

Partial Least Squares SEM

Test: Partial Least Squares SEM

Design: Component-based outer models and predictive structural regression for academic achievement.

Variables: G1, G2, G3, famrel, freetime, goout, studytime, failures

Null hypothesis: The PLS construct scores have no predictive structural relationship.

Formula: Outer weights maximize component variance; inner paths are OLS regressions among construct scores.

Source rows: 649

Calculated metrics:

social_to_academic: -0.0470898201207388

studytime_to_academic: 0.203047070350936

failures_to_academic: -0.372573999374448

academic_r_squared: 0.208490582064094

academic_composite_reliability: 0.96939525917592

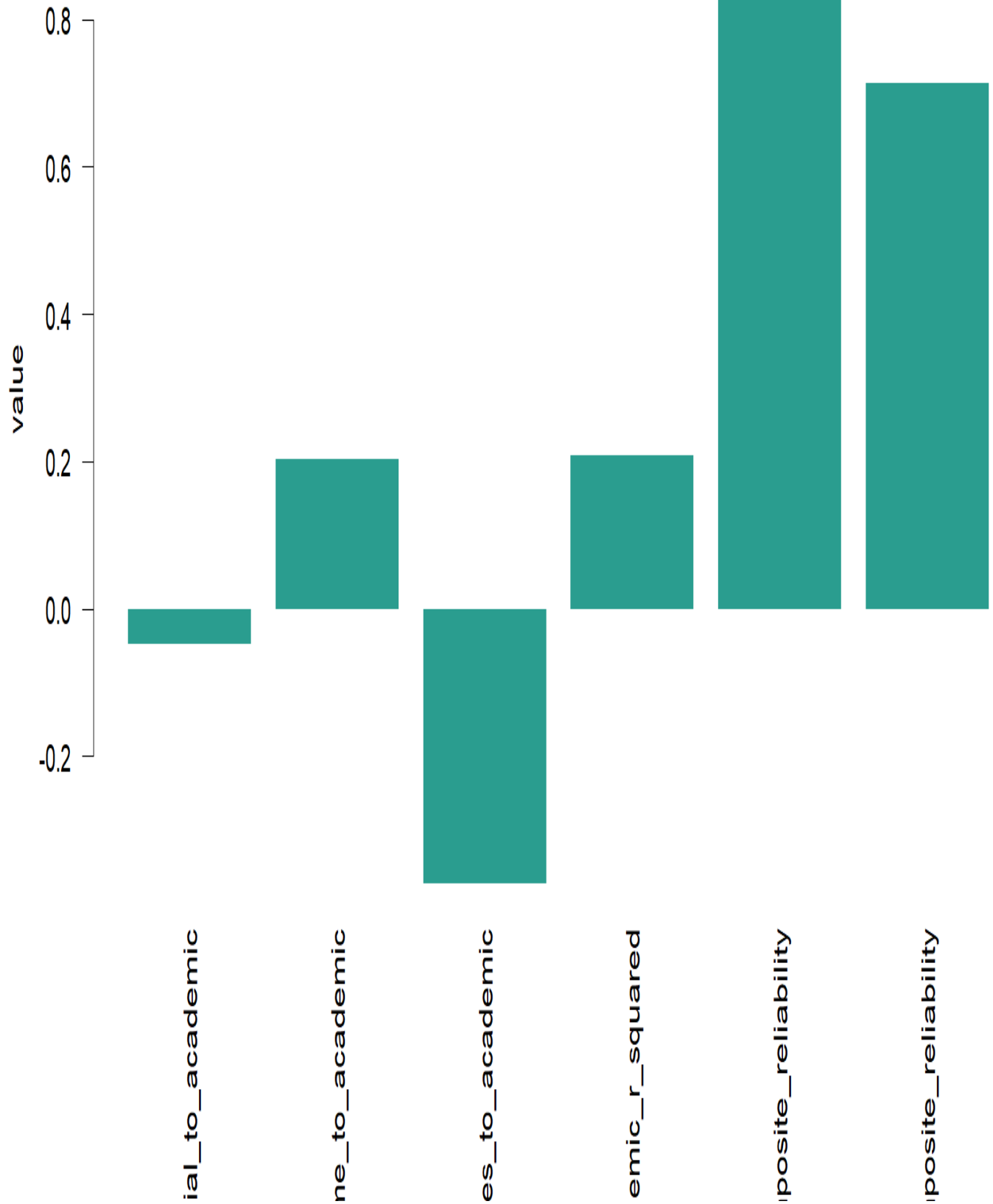
social_composite_reliability: 0.712839325533712

Interpretation:

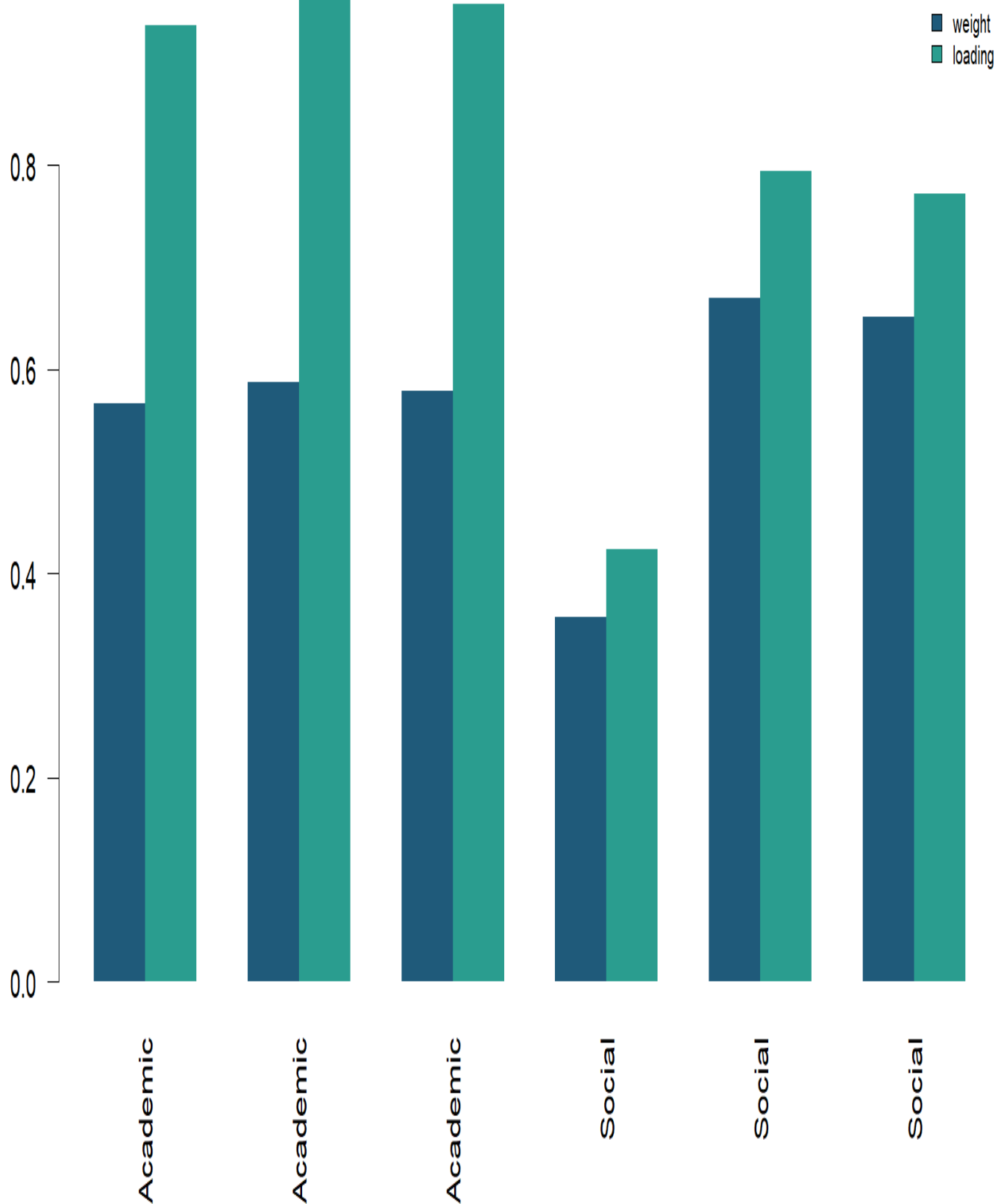
PLS-SEM optimizes components and predictive paths.

R2 0.208490582064094

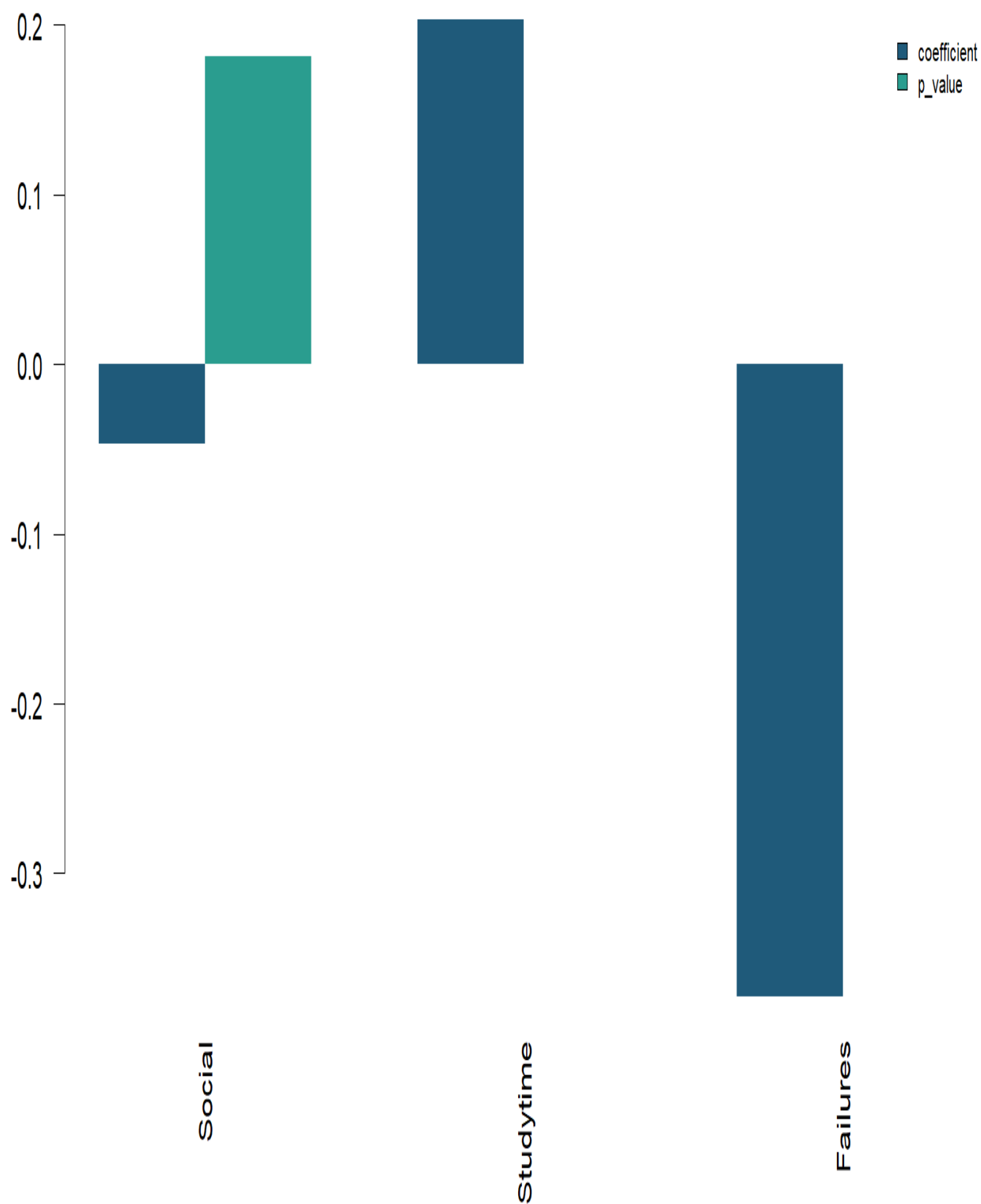
Partial Least Squares SEM - primary metrics



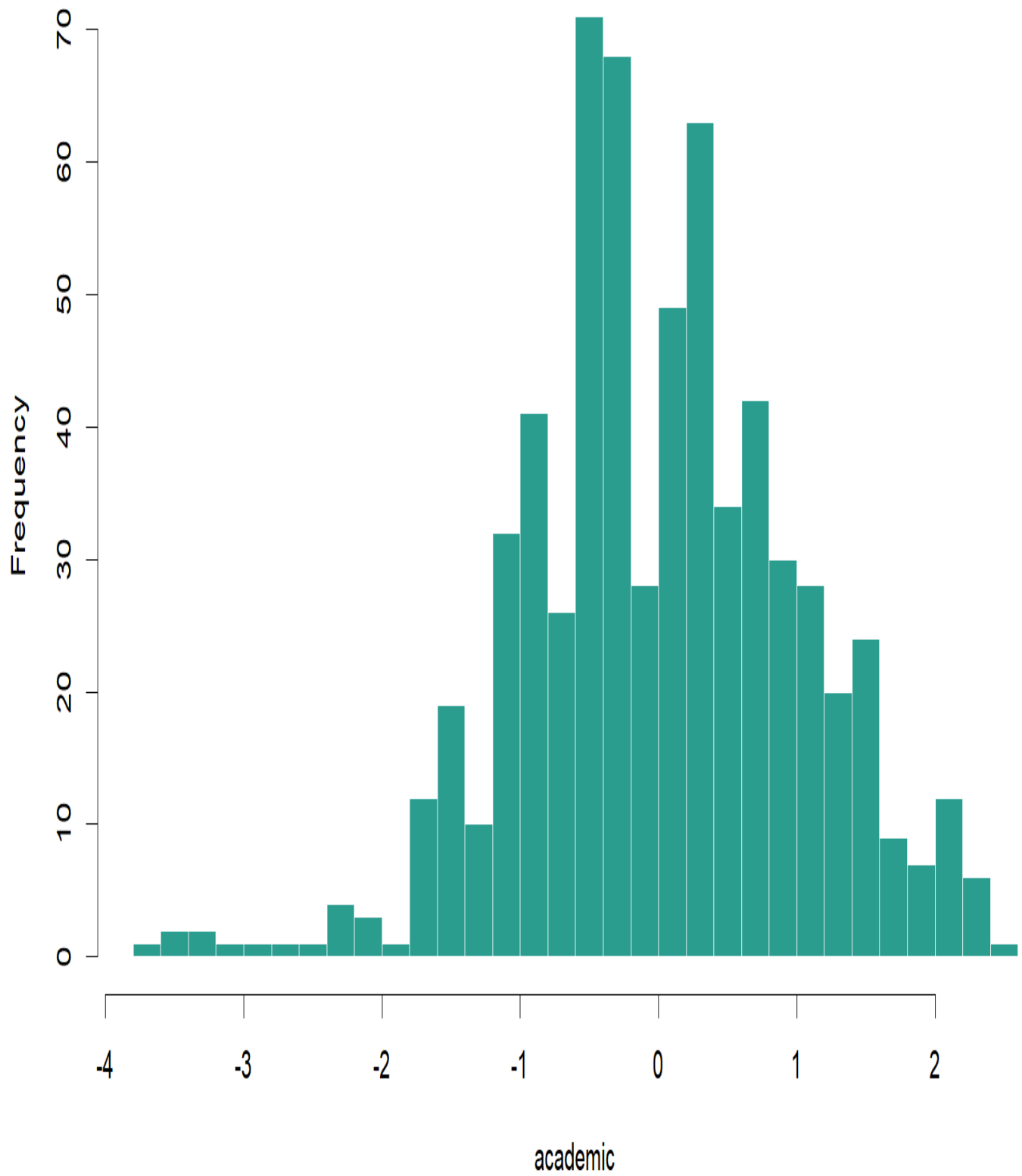
Partial Least Squares SEM - pls outer model



Partial Least Squares SEM - pls inner model



Partial Least Squares SEM - pls construct scores



Partial Least Squares SEM verified results

