

Statistics Assignment Fall 2022

In transaction cost economics you look at the decision between internalizing or using the market for transactions. A hybrid of this is whether to collaborate (internalize) or not. The idea here is that uncertainty, asset specificity, and personal involvement will influence the level of collaboration. The variables I am providing are:

Dependent variable:

cb1-cb5 are individual measures of Collaboration.

collab is the aggregation of cb1-cb5 into a single Collaboration variable.

Independent variables:

unc1-unc5 are individual measures of Environmental Uncertainty.

uncert is the aggregation of unc1-unc5 into a single Environment Uncertainty variable.

as1-as2 are individual measures of Asset Specificity.

Asset is the aggregation of as1-as2 into a single Asset Specificity variable.

PI which is a measure of the Personal Involvement of the respondent in the business relationship, measured in years. A variation on TCA says social equity may influence the collaboration decision.

- 1) Run exploratory statistics on collab, uncert, AS, and PI, and comment on normality, linearity, and outliers.
- 2) Run an exploratory factor analysis on cb1-cb5 and unc1-unc5 and evaluate them with respect to convergent and discriminant Validity. Together, convergent and discriminant validity form construct validity.
- 3) Run reliability analysis cb1-5 and unc1-5. Comment on them.
- 4) Run a correlation matrix for collab, uncert, asset, and PI. Assume that in a later regression you will use the same variables, with collab as the dependent variable. With this in mind, what is your evaluation of the correlations?
- 5) Run a multiple regression with collab as dependent and uncert, asset, and PI as independent variables. Evaluate the model by interpreting the appropriate tables. Find the best regression model.