

Exploring Relationships Between Quantitative Factors and the Form Of Government in MA Municipalities

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Topics

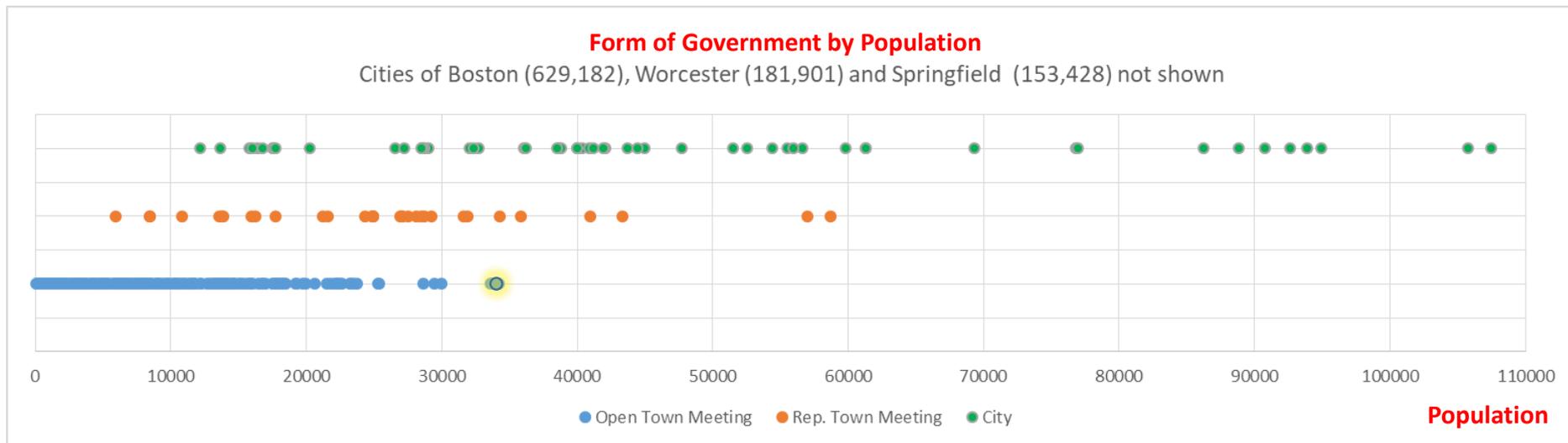
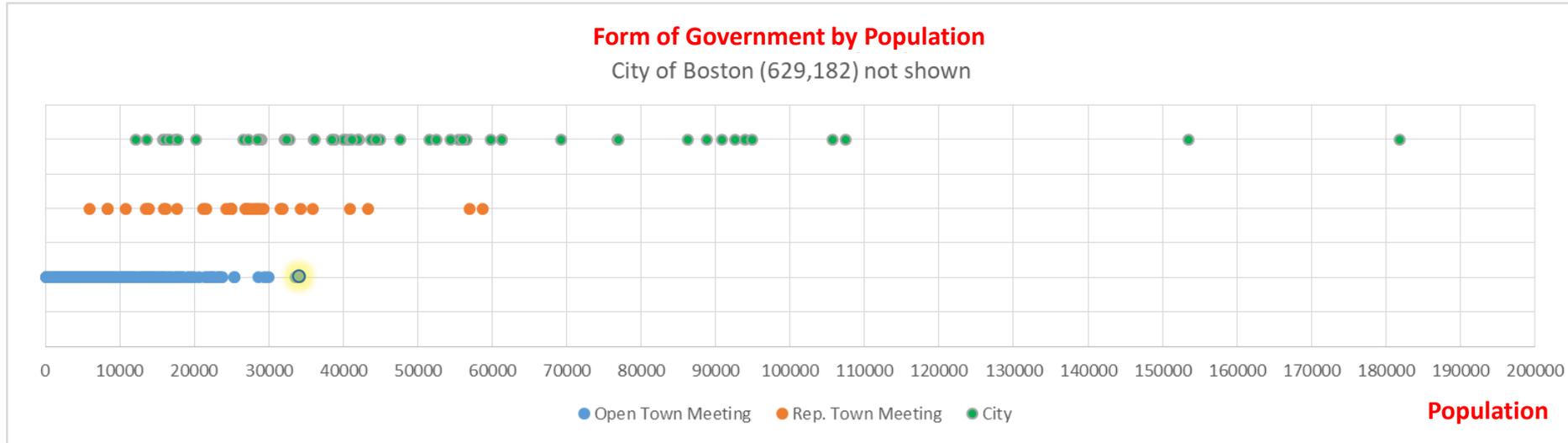
- Introduction
- Relationship between population of municipality and form of government
- Relationship between other factors and form of government
 - Median household income
 - Language spoken at home
 - Physical size of municipality (area)
 - Tax rate
 - Age distribution (New in V2)

Introduction

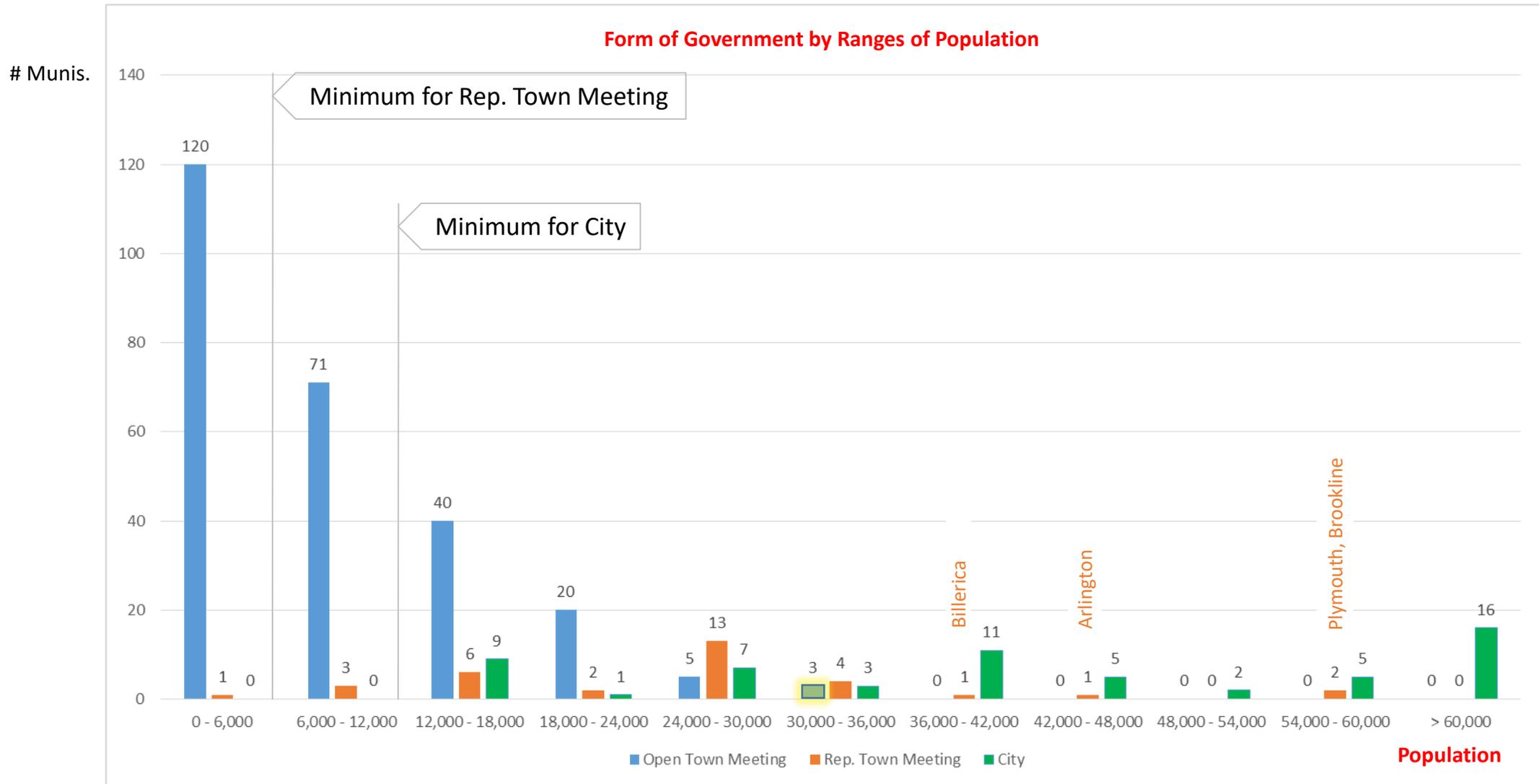
- Objectives
 - Explore whether/which quantitative factors influence Form of Government
 - Identify quantitative outliers to explore to elicit qualitative factors
 - Data from three consistent sources
 - Overview of Municipal Government, John Petrin, CPA
 - Forms of Government, Massachusetts Municipal Directory
 - American Community Survey 2013 3-Year Estimate <https://factfinder.census.gov/>
- ✓ “What facts can be stated about the data?”
- ✗ “What conclusions can be drawn from the data?”

Relationship between population of
municipality and form of government

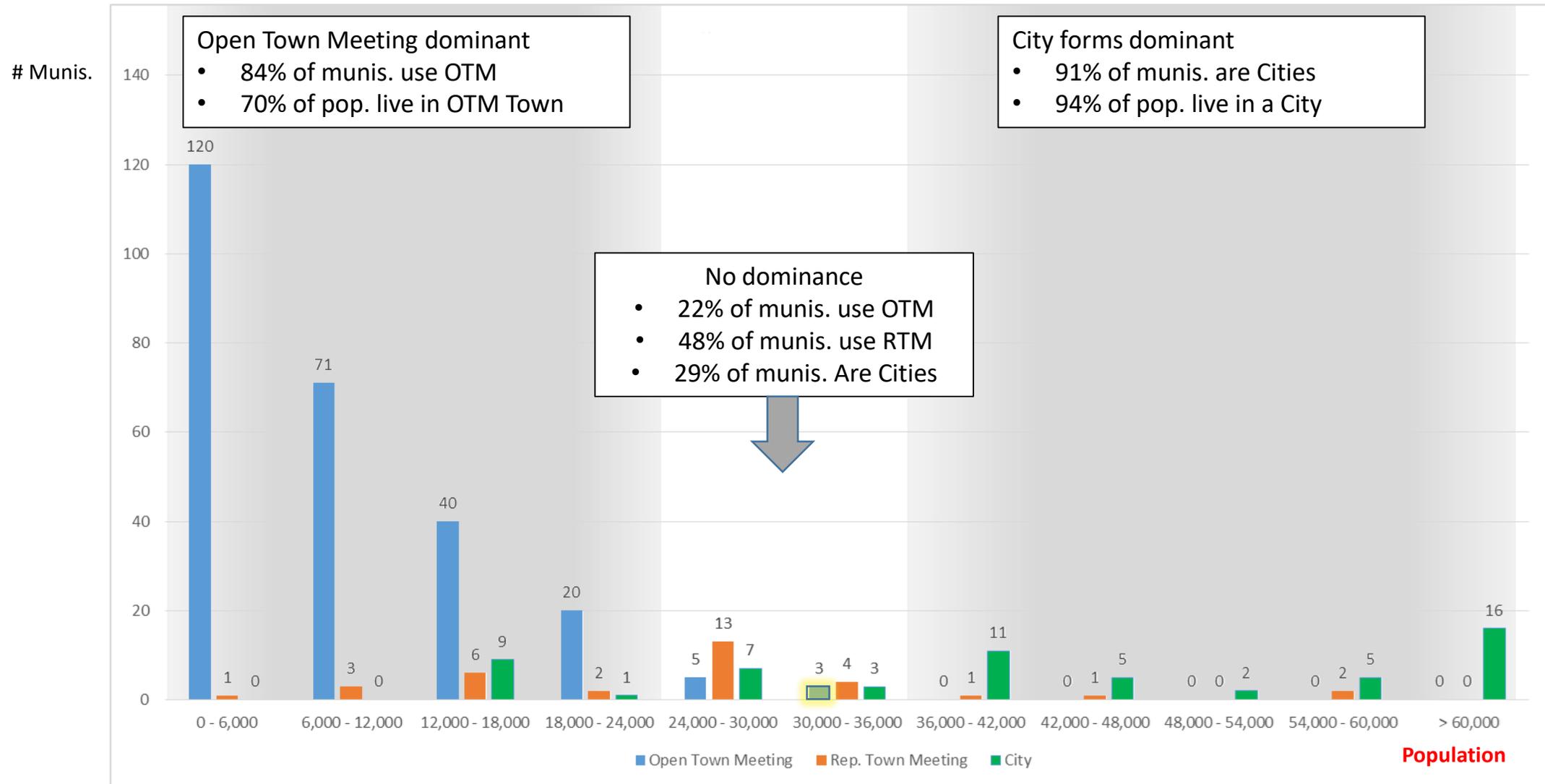
Form of Government, by Population



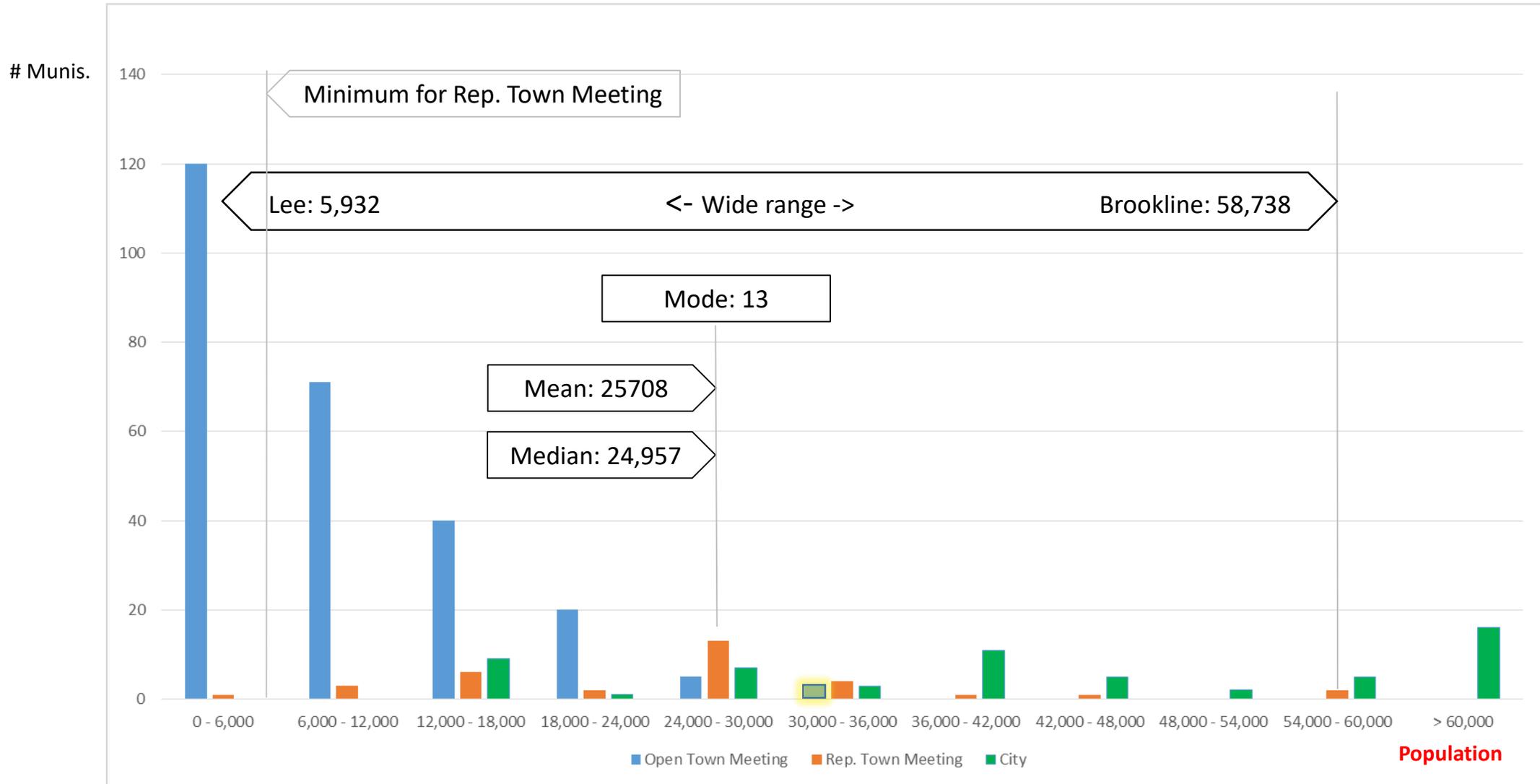
Form of Government, by Ranges of Population



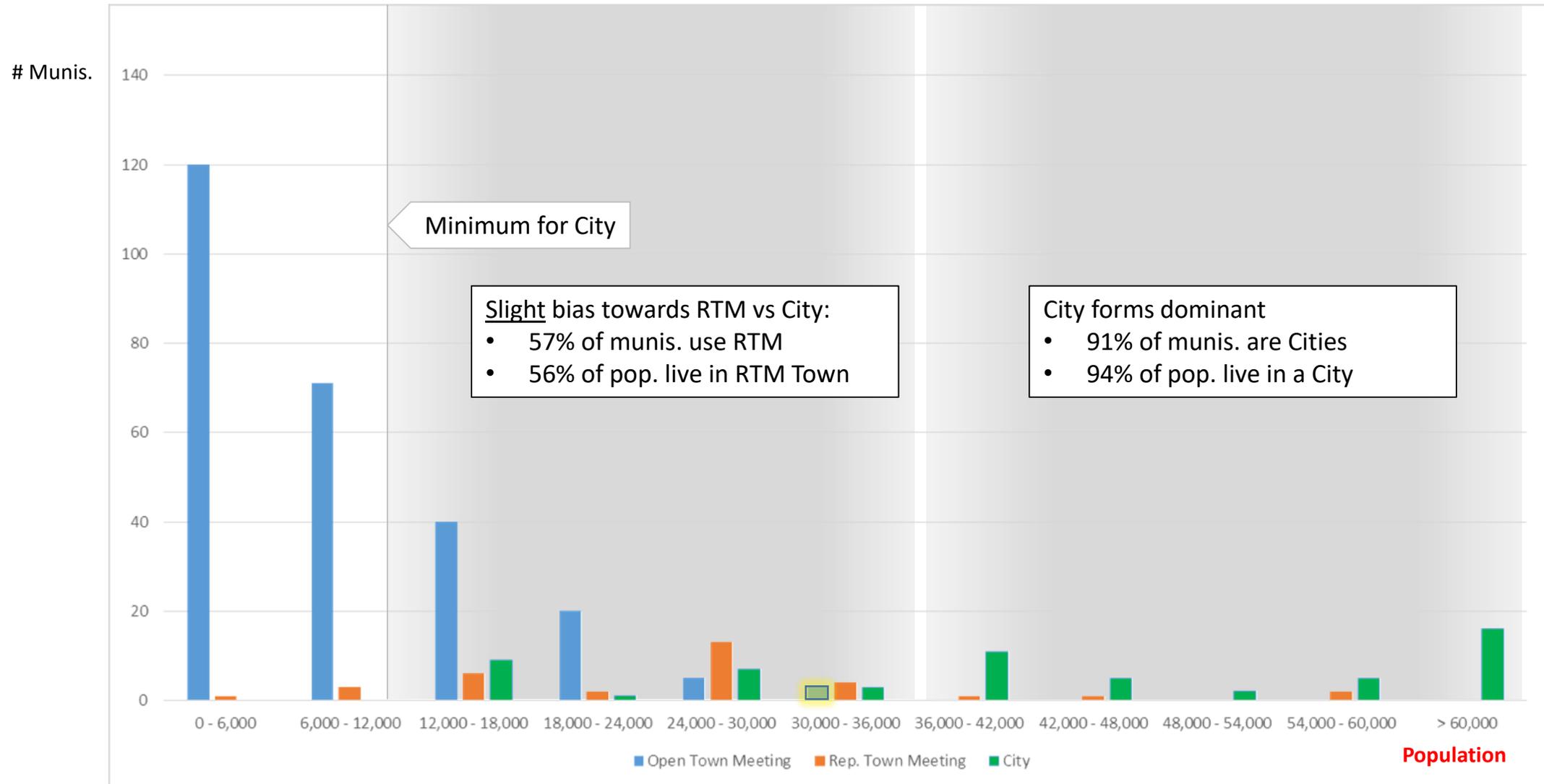
Form of Government: General Observations



Form of Government: Rep. Town Meeting



Form of Government: Rep. Town Meeting vs City



Form of Government, by Population

- Is population a predictor of Form of Government?
 - 0 – 24,000: Yes, Open Town Meeting
 - 24,000 – 36,000: No
 - Above 36,000: Yes, City form
- Is population a driver of Form of Government?
 - Cannot say from quantitative analysis alone

Andover is at the top of the range where no form dominates,
close to the range where City form dominates

Relationship between other factors and form of government

Median household income

Language spoken at home

Physical size of municipality (area)

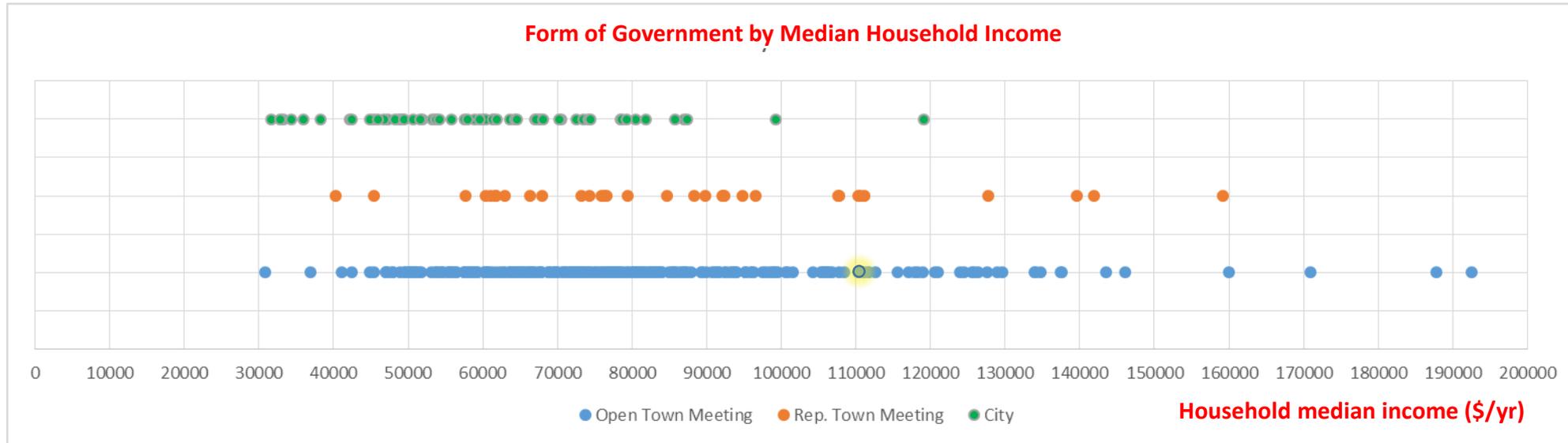
Tax rate

Age distribution (New in V2)

Relationship between other factors and form of government

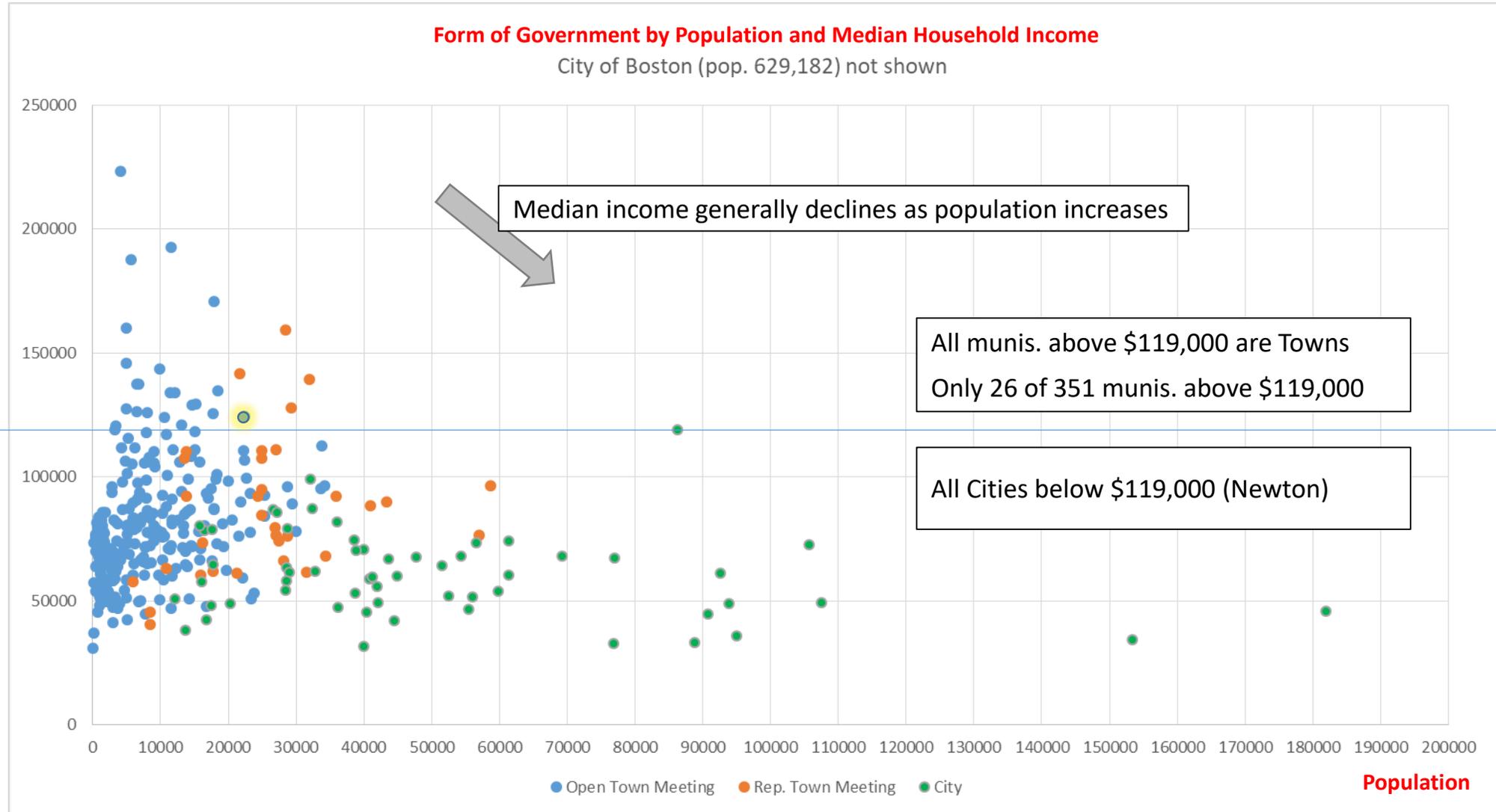
- Median household income
- Language spoken at home
- Physical size of municipality (area)
- Tax rate
- Age distribution (New in V2)

Form of Government by Income



Form of Government by Income

Household
median income
(\$/yr)



Form of Government, by Median Income

- Is Median Income a predictor of Form of Government?
 - Cannot say from quantitative analysis. Median Income and population are not independent
- Is Median Income a driver of Form of Government?
 - Cannot even say it is a predictor

Relationship between other factors and form of government

Median household income

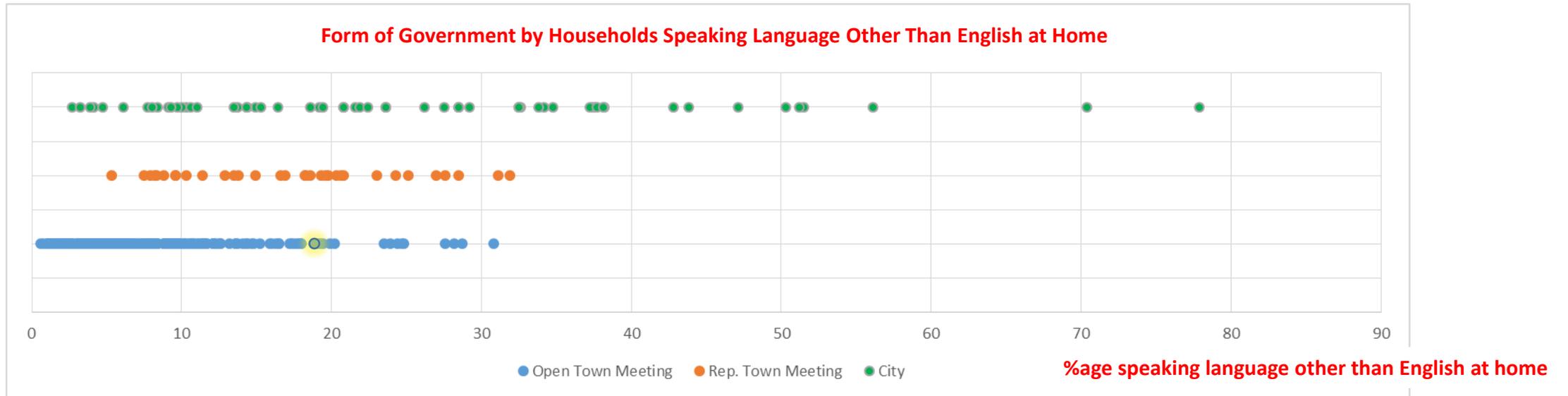
➤ Language spoken at home

Physical size of municipality (area)

Tax rate

Age distribution (New in V2)

Form of Government by Language

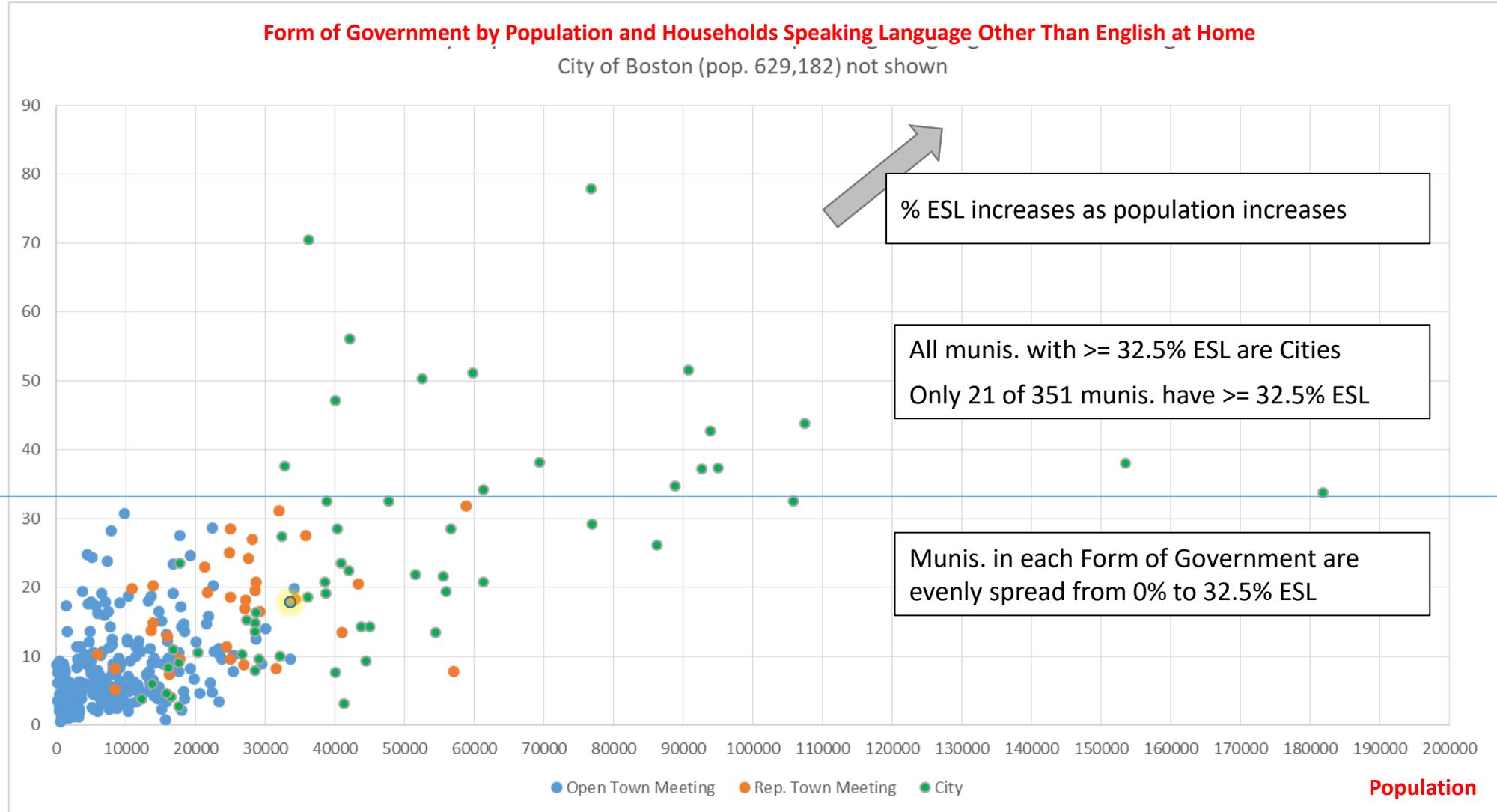


Note:

Speaking language other than English at home does not necessarily imply lack of ability or confidence to speak English in social or business settings

Form of Government by Language

%age speaking language other than English at home



Form of Government, by Language Spoken at Home

- Is language spoken at home a predictor of Form of Government?
 - 0 – 32.5% speaking language spoken other than English at home : No
 - Above 32.5%: Yes, City form
- Is language spoken at home a driver of Form of Government?
 - Cannot say from quantitative analysis. Language spoken at home and population are not independent

Andover is well within in the indeterminate region

Relationship between other factors and form of government

Median household income

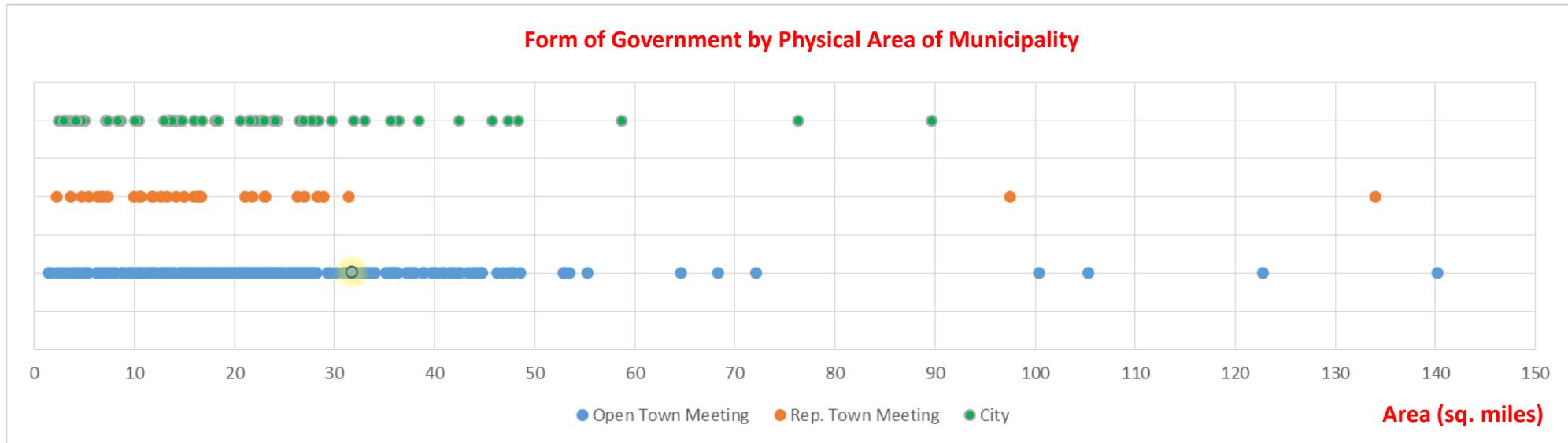
Language spoken at home

➤ Physical size of municipality (area)

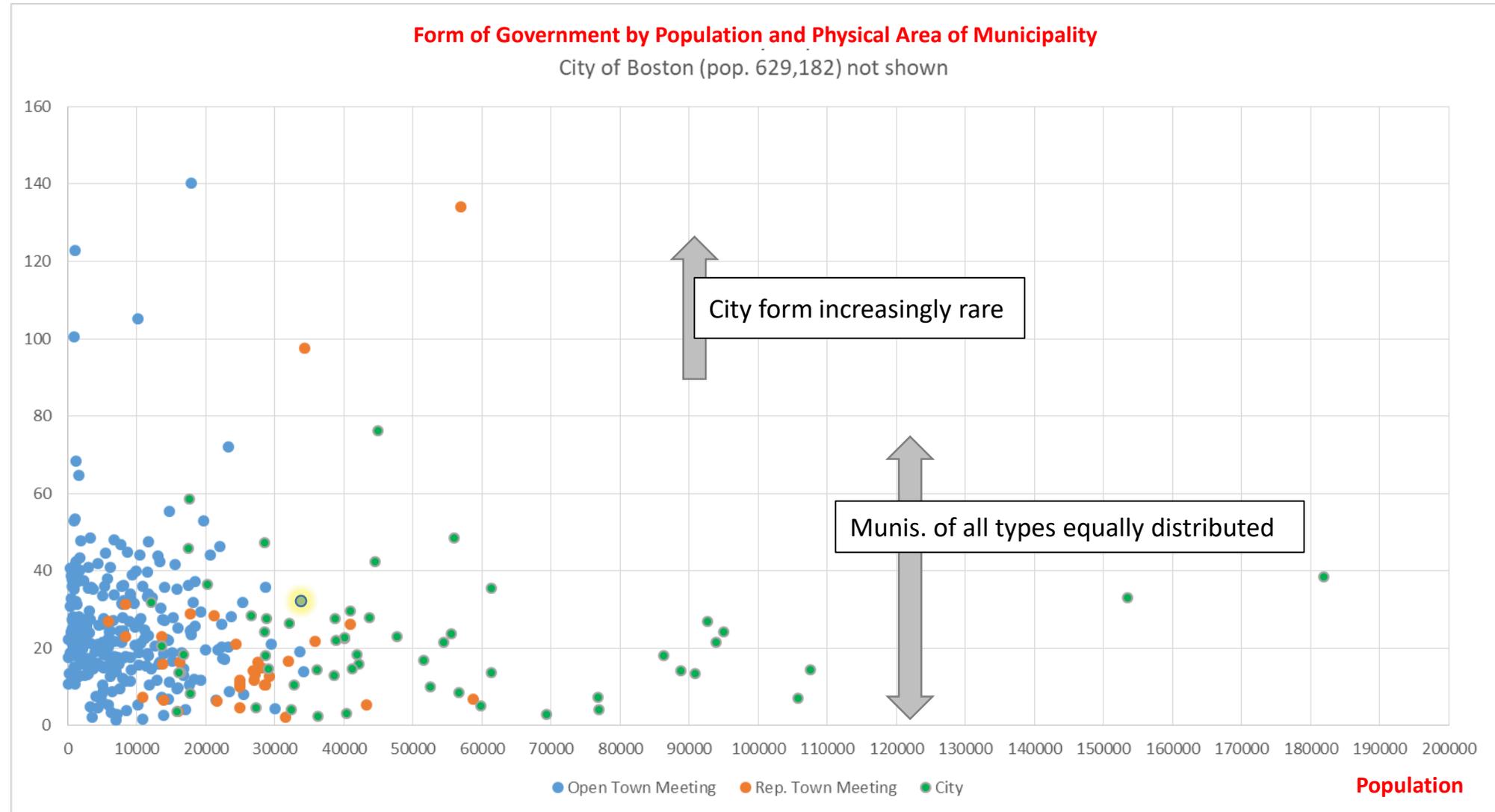
Tax rate

Age distribution (New in V2)

Form of Government by Physical Area



Form of Government by Physical Area



Form of Government, by Physical Area

- Is physical area a predictor of Form of Government?
 - In general: No
 - Slight predictor that municipalities with especially large areas will be a Town, but no predictor of Open Town Meeting vs Rep. Town Meeting
- Is physical area a driver of Form of Government?
 - Generally, cannot say from quantitative analysis. All forms are equally distributed, except in municipalities with especially large areas. However, there are too few of these for significance
 - Can say that especially large area does not preclude Town Meeting, and does not favor Open or Rep.

Andover is well within the indeterminate region

Relationship between other factors and form of government

Median household income

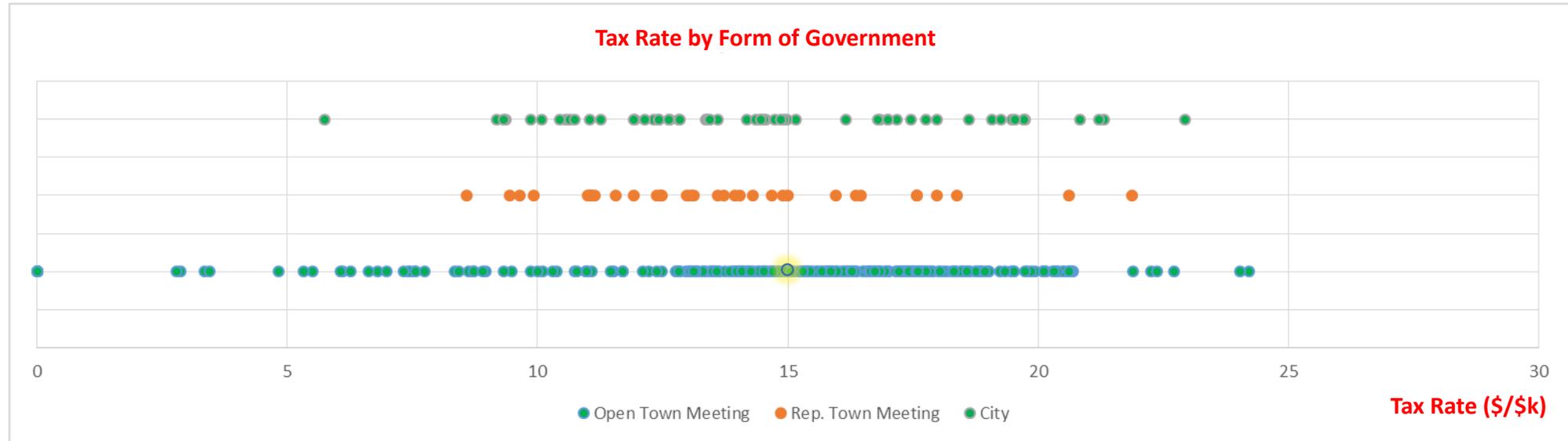
Language spoken at home

Physical size of municipality (area)

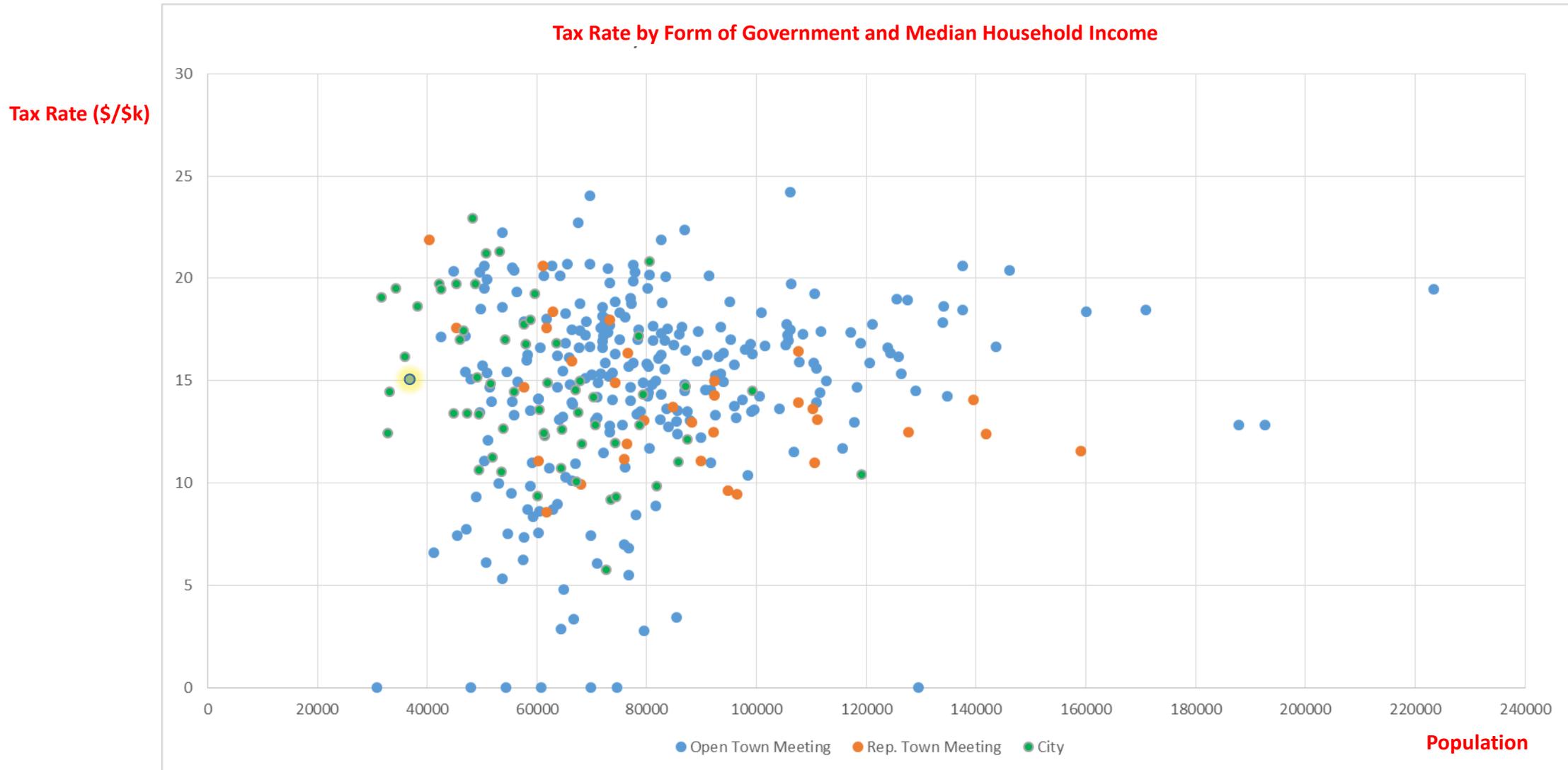
➤ Tax rate

Age distribution (New in V2)

Form of Government by Tax Rate



Form of Government by Tax Rate



Form of Government, by Tax Rate

Requires further work

- In retrospect, Tax Rate is probably incorrect metric. It is tax paid (tax rate x property value) that impacts the resident.
- Maybe also consider Proposition 2^{1/2} Over-rides or other metrics?

Relationship between other factors and form of government

Median household income

Language spoken at home

Physical size of municipality (area)

Tax rate

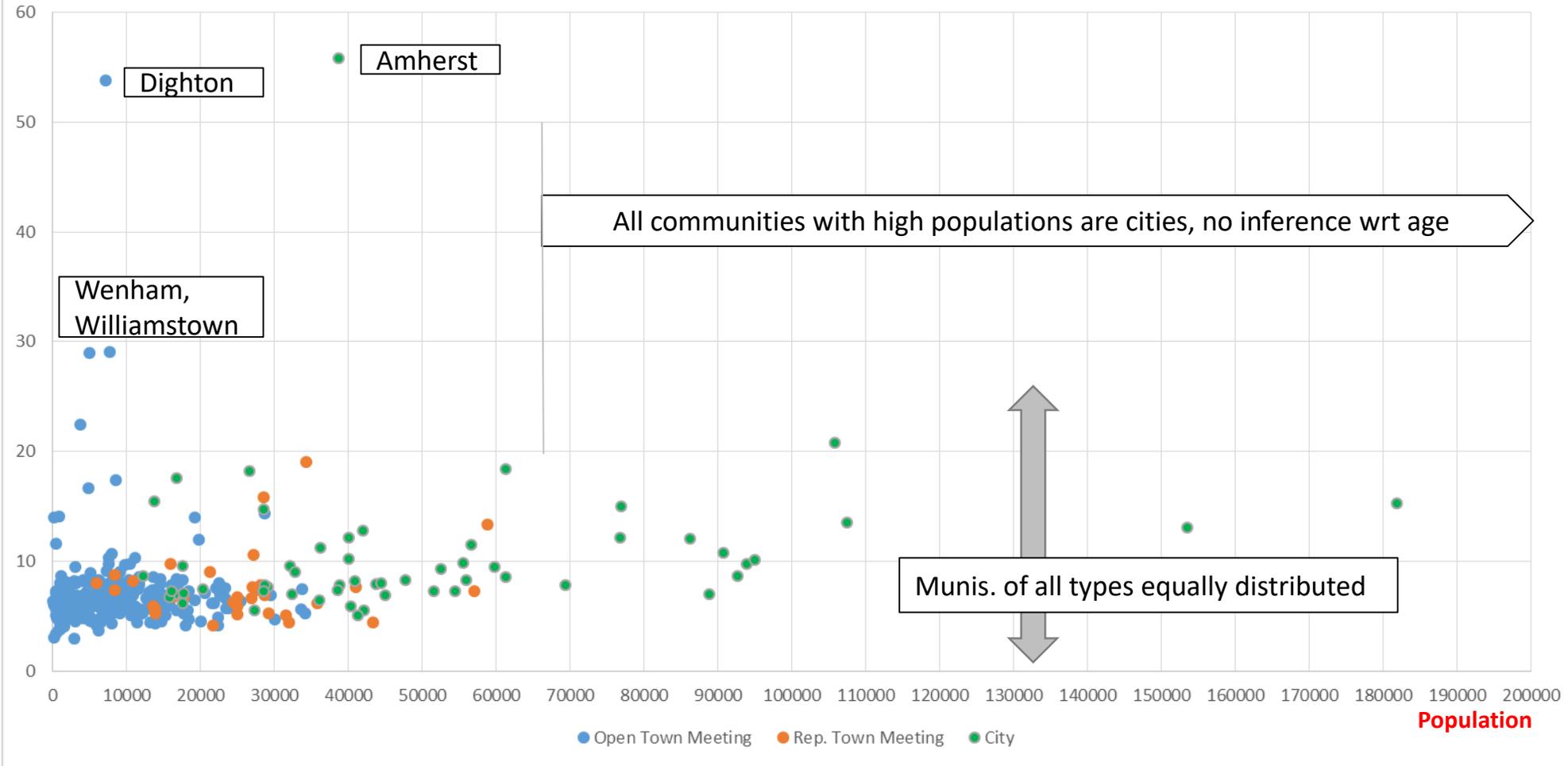
➤ Age distribution (New in V2)

Form of Government by Percentage Aged 18 - 24

%age of population aged 18 - 24

Form of Government by Population and %age of population aged 18 - 24

City of Boston (pop. 629,182) not shown

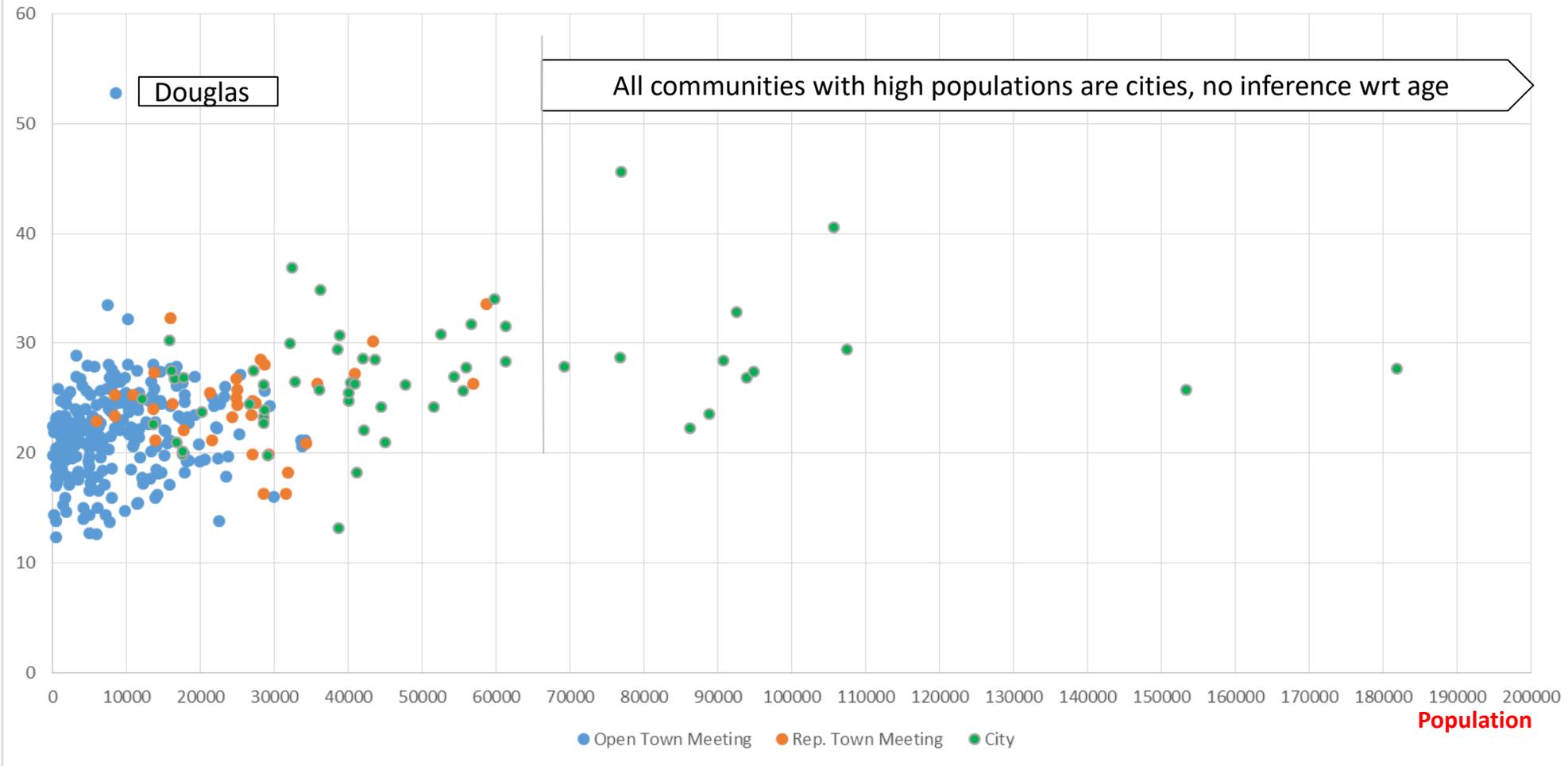


Form of Government by Percentage Aged 25 - 44

%age of population aged 25 - 44

Form of Government by Population and %age of population aged 25 - 44

City of Boston (pop. 629,182) not shown

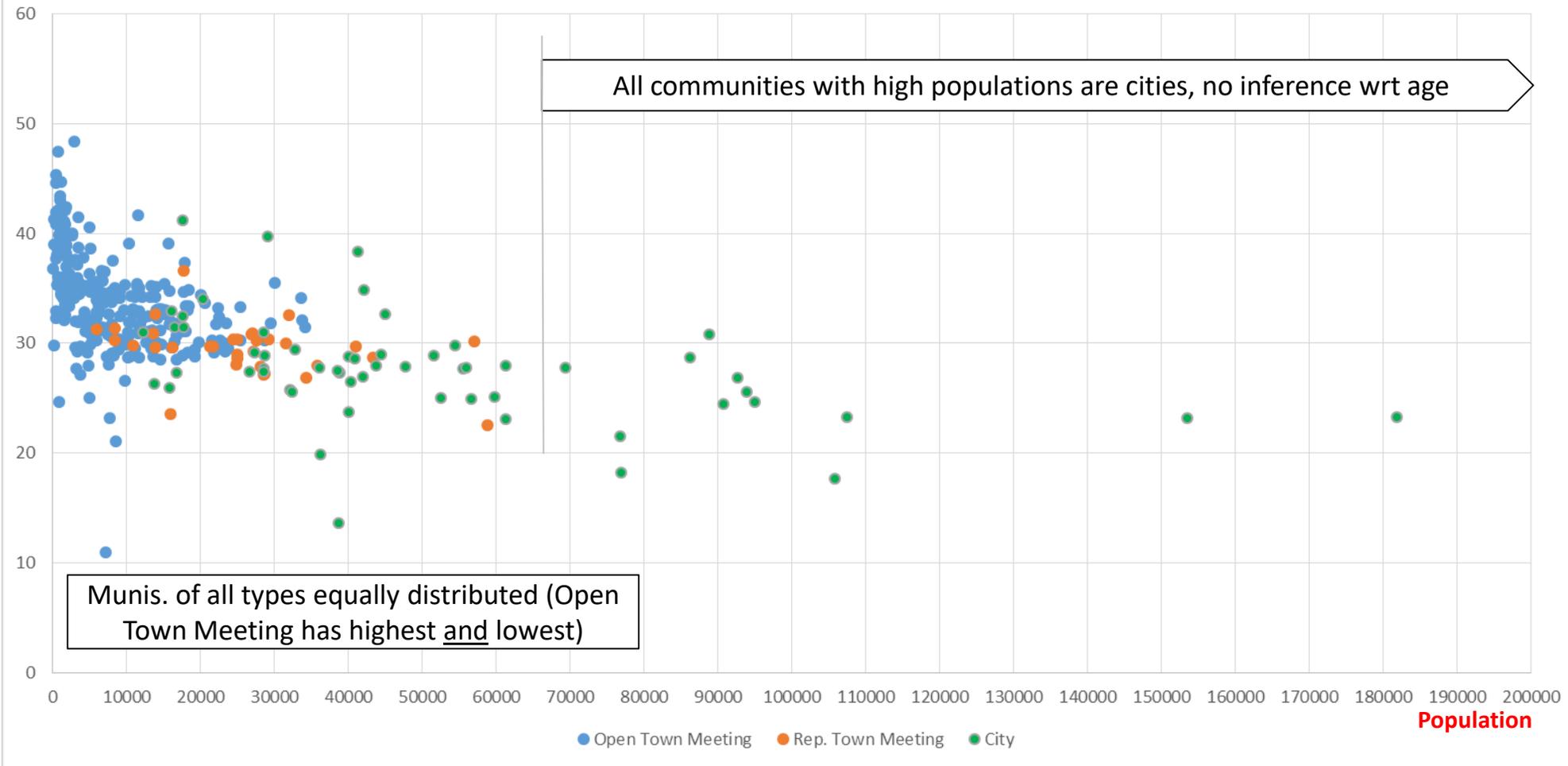


Form of Government by Percentage Aged 45 - 64

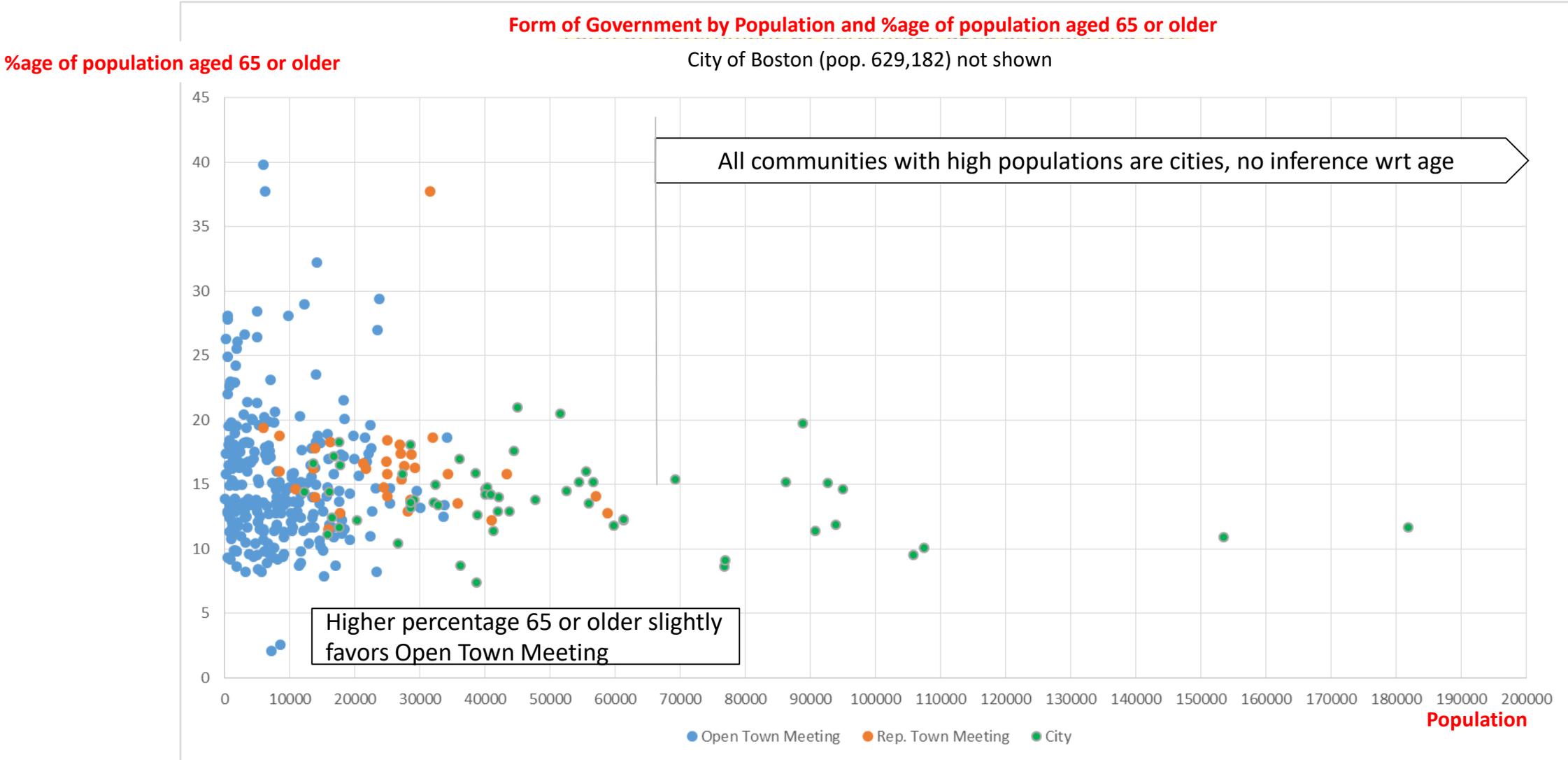
%age of population aged 45 - 64

Form of Government by Population and %age of population aged 45 - 64

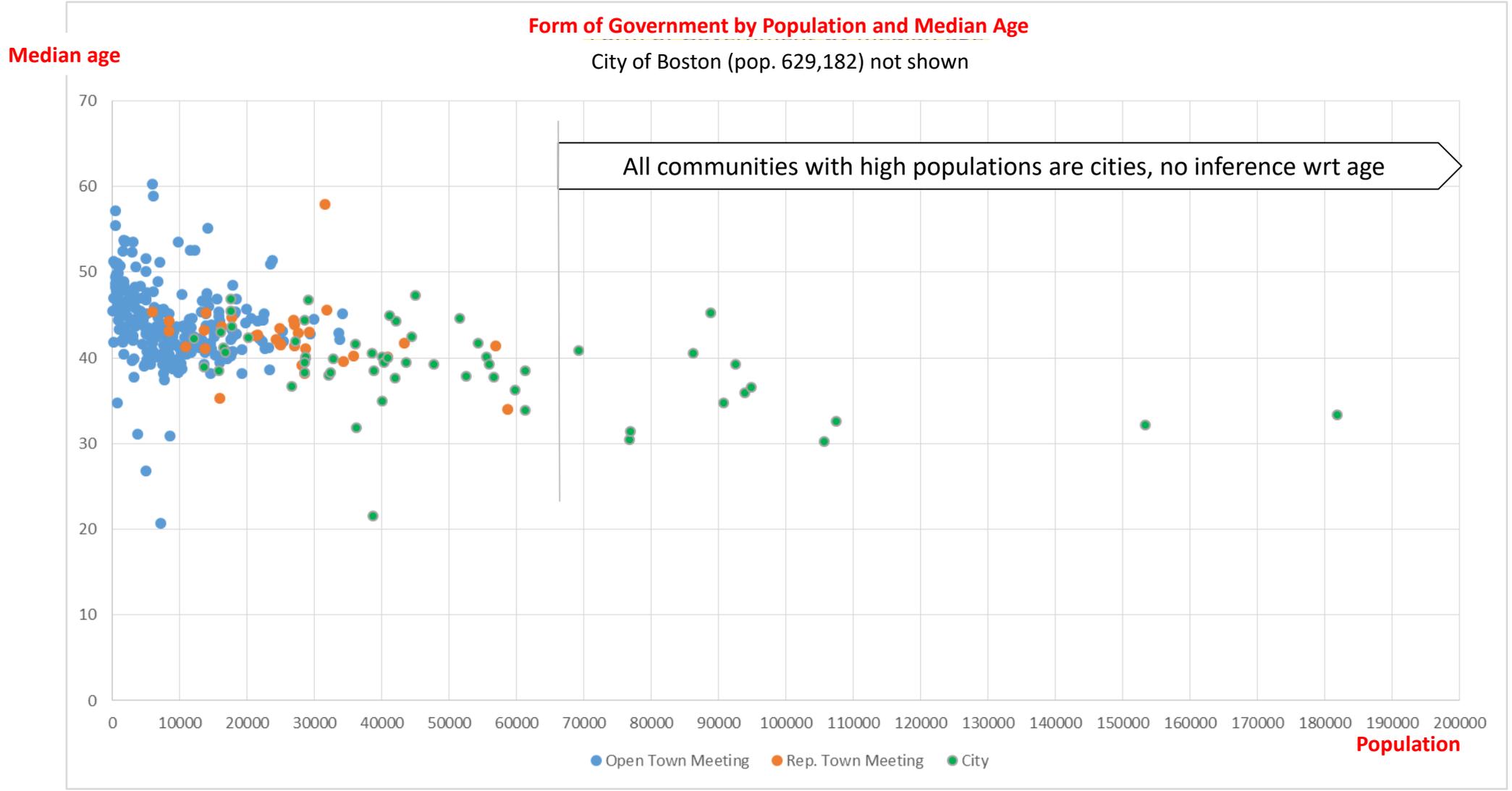
City of Boston (pop. 629,182) not shown



Form of Government by Percentage Aged 25 -44



Form of Government by Median Age



Form of Government, by Age Distribution

- Is age distribution a predictor of Form of Government?
 - In general: No
 - Amherst is somewhat unique because its student population is transient as well as young
- Is physical area a driver of Form of Government?
 - Cannot even say it is a predictor

Other metrics

- Data for the following metrics or adequate surrogates have not yet been found in an appropriate form
 - Average/maximum level of education
 - Commuter vs local employment, commute times (dormitory town vs self-contained)
 - Duration of residence in the municipality