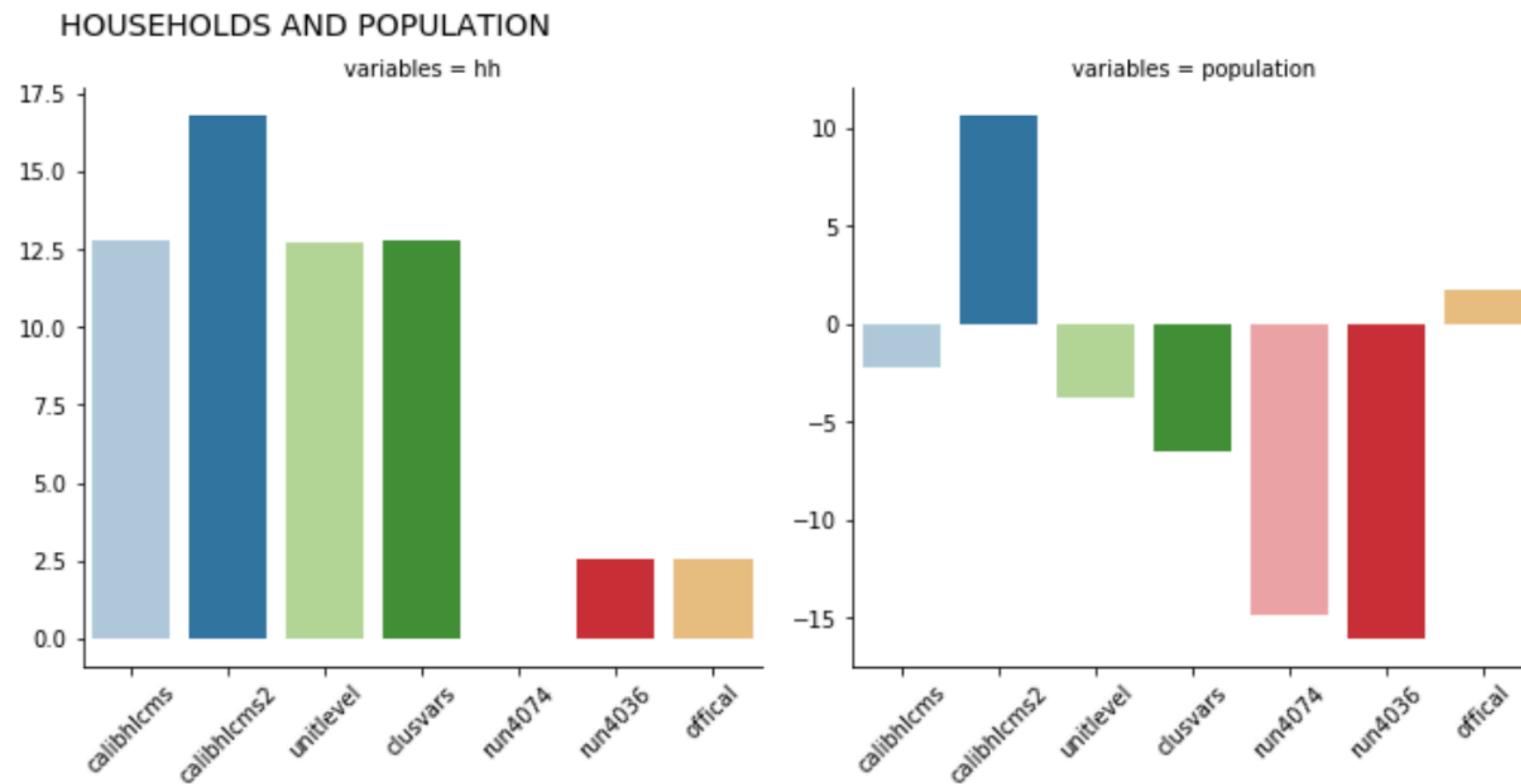


SEMCOG

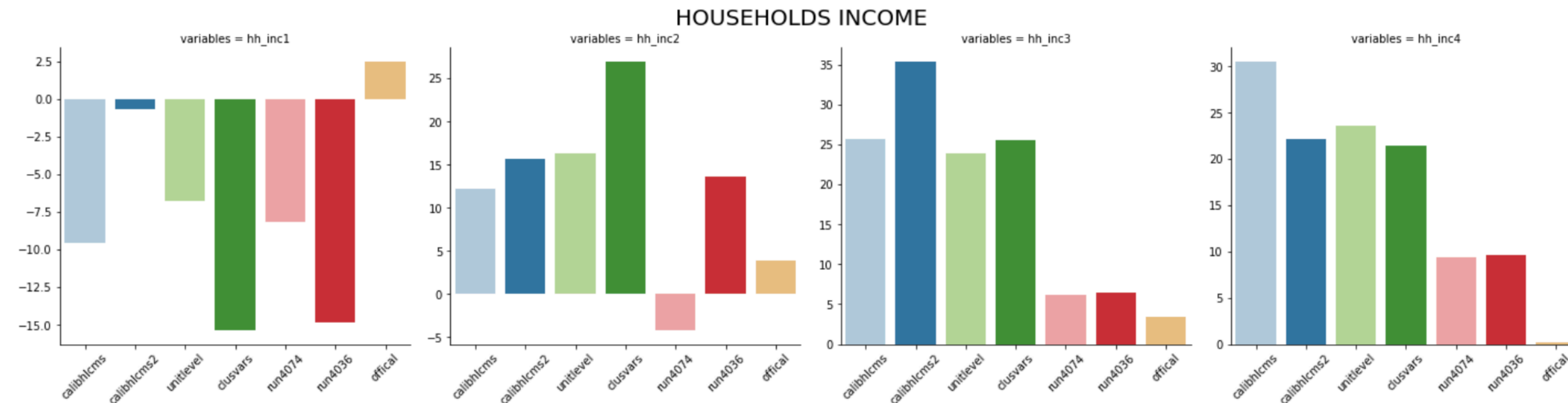
SIMULATION RUNS FOR 2045
MODELS' PERFORMANCES

CASE: DEARBORN CITY

- Comparison of runs

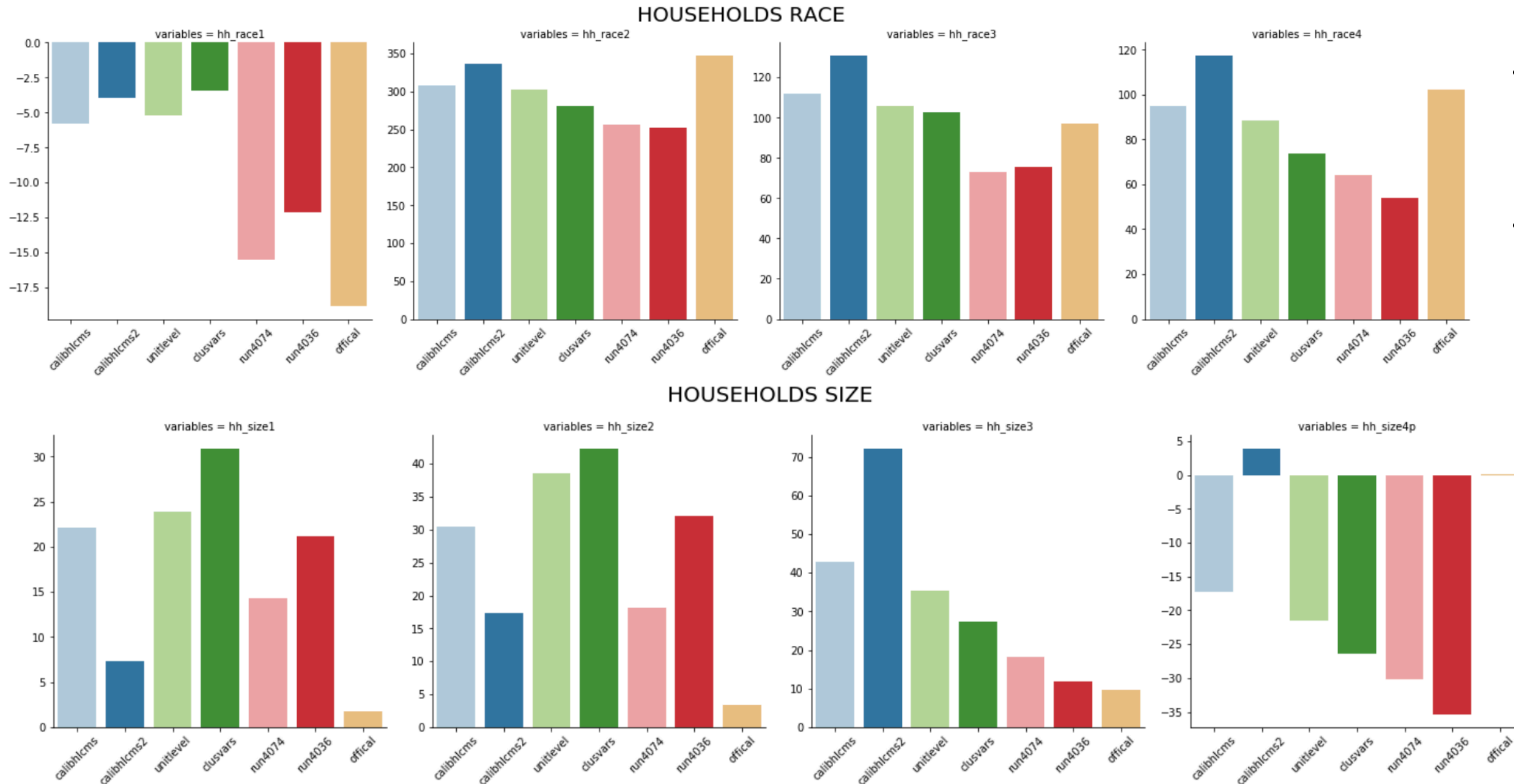


- Run 4074 and 4036 have similar percentages to the official forecast on hh but not on population
- Calibrated runs are not similar in hh but they are better in pop
- For hh and pop calibrated run 1 has similar percentages to the official forecast that calibrated 2



- For incomes 3 and 4, runs 4074 and 4036 have closest percentages.
- Calibrated runs have similar percentages in low income indicator.
- Calibrated run 2 has the lowest MSE in low income households
- For income 2, the calibrated 1 model has more similar positive percentage to the official

CASE: DEARBORN CITY

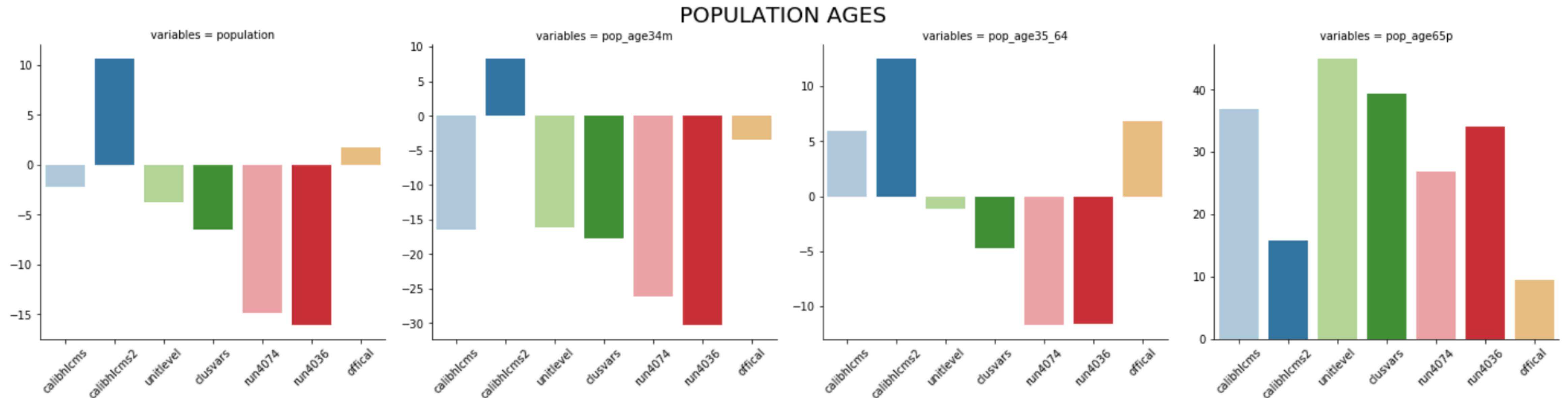


- Run 4074 and 4036 have similar percentages on races 1 and 3 but a larger difference on races 2 and 4.
- Calibrated runs are not good in race 1.

- Run 4074 and 4036 show the most similar percentages on hh size 3.
- Calibrated run 2 have more similar percentages in hh sizes 1, 2 and 4.
- Calibrated run 2 shows a big difference in hh size 3.

- For mean household size, calibrated 2 has is the closest value to the official one

CASE: DEARBORN CITY

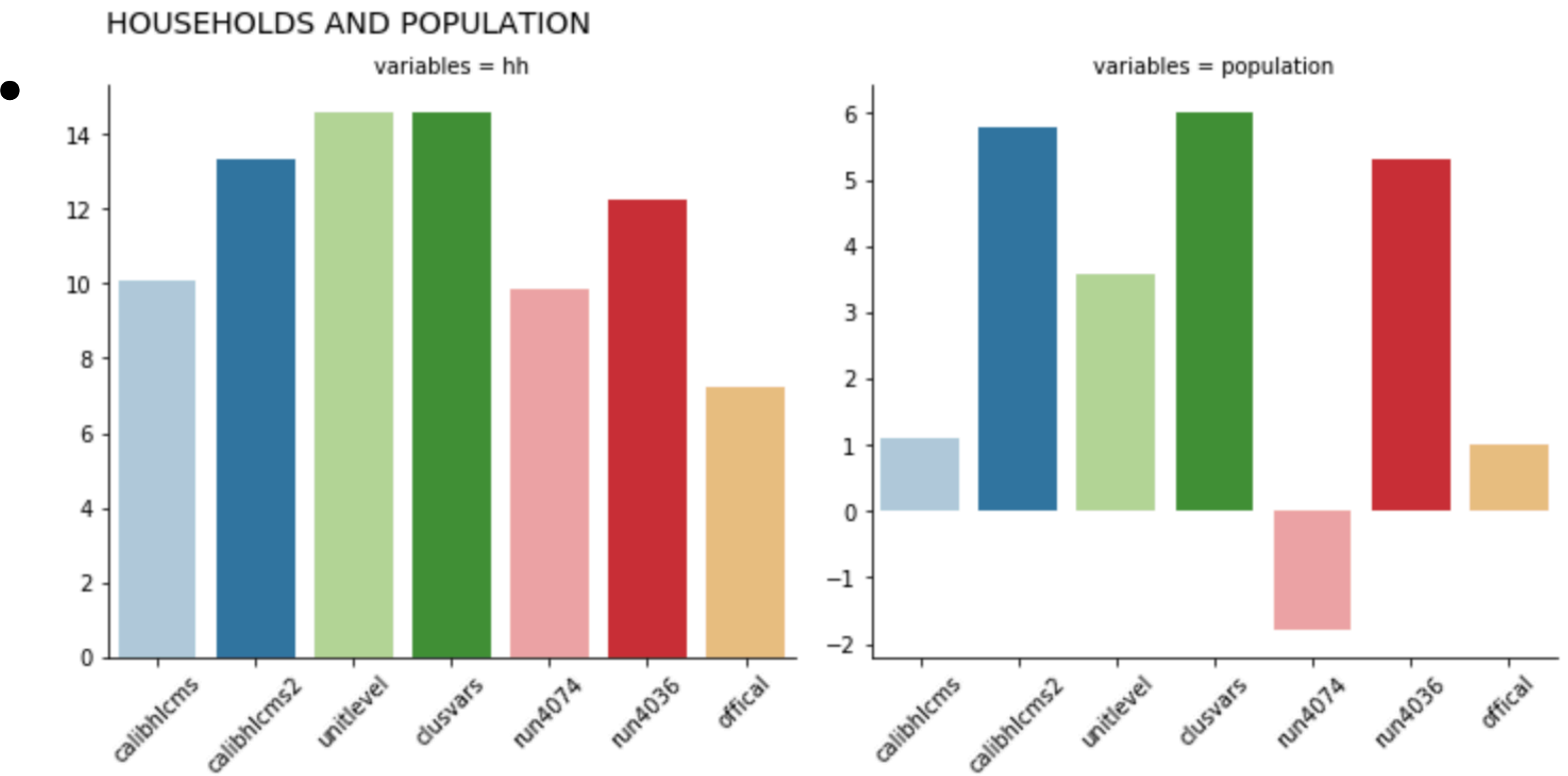


- Run 4074 and 4036 have higher difference in total population.
- For total population, calibrated run 2 is the only one that shows a positive percentage change as the official one.
- Calibrated run 2 has most similar percentages on the elderly values.

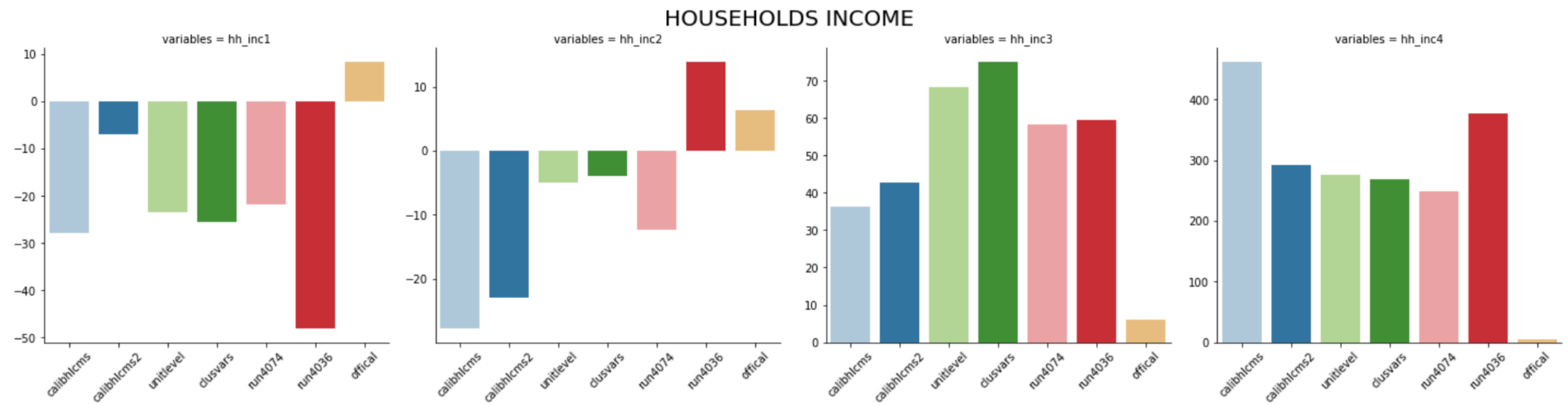
CASE: PONTIAC CITY

CITY:2215
Percentage Growth

INCOME: Pontiac (SEMMCD = 2215) is an urban declining city and has one of the lowest median incomes. However, over the forecast period, Pontiac is losing more than 4,000 HH (-38%) in income quartile 1 and gaining nearly 5,000 HH (371% increase) in income quartile 4. Same is the case with Southfield (2250).



- Calibrated runs seem to be growing much more the households
- Calibrated run 1 shows similar percentage growth as the official



- For all income segments, the calibrated runs show very different percentages than the official ones.

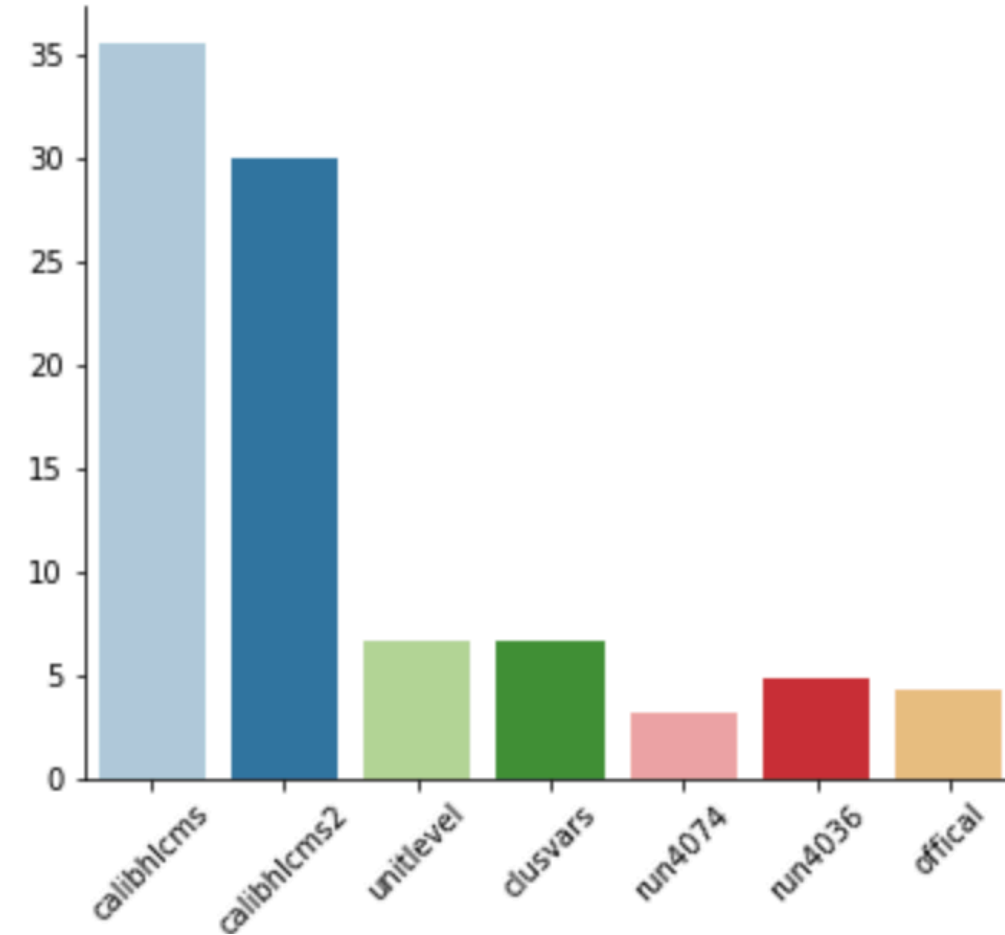
CASE: SOUTHFIELD CITY

CITY:2250

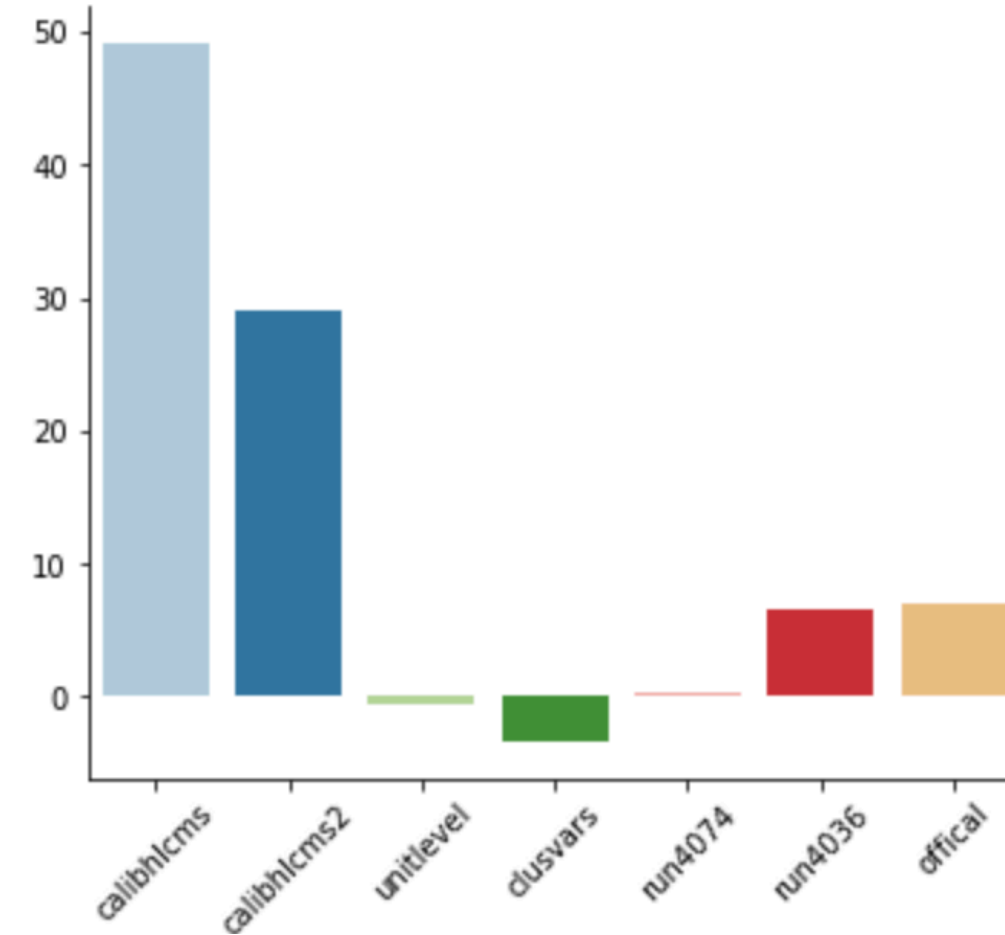
Percentage Growth MSE

HOUSEHOLDS AND POPULATION

variables = hh



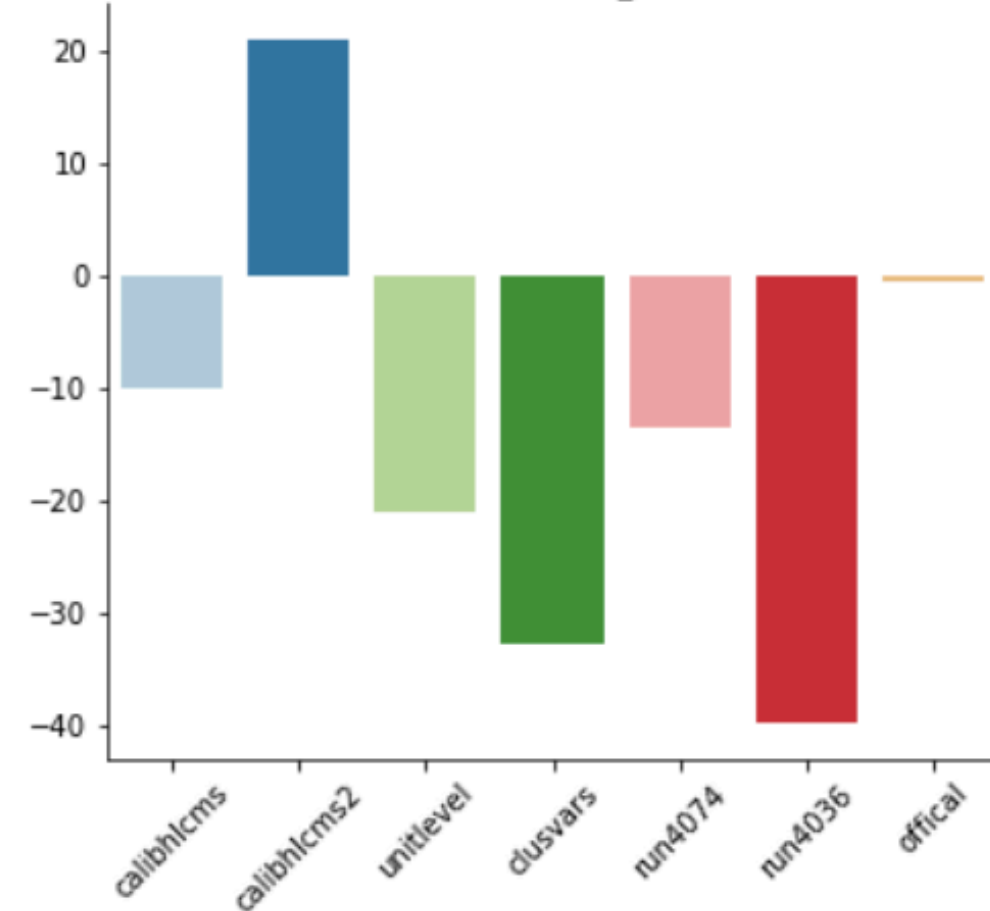
variables = population



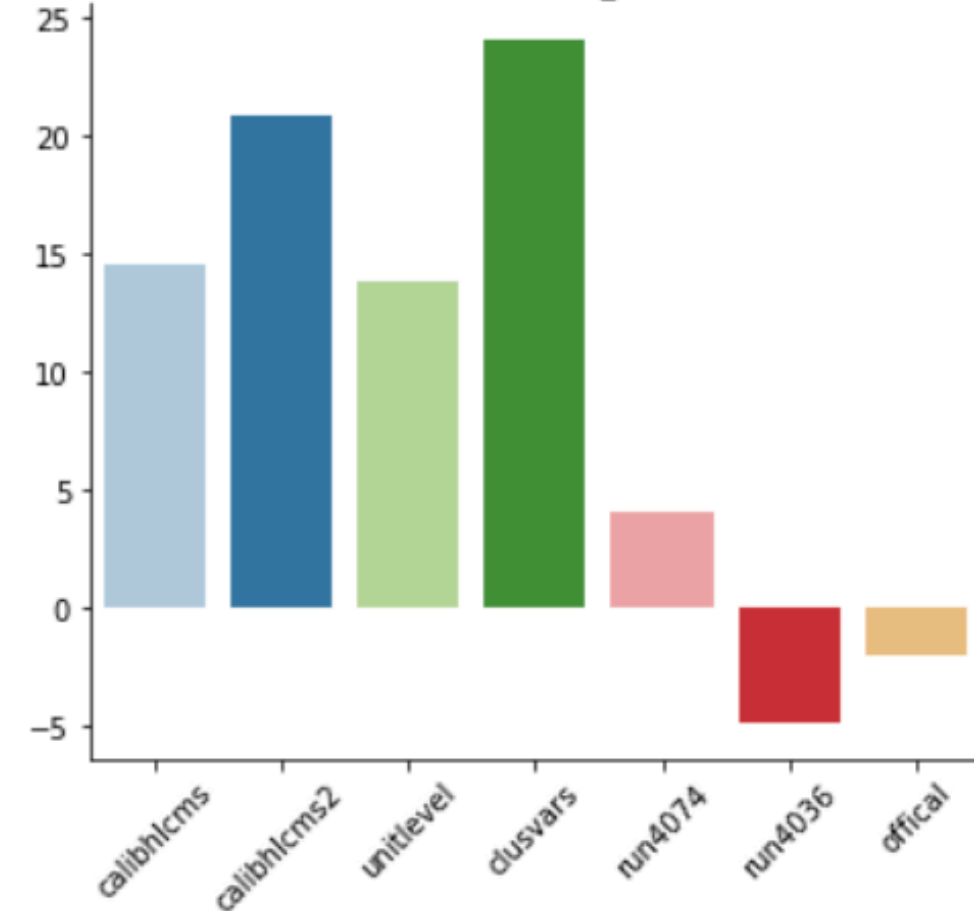
- For population and households, both calibrated models are not performing well for this city.

HOUSEHOLDS INCOME

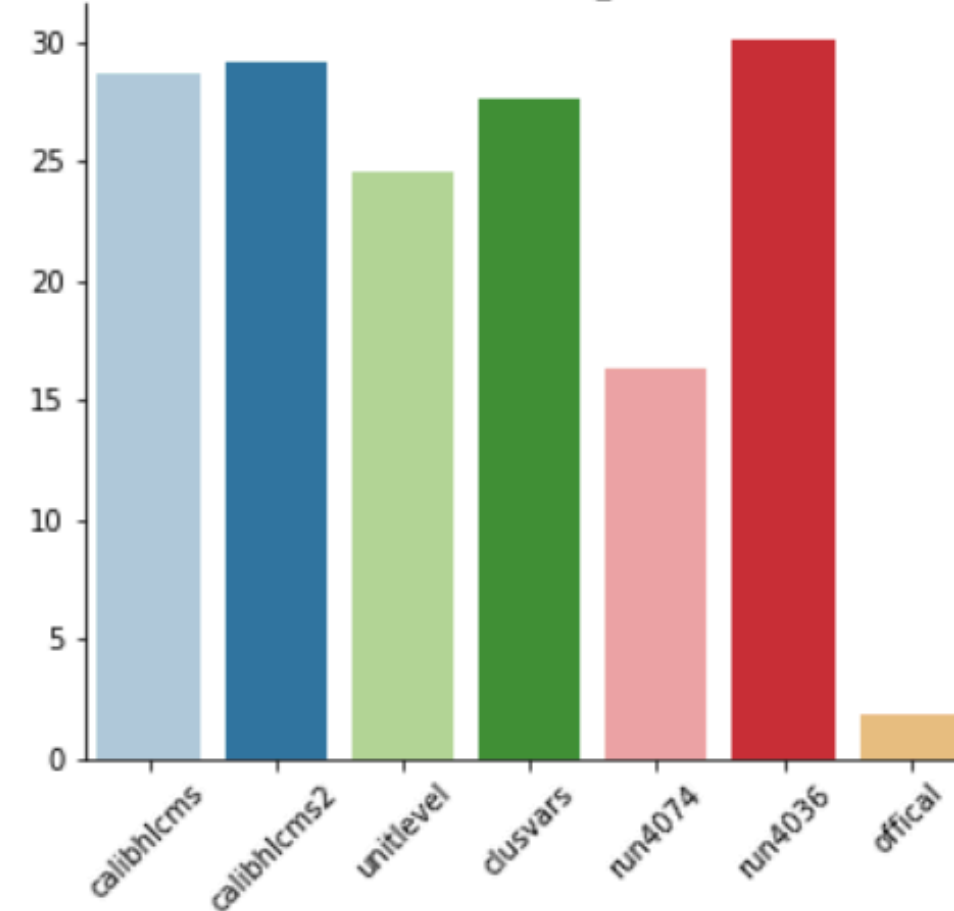
variables = hh_inc1



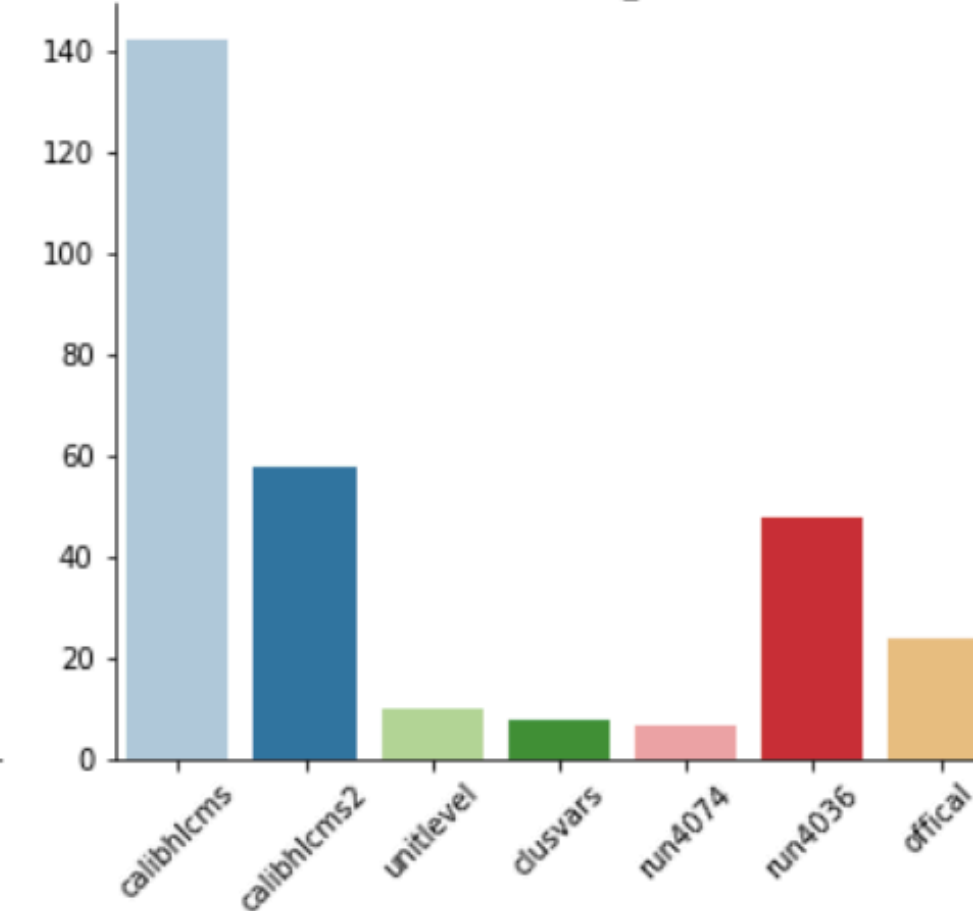
variables = hh_inc2



variables = hh_inc3



variables = hh_inc4



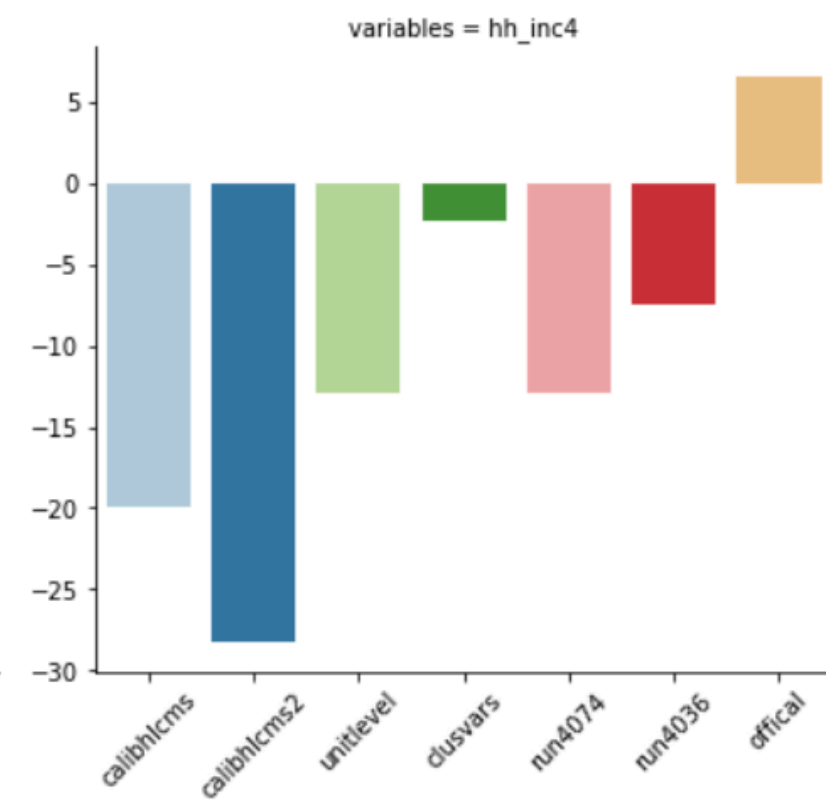
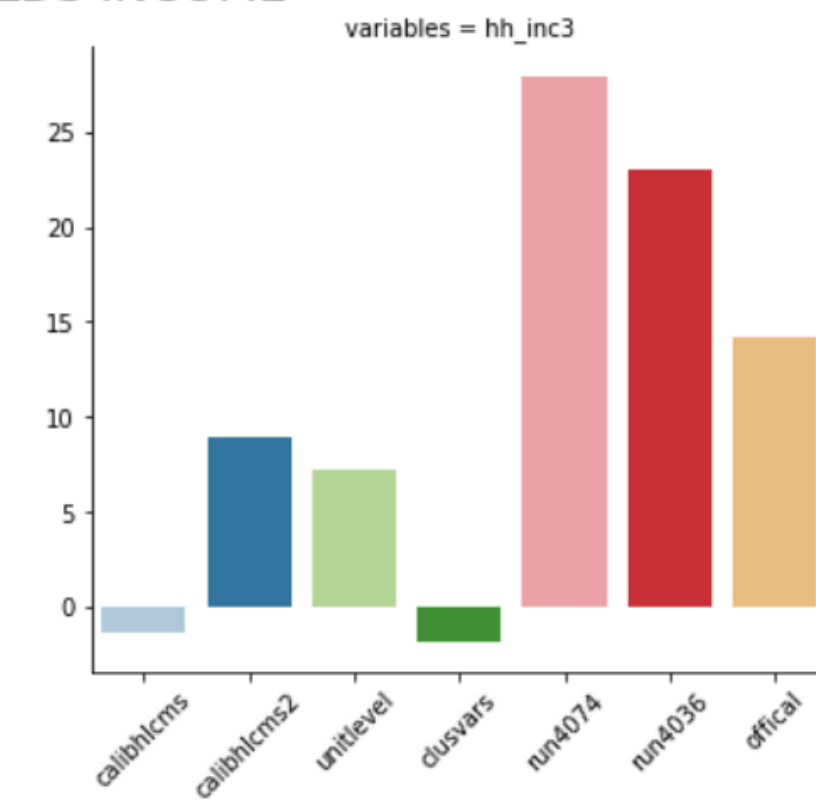
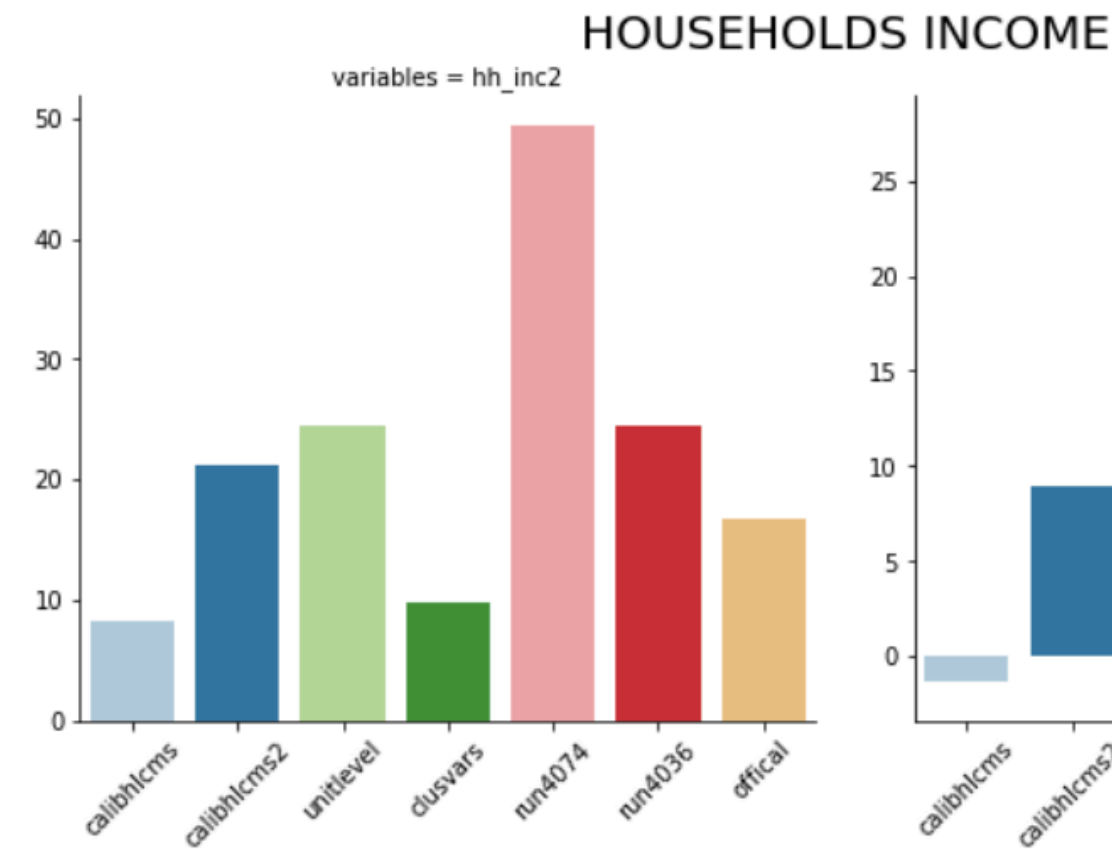
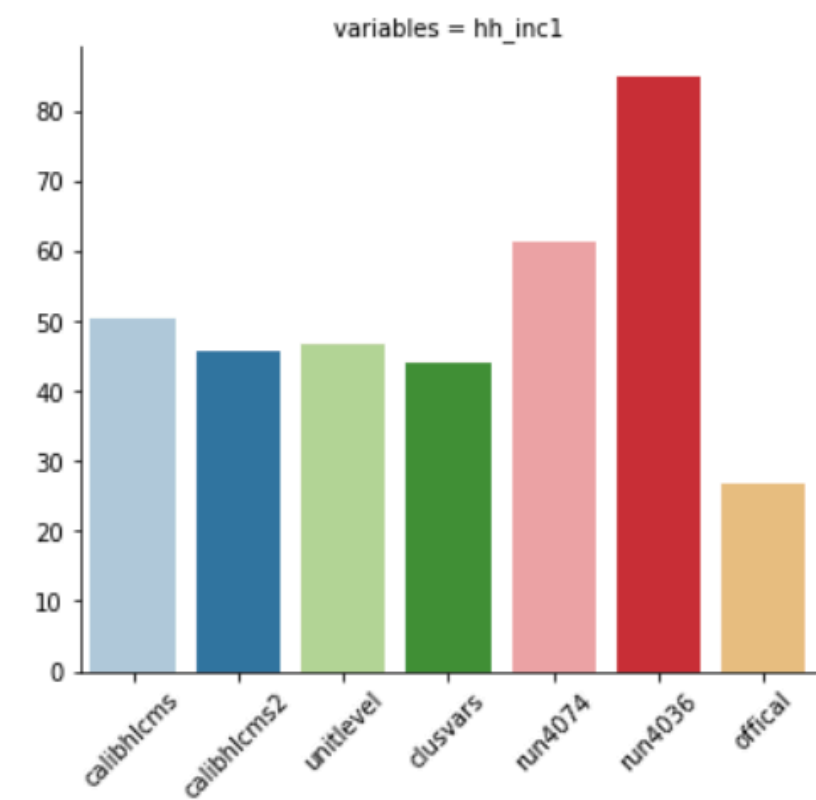
- For all income segments, the calibrated runs show very different percentages than the official ones. Except for income 1, where calibrated run 1 shows similar and negative percentage growth.

INCOME

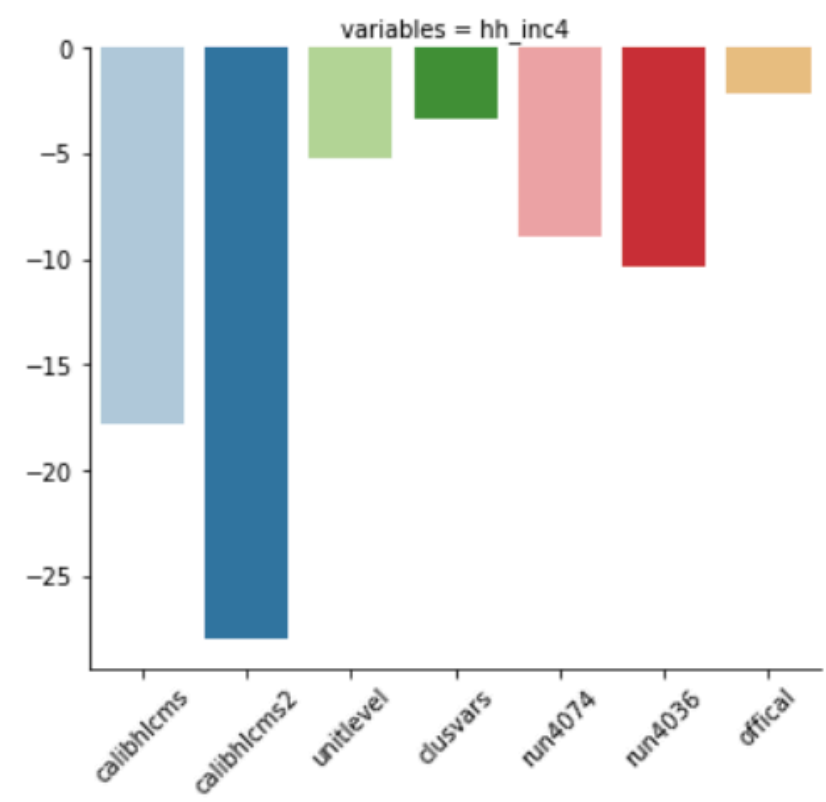
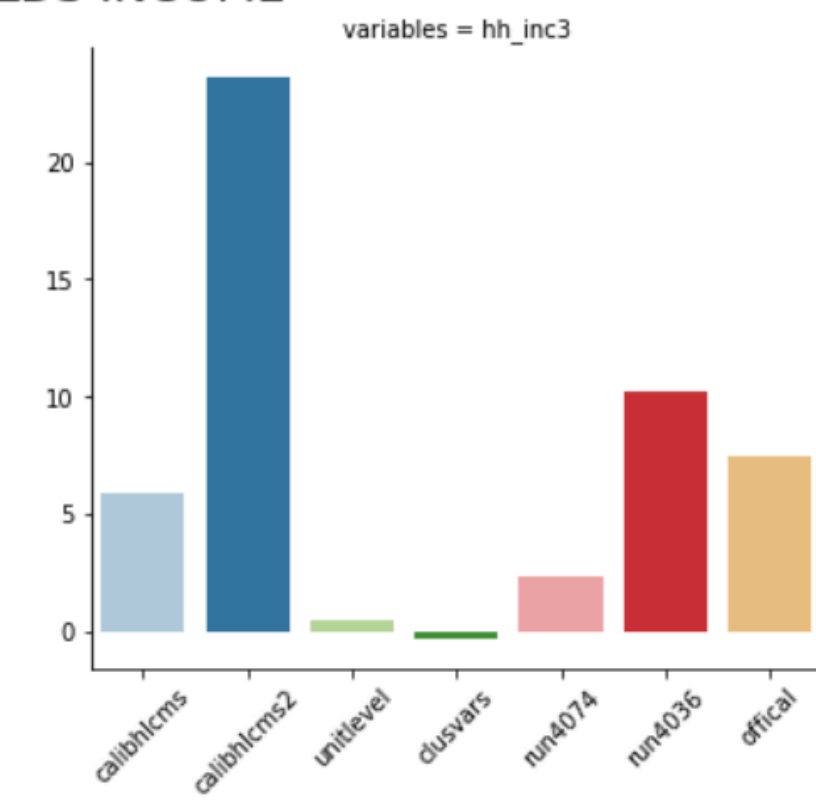
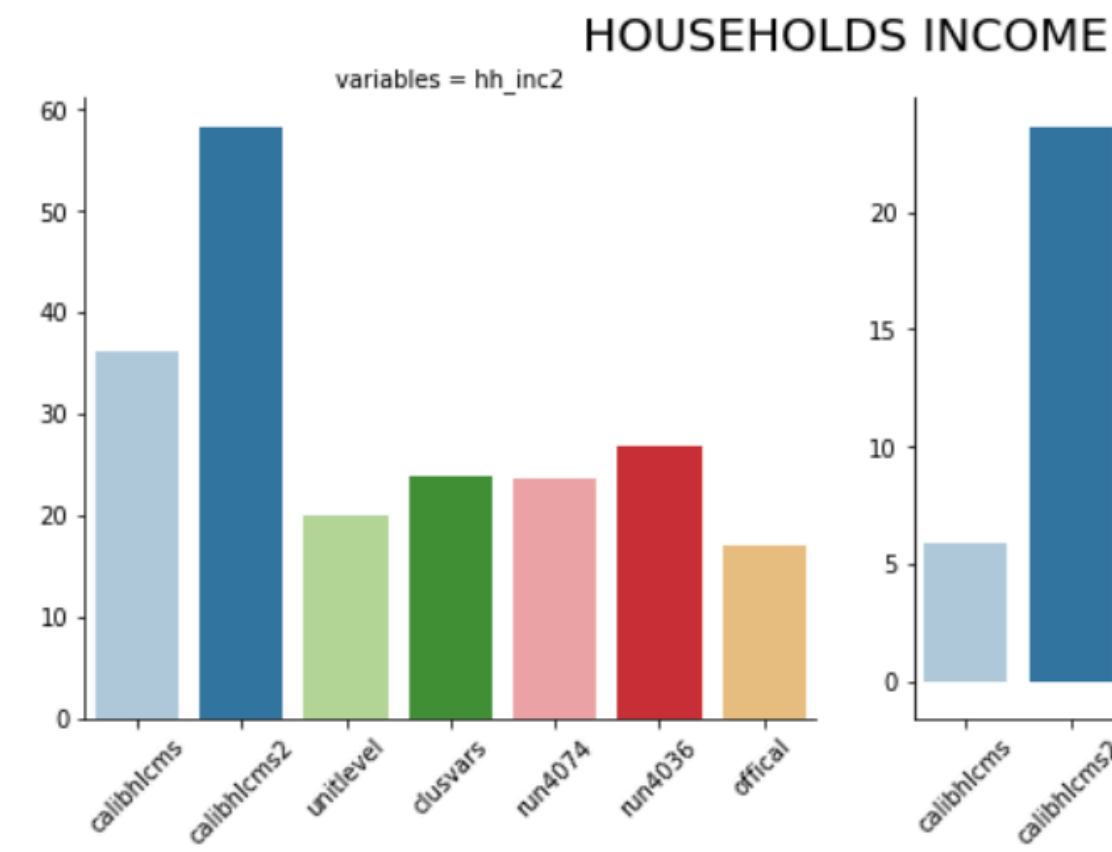
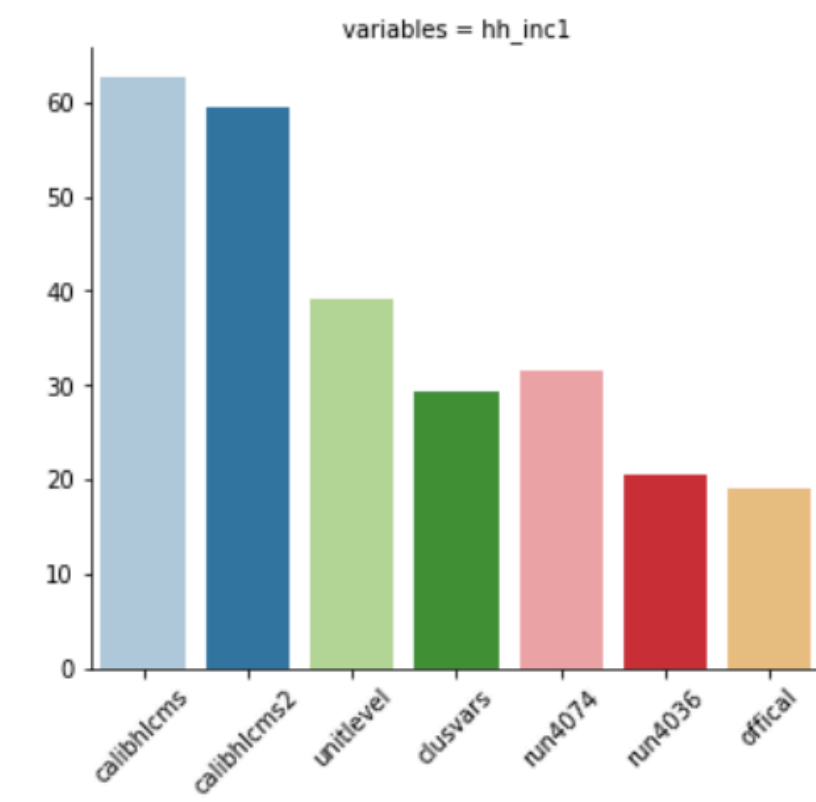
West Bloomfield Twp (2285), Bloomfield Twp (2040), and Troy (2270) are affluent communities which are losing Income 4 HH. They are gaining Income 1 HH.

- For high income, calibrated model runs show large differences

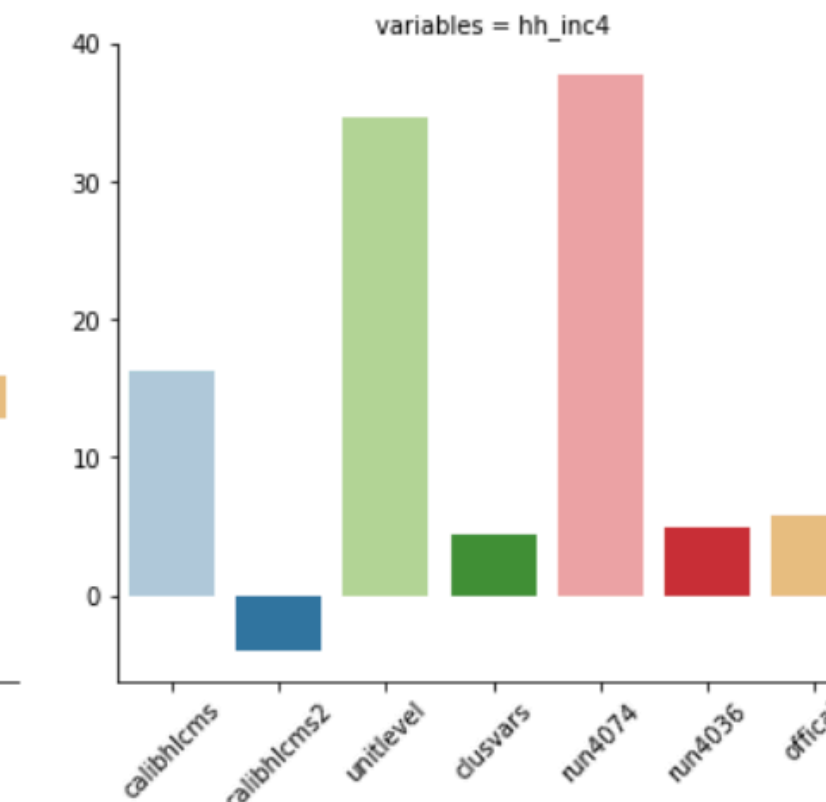
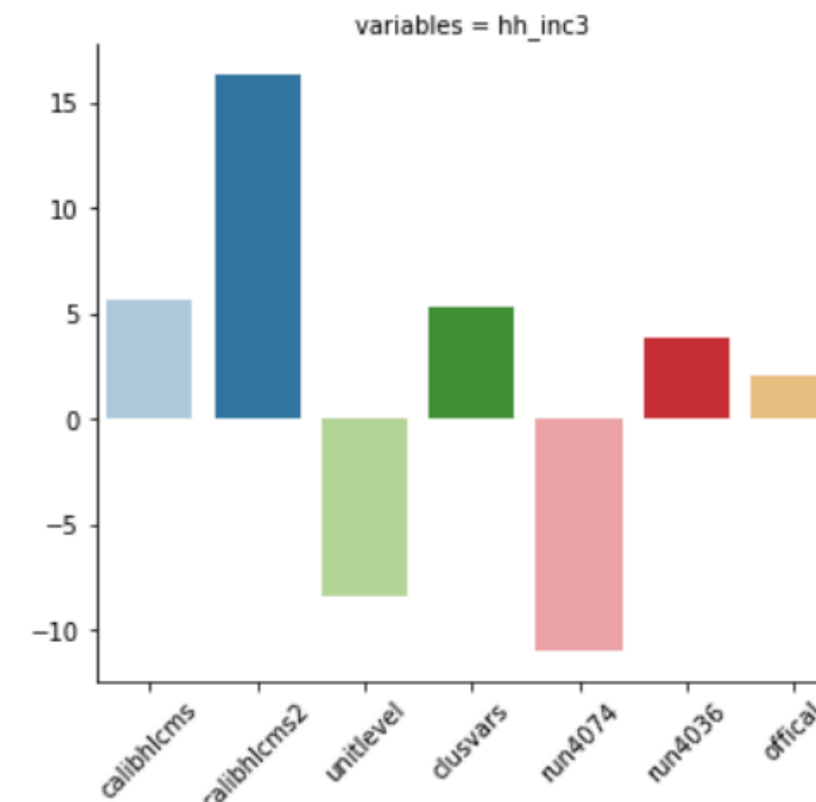
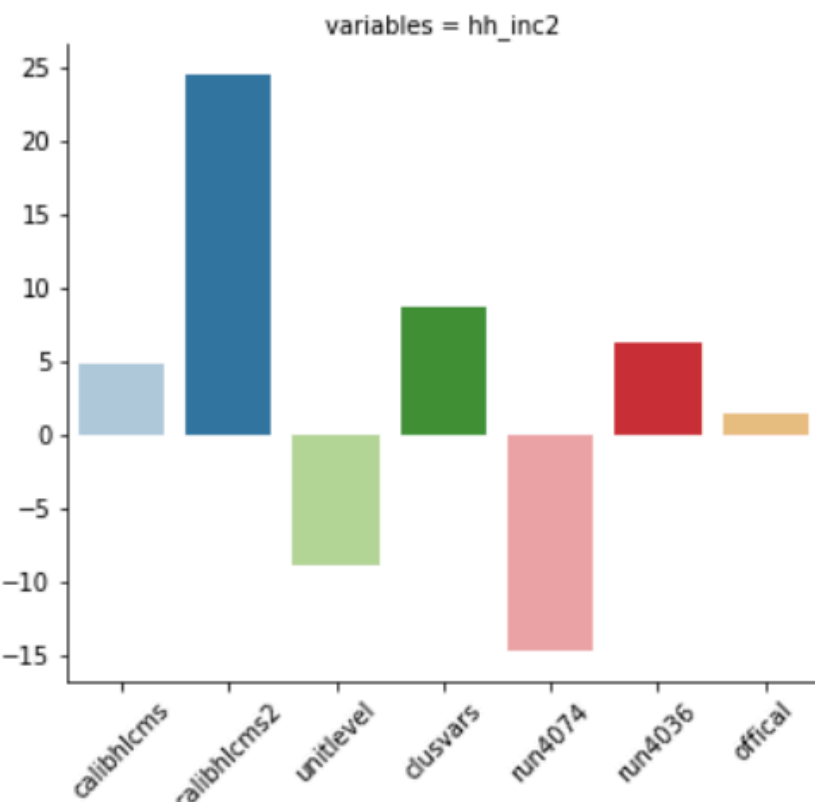
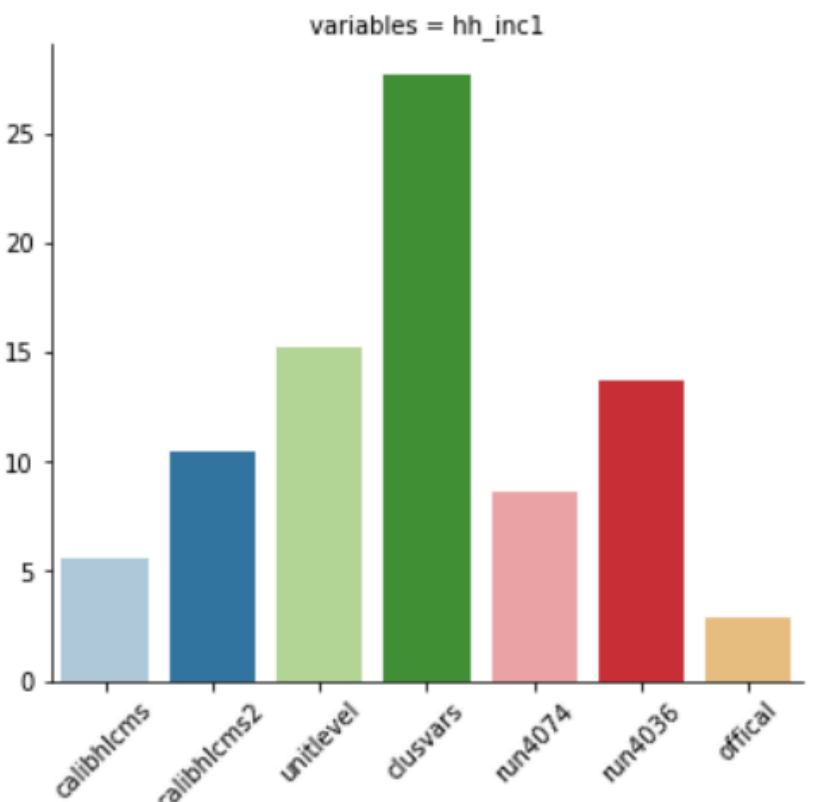
West Bloomfield



Troy



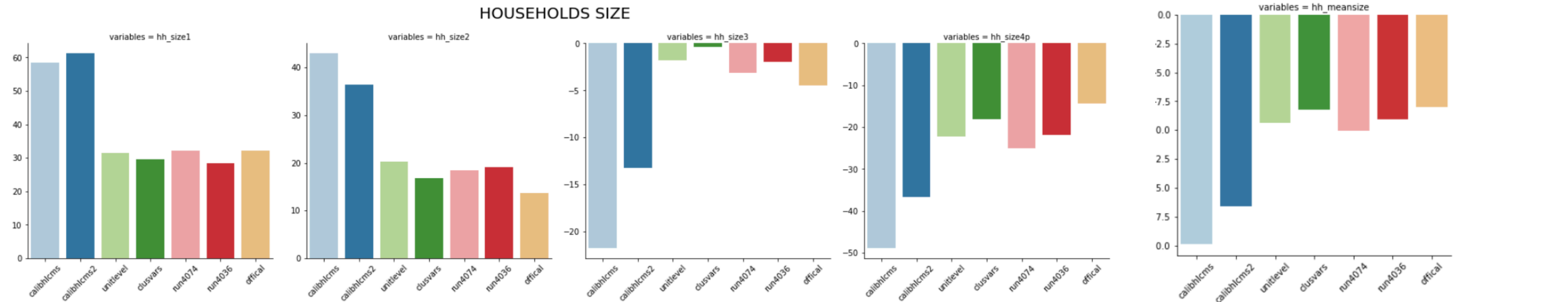
Bloomfield Two



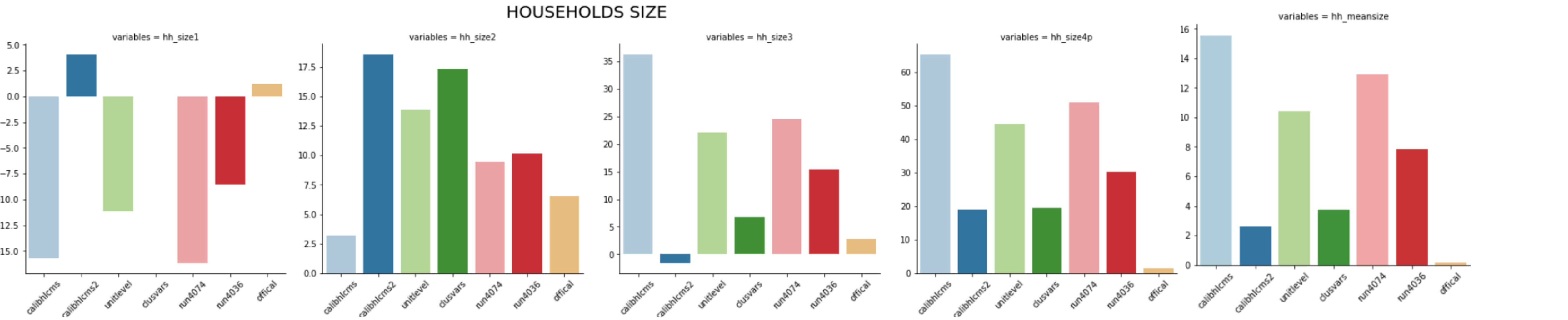
HHSIZE

Troy (2270) is relatively diverse community whose HHsize has been high and stable over last few decades, very good schools. It is losing substantial HH with children over the forecast period. HH size is dropping from 2.68 to 2.45 Royal Oak (2240) is a completely builtup city with average HH size of 2.0 . But Model seems to be liking that city a lot. It is placing lot more HH, which are larger than existing and with children, over the forecast period.

Troy



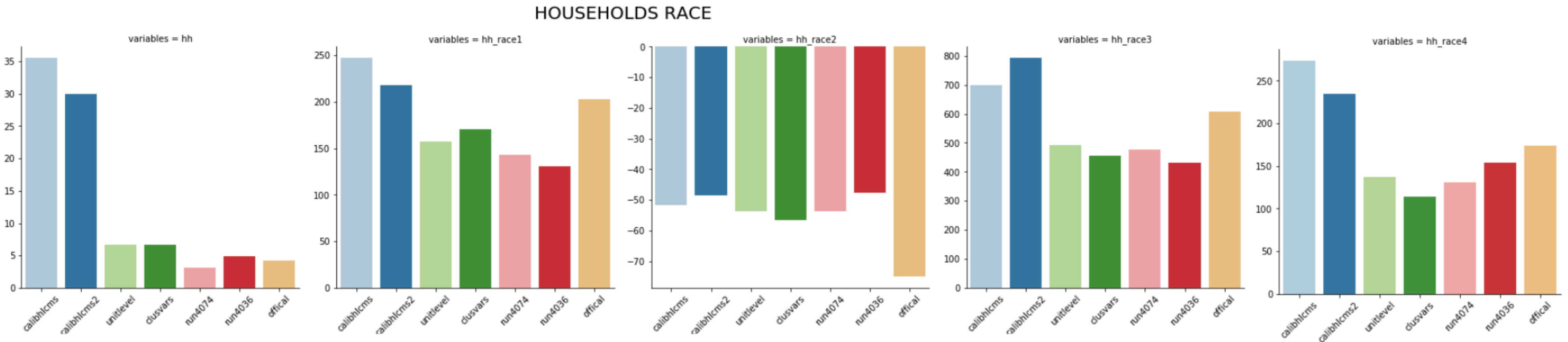
Royal Oak



RACE

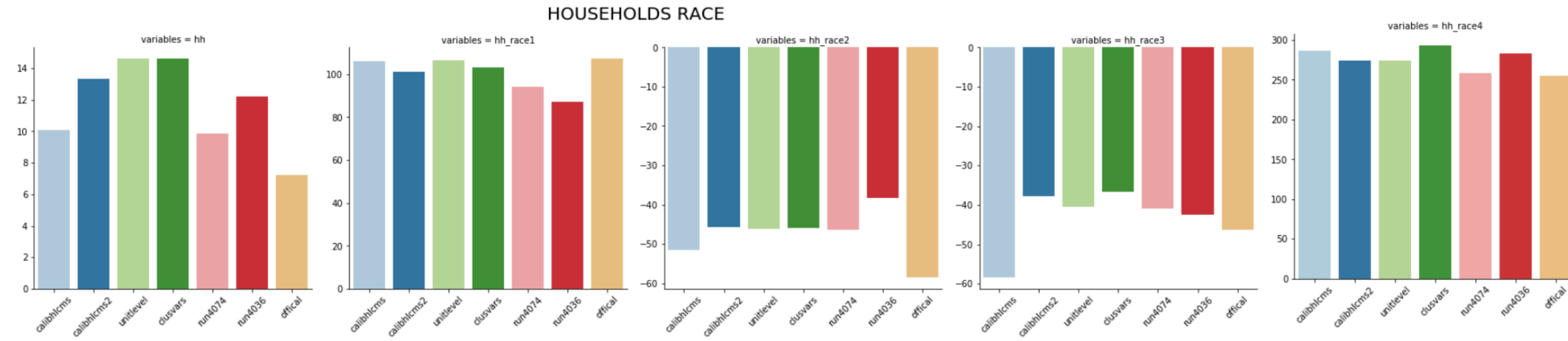
Southfield (2250) and Pontiac (2215) have large concentrations of black populations which have been growing over years. Model is moving black and Hispanic HH from Pontiac and moving in lot of white and Asian HH. Not that that is not a possibility, but I feel the magnitude is quite high. This may the result of model moving in lot of Income 4 HH into this place.

Southfield



Pontiac

Similarly, Troy (2270) and Novi (2170) have high concentrations of Asian population, and model is moving those Asian HH out of these cities, which is very unlikely. This may the reason Troy is losing income 4 HH.

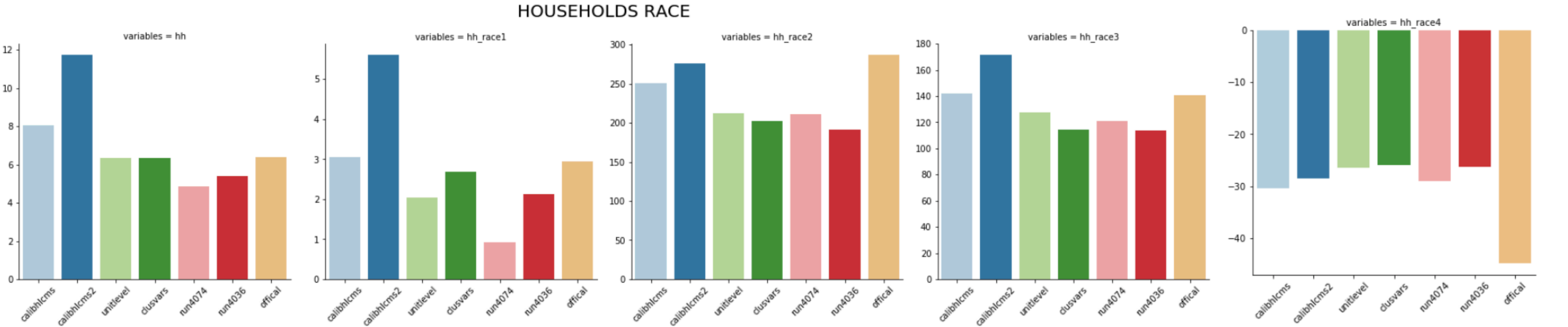


RACE

Southfield (2250) and Pontiac (2215) have large concentrations of black populations which have been growing over years. Model is moving black and Hispanic HH from Pontiac and moving in lot of white and Asian HH. Not that that is not a possibility, but I feel the magnitude is quite high. This may be the result of model moving in lot of Income 4 HH into this place.

Similarly, Troy (2270) and Novi (2170) have high concentrations of Asian population, and model is moving those Asian HH out of these cities, which is very unlikely. This may be the reason Troy is losing income 4 HH.

Troy



Novi

