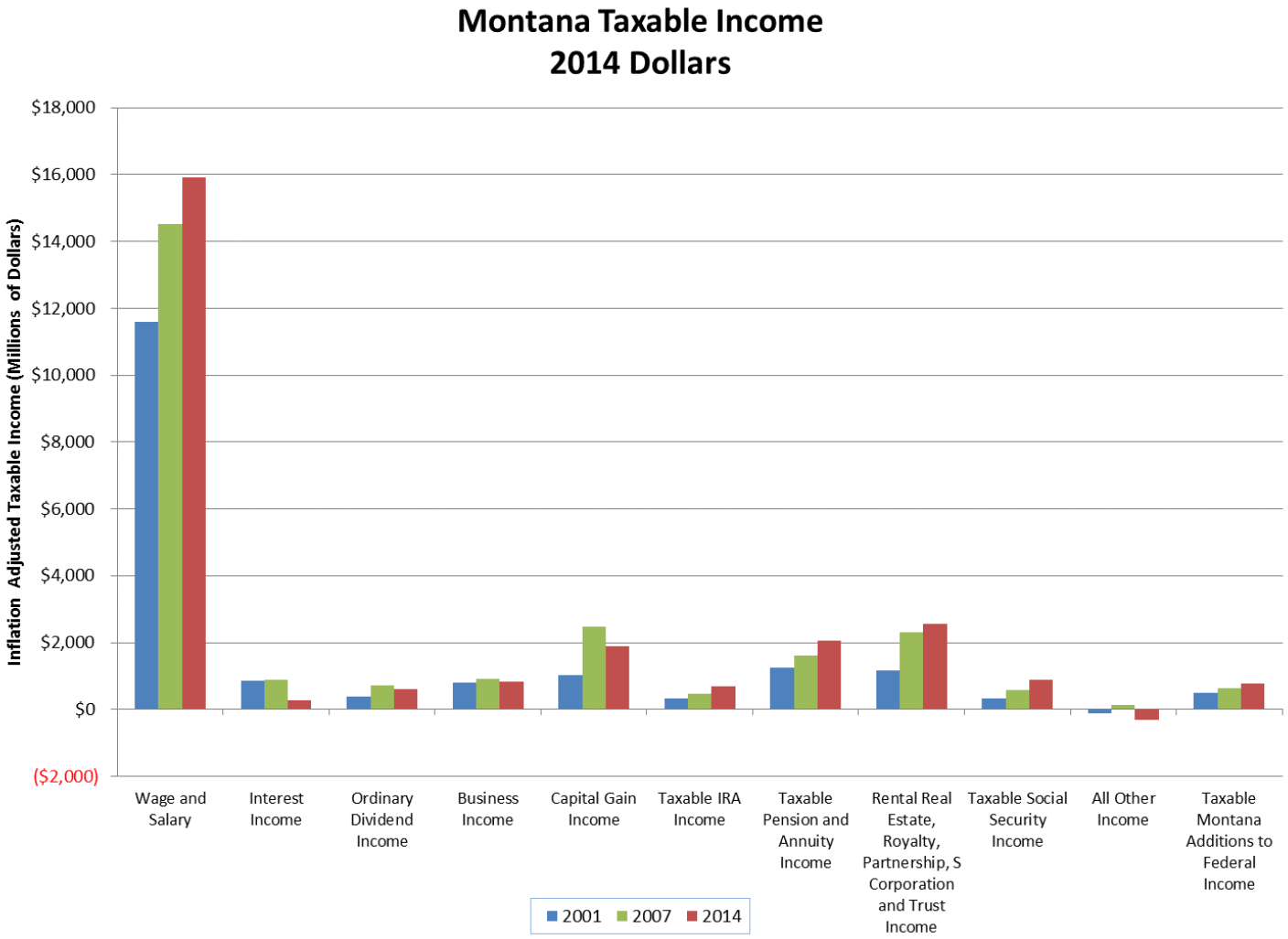
Estimate Differences

- Strengths
  - My estimates provide information on households outside the top income decile.
  - My estimates can be broken down by income types.

- Weakness
  - My estimates are only available for tax years 2001 through 2014.
    - Difficult to differentiate between business cycle and long-term changes.
  - My estimates are only available for Montana.

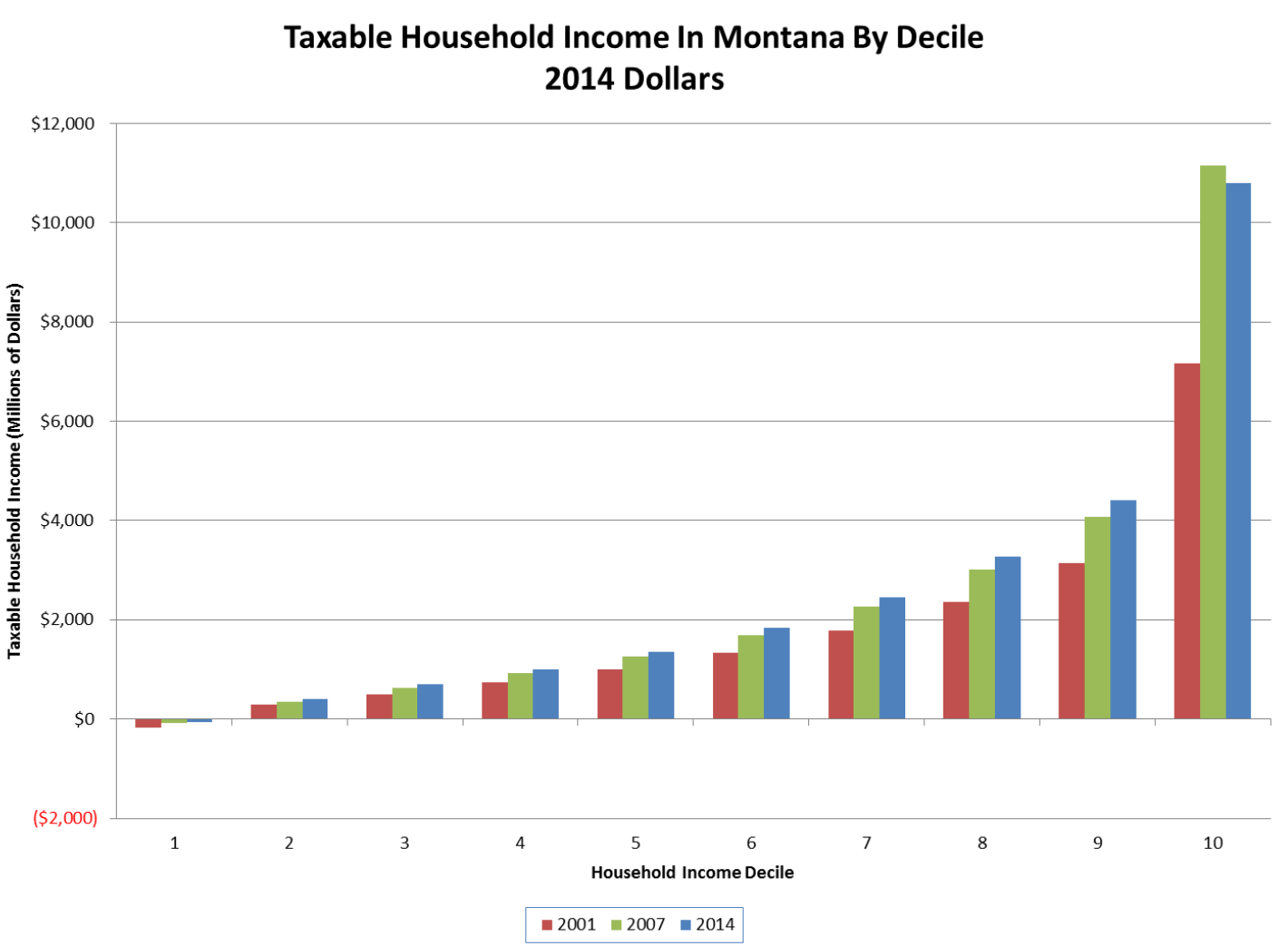
What Did I Find?

- After adjusting for inflation:
  - Total taxable income increased
    - $18 billion in 2001
    - $26 billion in 2014
  - Average per taxpayer household incomes increased
    - $47,195 in 2001
    - $58,097 in 2014
  - Wage, salary and tip income comprised half the increase in incomes
    - $8 billion increase from 2001 through 2014
    - 53.6 percent of the total increase in taxable income from 2001 through 2014

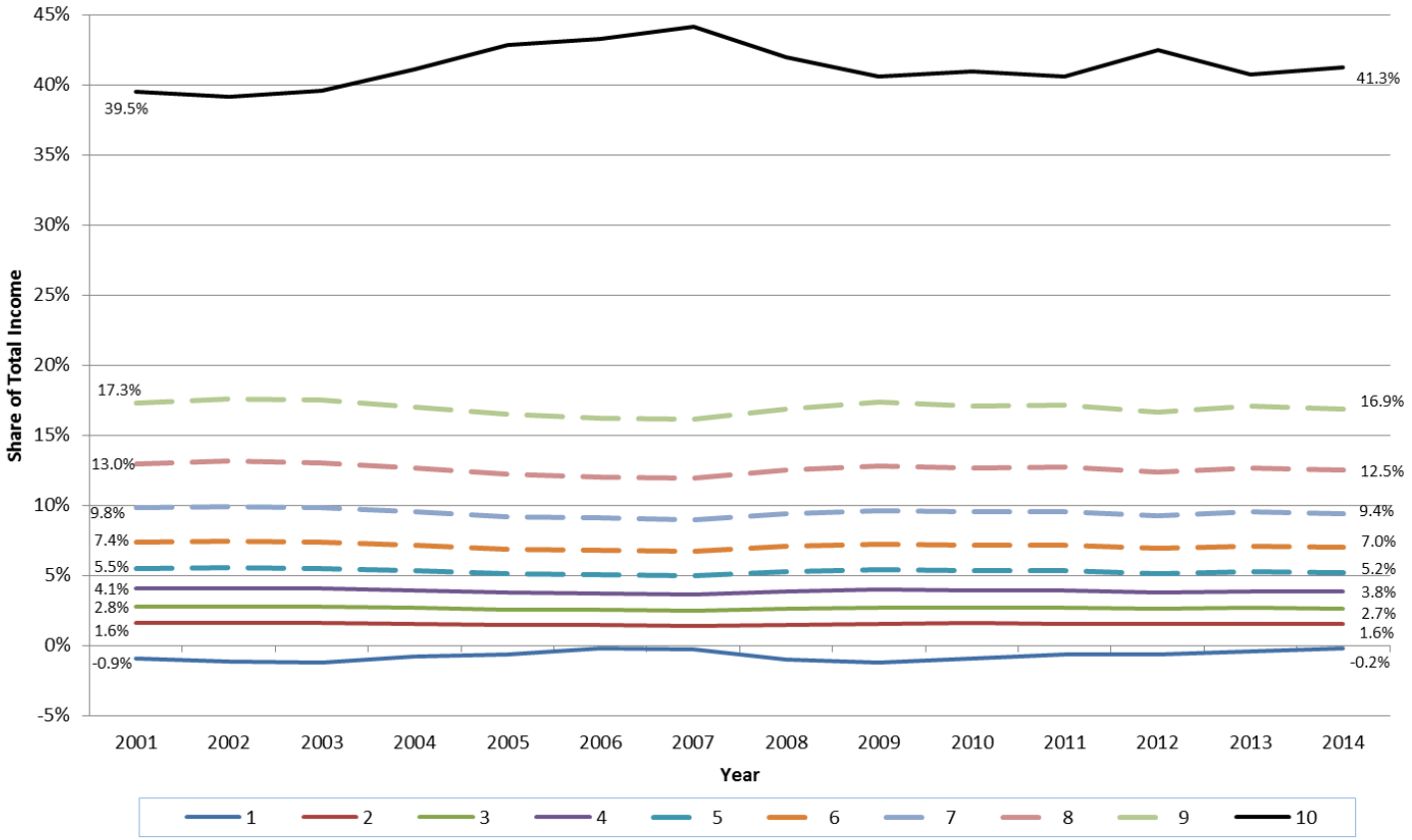

Montana Taxable Income
2014 Dollars
Inflation Adjusted Taxable Income (Millions of Dollars)
$18,000
$16,000
$14,000
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
($2,000)
Wage and Salary
Interest Income
Ordinary Dividend Income
Business Income
Capital Gain Income
Taxable IRA Income
Taxable Pension and Annuity Income
Rental Real Estate, Royalty, Partnership, S Corporation and Trust Income
Taxable Social Security Income
All Other Income
Taxable Montana Additions to Federal Income
2001
2007
2014

What Did I Find?

- The combined income of all income deciles increased from 2001 to 2014.
- Taxable income is relatively unequally distributed.
  - Top income decile:
    - 41.3% of income in 2014 (49.85% for U.S.)
    - 39.5% of income in 2001 (44.82% for U.S.)
  - Top 50% of households:
    - 87% of income in 2001 and 2014
- The income distribution in Montana is more equally distributed than at the national level
  - Top Decile in US: 49.9% in 2014
  - Top Decile in MT: 41.3% in 2014

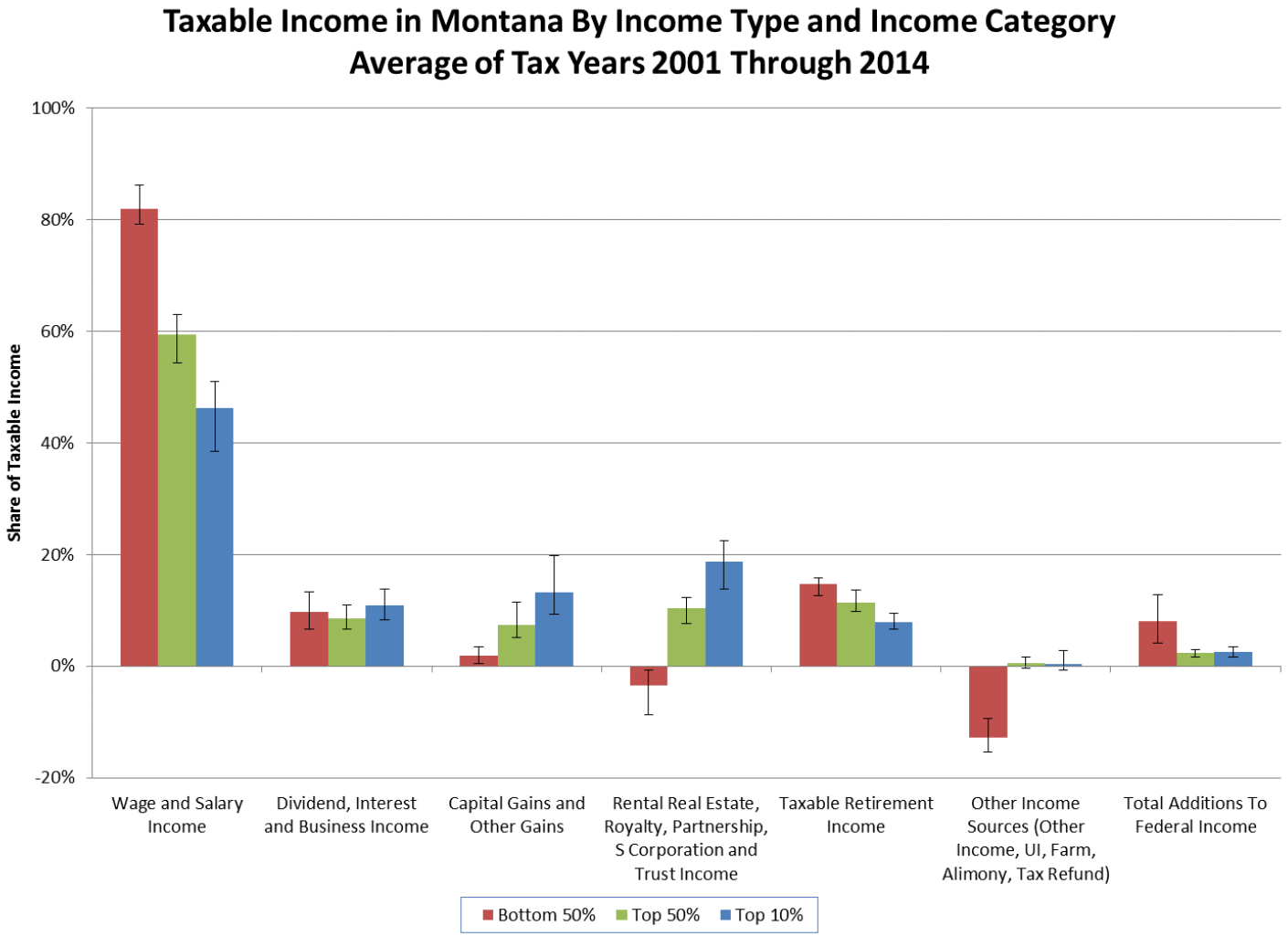

Taxable Household Income In Montana By Decile
2014 Dollars
$12,000
$10,000
$8,000
$6,000
$4,000
$2,000
$0
($2,000)
Taxable Household Income (Millions of Dollars)
1
2
3
4
5
6
7
8
9
10
Household Income Decile
2001
2007
2014

Share of Total Taxable Income By Deciles
2001 through 2014



What Did I Find?

- I also broke down the decile income amounts by income type.
  - Wage and salary income comprises a larger portion of income for households in the lower income deciles.
    - Bottom 50% of households: 80.3% in 2001 and 2014
    - Top 50% of households: 61.6% in 2001 and 57.9% in 2014
  - Dividend, capital gains, real estate, partnership and S corporation income comprises a larger portion of income for households in the upper income deciles.
    - Bottom 50% of households: 14.4% in 2001 and 7.5% in 2014
    - Top 50% of households: 24.9% in 2001 and 26.6% in 2014

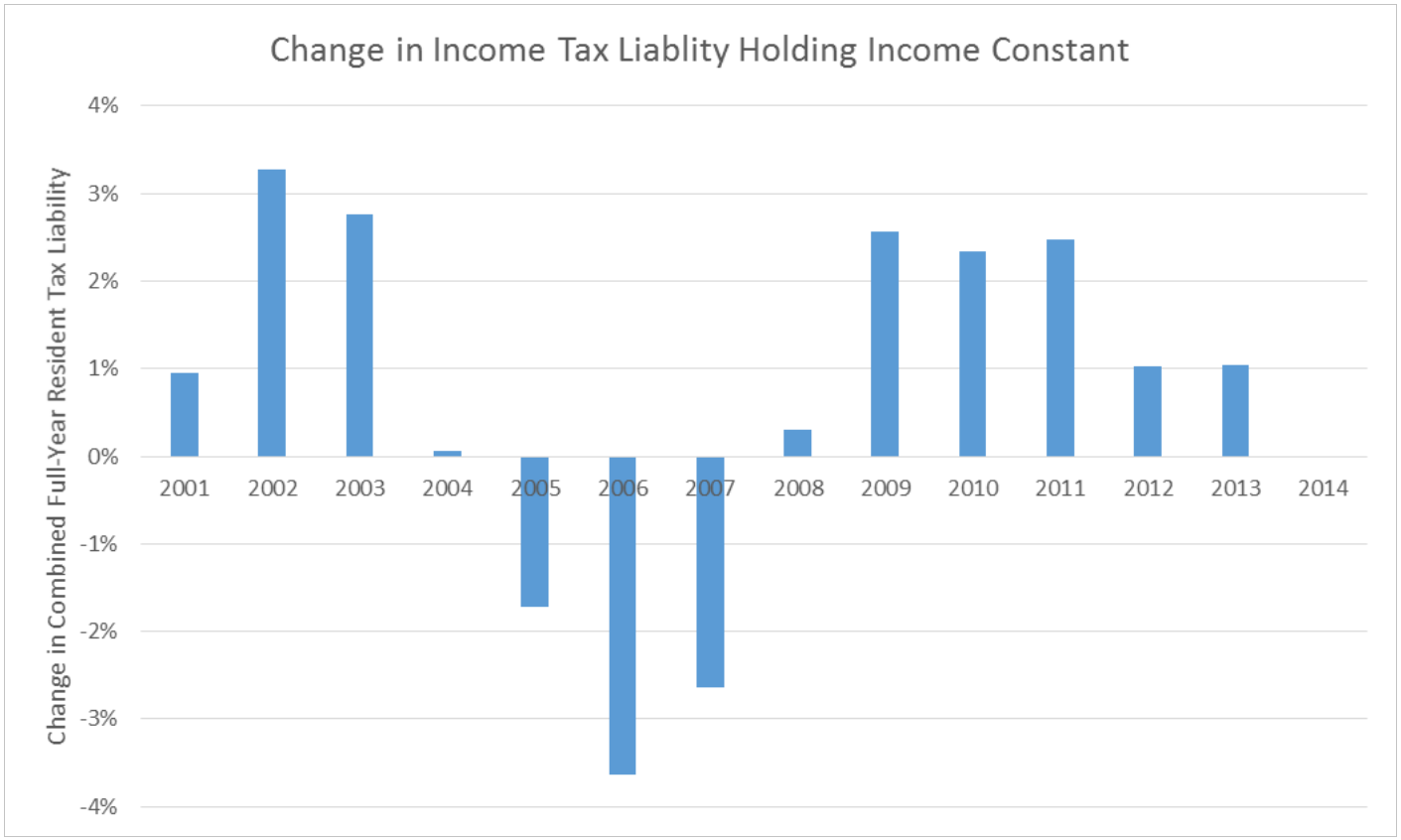

Taxable Income in Montana By Income Type and Income Category
Average of Tax Years 2001 Through 2014
Share of Taxable Income
100%
80%
60%
40%
20%
0%
-20%
Wage and Salary Income
Dividend, Interest and Business Income
Capital Gains and Other Gains
Rental Real Estate, Royalty, Partnership, S Corporation and Trust Income
Taxable Retirement Income
Other Income Sources (Other Income, UI, Farm, Alimony, Tax Refund)
Total Additions To Federal Income
Bottom 50%
Top 50%
Top 10%

Potential Implications

- Changes to the distribution of incomes has the potential to impact personal income tax revenue.
  - With Montana's progressive tax structure, tax revenues as a share of income will increase will any given amount of income as the share of income shifts from low-income to high-income households.
  - The type of income earned also has the potential to impact income tax revenue in Montana. For example, the state currently allows a 2% credit on capital gains income.
- How much of an impact does changes in incomes impact revenue?

Revenue Impact

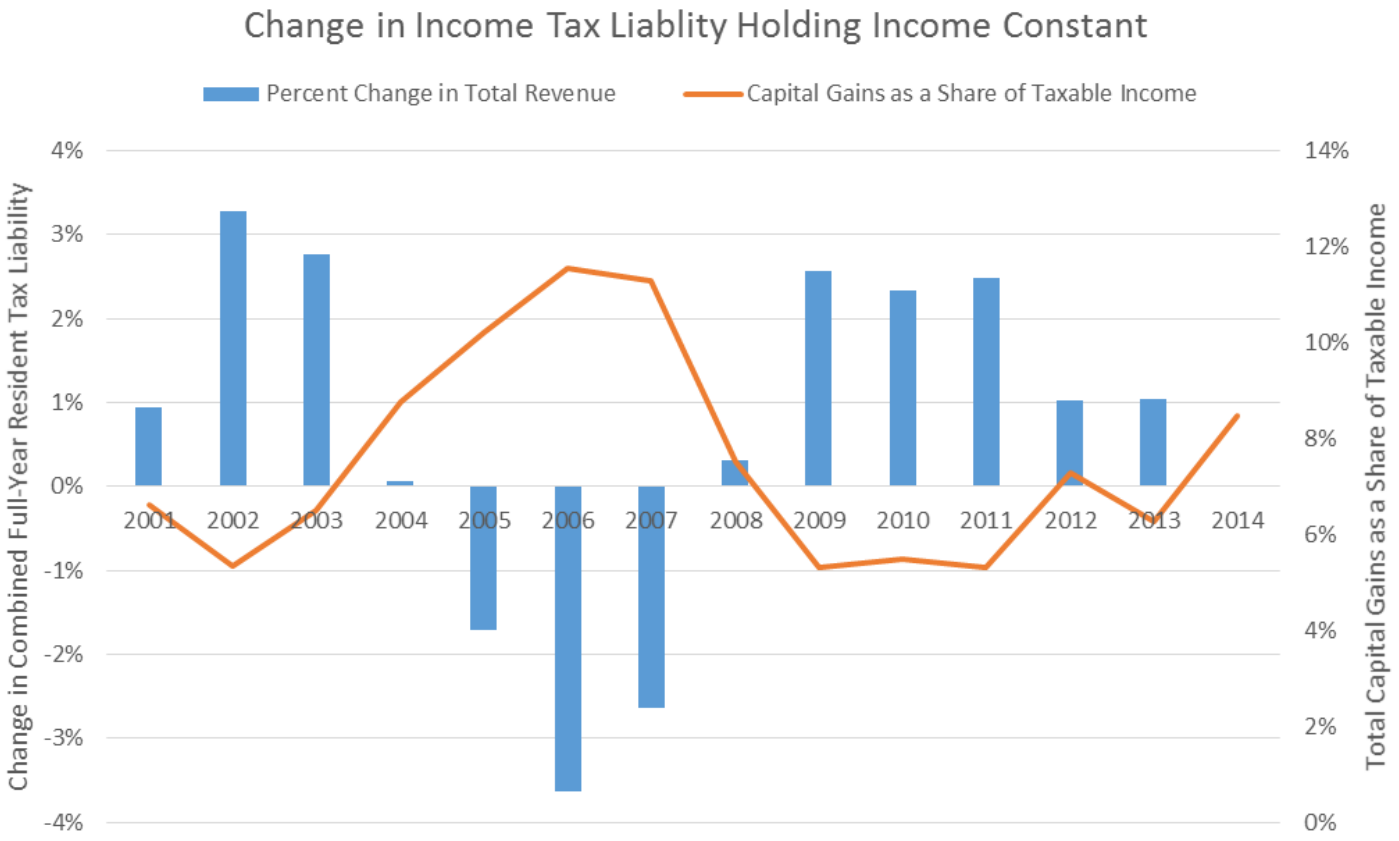
- What impact does the distribution of incomes have on total income tax liability?
  - Using 2014 income tax returns, and Montana's income tax model, I estimated the combined tax liability of Montana's households based on income distributions in previous years.
  - Only the distribution of incomes, across deciles and income types, is changed. The combined value of incomes is held to its 2014 level.
- With these changes, there are real, but relatively minor, changes in income tax liability.
  - Up to a 3.3% increase in some years
  - Up to a 3.6% decrease in other years

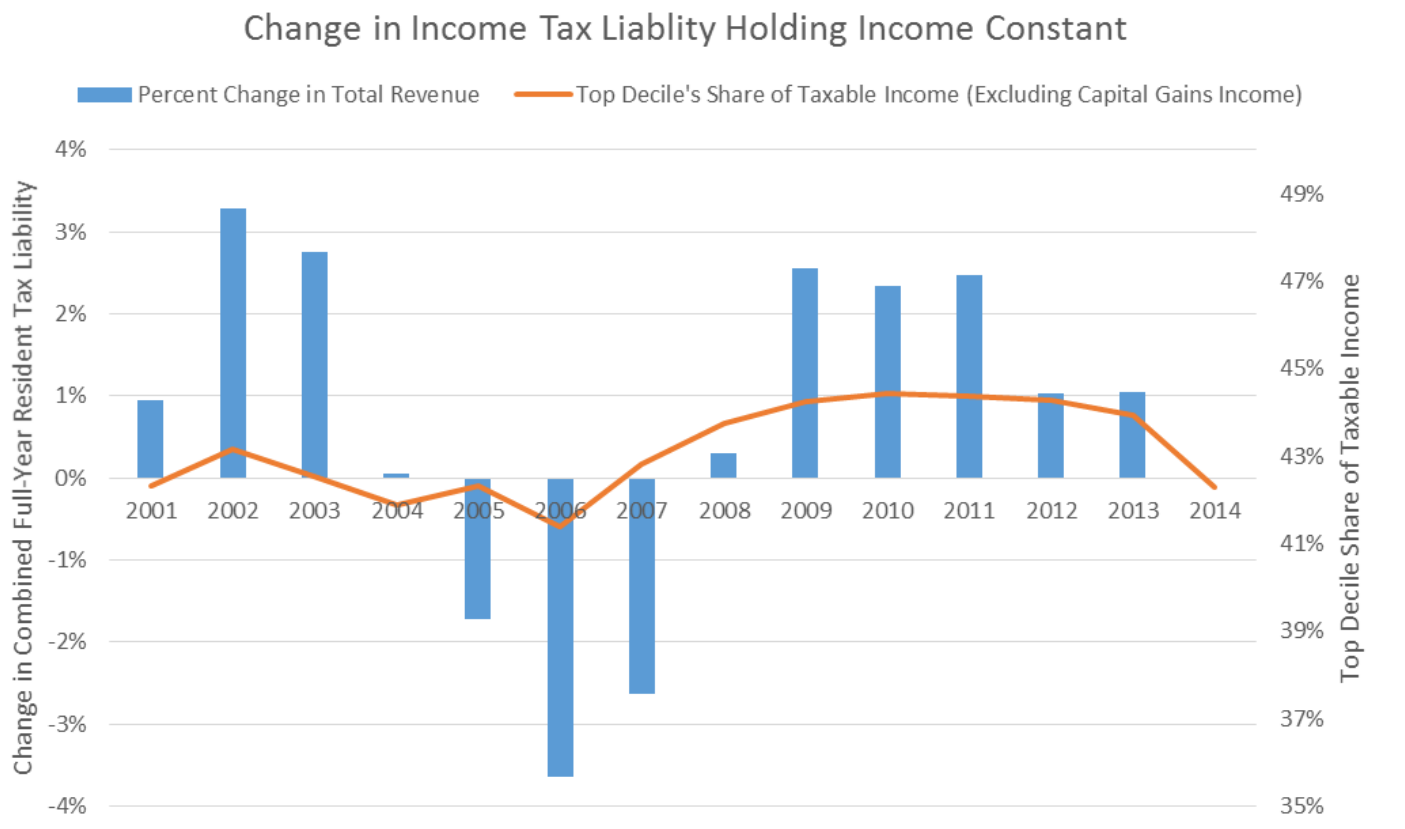

Change in Income Tax Liablity Holding Income Constant
Change in Combined Full-Year Resident Tax Liability
4%
3%
2%
1%
0%
-1%
-2%
-3%
-4%
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014

Revenue Impact

- Most of the change is due to changes in the type of income reported, namely capital gains income.

- However, a portion of the change is due to changes in the distribution of the income as well.


Change in Income Tax Liablity Holding Income Constant
Percent Change in Total Revenue
Capital Gains as a Share of Taxable Income
Change in Combined Full-Year Resident Tax Liability
Total Capital Gains as a Share of Taxable Income
4%
3%
2%
1%
0%
-1%
-2%
-3%
-4%
14%
12%
10%
8%
6%
4%
2%
0%
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014


Change in Income Tax Liablity Holding Income Constant
Percent Change in Total Revenue
Top Decile's Share of Taxable Income (Excluding Capital Gains Income)
Change in Combined Full-Year Resident Tax Liability
Top Decile Share of Taxable Income
4%
3%
2%
1%
0%
-1%
-2%
-3%
-4%
49%
47%
45%
43%
41%
39%
37%
35%
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014

Conclusion

- The combined income of all income deciles increased from 2001 to 2014.
  - The top decile had the largest increase in reported taxable income, with an increase of approximately $3.6 billion.
  - However, households in the top decile reported the only decrease in combined incomes from 2007 to 2014, with a decrease of $363 million.
- Income is relatively unequally distributed.
  - Top 10 percent of households reported 39.5 percent of taxable income in 2001 and 41.3 percent in 2014.
- Changes to the distribution of income, as well as it sources, has the potential to impact income tax revenue.
  - Estimated revenue impacts of between a 3.6% decrease or a 3.3% increase in revenue