# Story - 1 : Infrastructure Investment & Jobs Act Funding Allocation
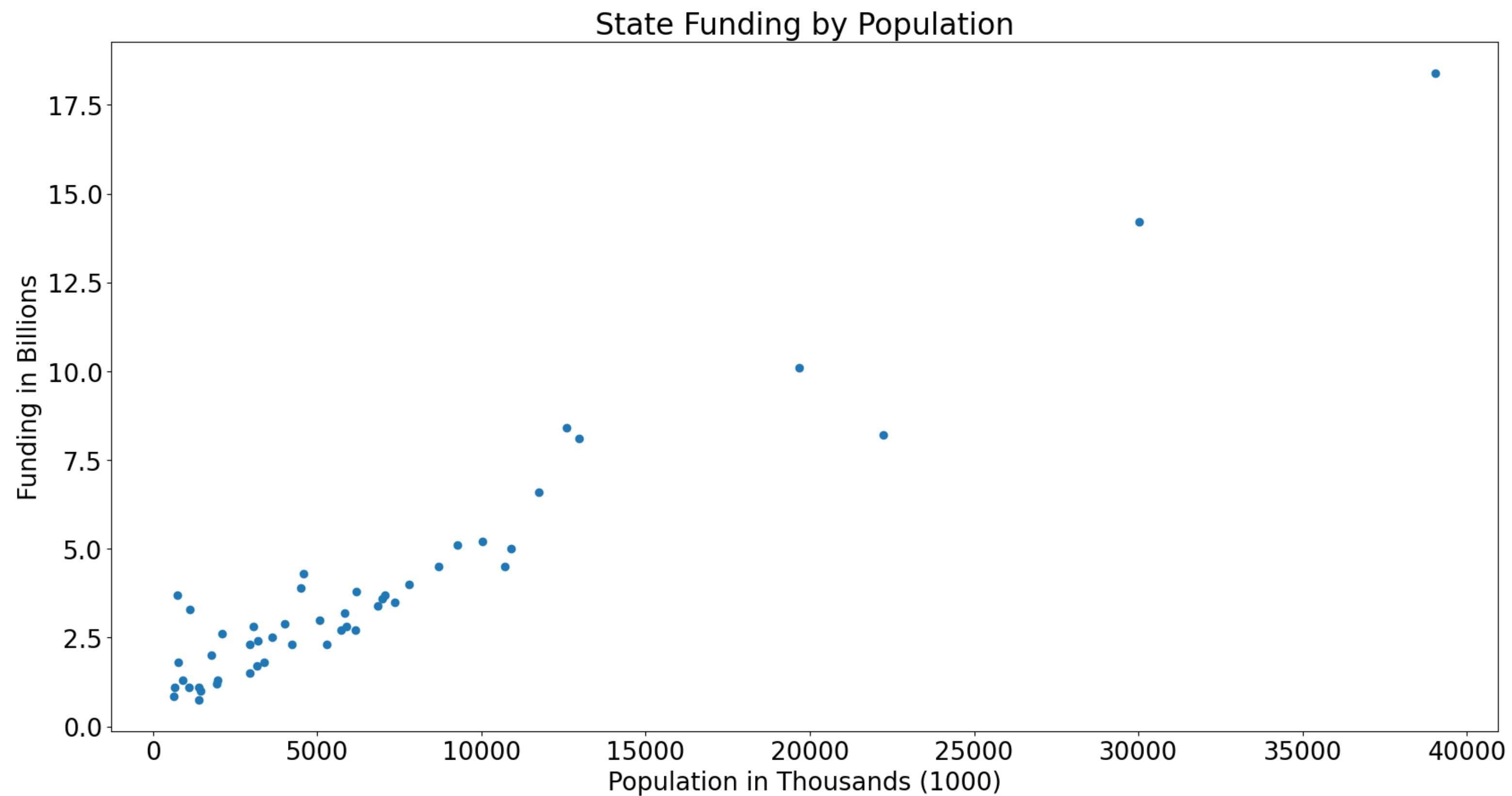
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# Key Questions

1. Is the funding allocation equitable based on the population of each of the States and Territories, or is bias apparent?

2. Does the allocation favor the political interests of the Biden administration?
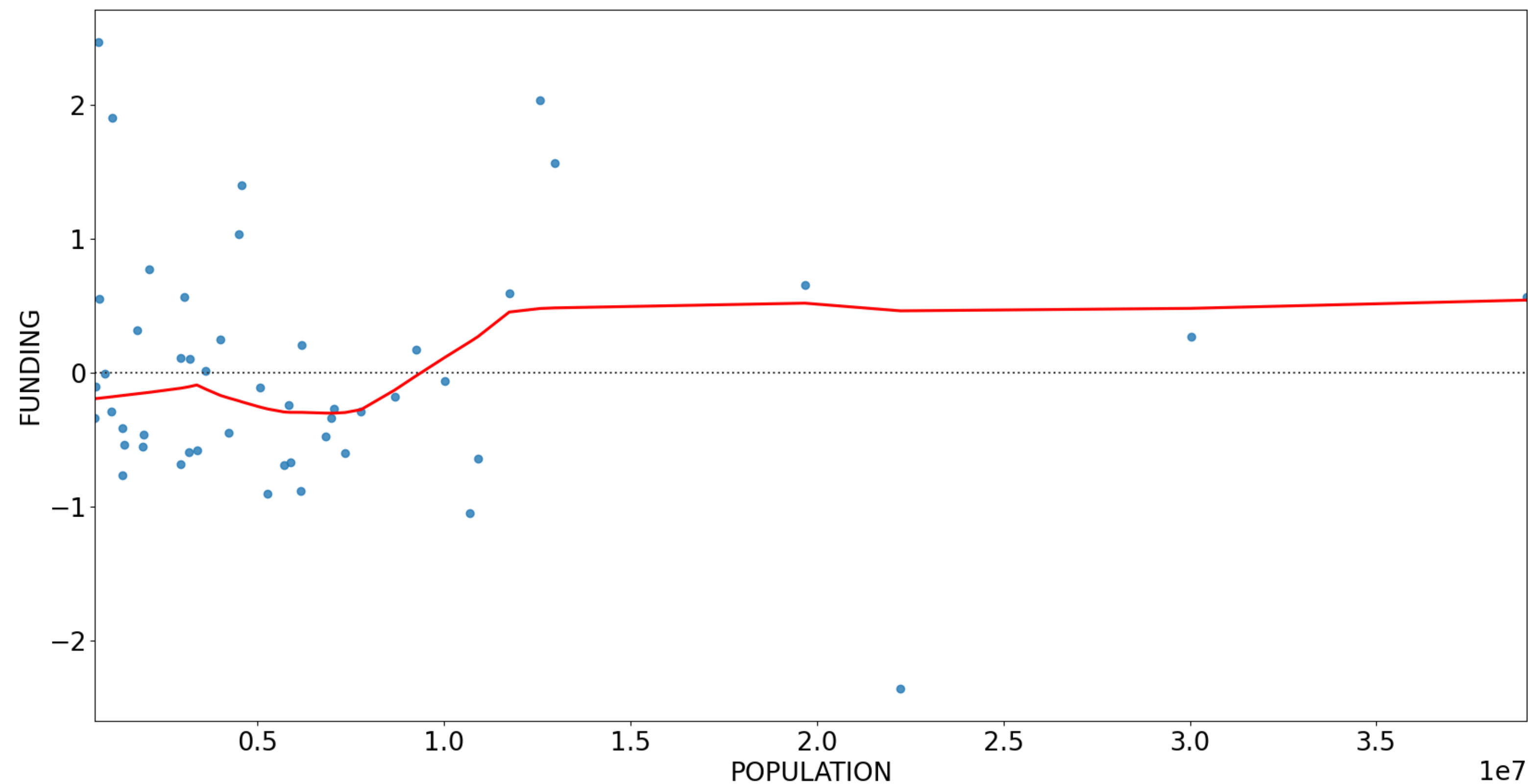
# Question 1 - Analysis

Scatterplot shows that, in general, states received funding proportional to population. However, since the IIJA funding contains both formula and discretionary allocations, the relationship between population and funding is (as expected) not perfectly linear.
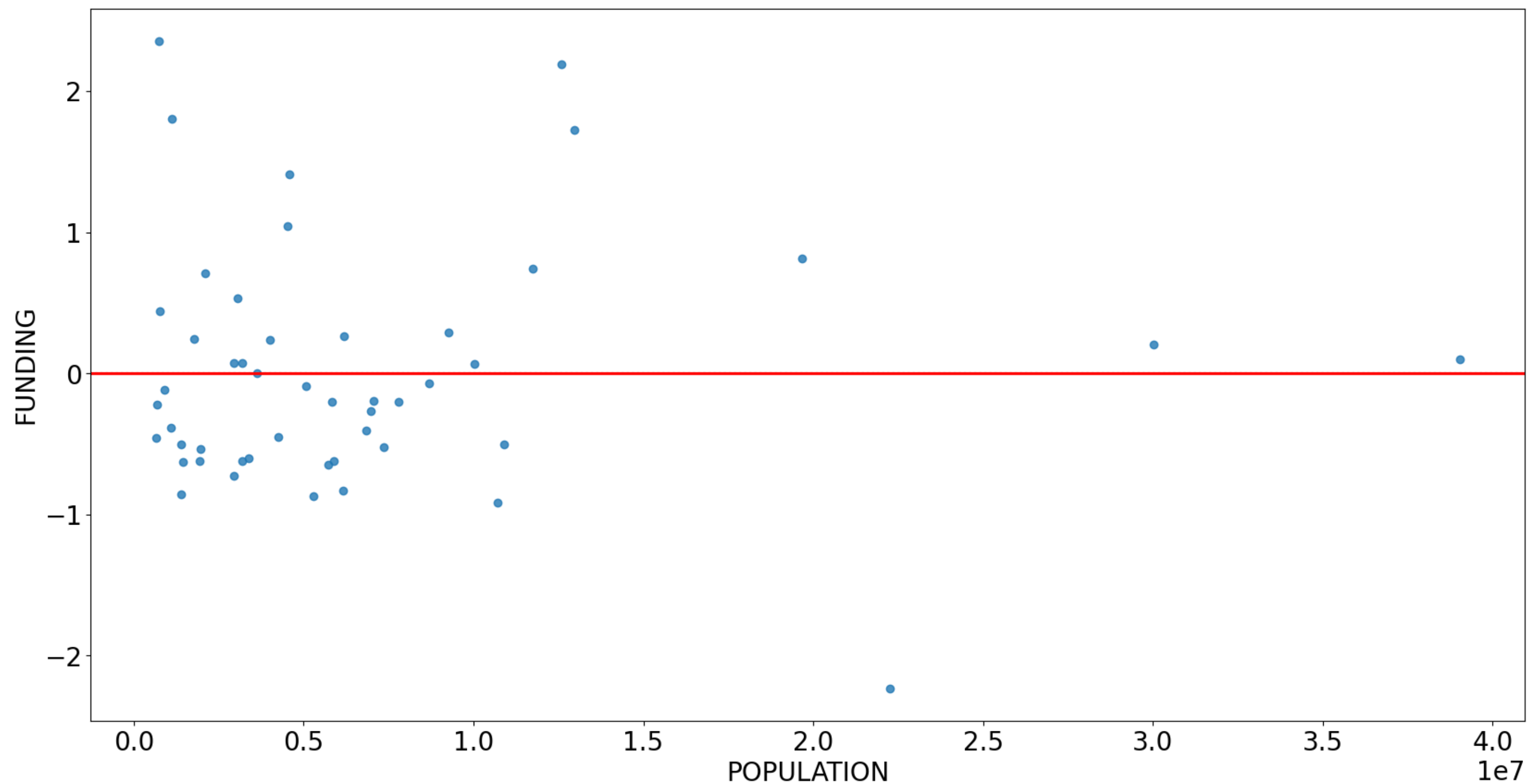


State Funding by Population

# Question 1 - Analysis

To better see the relationship between Population and Funding, we fit the data using linear regression and plot residuals. Presence of structure in the residual plot reveals a violation of linear regression assumptions. The red Lowess line shows the structure.
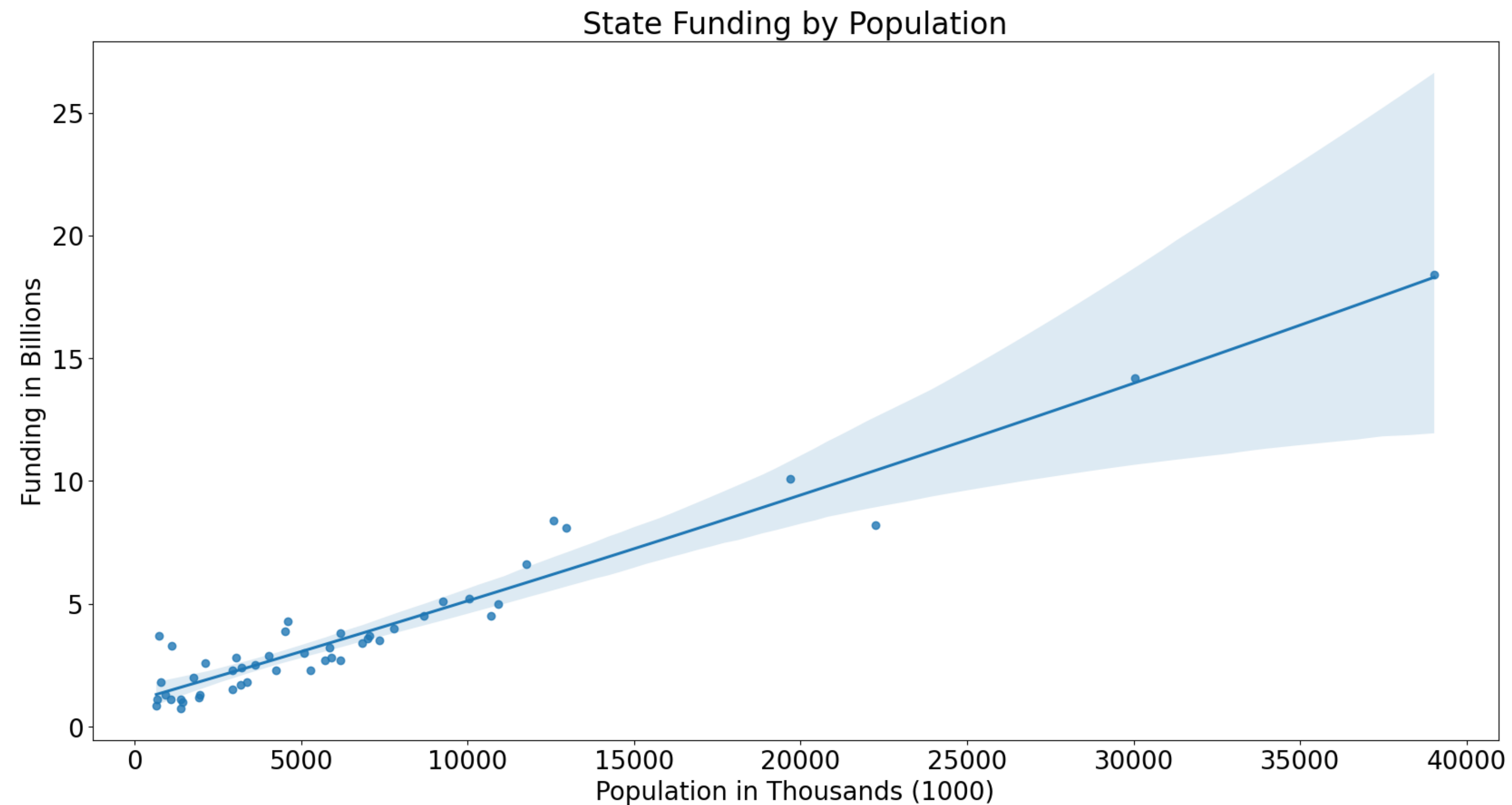
# Question 1 - Analysis

To compensate for structure in the residuals, a higher order polynomial function is used to fit the data. Using a order=2 function gets rid of the structure in the residuals.

# Question 1 - Conclusion

Scatterplot with higher order regression line shows that funding allocation is equitable based on the population of each of the States, and no bias is apparent.



State Funding by Population

# Question 2 - Conclusion

If funding was biased towards the political interests of the Biden administration, one would expect, in general, Democratic states to get a greater share of the per-capita funding compared to Republican states. In fact, as below graph illustrates, no such bias is apparent.

Therefore, we must conclude that the allocation, in fact, does not favor the political interests of the Biden administration.