

In the article “Rebel on the Grand Canal: Disrupted Trade Access and Social Conflict in China, 1650-1911” (*American Economic Review*, (2022) 112 (5): 1555-90), there was an error in our interpretation of the estimated coefficient in column (1), Table 4. With the inverse hyperbolic sine transformation (arcsinh) applied to the outcome variable, the coefficient should be interpreted as the approximate percentage change in Y under the conditions stressed in Bellemare and Wichman (2020). This would imply an “ $(\exp(0.0380)-1)*100=3.87$ percent increase in rebellions per million population”.

However, we also note that the calculation above may not provide an accurate approximation of the percentage change in our setting. As Bellemare and Wichman (2020) pointed out, the accuracy of this calculation requires most of the Y values to be large. However, our sample contains a lot of zeros in Y (since rebellions are rare events), which may lead to very inaccurate elasticity approximation in our setting. For this reason, we should refrain from drawing conclusions about magnitude from specifications with arcsinh .

To understand the magnitude, it would be more straightforward to look at estimates without arcsinh transformation. The results are reported in Table A3, Panel E of the online appendix. The estimated coefficient implies a 0.6154 increase in the number of rebellions per million population, which represents a 134% increase relative to the sample mean (0.4604). This number is roughly similar to what we have highlighted in the abstract and other parts of the paper.

References:

Bellemare, M.F. and Wichman, C.J. (2020), Elasticities and the Inverse Hyperbolic Sine Transformation. *Oxf Bull Econ Stat*, 82: 50-61. <https://doi.org/10.1111/obes.12325>