

Supplement to Robustness of statistical methods when measure is affected by ceiling and/or floor effect

Matus Simkovic¹ and Birgit Träuble¹

¹Universität zu Köln, Cologne, Germany

Corresponding author:

Matus Simkovic¹

Email address: matus.simkovic@uni-koeln.de

ABSTRACT



1 GENERALIZED GAMMA DISTRIBUTION

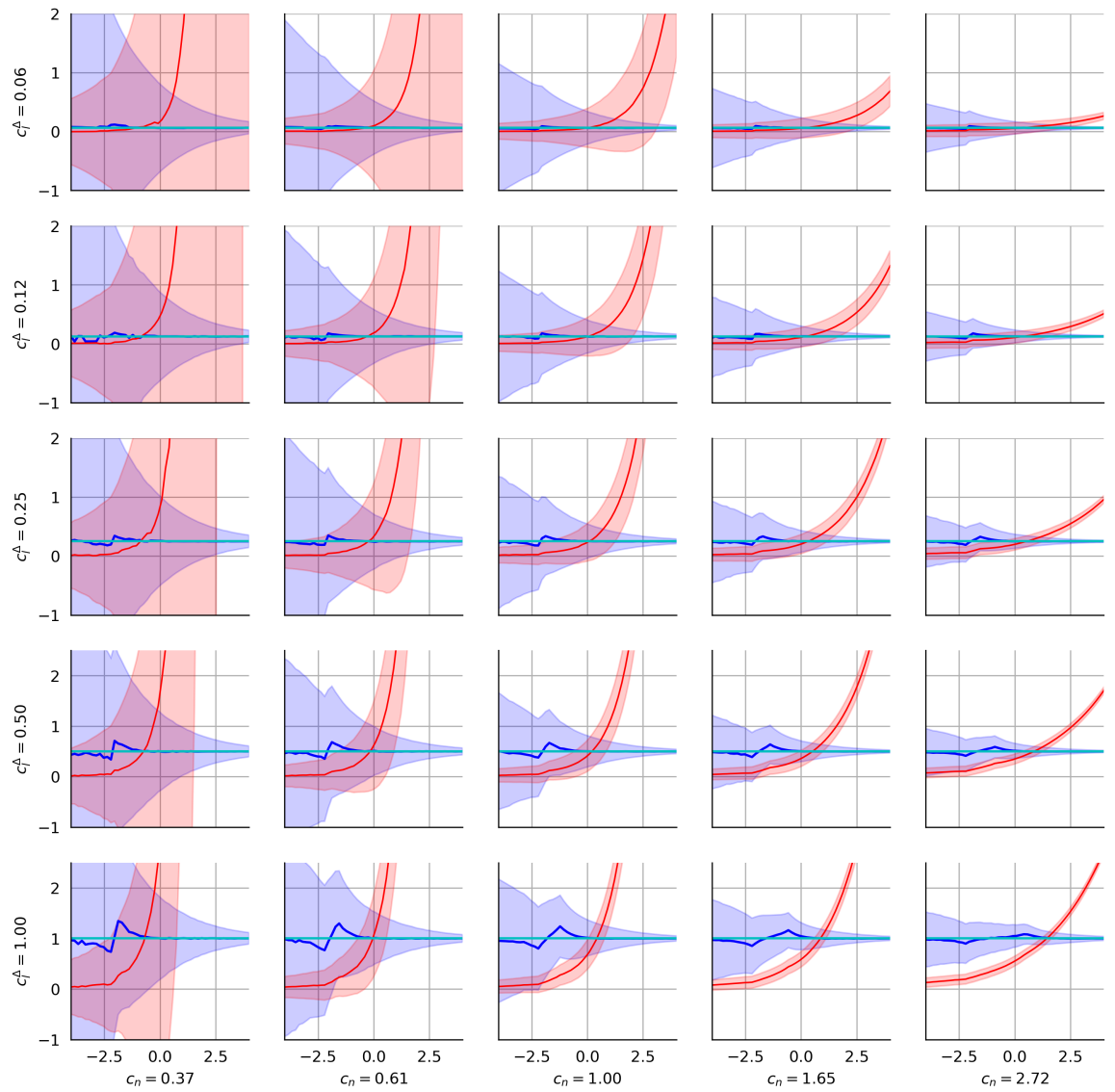


Figure 1. Confidence intervals evaluated with Generalized gamma distribution

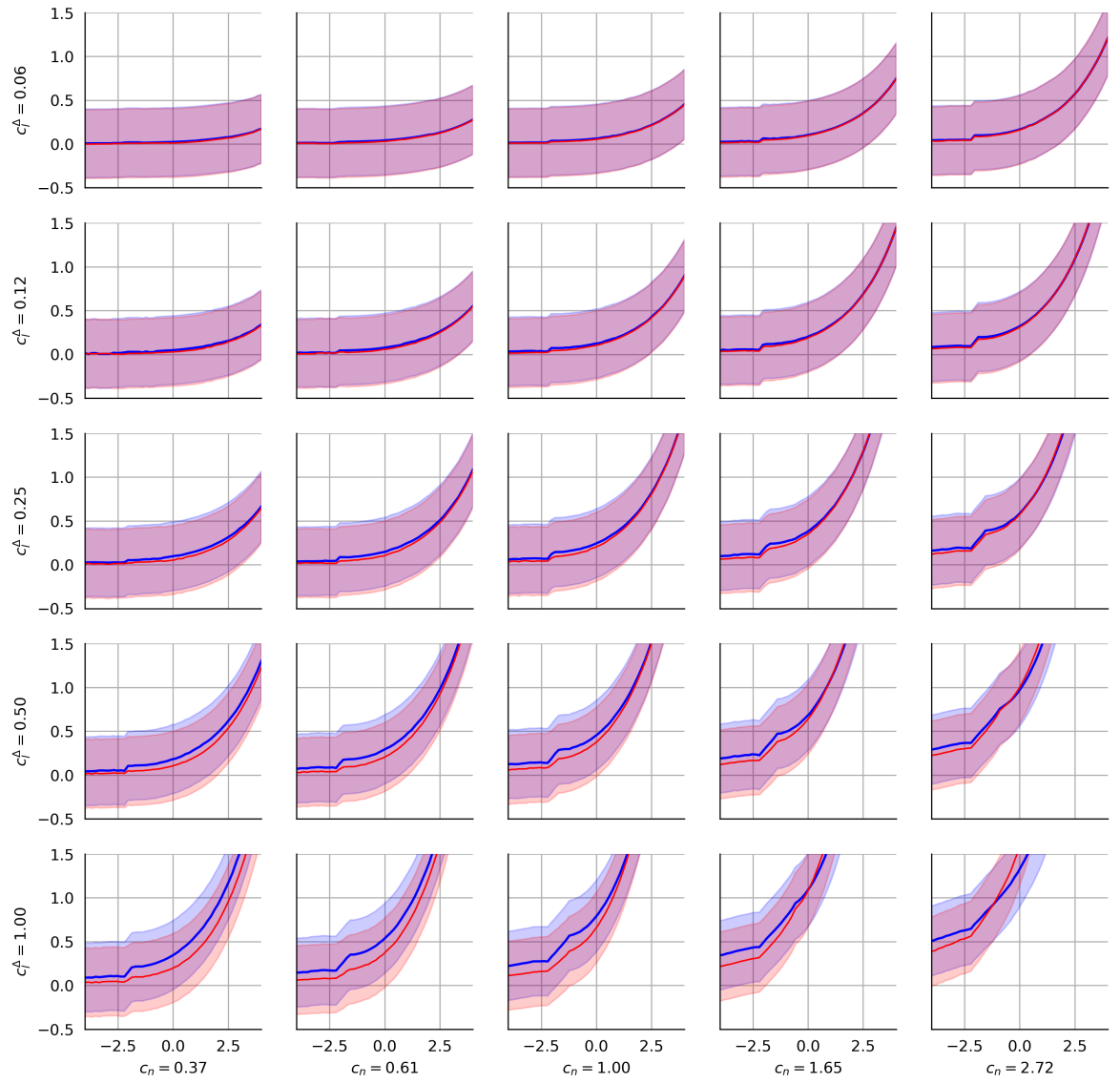


Figure 2. Cohen's d evaluated with Generalized gamma distribution

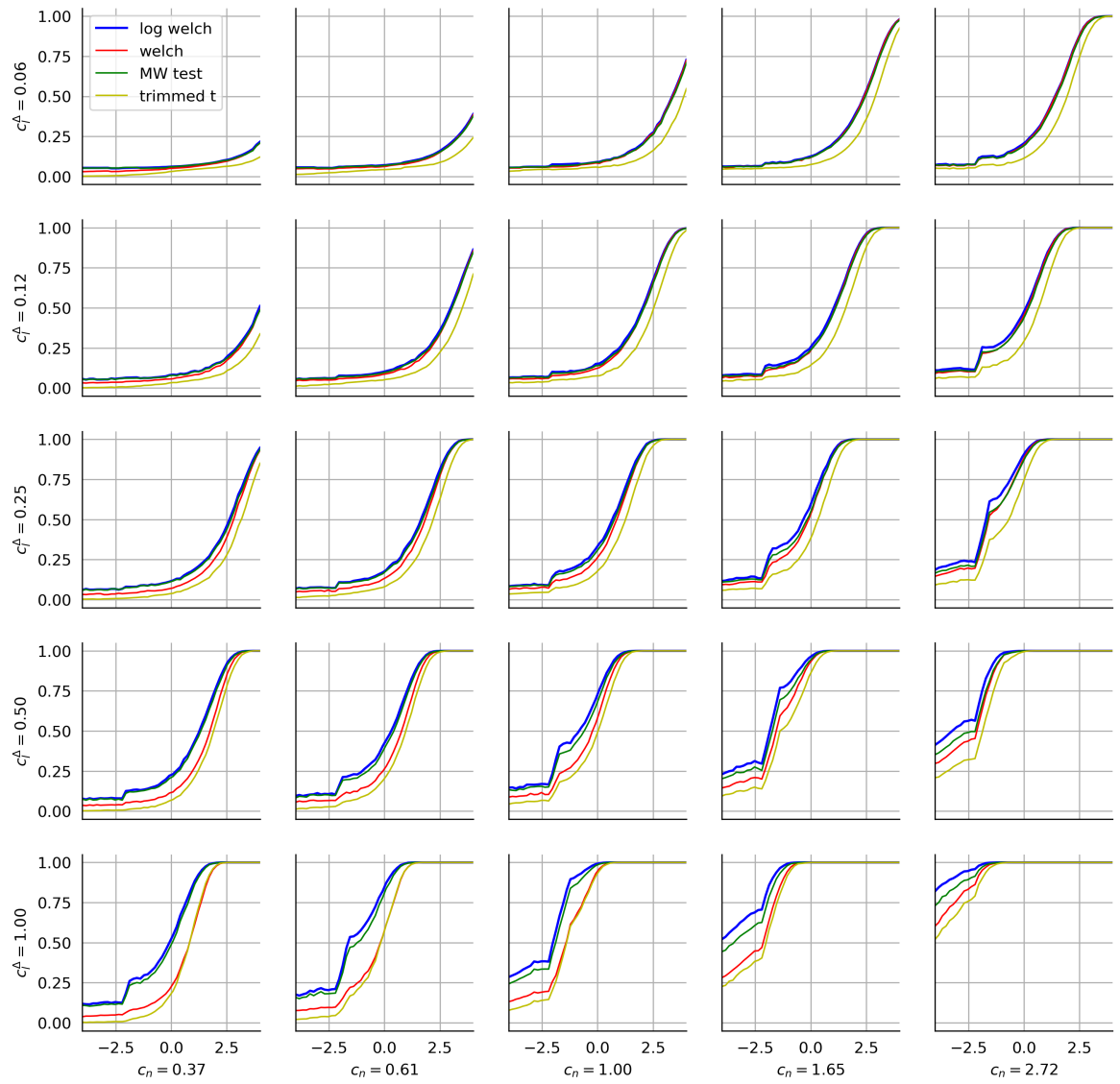


Figure 3. Two-group tests evaluated with Generalized gamma distribution

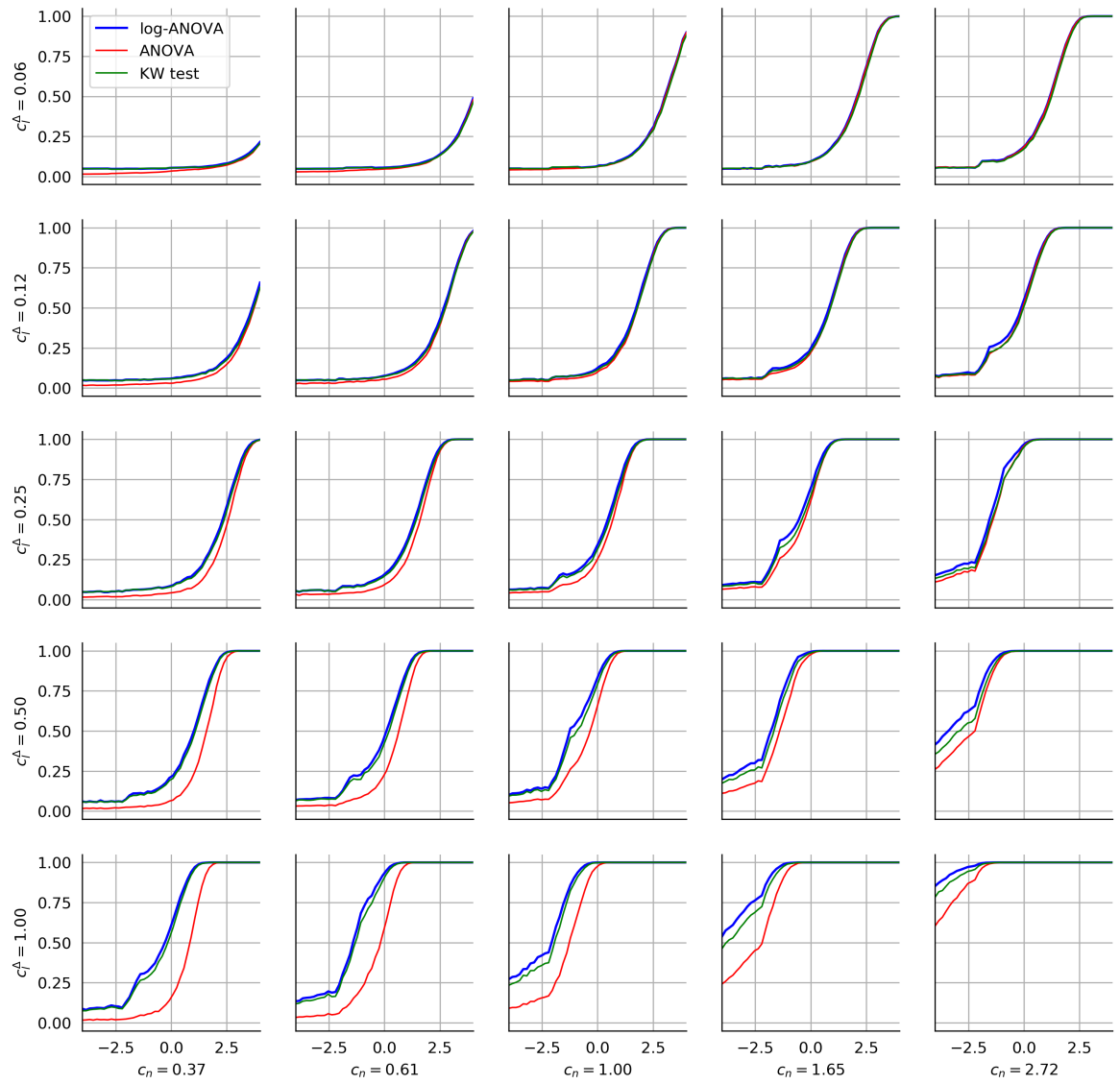


Figure 4. Three-group tests evaluated with Generalized gamma distribution

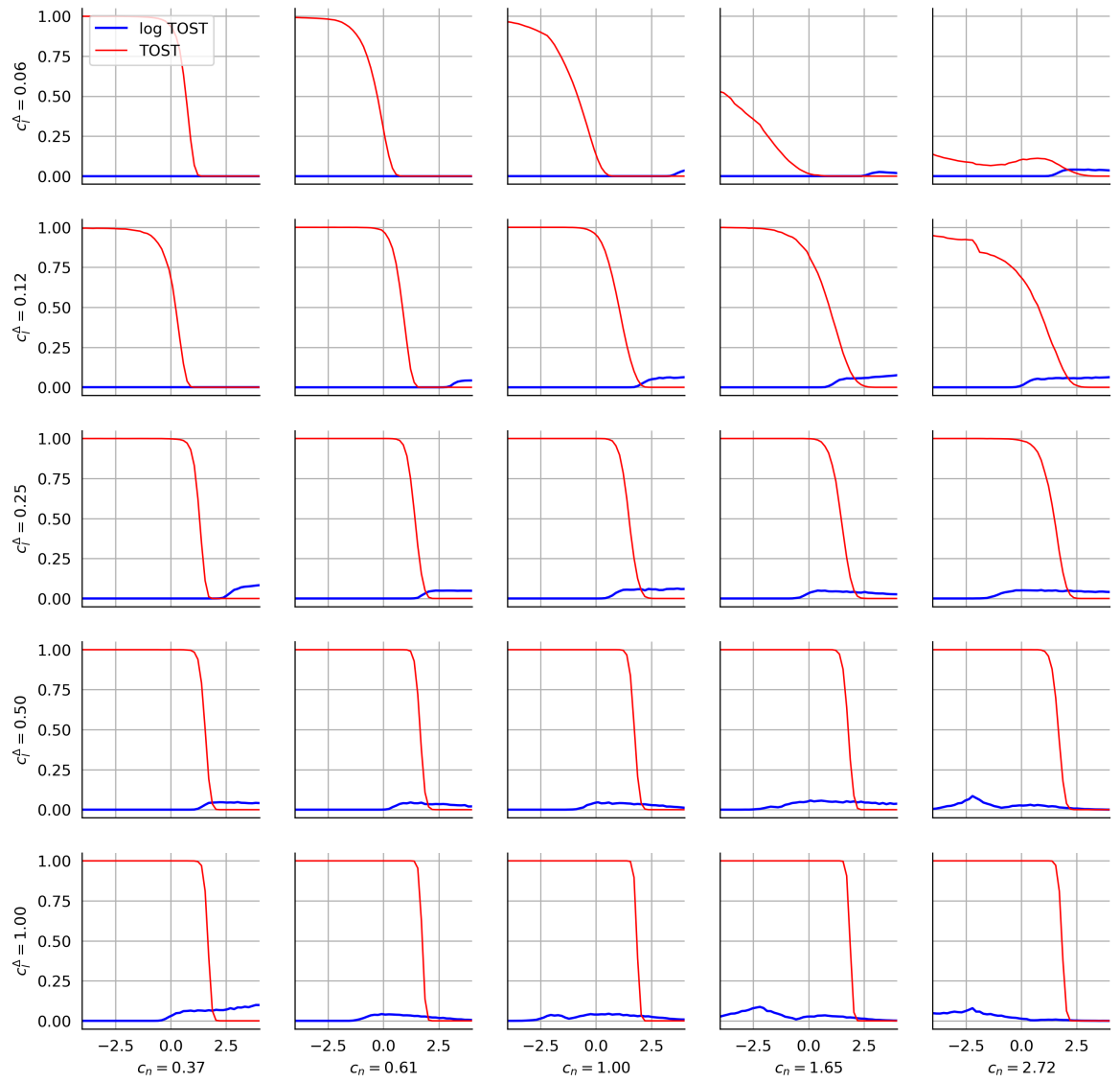


Figure 5. TOST procedure evaluated with Generalized gamma distribution

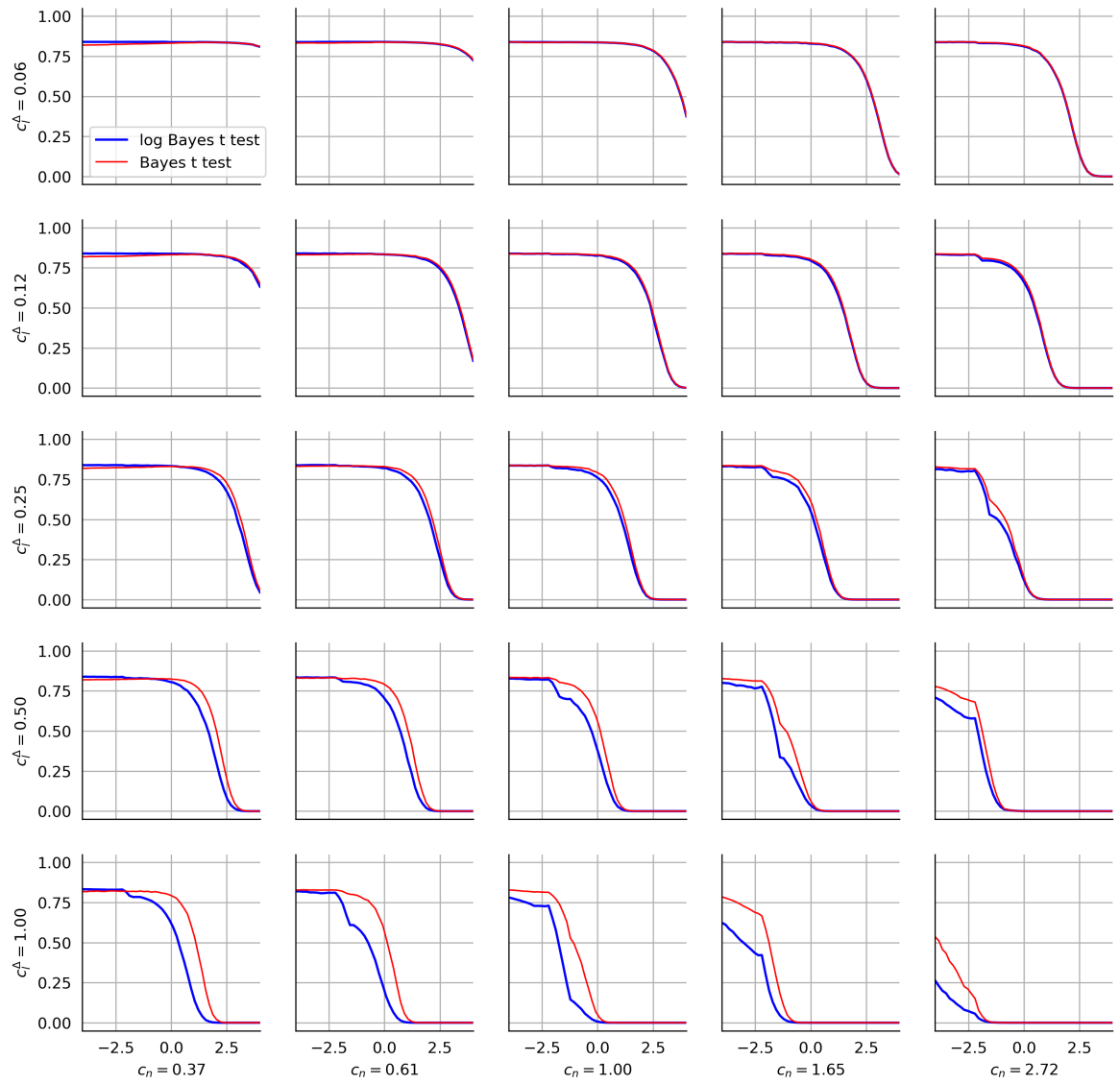


Figure 6. Bayesian t test evaluated with Generalized gamma distribution

2 WALD DISTRIBUTION

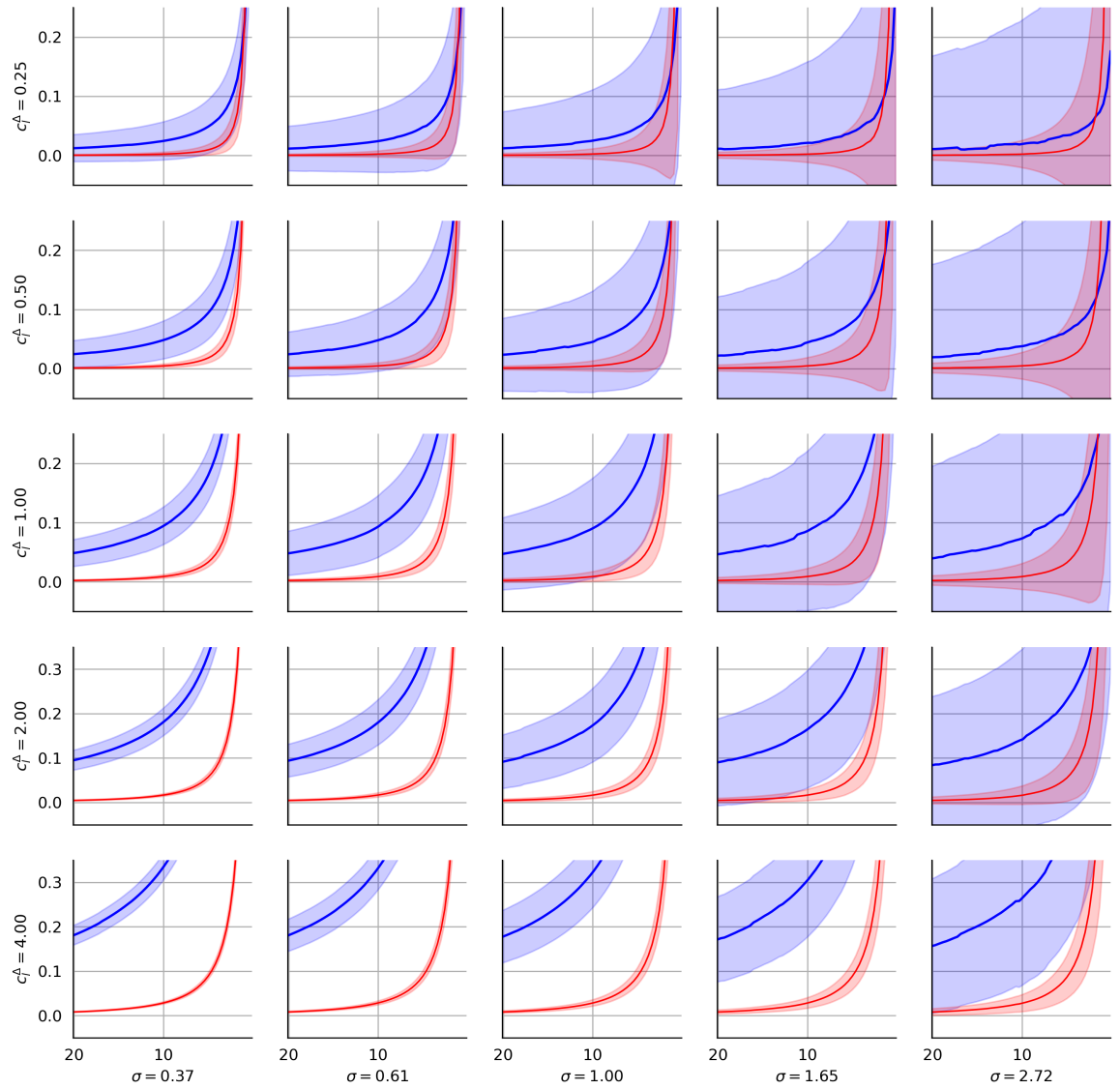


Figure 7. Confidence intervals evaluated with Wald distribution

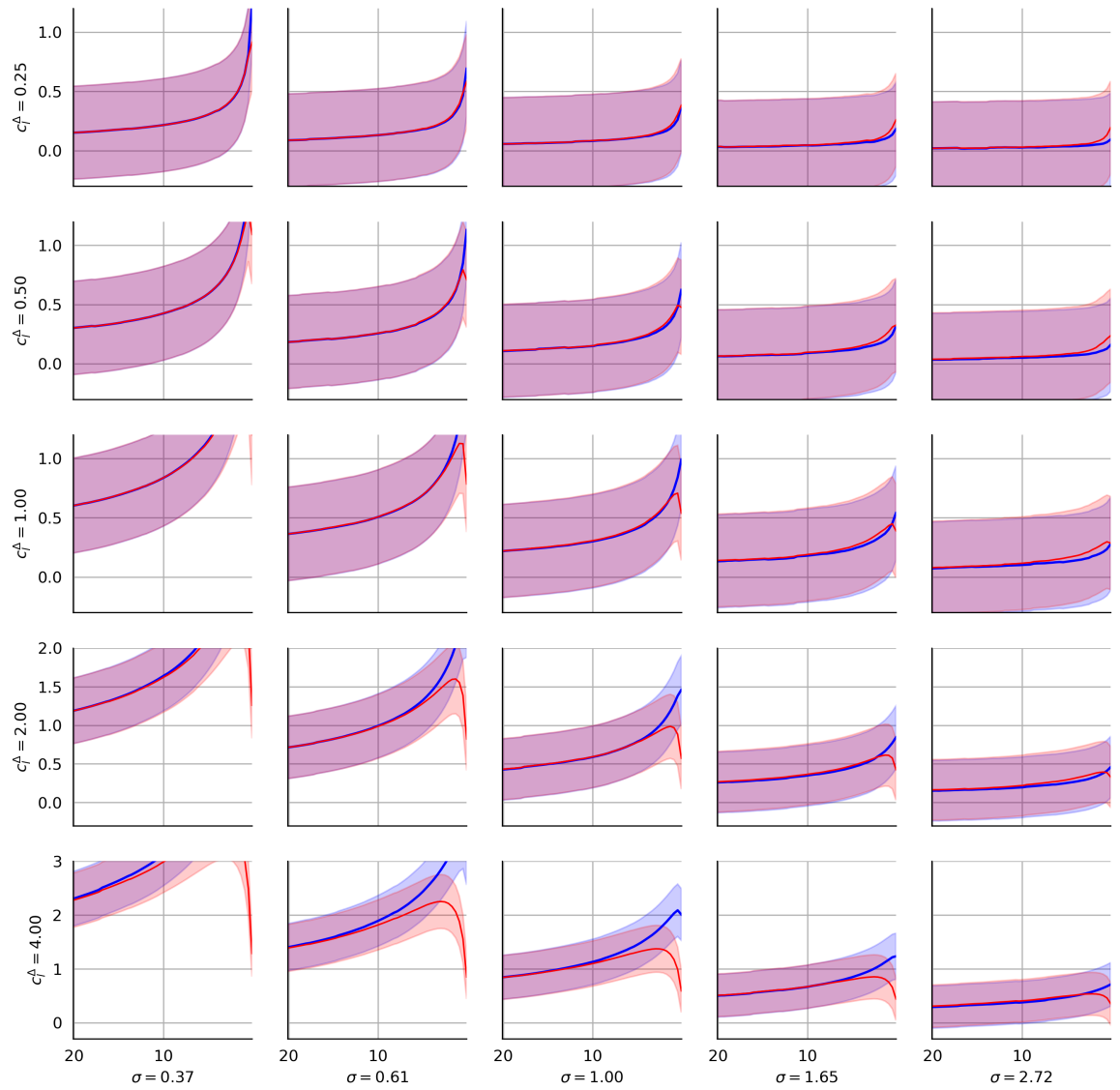


Figure 8. Cohen's d evaluated with Wald distribution

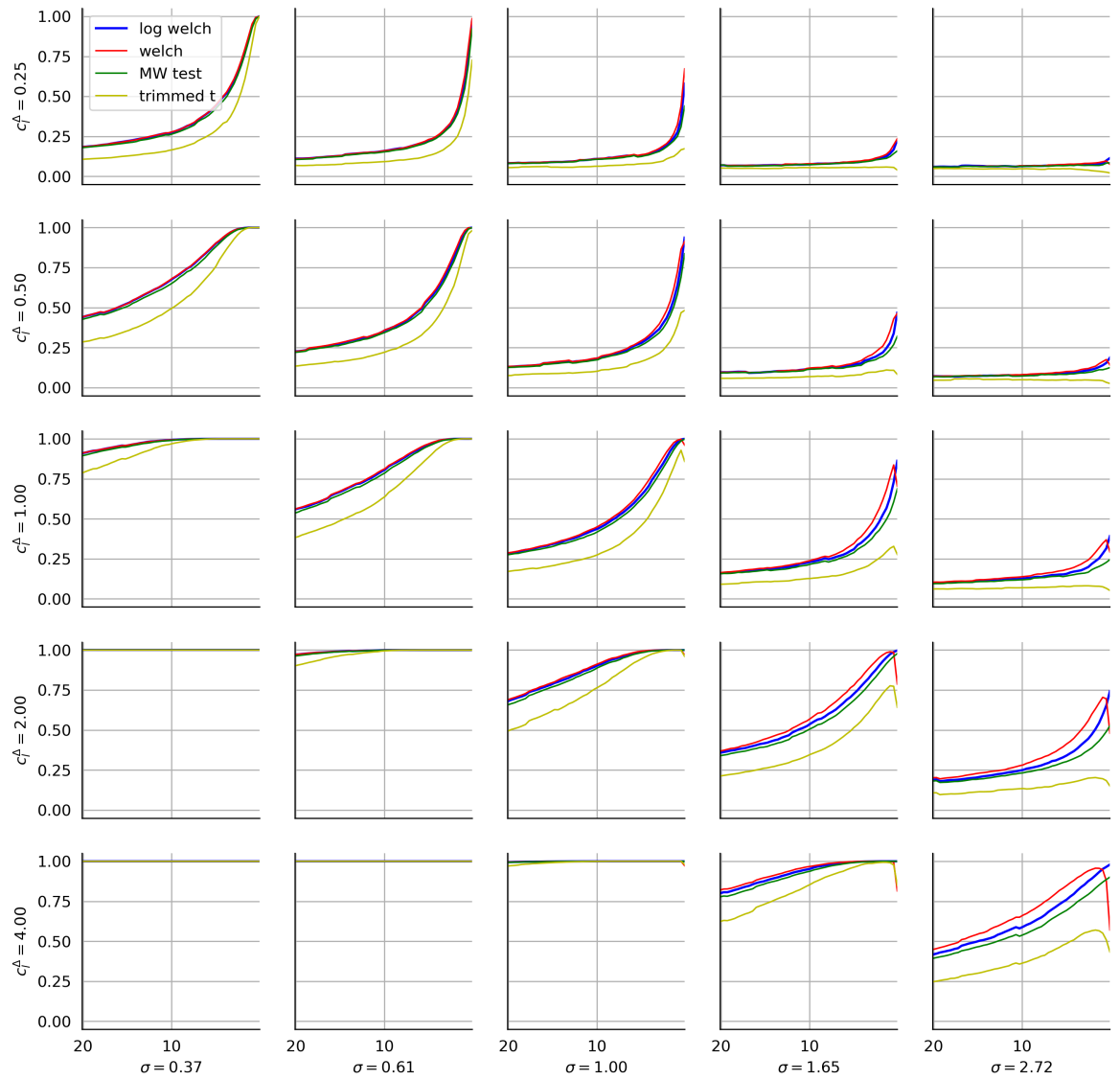


Figure 9. Two-group tests evaluated with Wald distribution

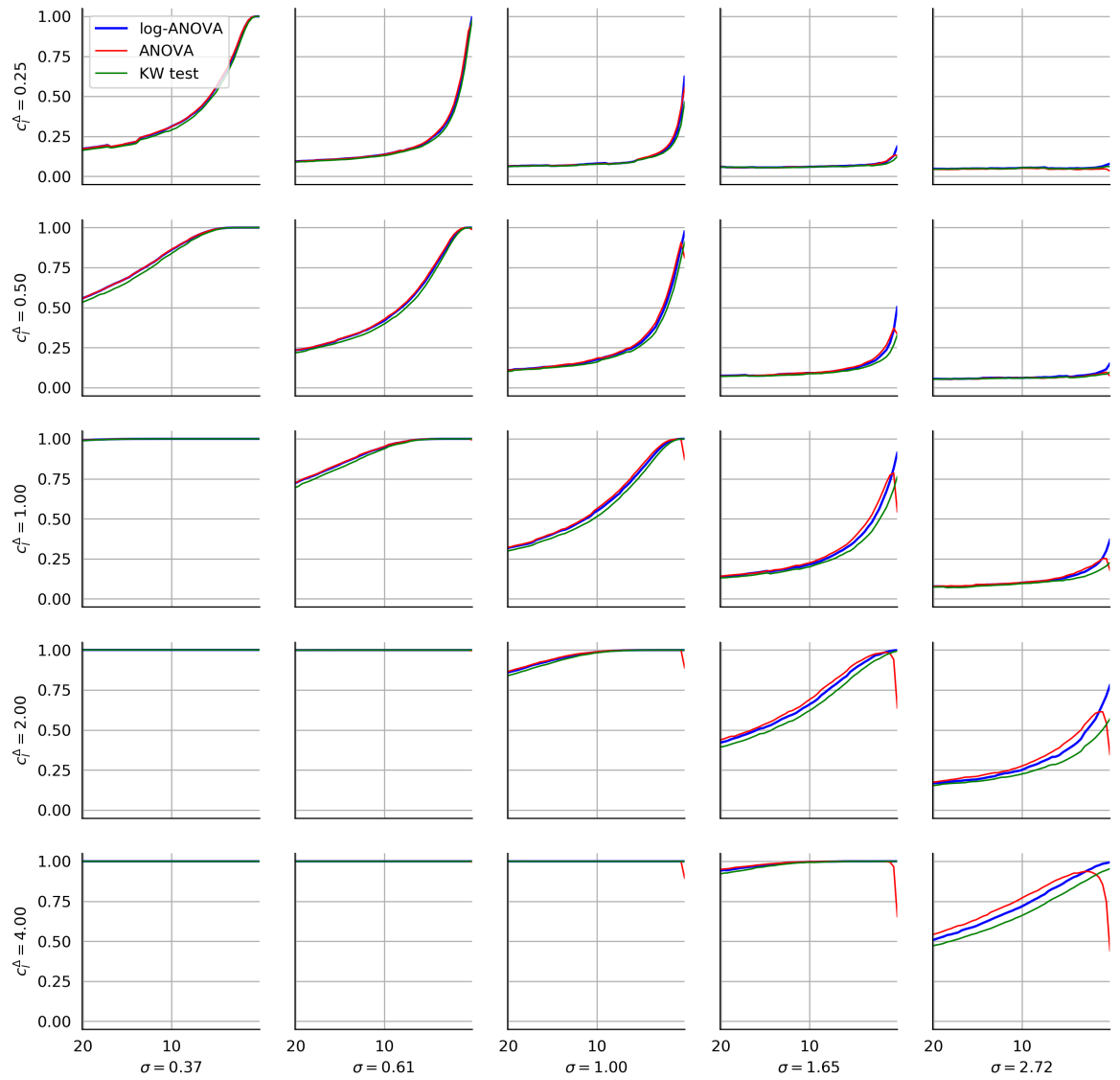


Figure 10. Three-group tests evaluated with Wald distribution

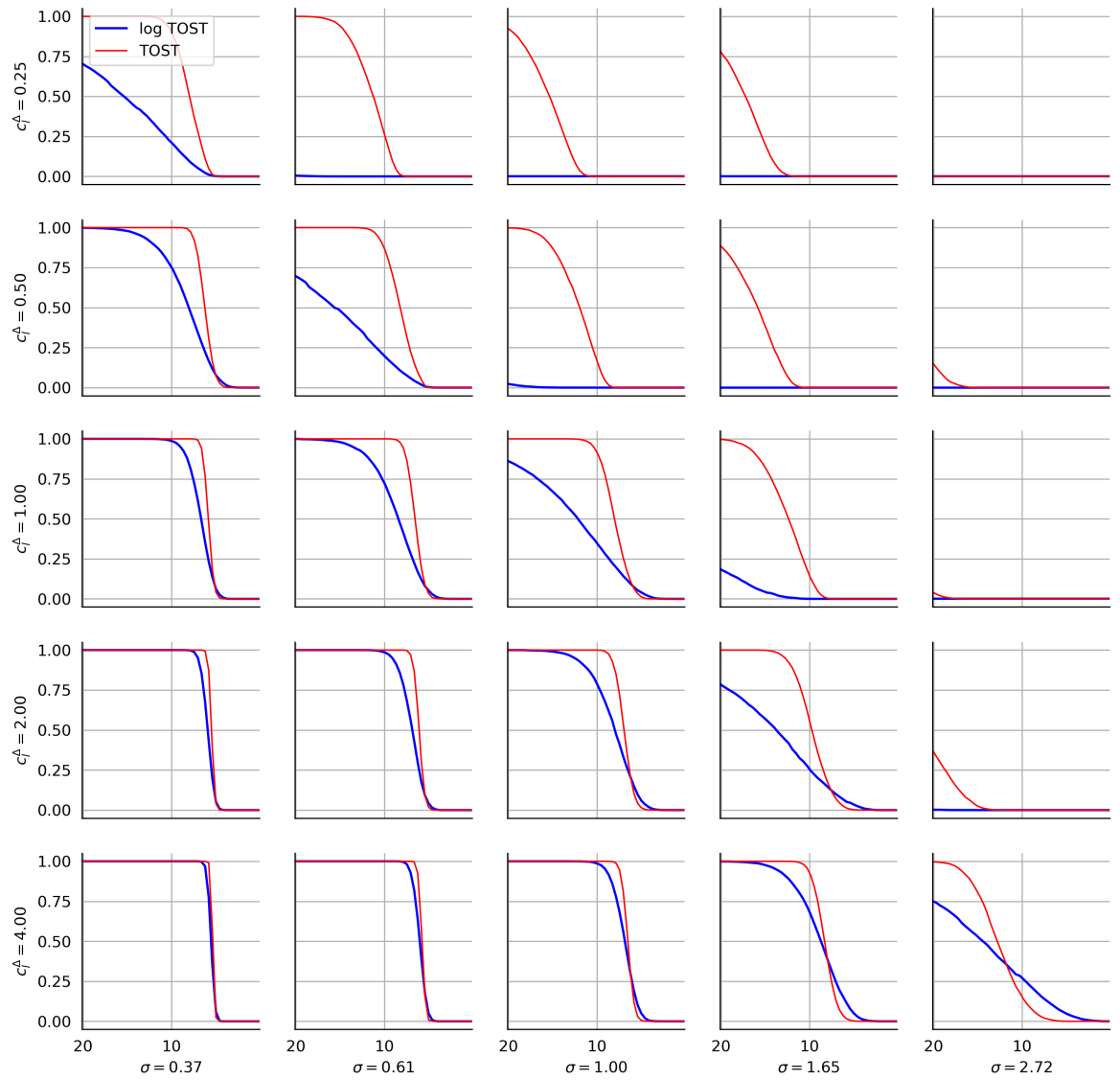


Figure 11. TOST procedure evaluated with Wald distribution

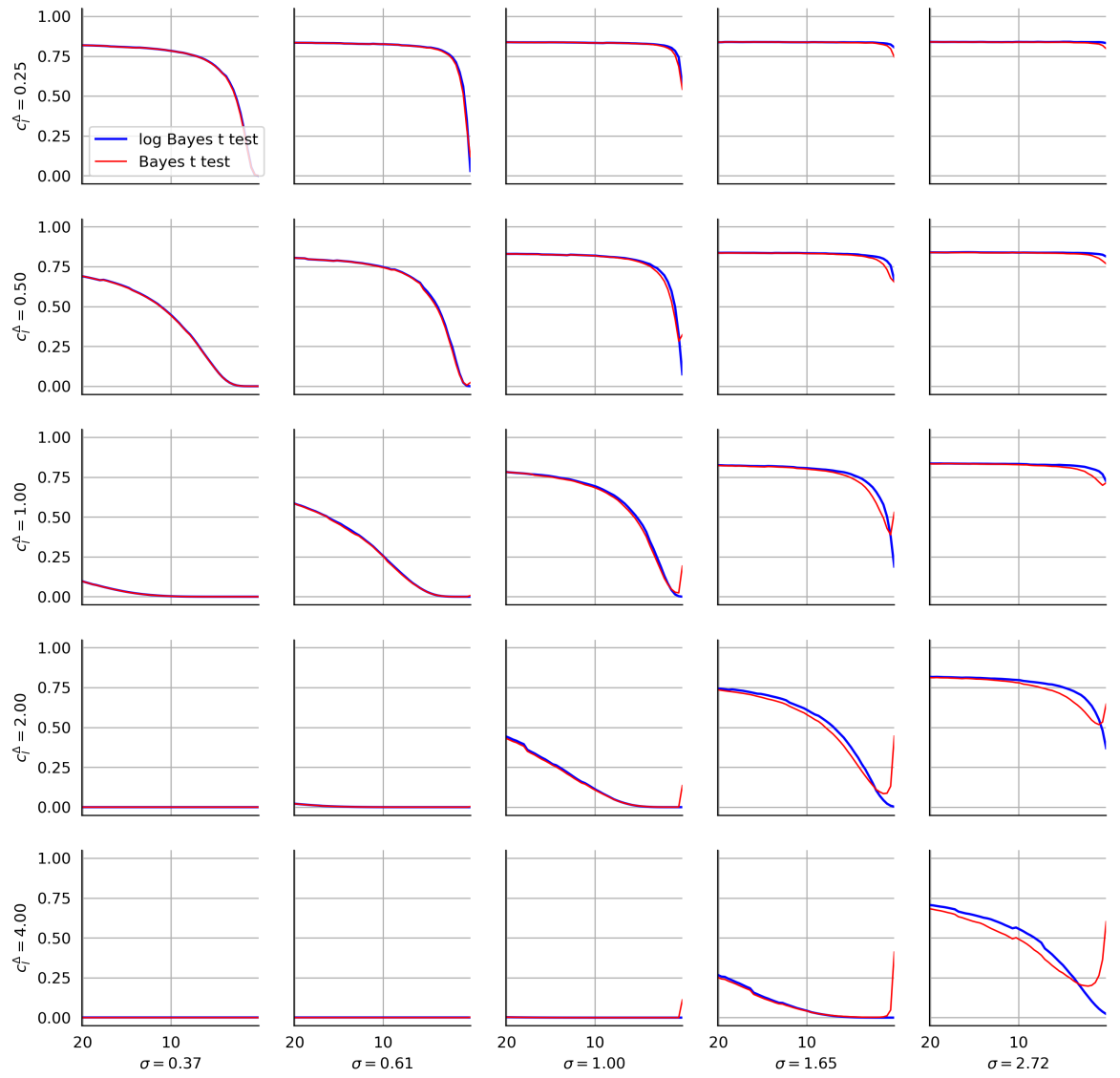


Figure 12. Bayesian t test evaluated with Wald distribution

3 BETA PRIME DISTRIBUTION

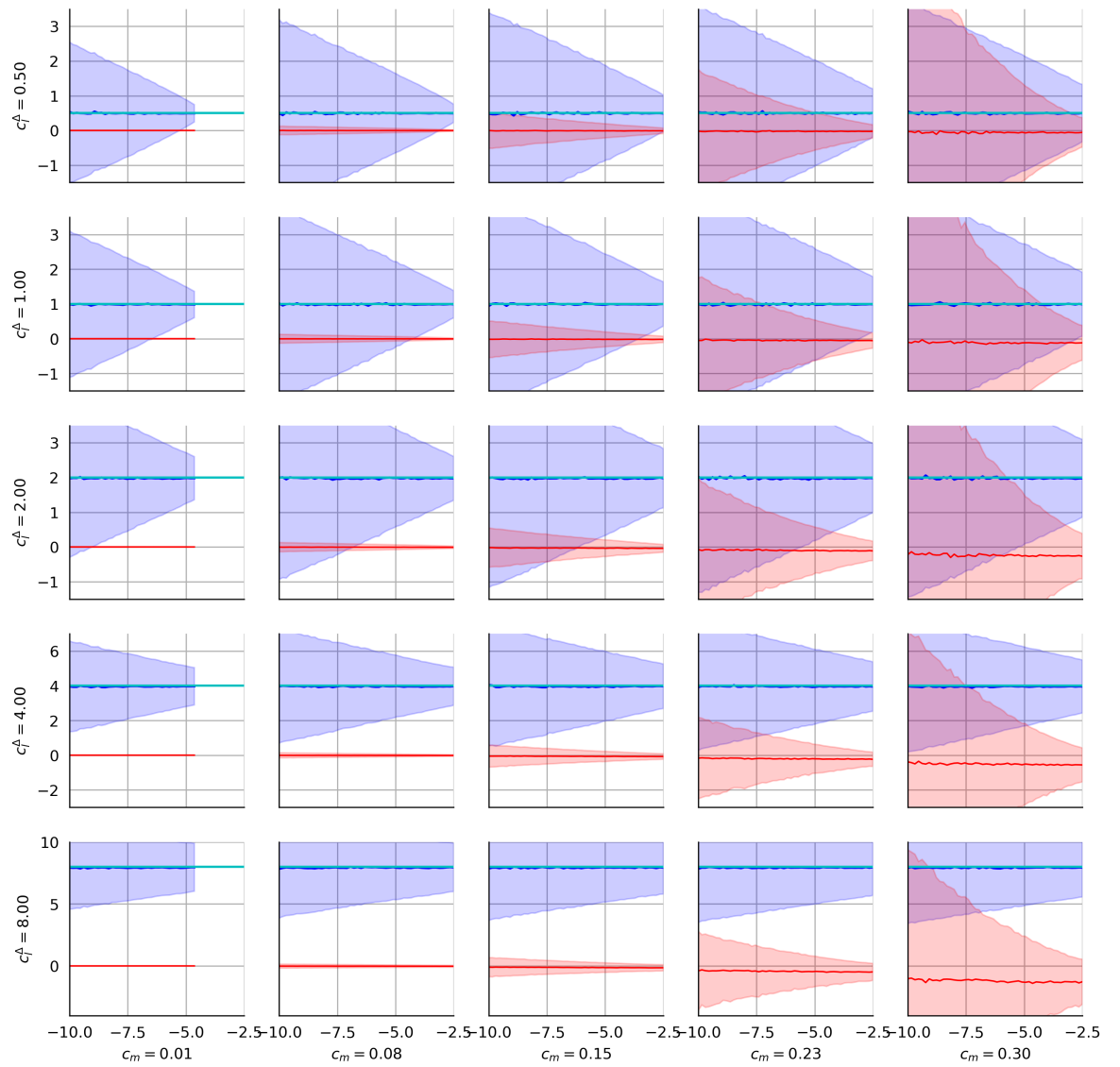


Figure 13. Confidence intervals evaluated with Beta prime distribution

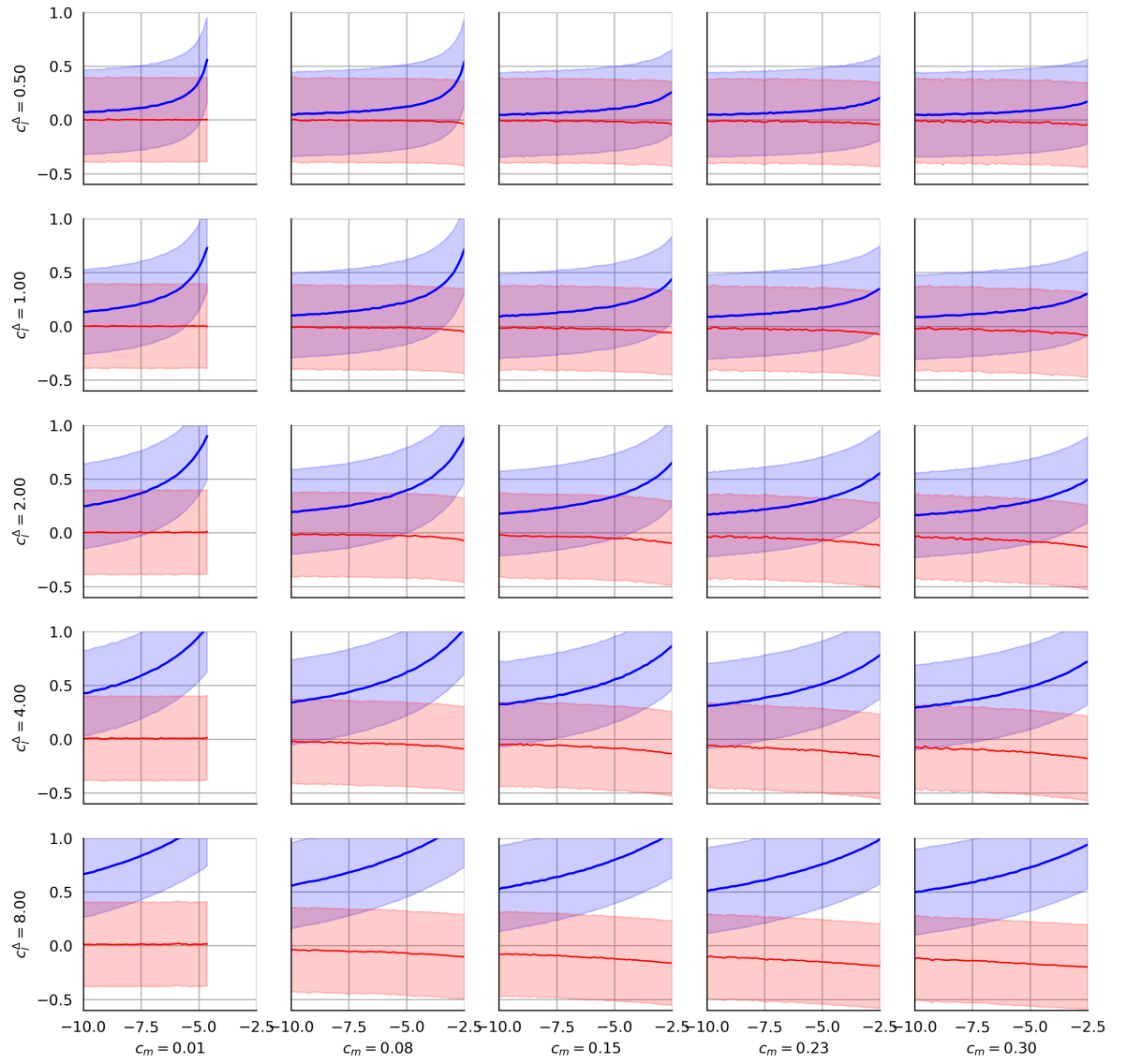


Figure 14. Cohen's d evaluated with Beta prime distribution

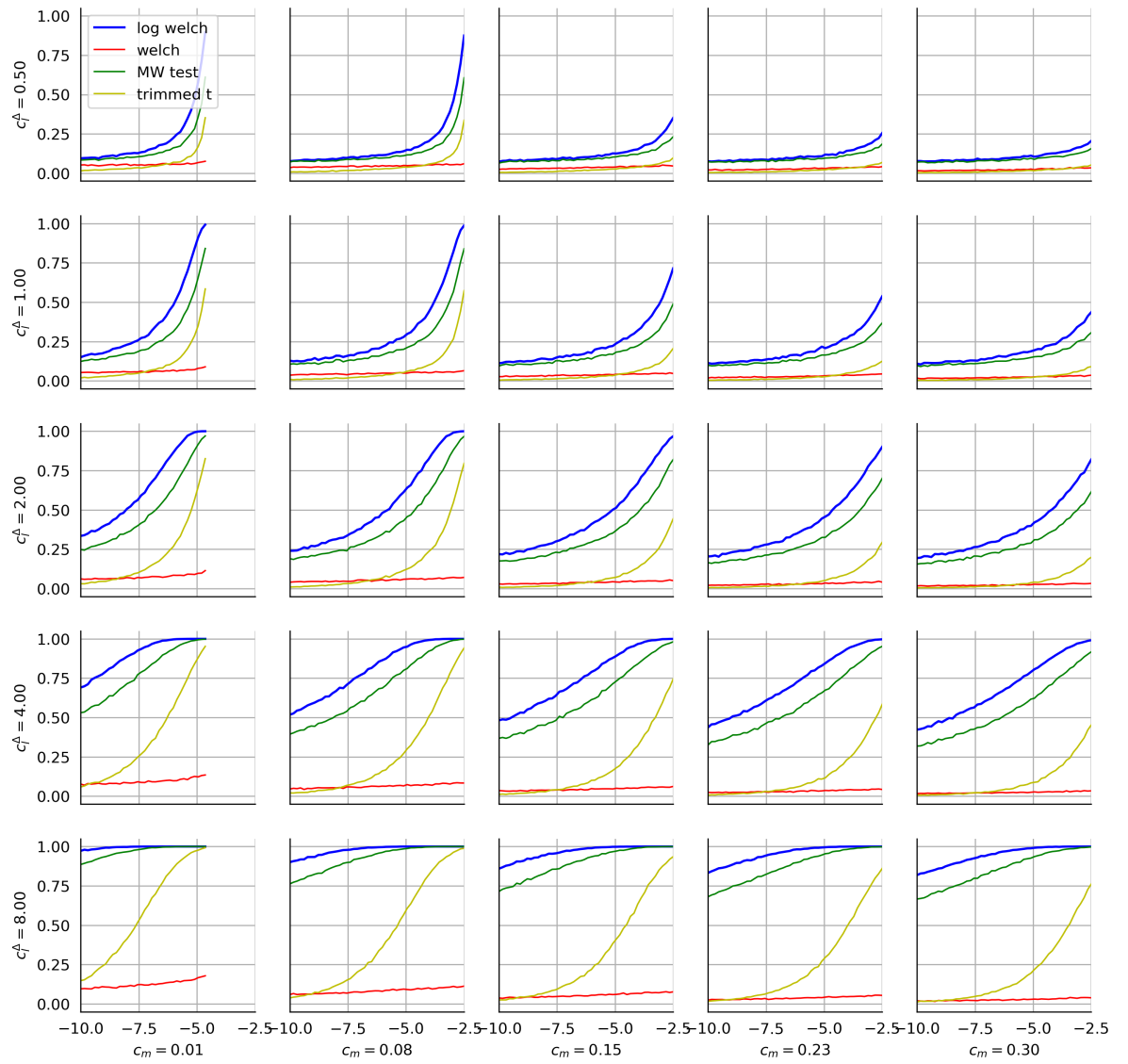


Figure 15. Two-group tests evaluated with Beta prime distribution

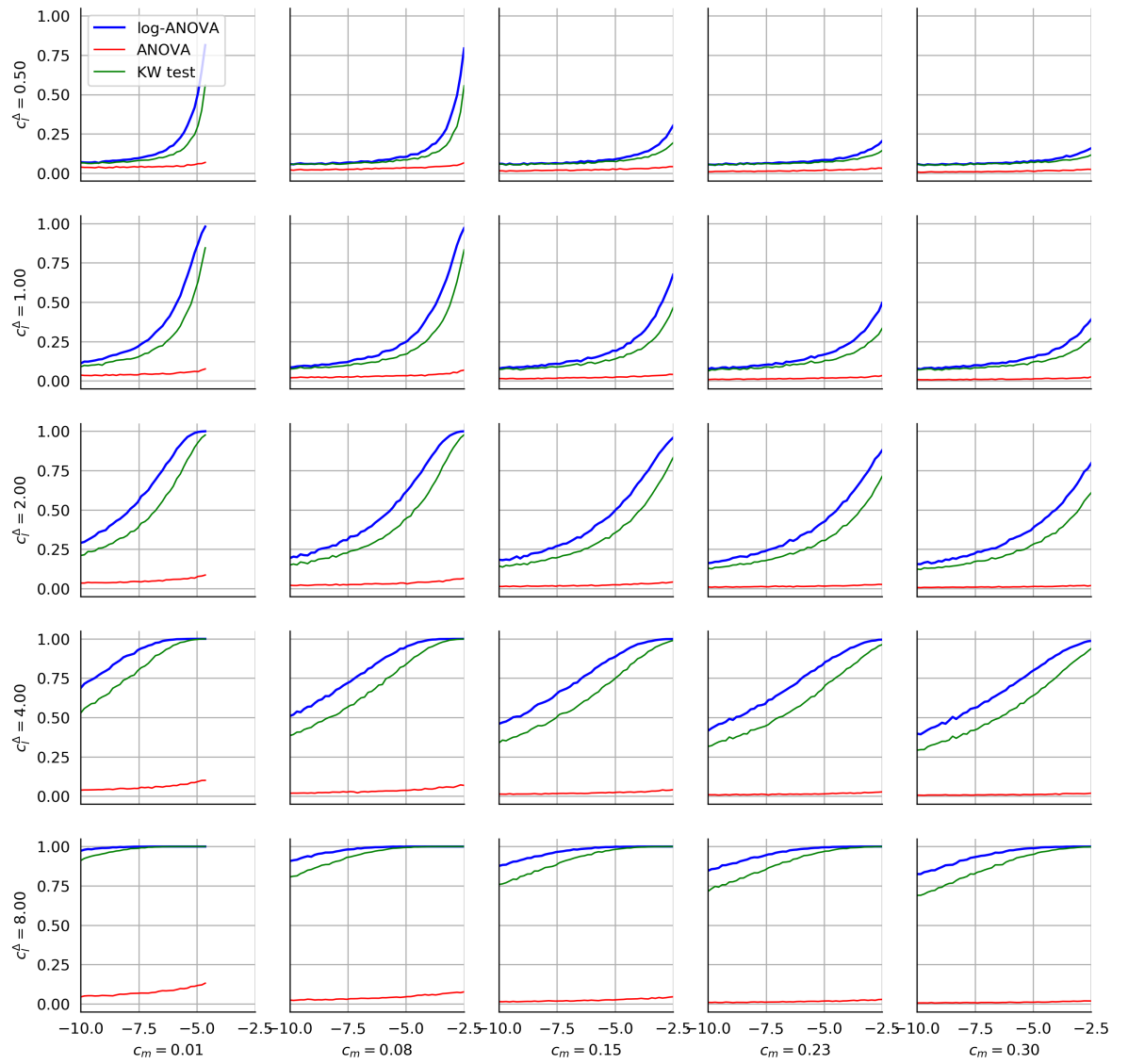


Figure 16. Three-group tests evaluated with Beta prime distribution

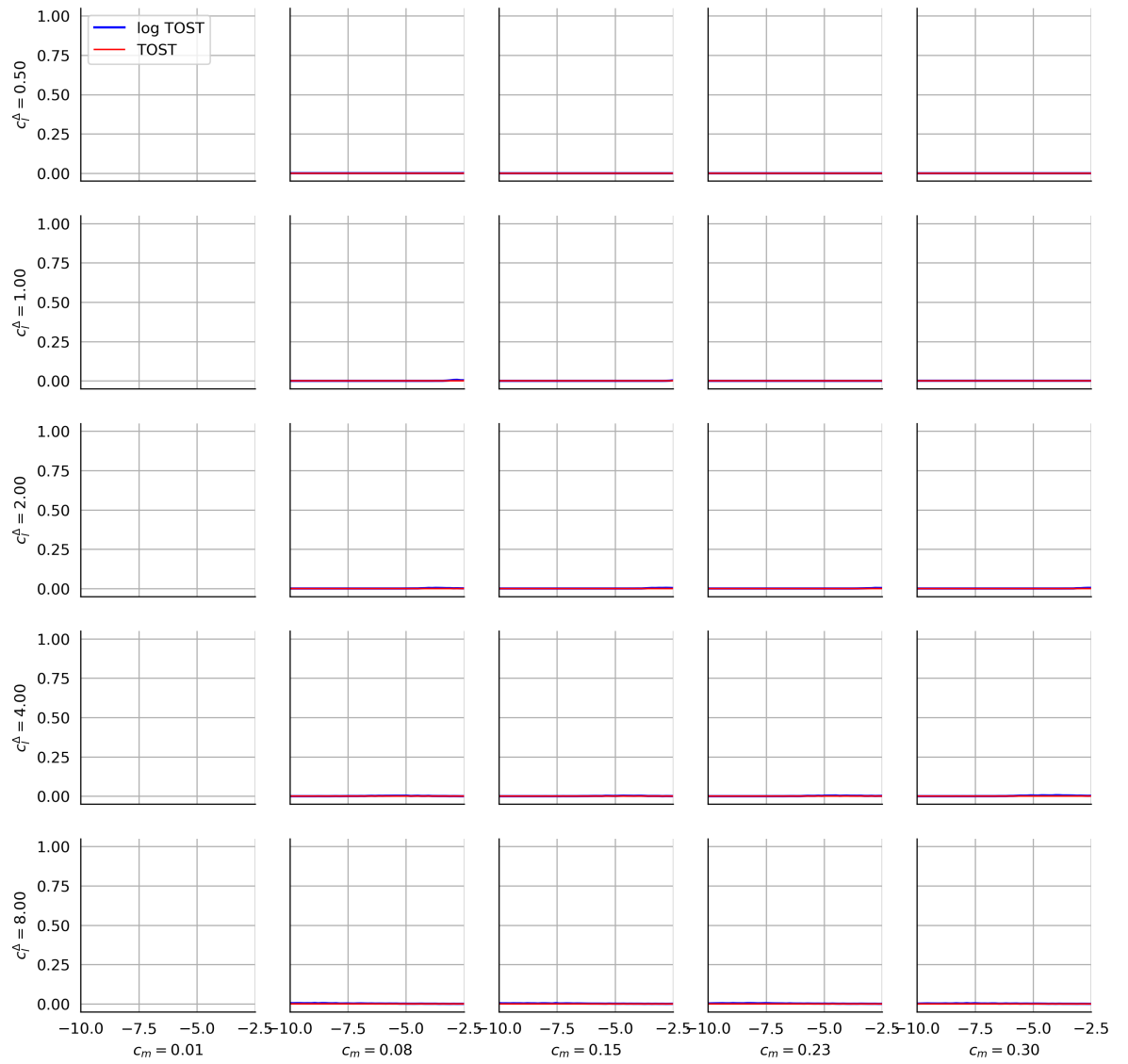


Figure 17. TOST procedure evaluated with Beta prime distribution

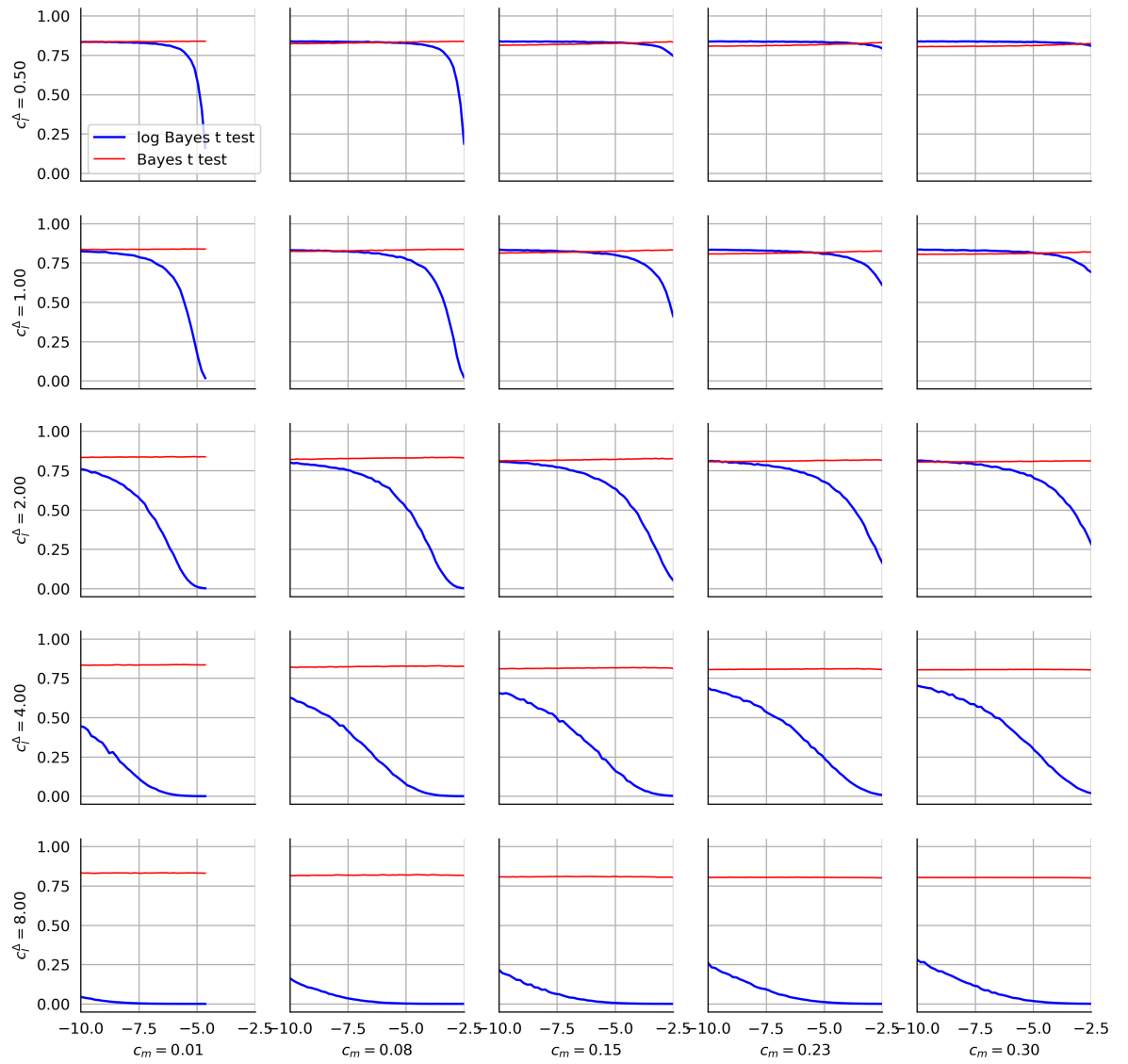


Figure 18. Bayesian t test evaluated with Beta prime distribution

4 BETA DISTRIBUTION

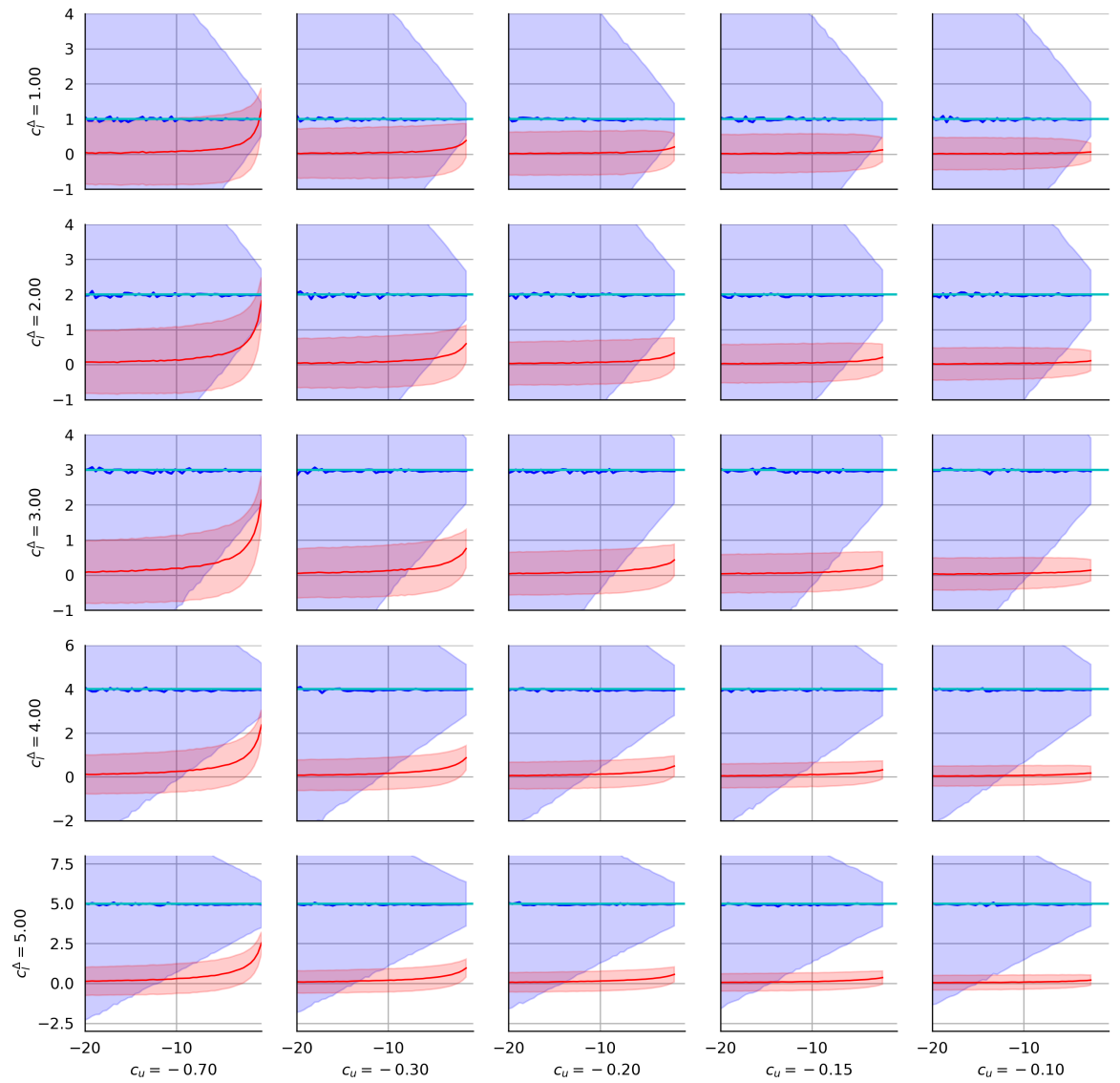


Figure 19. Confidence intervals evaluated with Beta distribution

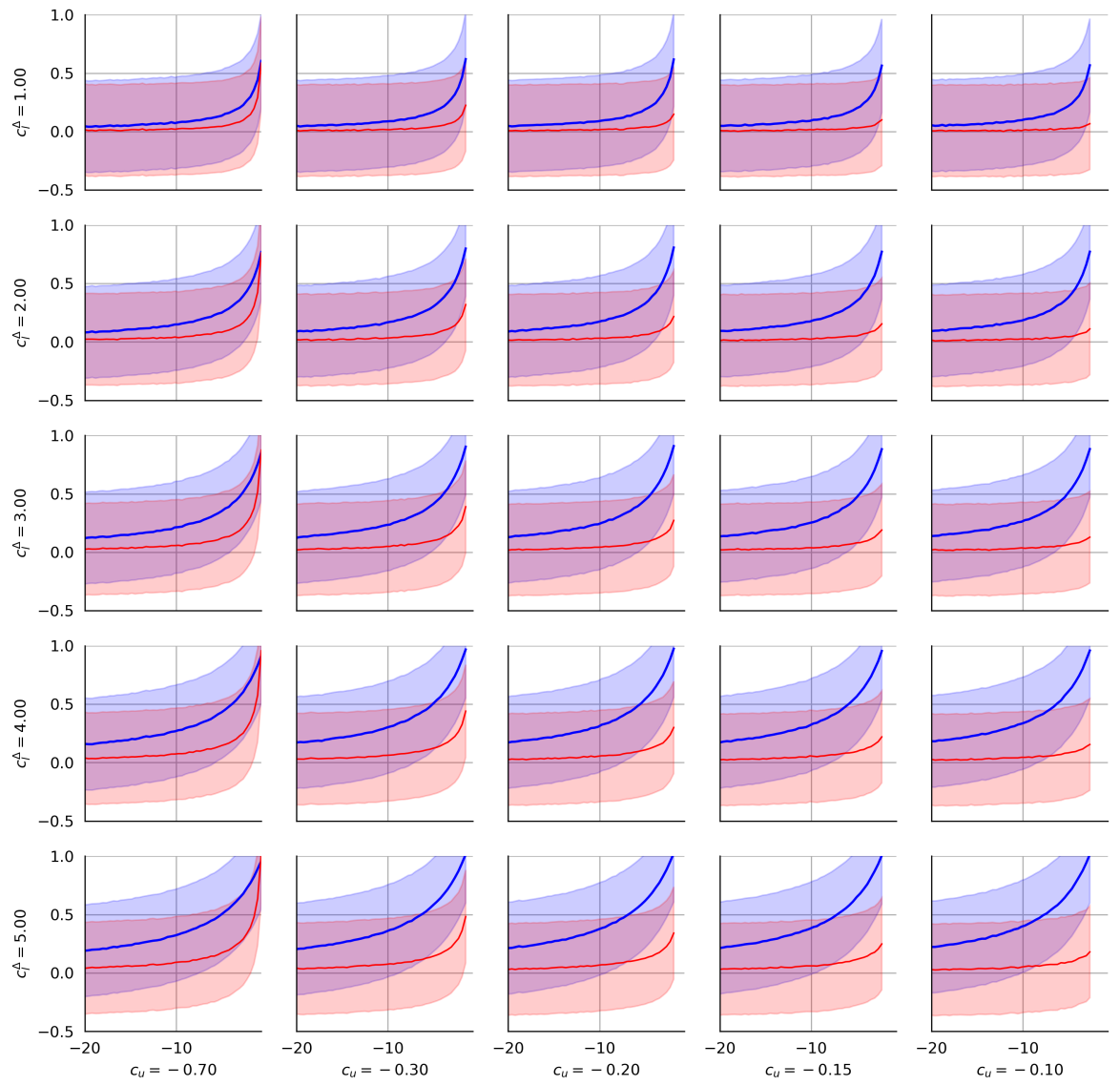


Figure 20. Cohen's d evaluated with Beta distribution

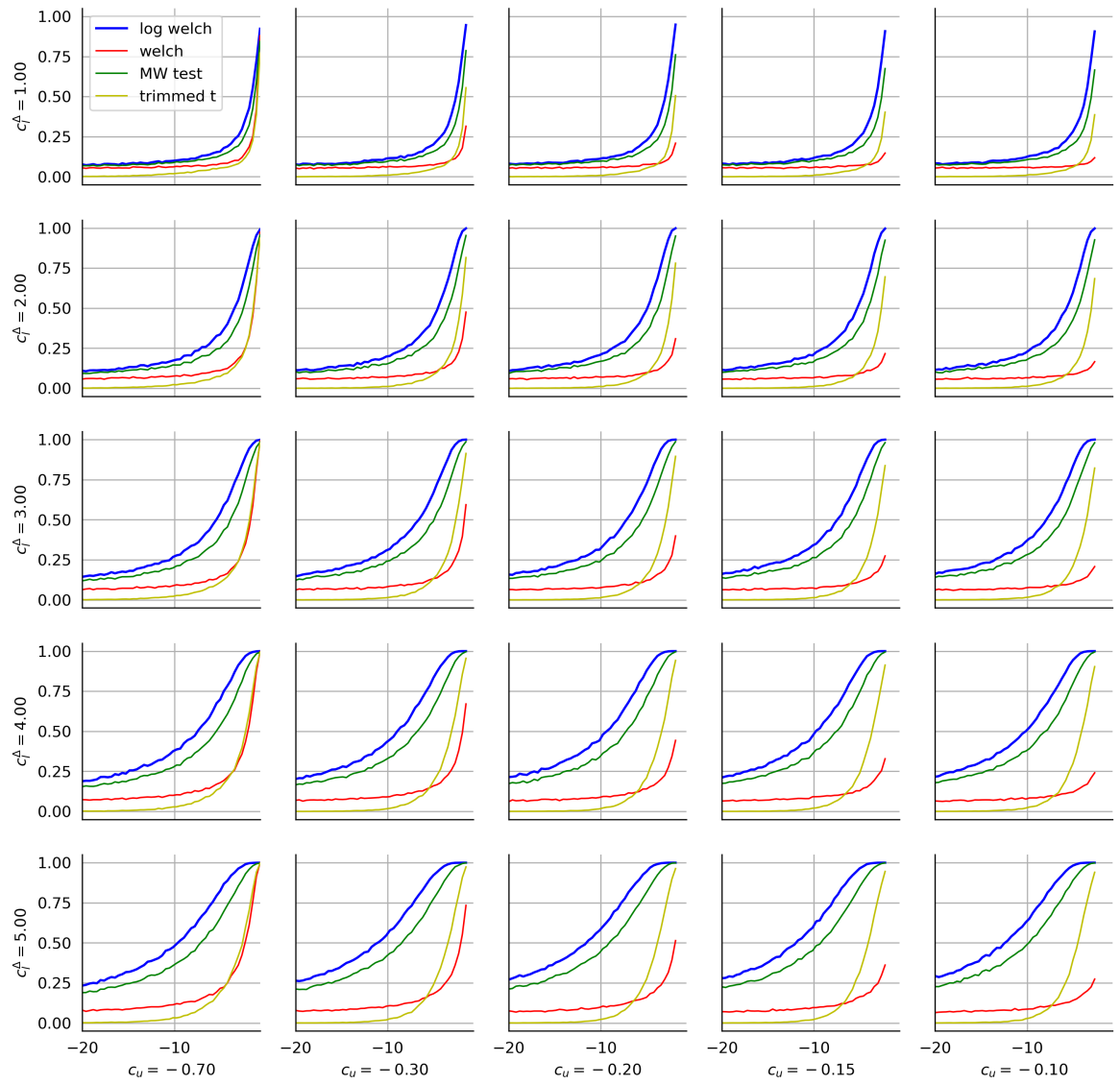


Figure 21. Two-group tests evaluated with Beta distribution

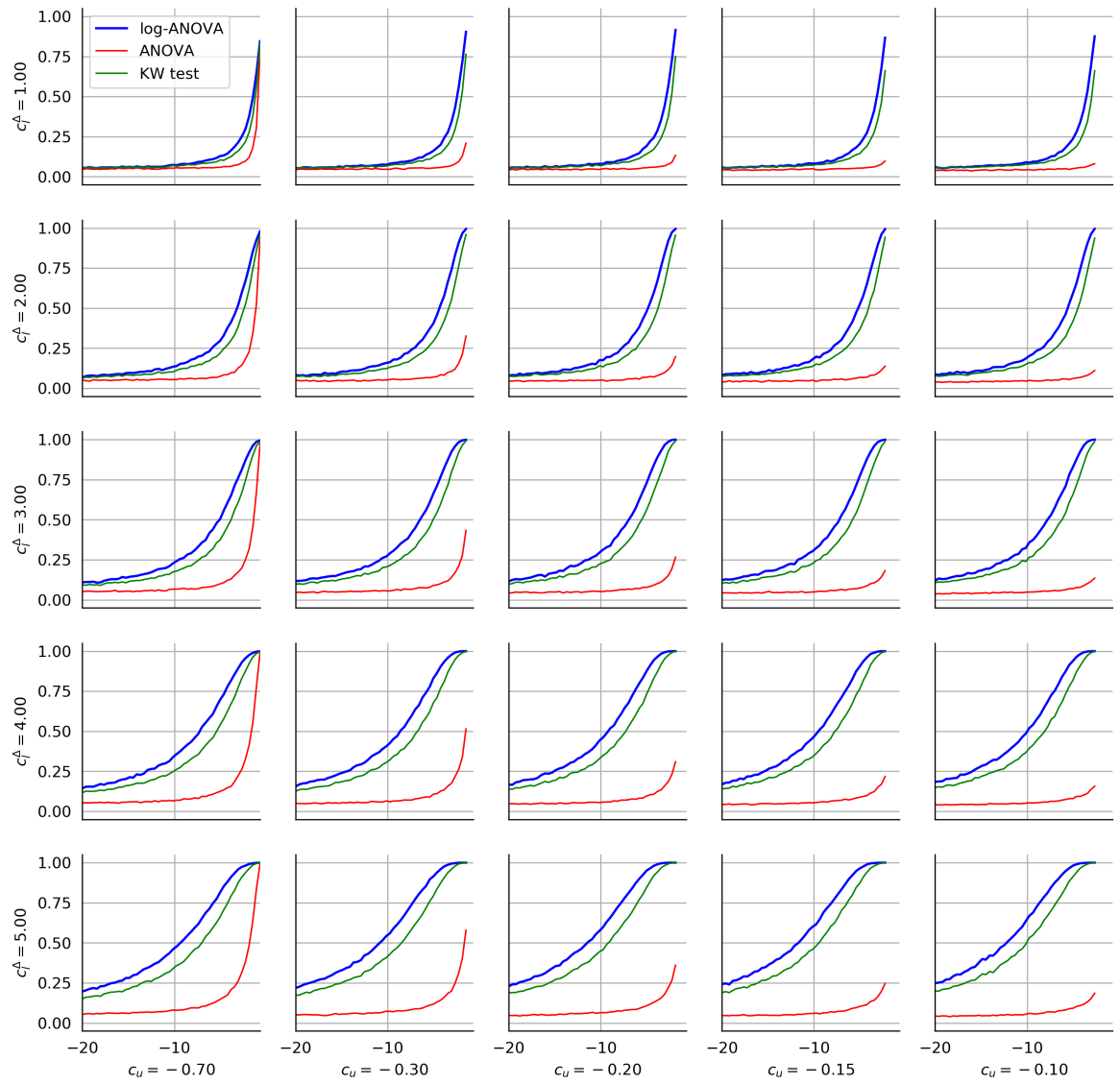


Figure 22. Three-group tests evaluated with Beta distribution

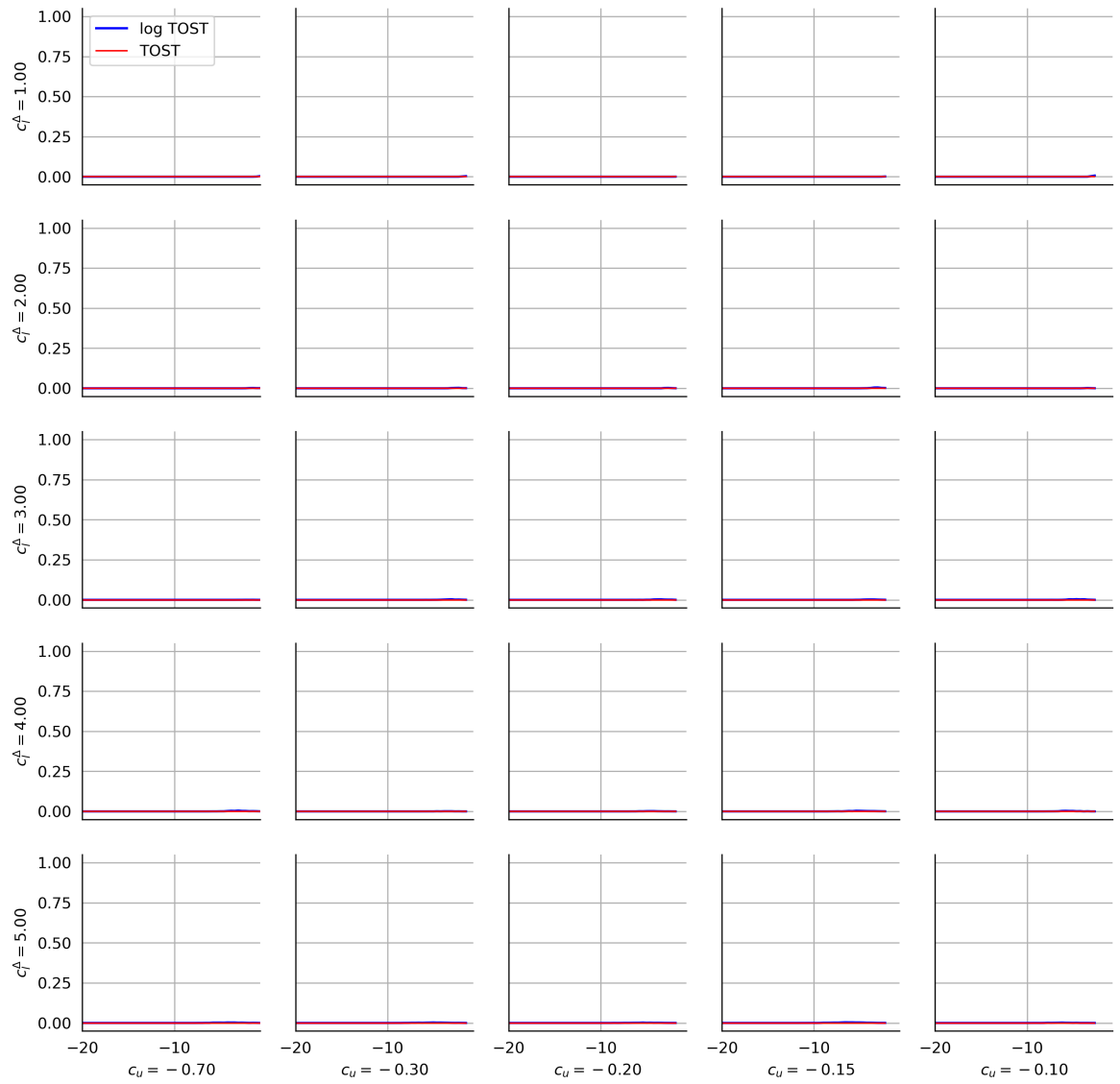


Figure 23. TOST procedure evaluated with Beta distribution

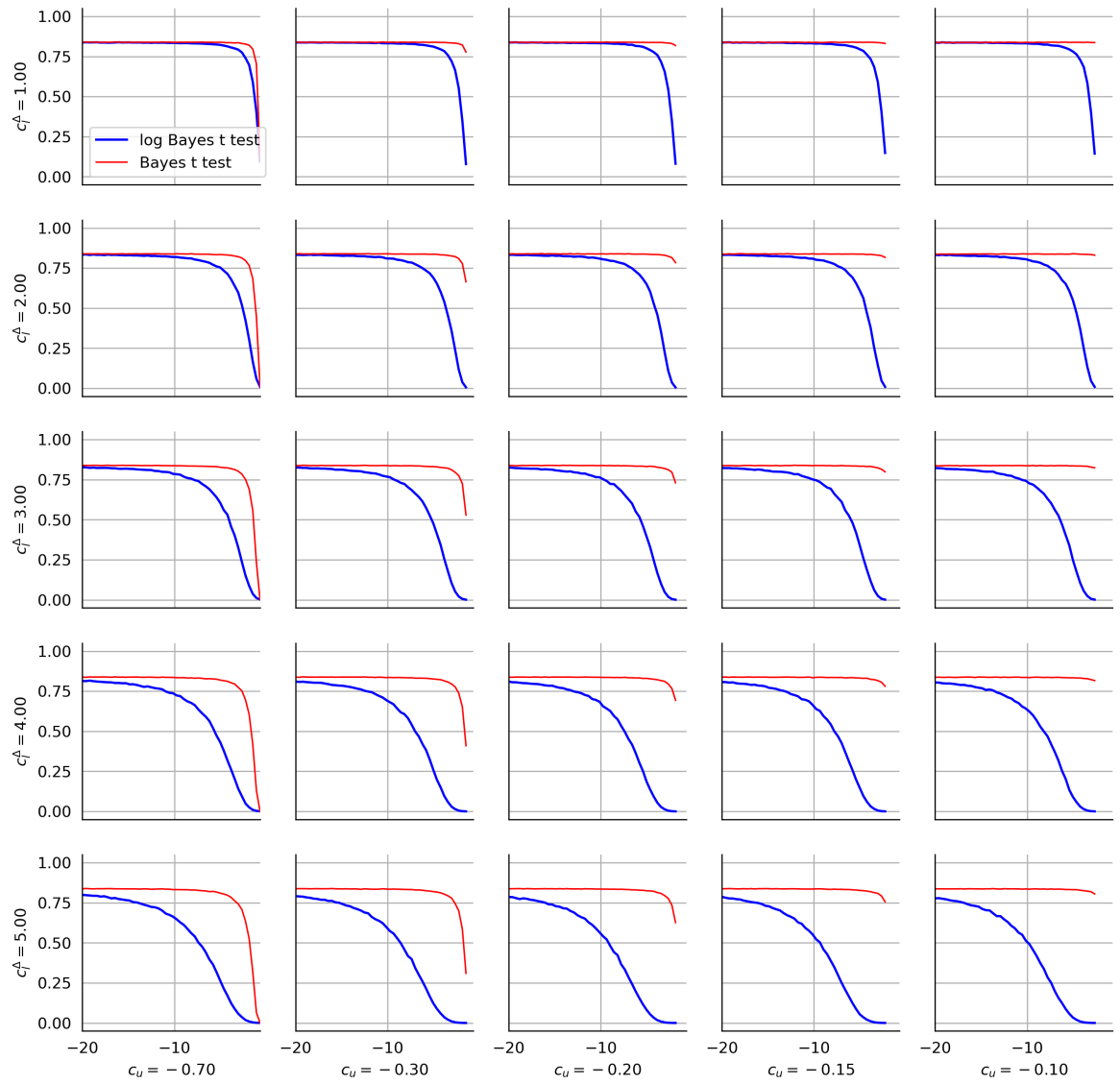


Figure 24. Bayesian t test evaluated with Beta distribution

5 BETA-BINOMIAL DISTRIBUTION

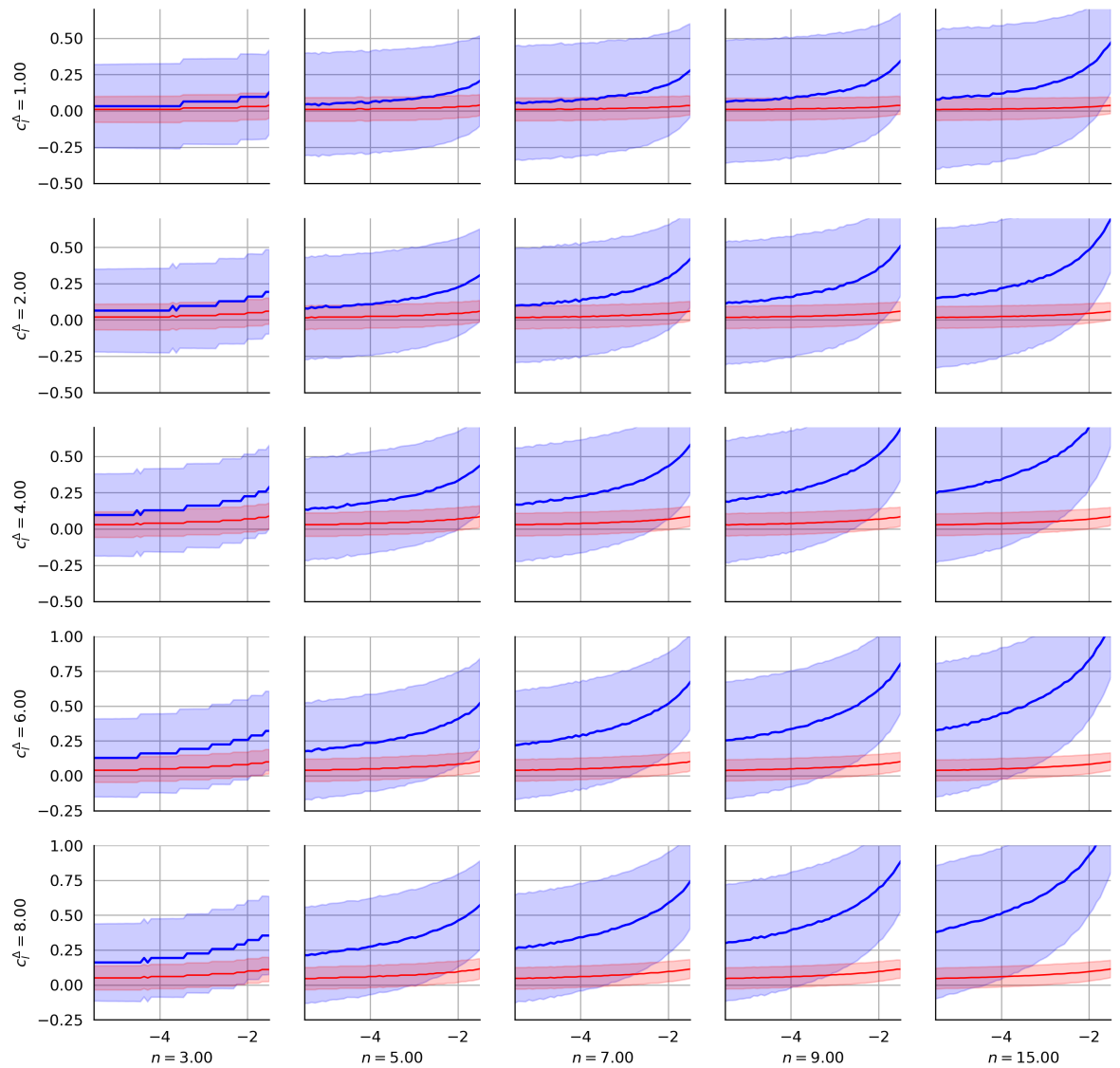


Figure 25. Confidence intervals evaluated with Beta-binomial distribution

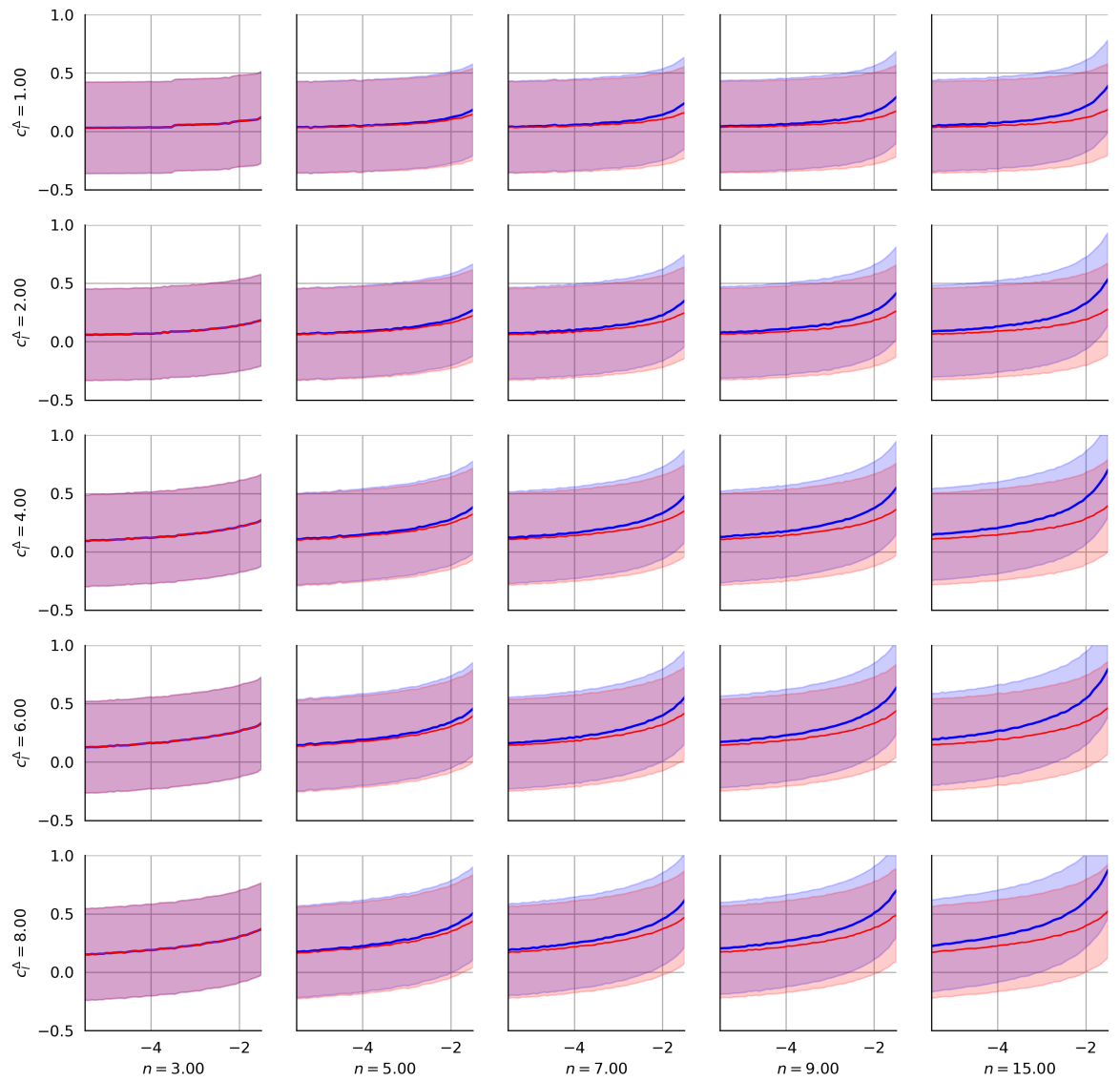


Figure 26. Cohen's d evaluated with Beta-binomial distribution

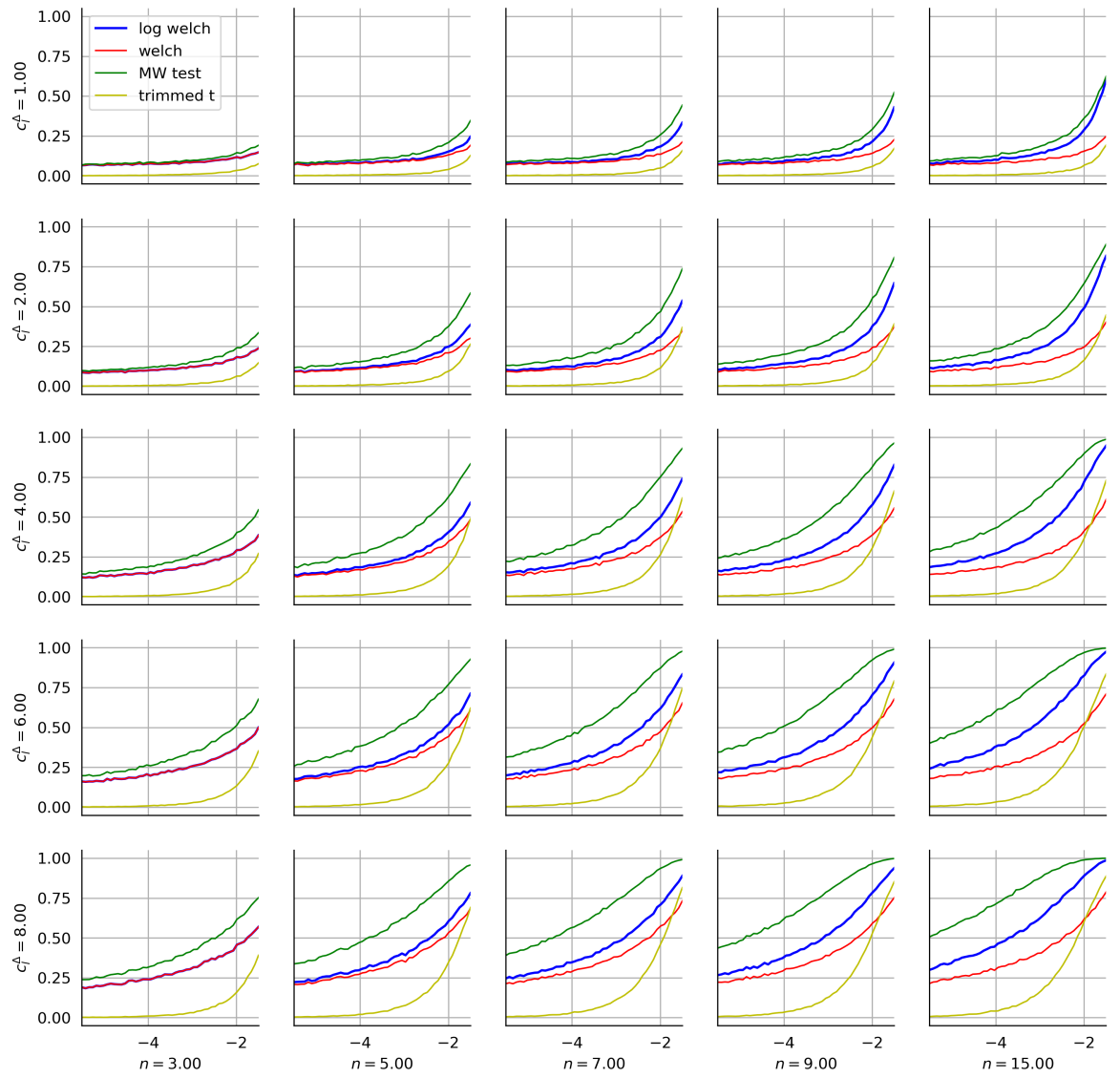


Figure 27. Two-group tests evaluated with Beta-binomial distribution

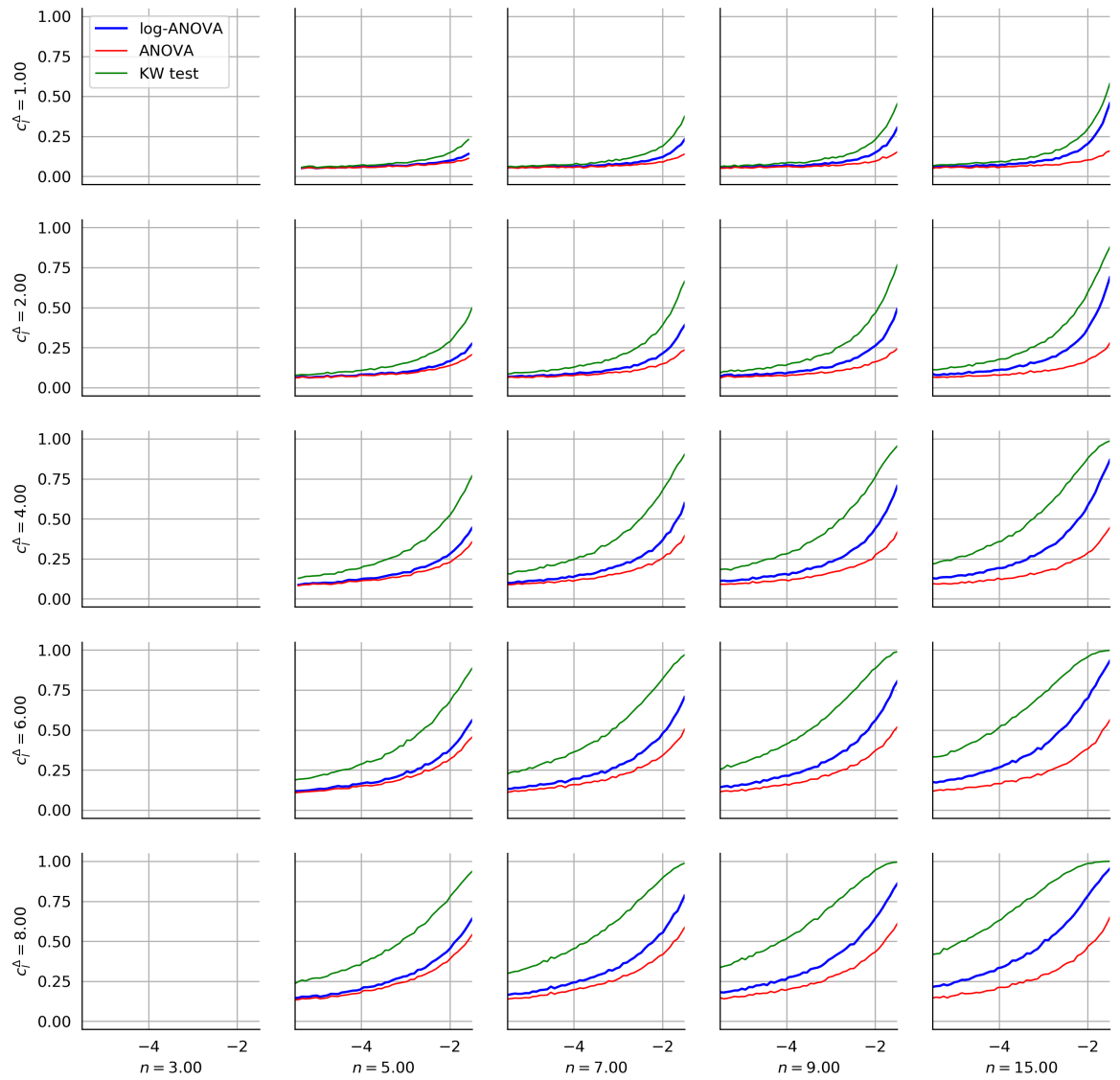


Figure 28. Three-group tests evaluated with Beta-binomial distribution

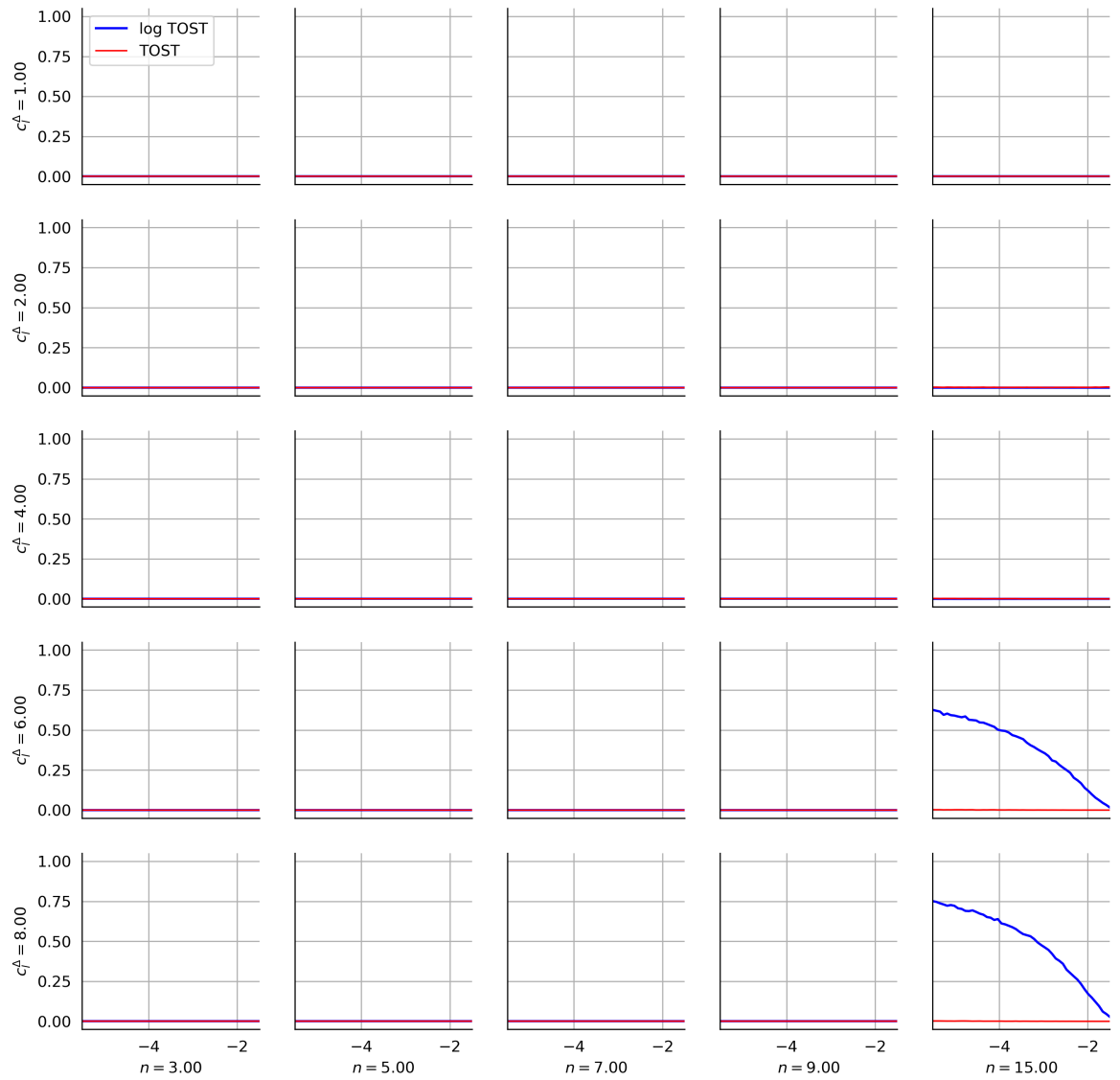


Figure 29. TOST procedure evaluated with Beta-binomial distribution

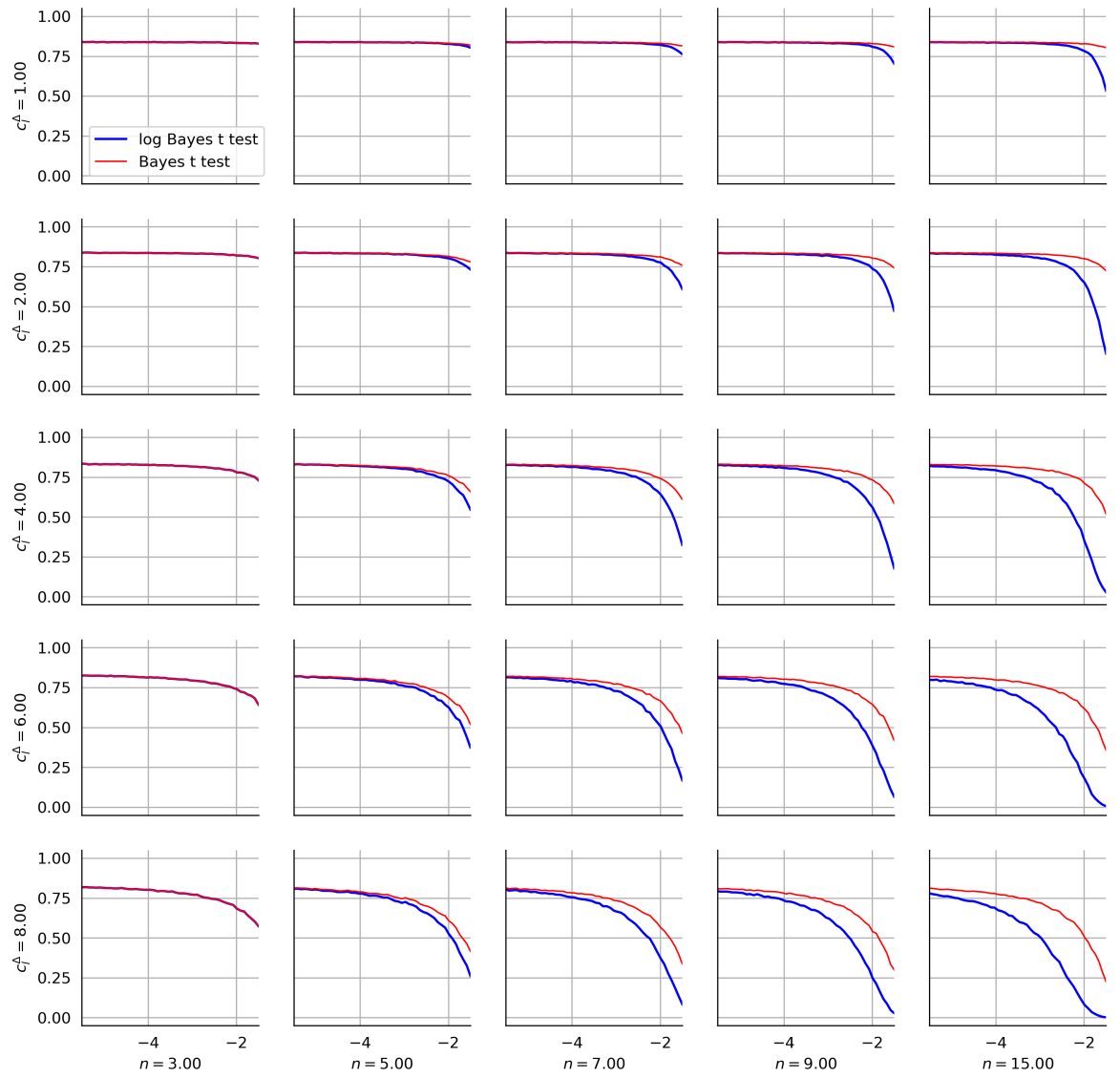


Figure 30. Bayesian t test evaluated with Beta-binomial distribution

6 ORDERED LOGISTIC REGRESSION MODEL

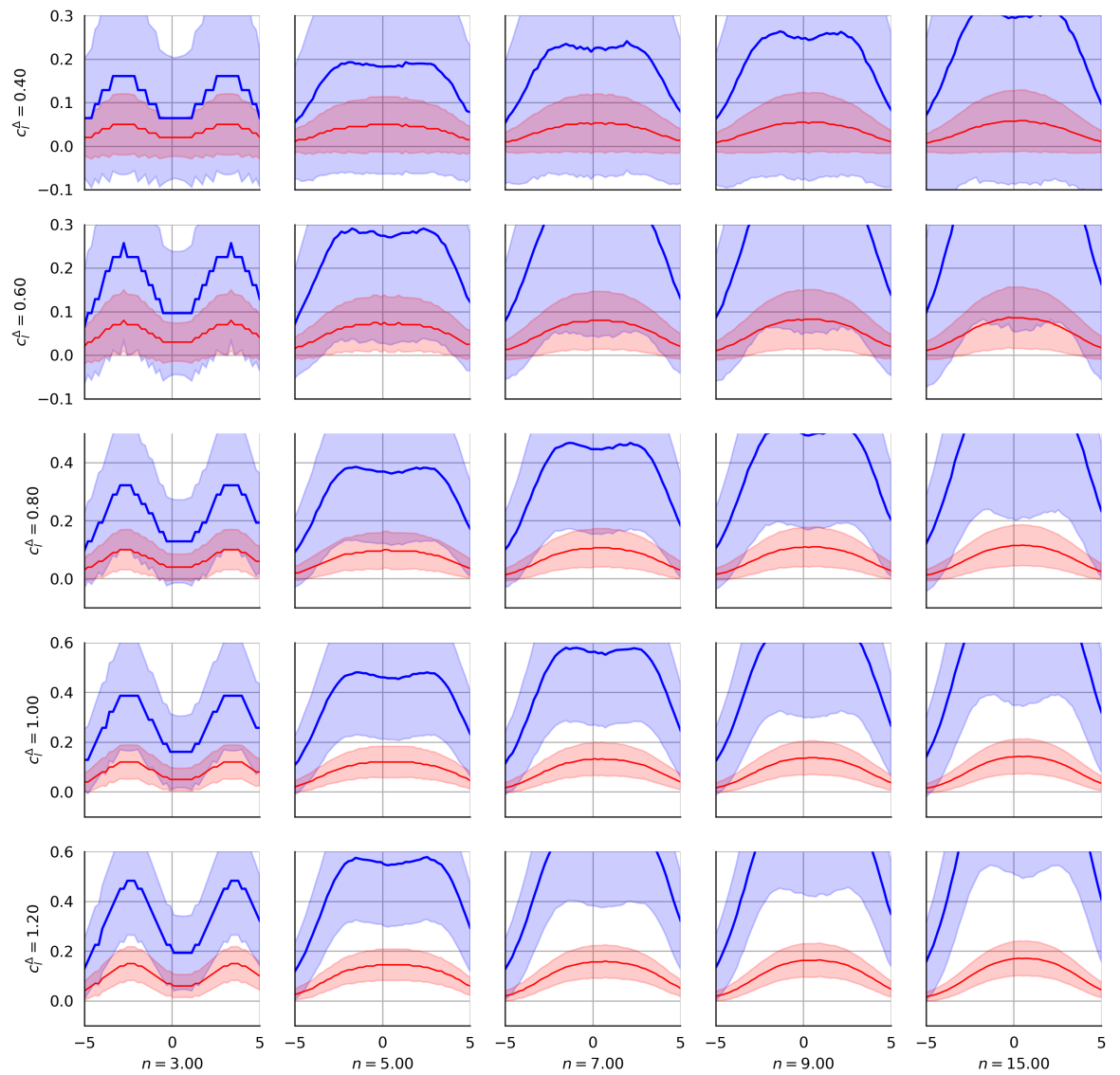


Figure 31. Confidence intervals evaluated with Ordered logistic regression model

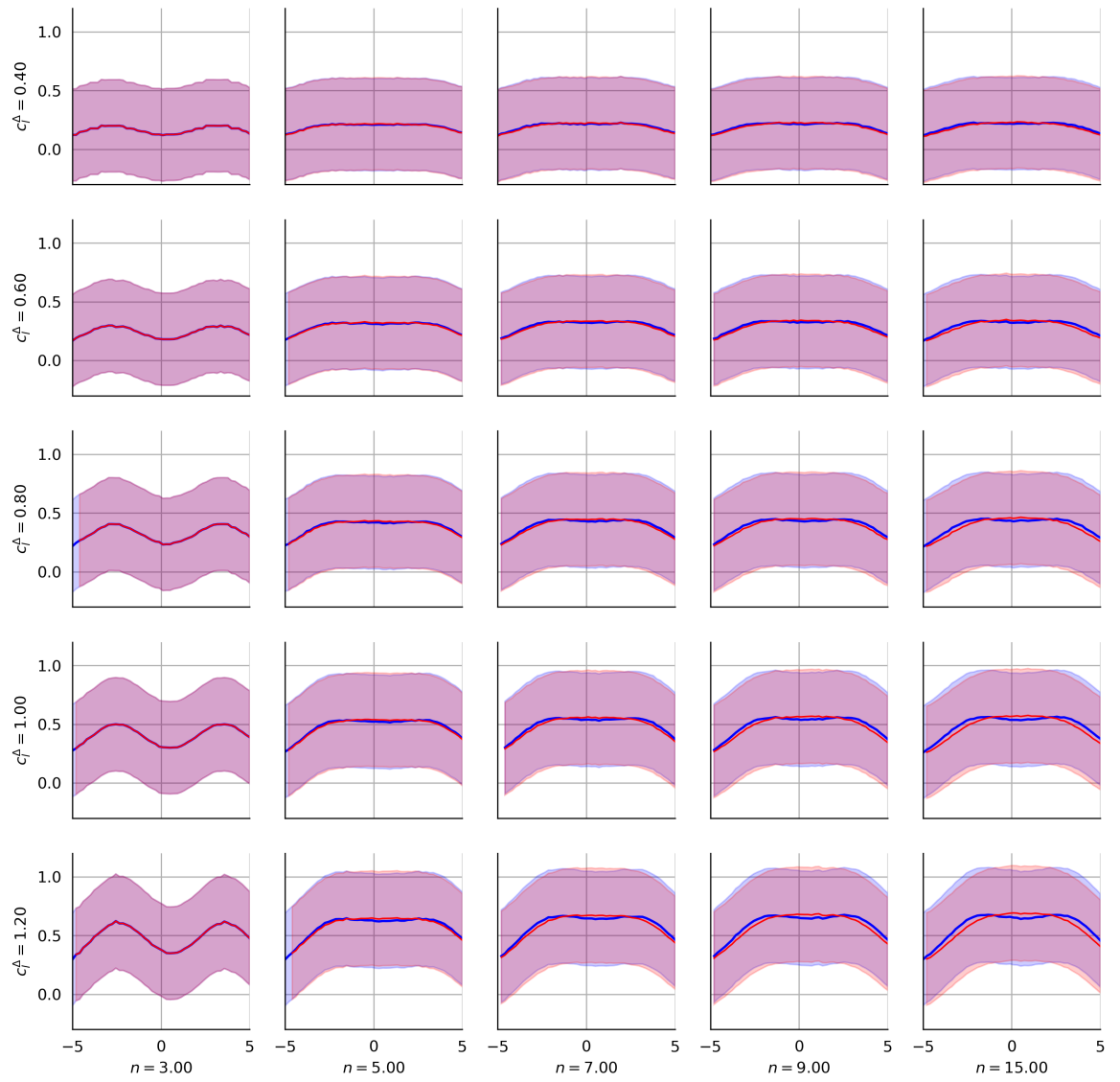


Figure 32. Cohen's d evaluated with Ordered logistic regression model

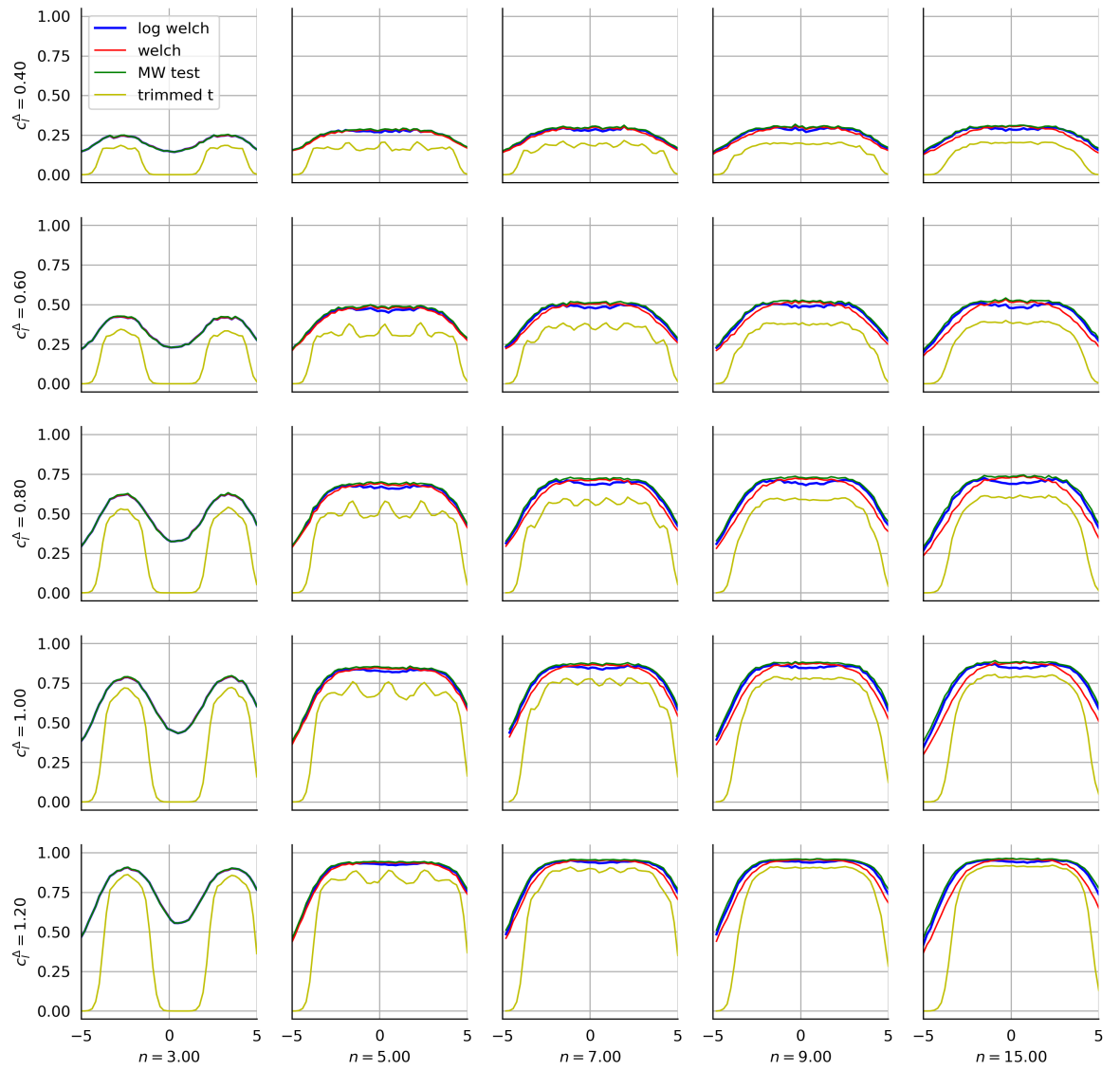


Figure 33. Two-group tests evaluated with Ordered logistic regression model

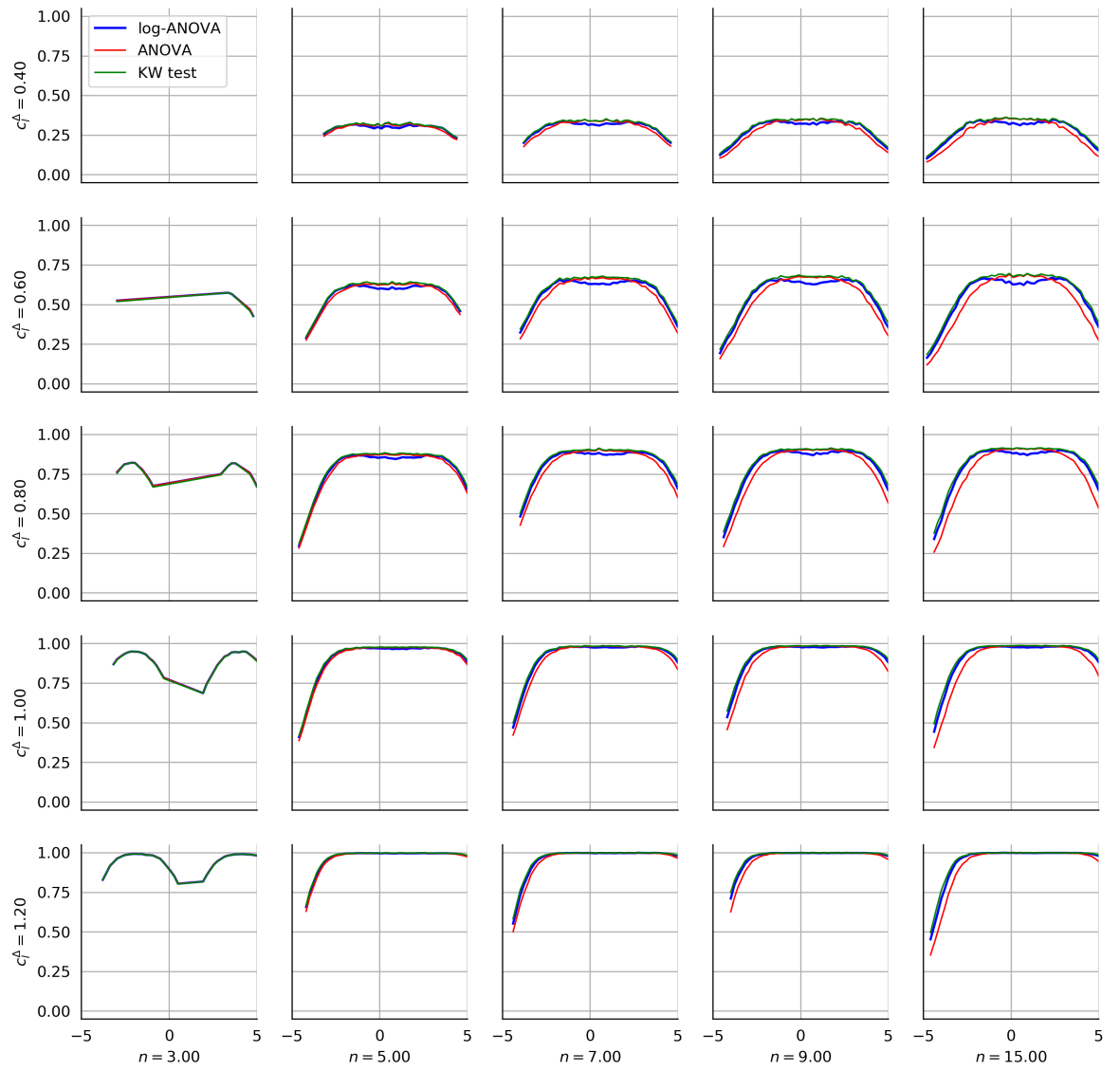


Figure 34. Three-group tests evaluated with Ordered logistic regression model

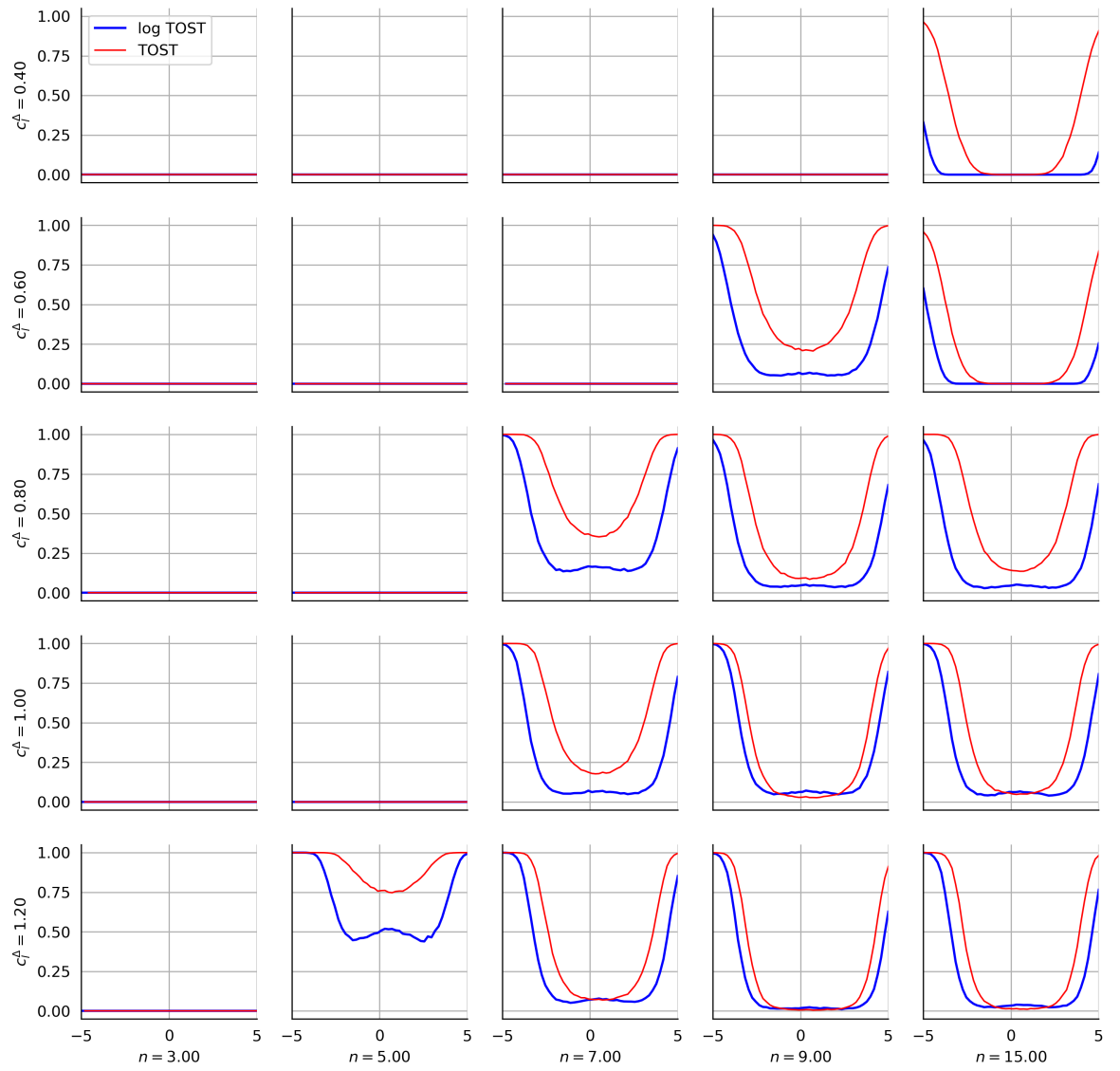


Figure 35. TOST procedure evaluated with Ordered logistic regression model

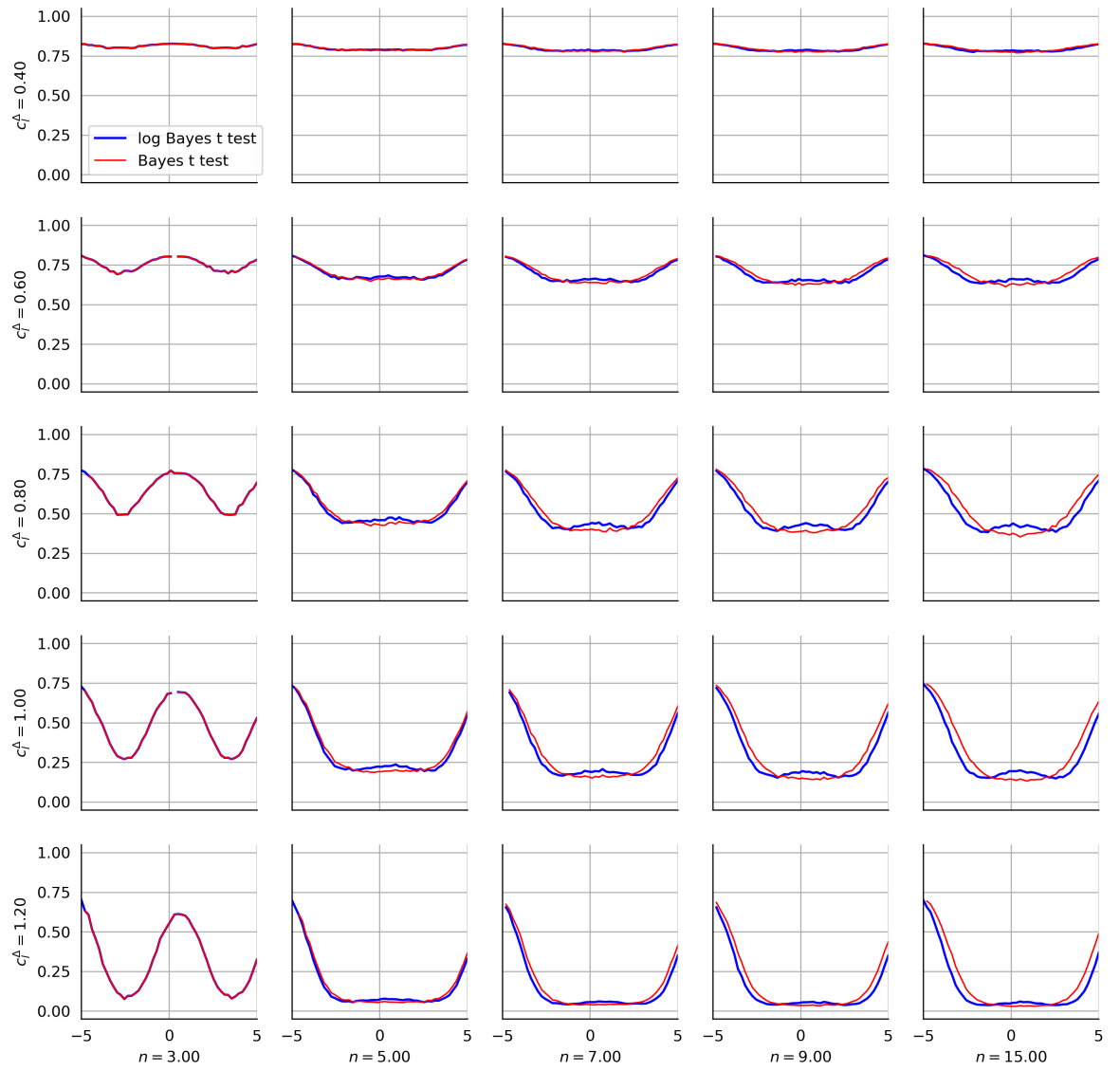


Figure 36. Bayesian t test evaluated with Ordered logistic regression model

7 ANOVA WITH LARGEST c_L^Δ

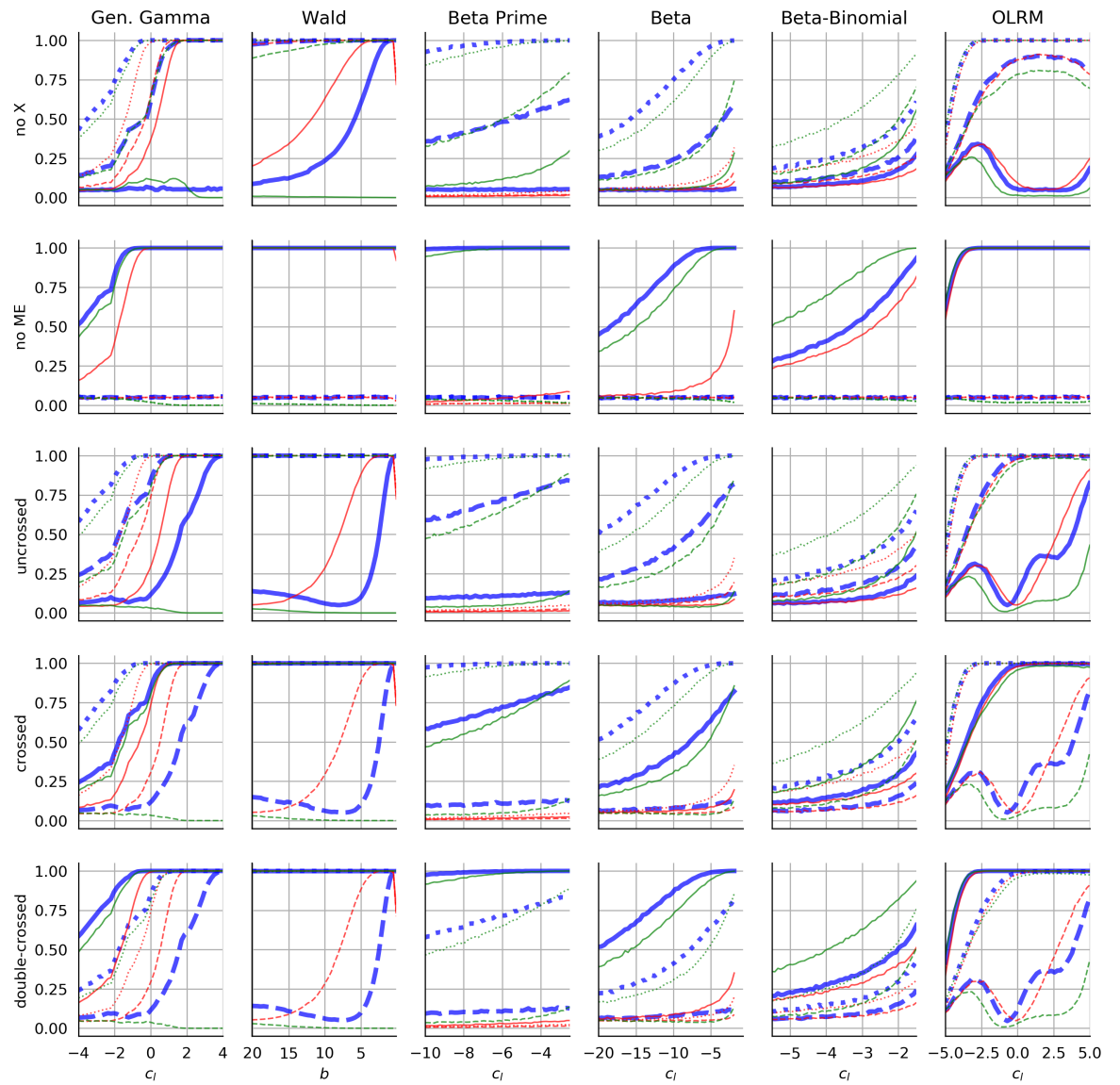


Figure 37. ANOVA with largest c_L^Δ . The precise value for each distribution is presented as the upper bound in fourth column in table 2 in the published article.