Retail Capture Throughout Nebraska

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Motivation
To understand what determines retail capture in Nebraska

Research Question
Does relative population influence retail capture?

Pull Factor Importance & Formula
-Pull factors (PF) are used to measure retail capture
-\( \text{Local Per Capita Taxable Retail Sales} / (\text{State Average Per Capita Taxable Retail Sales}) \)

Method and Definitions
-Regression of pull factors on absolute and relative population
-\textbf{Trade center (TC)} = County with largest population of all adjacent counties
-\textbf{Pull Factor} = \( \beta_0 + (\beta_1 \cdot \ln(\text{Pop}_i)) + (\beta_2 \cdot \text{TC}) + U \)

Data
-2017 population from the US Census Bureau
-2017 retail trade data from the Nebraska Department of Revenue

Regression

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Statistic</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.393</td>
<td>0.236</td>
<td>-1.665</td>
<td>0.0996</td>
</tr>
<tr>
<td>( \ln(\text{pop}) )</td>
<td>0.108</td>
<td>0.027</td>
<td>4.010</td>
<td>0.000132</td>
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<tr>
<td>Trade Center</td>
<td>0.387</td>
<td>0.101</td>
<td>3.834</td>
<td>0.000245</td>
</tr>
</tbody>
</table>

N= 86 Adjusted \( R^2 = 0.391 \)

Regression Results
Both variables, Trade Center and Natural log of the population were found to be statistically significant and positively correlated with retail capture

Conclusion
Relative population has a positive association with retail capture

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Literature Review