Attenuation Bias in Measuring the Wage Impact of Immigration

Discussion
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What the paper does

• Applies the Borjas (2003) methodology to large and small samples of Canadian and US Census data
  – Large samples: larger wage effect of immigration
  – Large sample immigrant share in small sample: larger wage effect of immigration
  – Conclusion: measurement error in immigrant share results in significant downward bias

• Calculates corrected coefficients
  – Back-of-envelope, ‘BBE’ and ‘USSIV’
Findings

• Striking results
  – Measurement error biases the coefficients by at least 20 to 30 percent in national level analysis
  – Even larger bias in area specifications (sample sizes smaller)
  – Area estimates one-tenth the size of national-level estimates
    • Labor-capital flows arbitrage geographic wage differences
  – Several estimates not statistically significant
Where to improve the paper

• More intuition
  – What is the source of sampling error?
  – What do the point estimates mean?
  – Why are point estimates so different in national vs. area specifications?
  – Statistical significance in large vs small samples

• Robustness checks
  – Some corrections are unstable, nonsensical
  – How sensitive are the effects of measurement error to the estimation methodology?
  – IVs other than lagged shares; natural experiments
Conclusion

• Reflects an important step in this literature
  – Reconciles disparate estimates
  – Considers a new challenge: measurement error

• Next step
  – What are the implications for other data sets, such as ACS or CPS? Other methods? Other regressors?
  – What are the implications of measurement error in other labor studies?
Measurement error

- Standard measurement error
  - Inflates variance (X), biasing coefficient Beta down
    \[ p \lim \hat{\beta}^{OLS} = \left( \Sigma_{xx}^{*} + \Sigma \right)^{-1} \Sigma_{xx}^{*} \beta \]
  - B&A argue bias can be quite large, small samples especially bad
  - Lagged share IV especially bad