

# Samuel P. Engle

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## References

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## Education

Ph.D. in Economics, University of Wisconsin-Madison, 2022 (expected)

M.S. in Economics, University of Wisconsin-Madison, 2019

M.S. in Statistics, Oregon State University, 2016

B.A. Economics & B.S. Mathematics, Seattle University, 2014

## Job Market Paper

*“Comparing variance estimators: a test-based relative-efficiency approach”*

When constructing Wald tests, consistency is the key property required for the variance estimator. This property ensures asymptotic validity of Wald tests and confidence intervals. Classical efficiency comparisons indicate all consistent variance estimators lead to equivalent tests. This paper develops a simple relative efficiency measure which leads to several new conclusions. These include quantifying the power loss associated with using cluster-robust variance estimators when observations are independent, recommending that smooth kernels should be used when estimating the asymptotic variance in quantile regression, and comparing the power of Anderson-Rubin tests to the standard Wald test. As an intermediate step, the asymptotic distributions of several test statistics are derived under fixed alternatives. Simulation evidence indicates the new asymptotic efficiency measure provides good finite-sample predictions. In an application using ACS data, it is demonstrated how to use the new approach for conducting power analysis when looking at the effect of minimum wage increases on employment.

## Publications

*Staying at Home: Mobility Effects of COVID-19*, with John Stromme and Anson Zhou, *Covid Economics: Vetted and Real-Time Papers*, Issue 4, 86-102, April 2020

*Offline training for improving online performance of a genetic algorithm based optimization model for hourly multi-reservoir operation*, with Duan Chen, Arturo S. Leon, Claudio Fuentes, and Qiuwen Chen, *Environmental modelling & software*, Volume 96, 46-57, October 2017

## Working Papers

“Comparing variance estimators: a test-based relative-efficiency approach” (Job market paper) ([link](#))

## Work in Progress

“Heteroskedastic-robust variance estimators for heavy-tailed data”

“Robust Wald tests via sample splitting”

“Improved testing in partially linear models with many regressors”

## Teaching Experience

University of Wisconsin-Madison:

Spring 2021: MS Econometrics II (ECON 705), TA

Fall 2020: PhD Math Camp/Math for Economists (ECON 703), TA

Fall 2019: PhD Econometrics I (ECON 709), TA

Fall 2017: Economic Approach to Current Issues (ECON 100), TA

Fall 2016, Spring 2017: Principles of Macroeconomics (ECON 102), TA

Oregon State University:

Fall 2015: Introduction to Statistical Methods (ST 351), TA

Fall 2014, Winter 2015, Spring 2015: Principles of Statistics (ST 201), TA

## Other Experience

2017- Statistical Consulting Group, College of Agricultural and Life Sciences, University of Wisconsin-Madison

## Presentations

2021 UW Madison Job Market Mini-conference  
2020 UW Madison Econometrics Student Workshop  
2019 UW Madison Econometrics Student Workshop

## Fellowships and Awards

2021 Alice S. Gengler Dissertation Fellowship, University of Wisconsin-Madison  
2018 Summer Research Fellowship, University of Wisconsin-Madison  
2017 Juli Plant Grainger Outstanding TA Award, University of Wisconsin-Madison

## Research Experience

2018-19,    Research assistant to Prof. Mikkel Sølvsten, University of Wisconsin-Madison  
2020  
2018        Research assistant to Prof. Bill Sandholm, University of Wisconsin-Madison

## Refereeing Activity

*American Economic Review: Insights, Journal of Population Research, World Medical & Health Policy*

## Additional Information

Programming: R, Stata, C++