Journal Article Details

* Study objectives
  + Study the role of research universities as suppliers of innovations.
  + Explain why technology commercialization outcomes are a function of licensing strategies, technology licensing office autonomy, research incentives, department incentives, and TLO licensing staff incentives.
* Theoretical and conceptual framework
  + Most research 🡪 vertically coupled, intra-organizational process.
  + New conceptualization 🡪loosely coupled, inter-organizational process.
    - Accommodates the concept of a marketplace for innovation.
    - Universities act as suppliers of innovation in this marketplace.
* Hypotheses
  + Relationship of technology commercialization and various activities and structures
    - Commercialization strategy: licensing strategies vs. sponsored research strategies
    - Organizational structure: high autonomy vs. low autonomy
    - Monetary incentives: compensation to stakeholders
  + Variables
    - Two dependent variables
      * Financial: commercialization income
      * Non-financial: firm creation
    - Eight study variables
    - Four control variables
      * Believe that these variables influence technology commercialization outcomes but they are not of primary concern
    - Eight (8) other variables were tested and excluded from the model
      * Not significant
      * Were highly correlated with other variables
      * Did not improve the model
  + Interaction terms
    - Test three pairs of interaction terms
      * TLO autonomy and commercialization
      * Faculty quality and pay contracts
      * TLO age and pay contracts
* Data and Methods
  + Phone interviews
  + AUTM Licensing Survey
  + USPTO database
  + Data for dependent variables non-linear and non-normal
  + Two hierarchical regressions

Journal Article Critique

* Theory
  + Not really clear why a different conceptualization of research and innovation was important to this study.
  + Focus is on immediate monetization. {LIMITATION}
  + Assumes that all universities place the same emphasis on maximizing commercialization revenue. {UNSTATED ASSUMPTION}
  + Asserts that its empirical model reduces Type I errors. {UNCLEAR}
  + Asserts that university TLOs manage commercialization process cradle-to-grave {UNSUPPORTED ASSERTION}
  + Asserts that licensing agreements are more profitable than sponsored research. {UNSUPPORTED ASSERTION}
  + Implies that licensing-for-cash is non-compatible with the readiness level of a technology. {UNSUPPORTED ASSERTION}
* Variables
  + Exactly what each variable was measuring wasn’t clear
    - Could clarify whether they were measuring units, dollars, percentages
    - Could give idea of the potential range of each variable
  + Possible study variables not included
    - Ability to attract and retain top scientists
    - Ratio of licensing revenue to research expenditures
    - Need for the TLO be financially self-sustaining
    - Ratio of licensing staff to disclosures received
    - Technology readiness level
  + Selection of control variables not defended based on literature
* Data and Methods
  + Unit of analysis is unclear
  + It’s not clear what information was obtained.
  + Glosses over the non-linearity and non-normality of dependent variable data.
    - Doesn’t explain why a log-transformation was selected over any other kind of transformation.
  + Doesn’t explain how dependent variable data was validated through phone interviews.
  + Data for frequency distribution of licensing strategy seems very questionable.
    - Asked opinions of TLO directors.
    - Doesn’t explain if or how it was validated.
  + Didn’t provide any details about the steps used in conducting the regression analysis.
  + Doesn’t explain the process for eliminating the variables that were excluded from the model.
* Results and Findings
  + Might be comparing “apples to oranges” in some instances.
    - Sponsored research and licensing-for-cash
  + Presents possible explanations of the results as facts rather than as hypotheses that need to be tested.
    - Rationale for emphasis on licensing-for-cash strategies
  + Some of the discussion seemed disconnected from the stated study objectives
    - Discussion about basic research versus applied research within findings on TLO autonomy.