

<b>1. Research questions and observational data</b> <ul style="list-style-type: none"> <li>Identifies the <i>causal</i> research questions</li> <li>Demonstrates understanding of why these data are observational; <i>Applies</i> to mobility context</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Familiarity with concepts but difficulty applying	<b>3</b> Good questions and discussion: applies concepts fairly well	<b>4</b> Great questions and excellent discussion
<b>2. Compares Regression 1 and 2</b> <ul style="list-style-type: none"> <li>Recognizes the non-linearity in Graph 1 and that the log-log transformation corrects it</li> <li>Reinforces this observation by correctly explaining Graphs 1A and 2A</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Familiarity with concepts but difficulty applying	<b>3</b> Good discussion and applies concepts fairly well	<b>4</b> Clear understanding and full application
<b>3. Interprets coefficient in Regression 2</b> <ul style="list-style-type: none"> <li>Correctly interprets the “slope” in Regression 2 (log-log specification). A ten percent (<i>not</i> percentage point) increase in the fraction of HHs led by a single mom (e.g. from 0.20 to 0.22) is associated with 4 percent decrease in AM on average. (1% instead of 10% is fine too)</li> </ul>	<b>0</b> Not addressed or serious conceptual errors	<b>1</b> Some familiarity with concepts	<b>2</b> Fair discussion and applies concepts fairly well but no numeric example	<b>3</b> Clear understanding and full application
<b>4. Interpretation of the intercept</b> <ul style="list-style-type: none"> <li>Recognizes that the intercepts have no interpretations (in any regression) because an x value of 0 is outside the range of the data</li> </ul>	<b>0</b> Not addressed or serious conceptual errors	<b>1</b> Some familiarity with concepts	<b>2</b> Seems to understand, but not conclusive	<b>3</b> Full/direct interpretation
<b>5. Fully interprets slope in linear specifications</b> <ul style="list-style-type: none"> <li><i>Interprets</i> a slope correctly in linear-linear specification. (Regressions 1, 3 – 8 are lin-lin.)</li> <li>Specifies units of measurement, clear on causality, recognizes scatter (e.g. says “on average”), names the x and y variable, and whether describes Southeast or entire U.S.</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Some familiarity with concepts	<b>3 4</b> Fair to good interpretation but not complete/not entirely correct in all cases	<b>5</b> Clear understanding and full interpretation
<b>6. Fully interprets the R<sup>2</sup></b> <ul style="list-style-type: none"> <li>Consistently <i>interprets</i> the R<sup>2</sup> correctly</li> <li>Unit-free, no direction, measure of strength of linear relationship, what percent of variation in LHS variable explained by variation in RHS variable, and whether describes Southeast or entire U.S.</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Some familiarity with concepts	<b>3 4</b> Fair to good interpretation but not complete/not entirely correct in all cases	<b>5</b> Clear understanding and full interpretation
<b>7. Compares Regression 1 and 3</b> <ul style="list-style-type: none"> <li>Points out that non-linearity is NOT an issue for the Southeast subsample</li> <li>Points out that not only the functional form but also the slope are v. different for the Southeast</li> <li>Points out that the relationship between the variables is weaker in the Southeast: the R<sup>2</sup> is lower in Regression 3 (and the R<sup>2</sup> of Regression 1 should <i>understate</i> strength because a line does not fit the curved relationship well)</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Some familiarity with concepts	<b>3 4</b> Fair to good discussion and applies concepts fairly well but does not address all of the key comparisons	<b>5</b> Clear understanding and full discussion

<b>8. Compares Regression 3 and 4</b> <ul style="list-style-type: none"> <li>Understands signs of slopes are as expected (negative for AM and positive for RM) and that both look linear (no violations of assumptions)</li> <li>Points out similarity in <math>R^2</math></li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Familiarity with concepts but difficulty applying	<b>3</b> Good discussion and applies concepts fairly well	<b>4</b> Clear understanding and full application
<b>9. Discussion of Regressions 5 – 8</b> <ul style="list-style-type: none"> <li>Points out that all four show very little association (linear or otherwise) between mobility and student to teacher ratios</li> <li>Recognizes this does NOT mean that quality of education has no causal effect on mobility</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Some familiarity with concepts	<b>3 4</b> Fair to good discussion and applies concepts fairly well but errors/omissions	<b>5</b> Clear understanding and full application
<b>10. Correlation as a <i>descriptive</i> statistic</b> <ul style="list-style-type: none"> <li>Gives TWO causes for concern: (1) non-linearity in some case and (2) geographic variation in strength within U.S.</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Indirectly addresses one of the two	<b>3</b> Directly addresses only one of the two	<b>4</b> Directly addresses both reasons
<b>11. Explains analyses do NOT address questions</b> <ul style="list-style-type: none"> <li>Demonstrates understanding that causal research question cannot be answered with these observational data</li> <li>Gives valid examples of lurking/unobserved/omitted/confounding variables (these are synonyms: any one is acceptable)</li> </ul>	<b>0 1</b> Not addressed or serious conceptual errors	<b>2</b> Some familiarity with concepts but does not offer much or any explanation or application to this context	<b>3 4</b> Fair to good discussion and identification of some lurking variables	<b>5</b> Full explanation that directly addresses causality issues
<b>12. Writing is clear</b> <ul style="list-style-type: none"> <li>Easy for reader to understand exact meaning of each sentence (even if incorrect)</li> <li>Written for understanding; not vague or open to multiple interpretations</li> </ul>	<b>-2</b> Reader cannot follow some key sentences or passages	<b>-1</b> Reader can follow sentences but with effort	<b>0</b> Fairly modest revisions could improve clarity	<b>1</b> Meets all criteria for clarity
<b>13. Writing is coherent</b> <ul style="list-style-type: none"> <li>Well-structured paragraphs and transitions between paragraphs</li> <li>Effective use of linking words (e.g. in addition, for example, yet, however, hence, etc.)</li> <li>Ideas reinforce each other: no contradictions</li> </ul>	<b>-2</b> Substantial revision needed throughout	<b>-1</b> Some parts need substantial revision	<b>0</b> Fairly modest revisions could improve coherence	<b>1</b> Meets all criteria for coherence
<b>14. Writing is concise</b> <ul style="list-style-type: none"> <li>Uses a concise writing style to enable a deep and full analysis within the requested two-page length</li> <li>Avoids wordiness and unnecessary repetition</li> </ul>	<b>-3</b> Revision could shorten $\geq 20\%$ without loss of substance or clarity	<b>-2 -1</b> Revision needed in multiple places to fix wordiness and repetition	<b>0</b> Fairly modest revisions could improve concision	<b>1</b> Meets all criteria for conciseness