The Politics of Equity Research

Leonard S. Goldfine – Assistant Director, Office of Institutional Research
Peter M. Radcliffe – Director, Planning and Analysis

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The big ideas

• Equity ≠ Equality
• Correlation ≠ Causation
• Regression of a universe is a good for identifying **systemic** problems, but may not be ideal for addressing individual cases.
• Is the analysis at the appropriate administrative level?
  – That is, is a system-wide model being used to examine local decisions?
Lawyer Up

…no seriously, consult a lawyer!

• They know better the implications of the research and/or findings.
• They know better what are the institution’s explicit and implied obligations regarding salaries, tenure, etc.
• They know better about whether there is (or should be) a process in place for affected groups.
Ideology versus Reality

• From faculty: “We’re all faculty, so disciplinary differences shouldn’t matter.”
• From administration: “All key decisions are local (loose coupling), so central administration can’t be held accountable for local decisions…even if they add up to a systemic issue.”
What may prompt equity research

- Perception of disparate treatment
- Perception of disparate impact
  - Neutral policies may nevertheless have disparate impact
- Everyone else is doing it…It’s time to have a policy
  - We did this 20 years ago…it’s all be fixed.
  - Don’t poke the hornets’ nest.
Players and/or Initiators of Equity Research

- The petitioners (e.g., female faculty, faculty of color, etc.)
- The administrators (e.g., President, Board of Regents, Provost, etc.)
- The IR Office
- Others: Lawyers, Consultants, Press
Game Theories

• Cooperative vs Non-cooperative game
  – Are players bound by commitments? (e.g., legal) Or can the “winner” not necessarily expect that the “loser” will follow-through on remedy?

• Zero Sum?
  – Does winning mean that the other side has to lose?

• Perfect versus Imperfect Information
Law Background

- Title VII (Civil Rights Act 1964, Education Amendments 1972)
  - Prohibits discrimination in employment on basis of race, color, religion, sex, or national origin.
- Title VI (CRA 1964)
  - Prohibits discrimination against any person on grounds of race, color, or national origin under any program or activity receiving Federal financial assistance.
- Title IX (EA 1972)
  - Prohibits discrimination against any person on grounds of sex under any program or activity receiving Federal financial assistance.
- Others:
  - Age Discrimination in Employment Act (1967); for persons age 40+
  - Section 504 of the Rehabilitation Act (1973) [institutions getting Federal Funding]
  - Americans with Disabilities Act (1990)
  - Executive Order 11246 (1965) prohibits discrimination based on race, color, religion, sex, national origin; and requires affirmative action plans that include specific goals for developing a more diverse workforce.

The Politics of Choosing the Appropriate Analytical Model

- What type of model to use for analysis
  - Linear regression
  - Binary Logistic

- What is the dependent variable
  - Salary – point in time
    - Prorate salary, total income, augmentation, etc.
    - Pure salary, natural log, white-male salary, etc.
  - Salary – change over time
  - Distribution of merit awards
  - Retention offers
  - Tenure awards
  - Etc.
Politics of Analytical Technique

• Regression and total variance explained
  – Impact on whether model used is appropriate for policy and/or remediation decisions.
  – Using a population sample or the entire population?

• Statistical significance
  – large enough sample size can make almost anything statistically significant

• Practical significance
  – rules of thumb
    • “Sure, I’ll take $500!”
Politics of Variable Definition

• What variables are included?
  – Appropriate for determining disparate impact?
• How are they calculated?
  – All 9-month prorated?
  – Include administrative augmentations?
Politics of Sample selection

• Who is included in the analysis? (scope)
  – All faculty? Faculty of a certain rank?
  – Administrators?
  – Quasi-administrators (department chairs – may be in admin role on rotation…first among equals, etc.) How is salary calculated?- included in base or augmented?
  – Medical school/clinical salaries?
  – Full-time, part-time? How defined (100%? 67% 75%???) If not 100%, then how pro-rate, if at all?
  – What time frame of data-set? Multi-year, historical?

• Level of aggregation – how far down can you reasonably dig? System-wide, college, department?
  – Affects sample size, which affects how you can structure your model
Predictor variables

• Too many variables:
  – Overspecified model: loses predictive power when a small sample size (or even not so small) is torn apart by too many predictors.
  – *Rule of thumb, if you have one predictor for every five individuals, you probably have too many predictors.*

• Too few variables:
  – *Omitted variable bias:* loses power because some critical predictor is left out of the model. This may result in the variable of grievance (e.g., gender, race) being given inappropriate statistical significance.

• It is in the best interest of a petitioning party to limit the number of variables in the model. It is in the best interest of the defending party to maximize the number of non-grievance variables in order to explain away and/or limit the size of a disparity.
Examples of typical predictive variables

- Variable of grievance: (gender, race). This is the critical dependent variable. If, after other variables are accounted for, this is still statistically significant, then it signals a potential (systemic) problem.
- Seniority – years since degree, years since hire, years since tenure, rank
- Discipline – college/department, CIP, field, Biglan classification (hard/soft, pure/applied, life/non-life)
- Other Market Variables - PhDs in the pipeline, PhDs in non-academic jobs, others
- **Merit** (good luck)
Example of disparate impact: Unintended consequences

- E.g., Hiring Faculty at Rank
- E.g., Tenure Clock Stoppage
- E.g., Spousal Hire
Lessons Learned

- Consult your lawyer
- Reach agreement on a model BEFORE running numbers
- Data integrity is probably worse than you think
- Implications of analysis are limited to those who are included in the analysis (avoid over-generalization)
- Model definition is a POLITICAL process
- Analysis is also a political process (statistical significance versus practical significance)
- Analysis versus policy/remediation decisions
Contact Information

• Leonard S. Goldfine, Assistant Director
  Office of Institutional Research
  University of Minnesota
  gold0154@umn.edu
  612-625-1481

• Peter M. Radcliffe Executive Director Office of
  Planning and Analysis - System Academic
  Administration, University of Minnesota
  radcl002@umn.edu
  612-626-3838