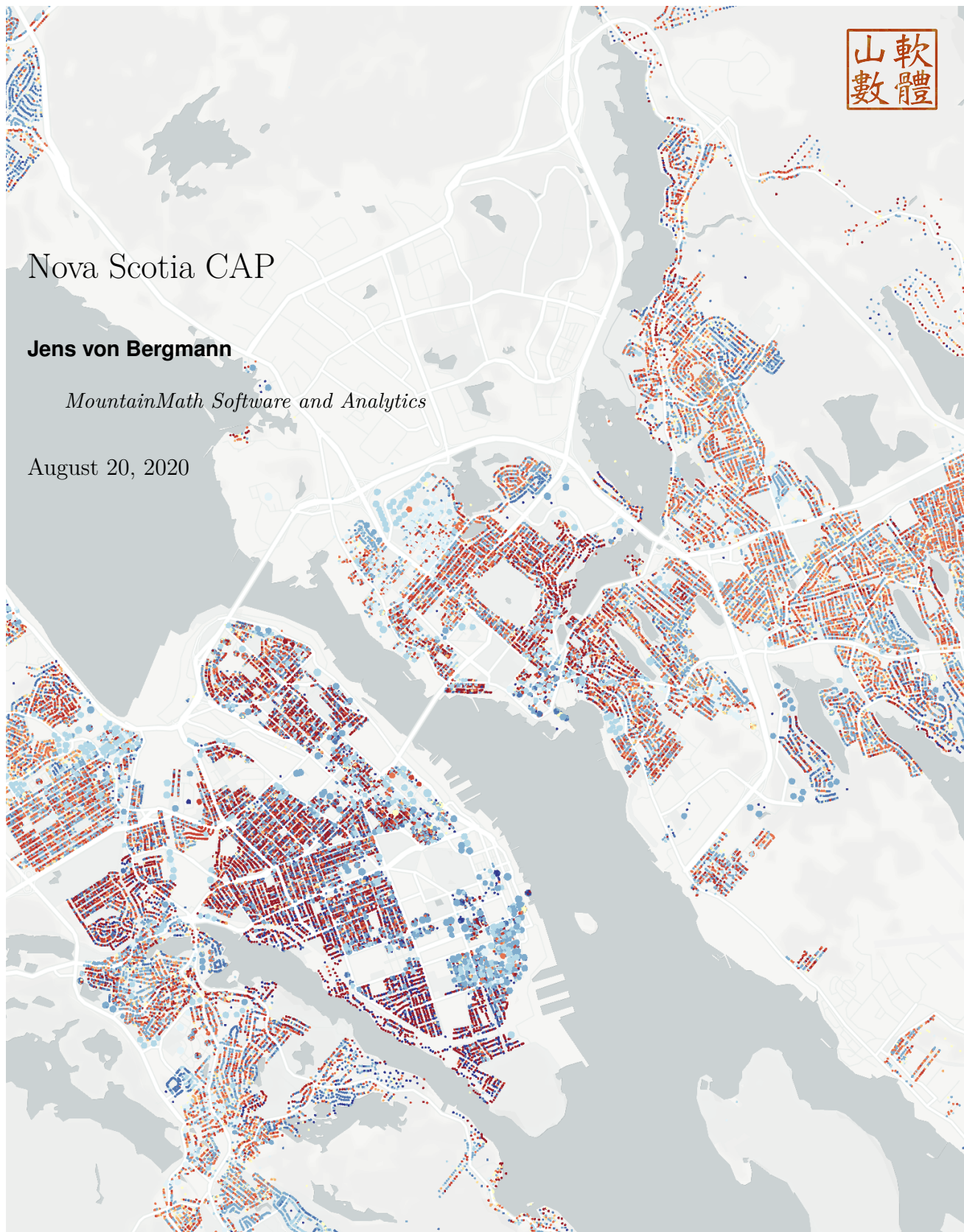


Nova Scotia CAP

Jens von Bergmann

MountainMath Software and Analytics

August 20, 2020



In 2005 Nova Scotia introduced a cap on property taxes (CAP), back-dated to 2001, that caps eligible residential property assessments for the purpose of calculating property taxes. The capping rate was set to inflation (NSCPI) in 2007.

1 Property taxes

Property taxes pay for municipal as well as portions of some provincial services, the latter including schools. The total amount of property taxes to be collected is determined by budgetary requirements, and this total is split among properties proportional to the assessed property, possibly depending on the property class (commercial, residential, resource).

This is usually expressed through the tax rate

$$\text{tax rate} = \frac{\text{Municipal Budget}}{\text{Aggregate assessed property value}}$$

with the tax payable by an individual property owner calculated via

$$\text{tax due} = \text{tax rate} \times \text{assessed property value}$$

In general the formula gets a bit more complicated, part of the municipal budget might get covered by user fees, the provincial portion of the property tax gets added on, and commercial properties, which generally get taxed at a higher rate, shift some of the tax load.

2 Nova Scotia CAP

The Nova Scotia CAP changes the above equation on how taxes are calculated by limiting increases in the assessed property value used for taxation purposes for eligible properties. Eligible properties in Nova Scotia have two assessed values, the *assessed value* given by the estimated market value of a property, and the *taxable assessed value* that is the lesser of the assessed value and the inflation-adjusted assessed value taken at the time of purchase of the property.

With some properties getting taxed at a lower *taxable assessed value* the above equation for the tax rate gets modified with the aggregate *taxable assessed value* in the denominator, which increases the tax rate.

$$\text{CAP tax rate} = \frac{\text{Municipal Budget}}{\text{Aggregate taxable assessed property value}}$$



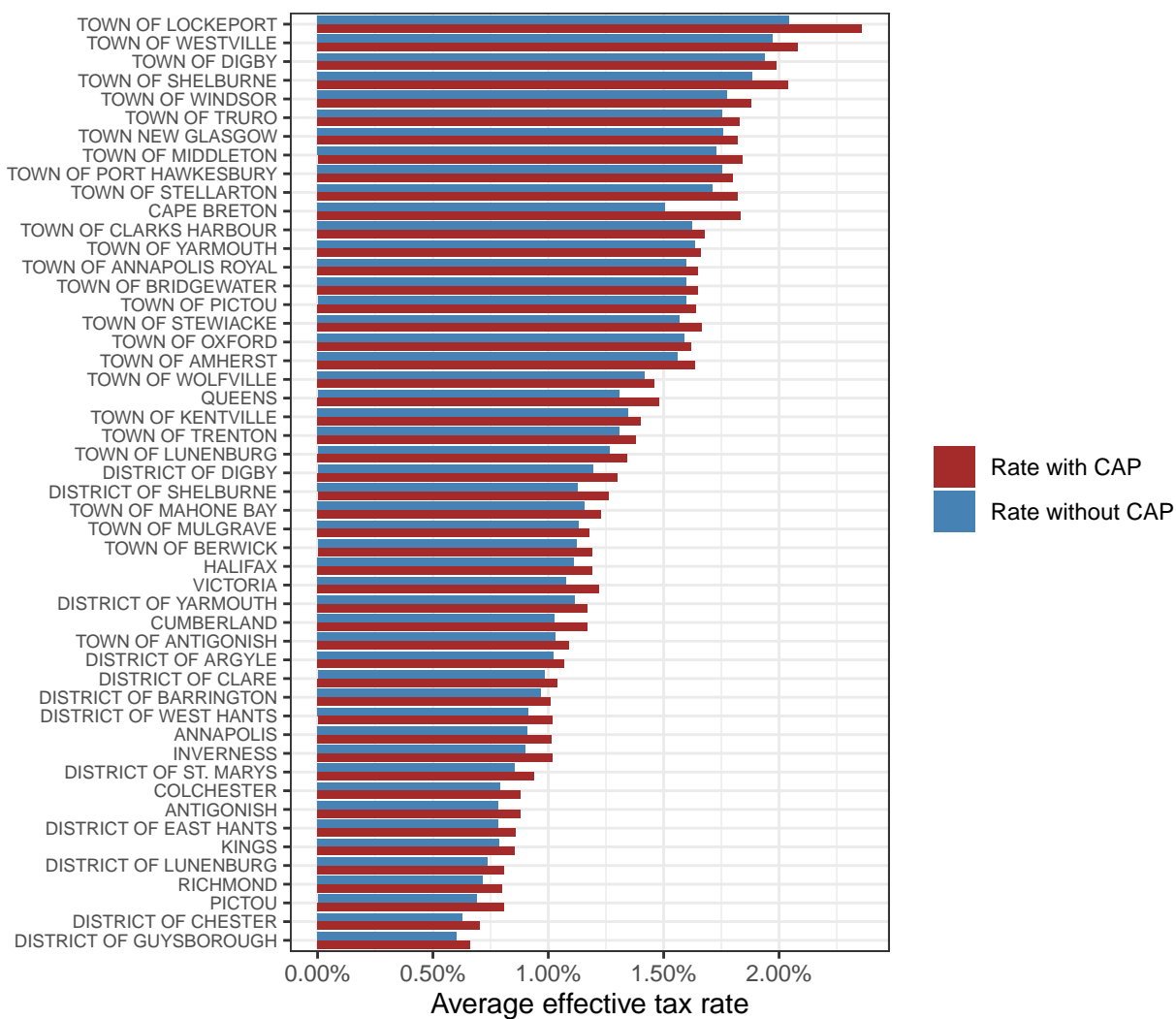
This in turn raises the property taxes for everyone not benefiting from the CAP where the *taxable assessed value* is the same as the *assessed value*.

$$\text{CAP tax due} = \text{CAP tax rate} \times \text{taxable assessed property value}$$

The CAP applies to **eligible properties** which includes detached houses and owner-occupied condominiums, but categorically excludes rental apartments, as well as rented or vacant residences in condos.

The tax rates, and by how much CAP raises them, varies by municipality.

Average effective residential tax rates in Nova Scotia 2019



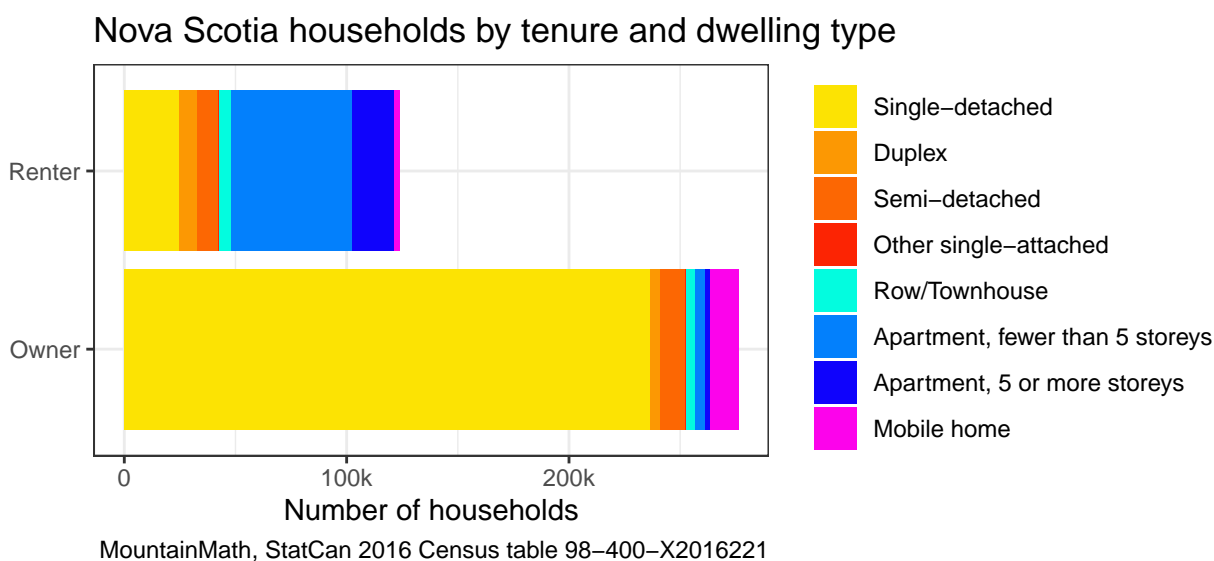
MountainMath, Nova Scotia Open Data

This raises two questions, one about the **social equity of CAP** and one about **behaviour change due to CAP**.

3 Social equity of CAP

By design, non-condo homeowners who bought a long time ago, as well as long-time owner-occupying condo owners, profit from CAP through lower property taxes, whereas renters in apartments and condos, as well as recent homeowners, pay higher property taxes. Recent owners pay the higher property taxes directly. Renters pay them indirectly as landlords are more inclined to raise rents on longtime renters when their expenses increase, as well as via downward pressure on overall rental supply (and subsequently on rents) by making investment in new rental properties less attractive.

The categorical exclusion of most renter households from benefiting from CAP gives a straight-forward way to understand some of the equity implication of the Nova Scotia assessment cap.



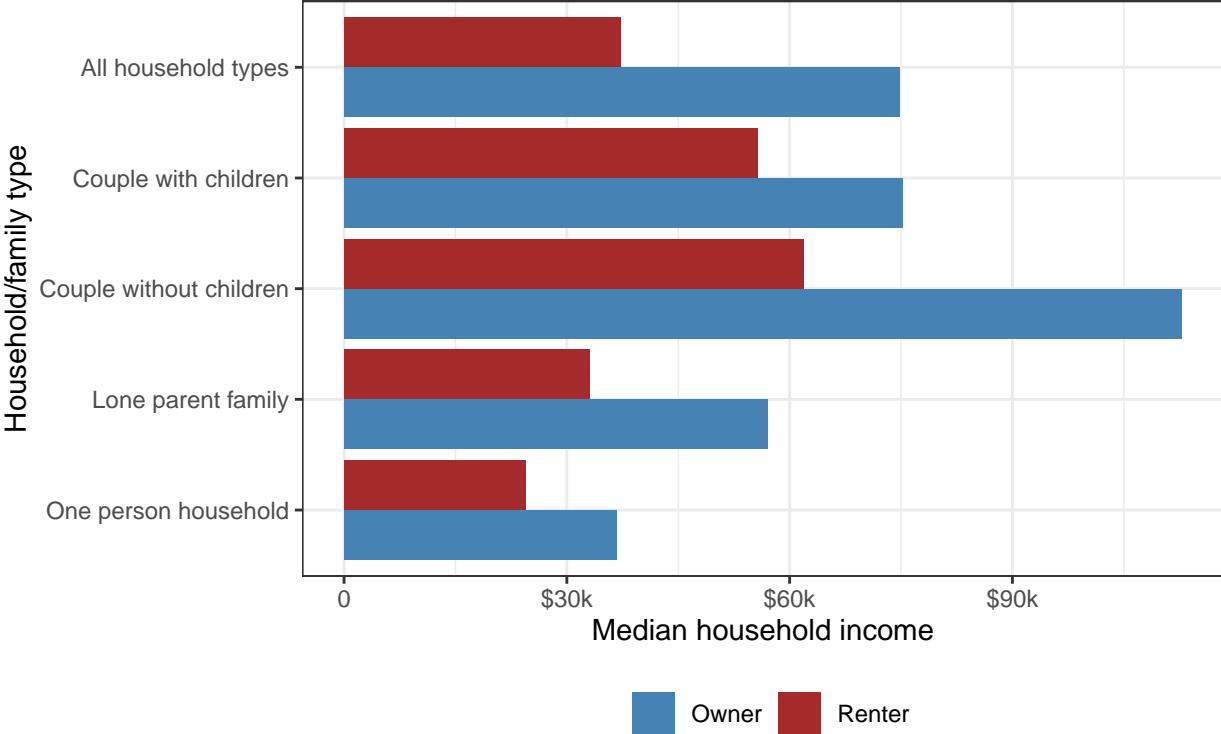
Renter households in Nova Scotia live in a mixture of dwelling types, with low-rise apartments being the most prevalent one. The vast majority of owner households lives in single-detached homes.

CAP applies differently to condominium units. Only 3% of the occupied dwelling stock is strata titled.

While the vast majority of renter households are categorically excluded from benefiting directly or indirectly from the Nova Scotia CAP, renter households tend to have incomes that are substantially lower than that of similar owner households.



Nova Scotia median income by tenure and household type



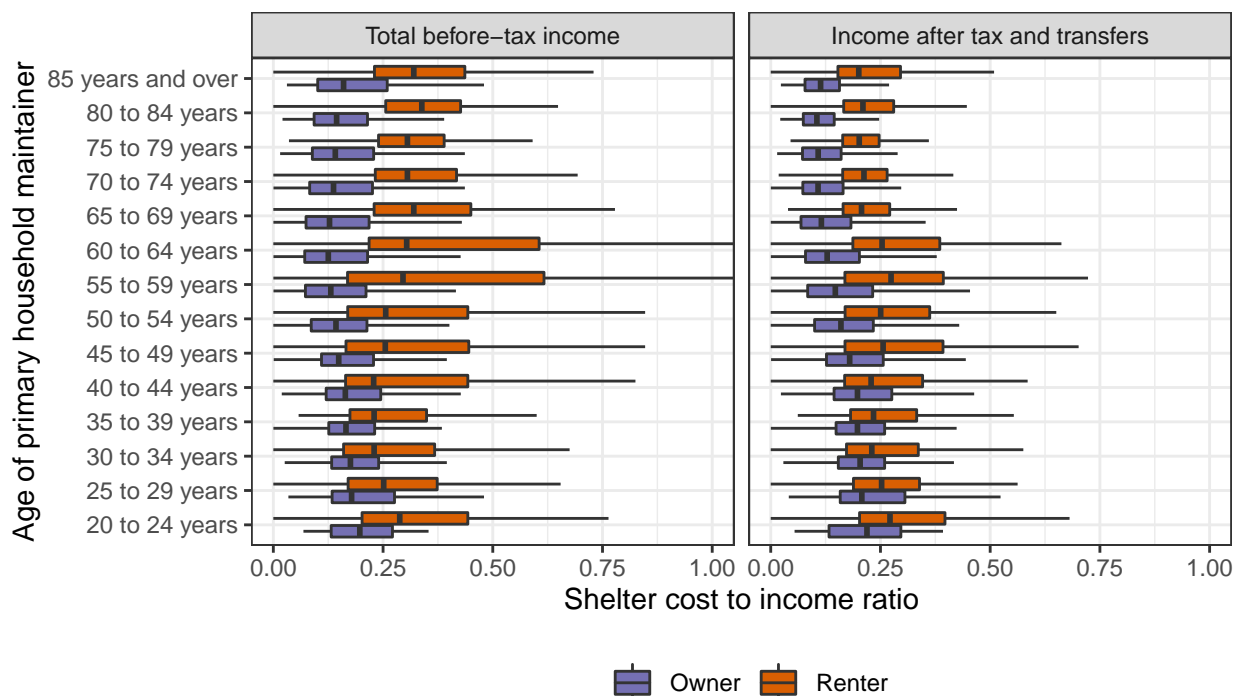
MountainMath, StatCan Census 2016 table 98-400-X2016225

However, we have seen that some renters, in particular those in (non land-strata) single detached homes, indirectly profit from CAP, so those deserve special attention. Microdata shows that the median income of the 20% of renters in (non-land strata) single detached homes is 13% higher than the income of renters in other dwellings, reconfirming that households with higher incomes stand to profit from CAP.

Income is not the only metric of importance, ability to pay also matters. In particular, ability to pay may impact seniors that no longer have employment income. On the other hand, seniors that own their home often have lower shelter costs as they are more likely to be mortgage-free. The distribution of shelter cost to income ratios can help shed light on this. Generally people focus on shelter cost to total household income ratios, which is the metric traditionally employed by the Canada Mortgage and Housing Corporation (CMHC), but sometimes people also consider income after tax and transfers as an alternative metric. The graph below includes both and looks separately at owner and renter households. Shelter costs for owner households include mortgage payments, utilities, condominium fees and property taxes. Shelter costs for tenant households include rent and utilities.



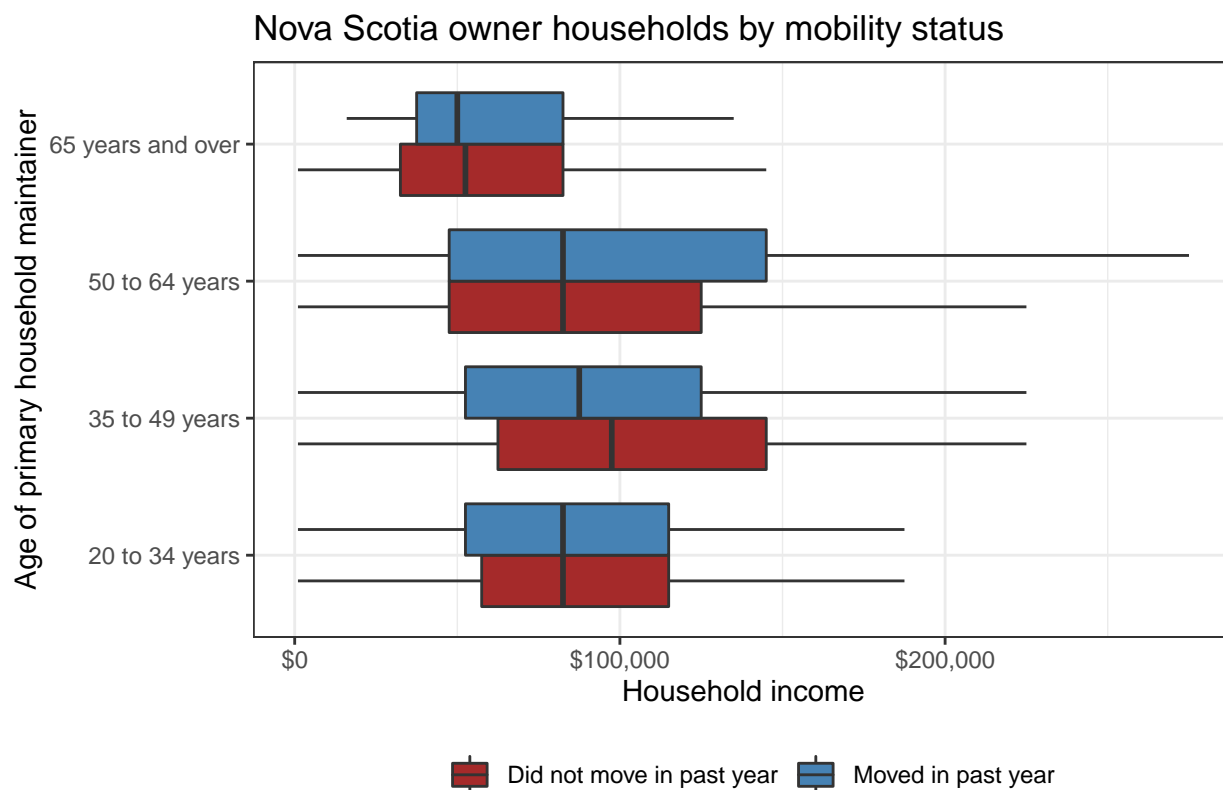
Nova Scotia shelter-cost-to-income ratios
(non-student households)



MountainMath, StatCan 2016 Census PUMF

Again, the distribution of shelter-cost-to-income ratios for renter households lies consistently above that of owner households in each of the age groups, sometimes substantially so. There is little indication that Nova Scotia senior households are in general more stressed to pay their shelter costs, especially when considering income after tax and government transfers.

The CAP favours owner households that have stayed in their residence for longer times over those that bought recently. The census does not have data on when owner households bought their home, but owner households that lived at a different address in the previous year is often seen as a good proxy for owner households that bought recently.



Grouping by rough age bands to avoid small sample sizes, we don't see a consistent pattern supporting the argument that recent buyers (proxied by owners that moved recently) have incomes that are different from the owner population that did not move.

4 Behaviour change

Changes in taxes impacts people's decisions by shifting costs associated with their choices. In the case of the Nova Scotia CAP the tax impacts decisions on residential mobility, tenure, re-development and new developments, especially rental housing. The tax is comparatively recent, and the overall amount of the tax shift is still relatively small compared to other transaction costs involved in the aforementioned decisions. Despite anecdotal evidence that the Nova Scotia CAP impacts owners' decisions on whether or not to move, we could not find conclusive evidence of behaviour change (or the lack thereof) in census, taxfiler, or construction data. But places with similar legislation that has been in place for longer, like California's Prop 13, can show what one might be able to expect from the Nova Scotia CAP if left in place.

Fernando Ferreira showed that California's Prop 13 reduced residential mobility of owners, which may negatively impact labour mobility (Ferreira [2010]). At the same time, a reduction of residential mobility could also be interpreted as stability when it is the result of

a reduction in involuntary moves. This question was investigated by Isaac William Martin and Kevin Beck, who analyzed potentially gentrifying areas across several states and found no measurable impact of property assessment caps on involuntary moves of owners ([Martin and Beck \[2018\]](#)).

While individual implementations of property assessment caps differ across jurisdictions, the experience from places with longer-running property assessment caps are a point of caution that the Nova Scotia assessment cap may face increasing negative consequences on residential mobility in the future without meaningfully reducing involuntary moves.

5 Conclusion

The Nova Scotia CAP is problematic from both the equity perspective, as well as in regards to the possible impact on behaviour.

By excluding renter households, the Nova Scotia CAP is a regressive tax policy. It systematically favours higher incomes households, and households with a lower shelter-cost burden. While adverse impacts on residential mobility is mostly anecdotal at this point, experience from other jurisdictions shows that adverse effects on residential mobility may increase to measurable levels in the future if the gap between capped and uncapped assessments widens.

Phasing out the Nova Scotia CAP will likely increase overall equity and enhance residential mobility. As with any tax change there will be winners and losers, and phasing out the Nova Scotia CAP may in rare cases result in involuntary moves by those currently benefiting from the CAP. While these cases are rare, they may pose a concern to policy makers. A property tax deferral program that allows for deferral of the difference of the phased out property tax to the capped tax before the phase-out could address those concerns.

Acknowledgement

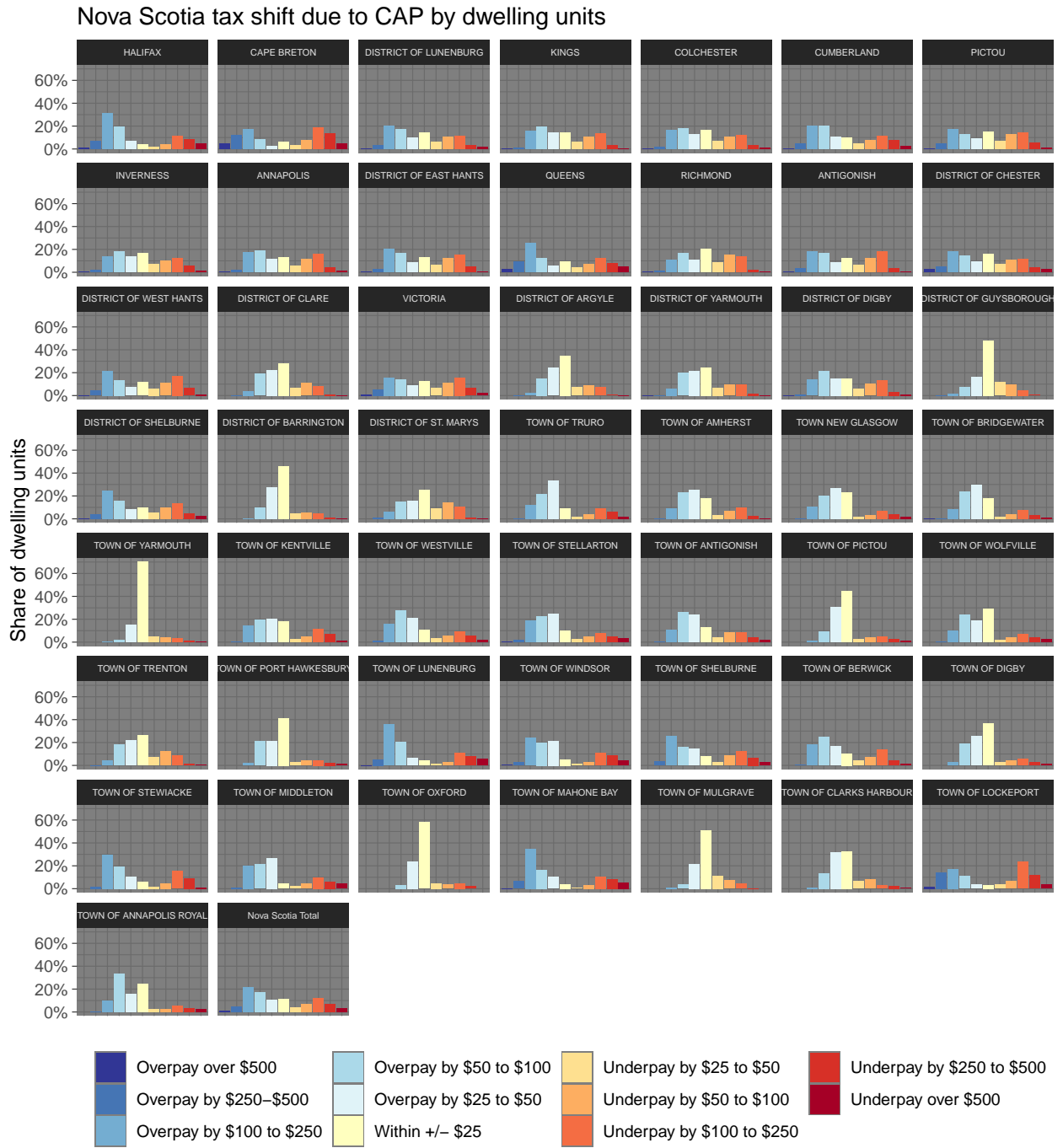
This report was supported through funding from the Nova Scotia Federations of Municipalities, Association of Municipal Administrators Nova Scotia, Nova Scotia Association of Realtors, and Investment Property Owners Association of Nova Scotia.

A Appendix

This appendix serves to collect summary statistics of the tax shift due to CAP for each municipality, as well as statistics about the distribution of renter households. An accompanying interactive map showing the tax shift for individual properties is available at https://nsfm.ca/cap_map.html.

A.1 Tax shift of dwelling units

Throughout we have focused on dwelling units instead of properties and have generally dropped properties without a residential component from our consideration. The impact on each individual dwelling unit in a rental apartment building is not known as taxes are only assessed at the entire building level, and we estimate the tax and tax shift for each unit by the average taxes paid per unit. The following graph depicts the distribution of tax shift for each residential unit. If there was a resource component attached to the property that is assessed based on value it was included in the tax shift calculation.

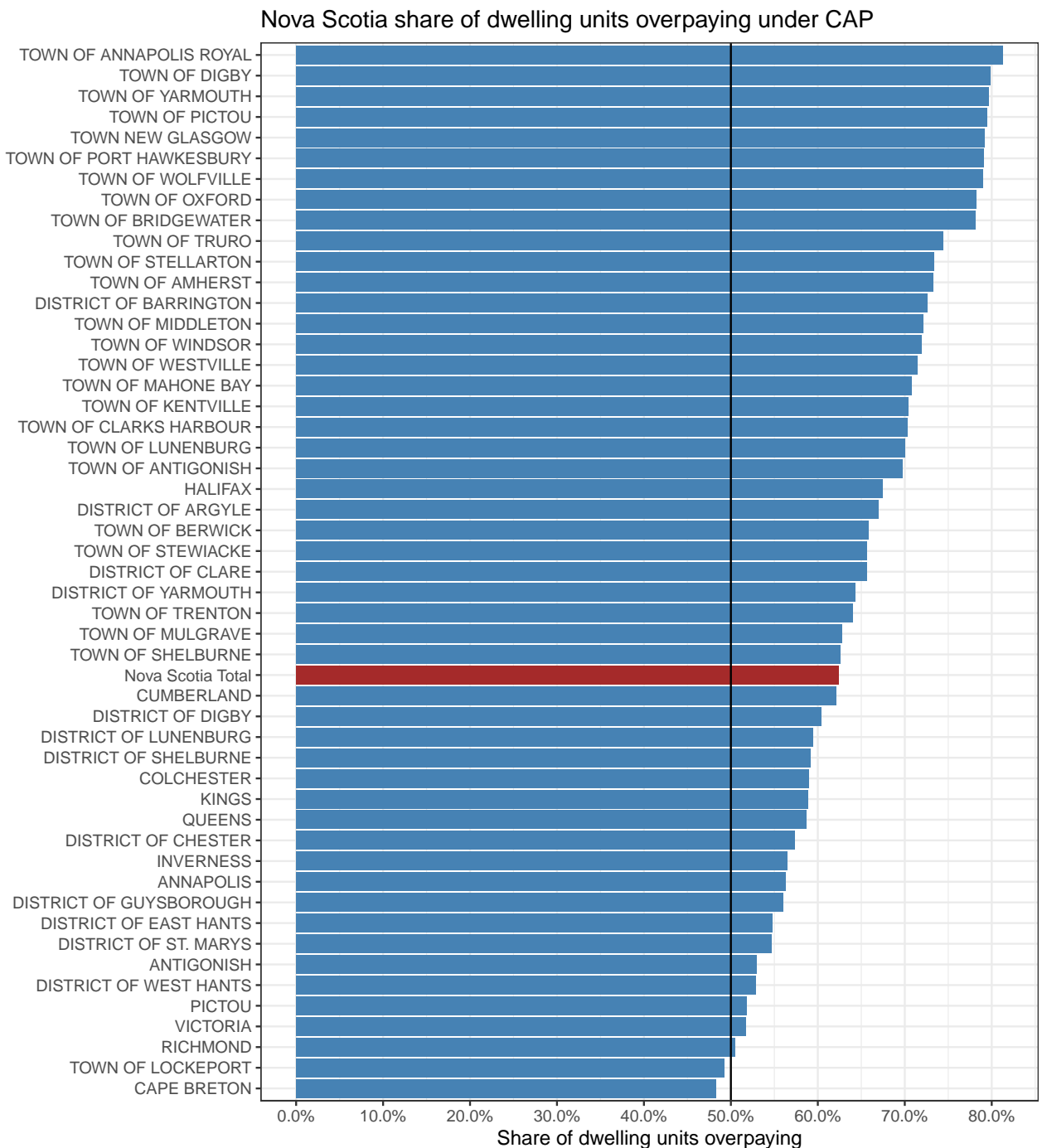


MountainMath, Data: PVSC



A.2 Share of dwelling units overpaying

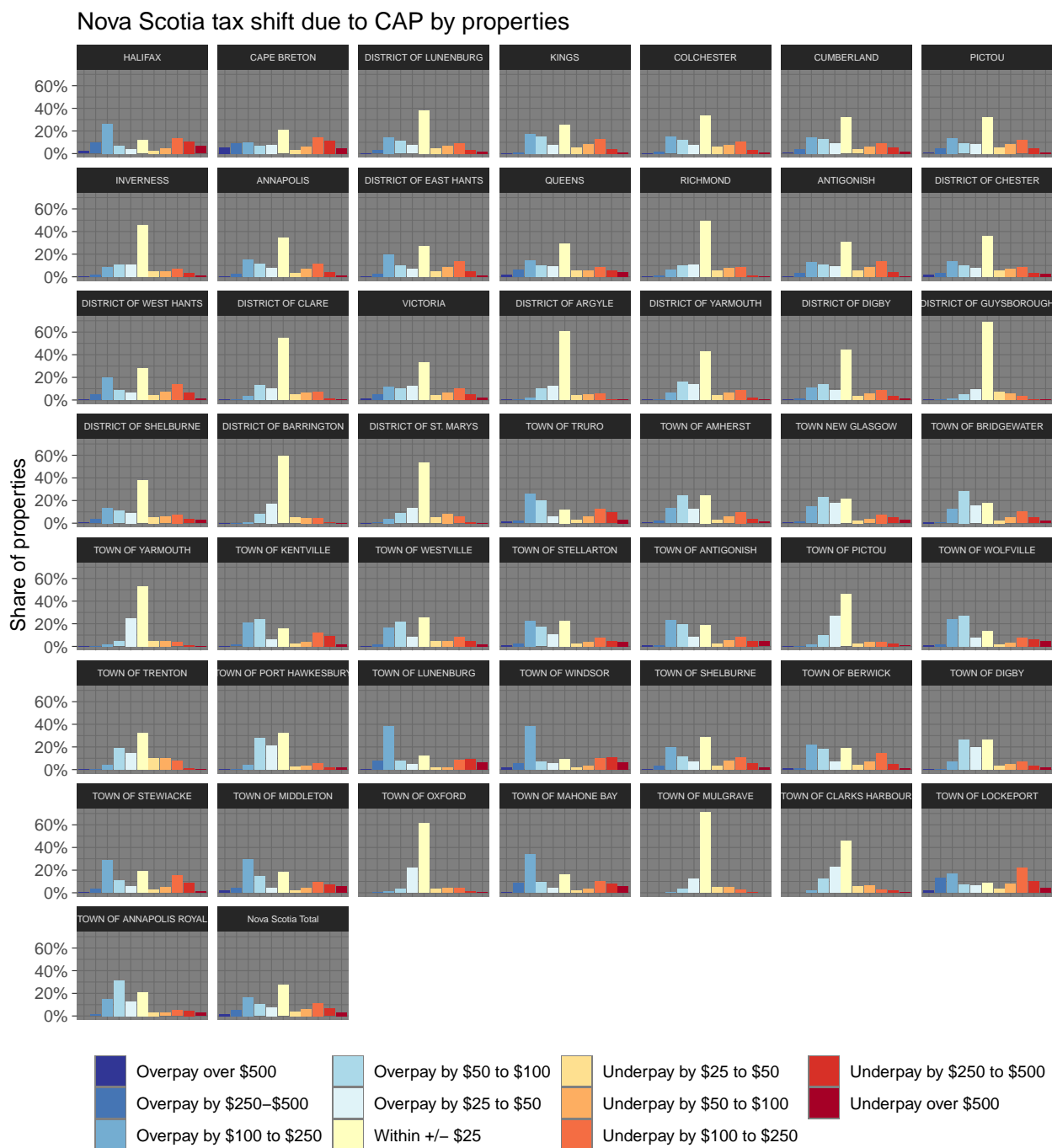
From the above graphs we already see that the distribution of dwelling units skews to more units overpaying than underpaying, which has be be made up for by some units underpaying by large amounts. To simplify the distribution further we show the share of dwelling units in each municipality that are overpaying under the Nova Scotia CAP.





A.3 Tax shift of properties

Another way to represent the data is to look at the tax shift by residential and resource properties instead of dwelling units. This view is useful from the perspective of municipal tax authorities and the revenue they are collecting, and it includes properties with pure resource and no residential uses.

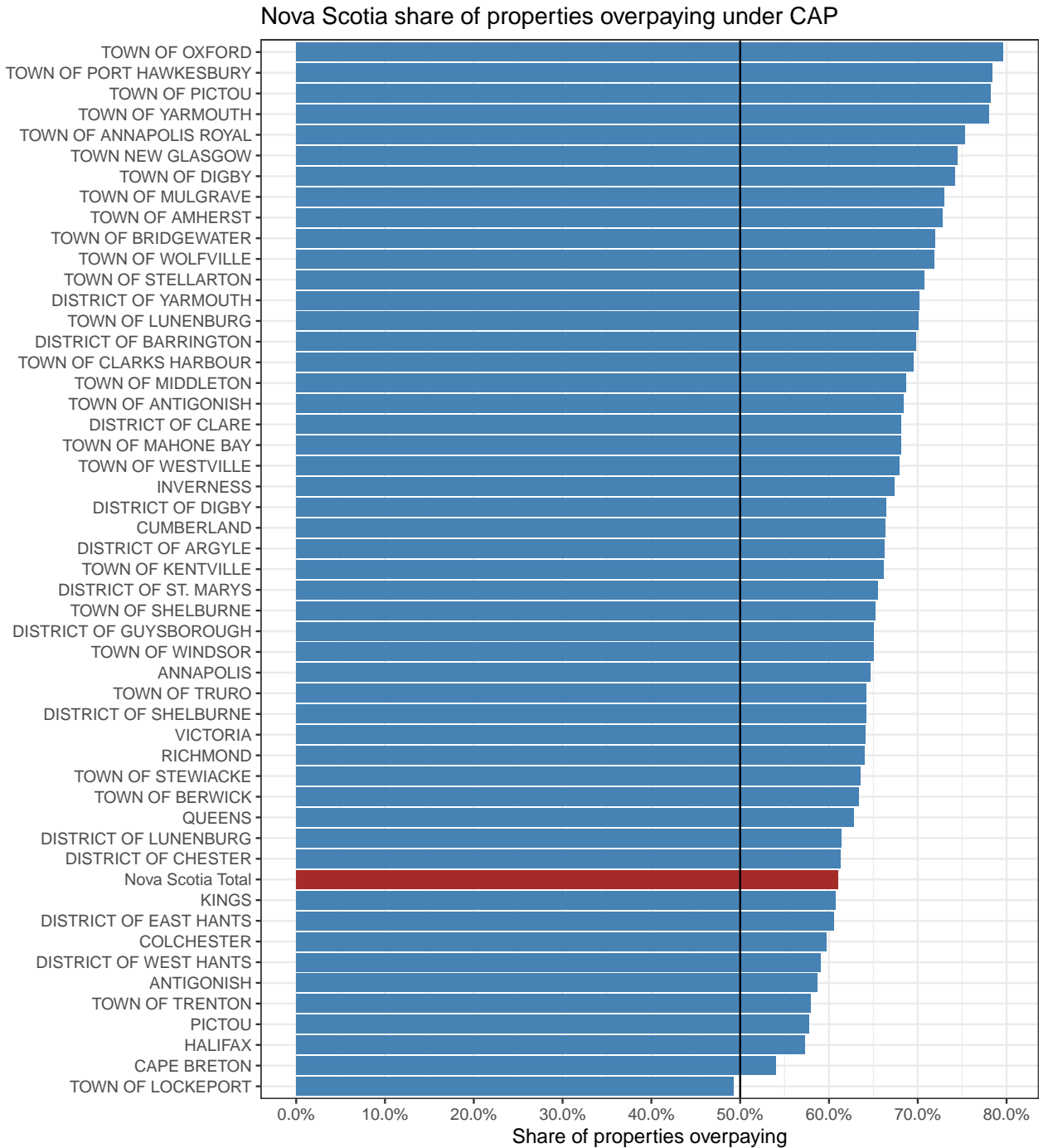


MountainMath, Data: PVSC



A.4 Share of properties overpaying

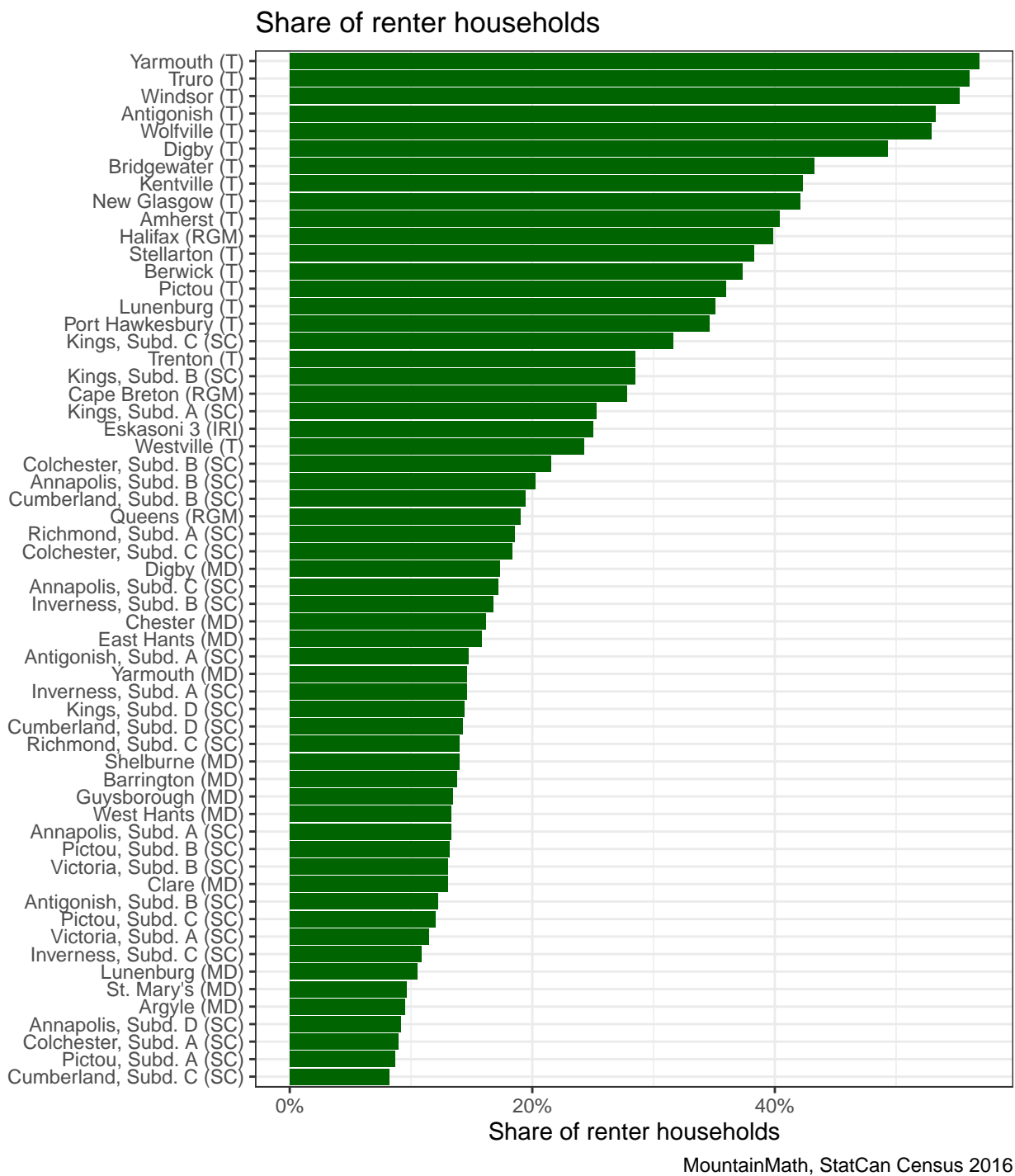
We again simplify the distribution further and consider how many properties are overpaying under the Nova Scotia CAP, with a similar result that more properties are overpaying than underpaying.





A.5 Share of renters across Nova Scotia municipalities

Renters play a special role as most of them are categorically excluded from benefiting from the Nova Scotia CAP. This graph gives a breakdown of the share of renter households by municipality.



References

- Fernando Ferreira. You can take it with you: Proposition 13 tax benefits, residential mobility, and willingness to pay for housing amenities. *Journal of Public Economics*, 94(9):661 – 673, 2010. ISSN 0047-2727. doi: <https://doi.org/10.1016/j.jpubeco.2010.04.003>. URL <http://www.sciencedirect.com/science/article/pii/S0047272710000435>.
- Isaac William Martin and Kevin Beck. Gentrification, property tax limitation, and displacement. *Urban Affairs Review*, 54(1):33–73, 2018. doi: 10.1177/1078087416666959. URL <https://doi.org/10.1177/1078087416666959>.