

CAN GOVERNMENT-ACADEMIC PARTNERSHIPS HELP SECURE THE FUTURE OF THE FEDERAL STATISTICAL SYSTEM? EXAMPLES FROM THE NSF-CENSUS RESEARCH NETWORK

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Question rephrased

(How Best) Can Government-Academic Partnerships
Help Secure (Enhance) the Future
of the Federal Statistical System?

Short answer: *Of course!*

Longer answer invokes key questions

1. Is the operational environment favorable to research?
2. Can partnership goals align?
3. Features of effective partnership structures & functions?
4. How to manage expectations and processes:
 - Resource requirements, timelines, outcomes?
 - Steps to assess progress and optimize results?

Operating environment

I. Mission of official statistics

Provide high-quality, cost-effective statistics to inform decisions made by a wide range of stakeholders

In shorthand

- ▶ Balance quality v. risk v. cost ("performance")
- ▶ Best value for the nation's data dollar

Environment (continued)

- II. Federal statistics are capital intensive—mostly intangibles, substantially influenced by research
 - A. Technical skills – see May 7-8 presentations
 - B. Management capabilities
 - C. Institutional culture

- III. Challenging trends
 - A. Increasing stakeholder expectations for scope, timeliness and quality
 - B. Increasing costs
 - C. Resources flat or declining in real-dollar terms

Environment (continued)

IV. We face a negative-sum exercise **UNLESS** we accelerate progress with:

- A. Improved methodology
- B. Alternative data sources (including “big data”)
- C. Expanded products and customer base

Conclusion: Government-academic partnerships can (must?) help the statistical system thrive in this highly dynamic environment

Environment (continued)

- V. Tradition of government-academic partnerships
 - A. Joint Program in Survey Methodology
 - B. Research Data Centers, within-agency access
 - C. CNSTAT, FESAC, other advisory groups
 - D. NSF – Measurement-Methods-Statistics Program
 - E. Agency-specific contracts
 - F. Networks of research collaborations, professional organizations and staff movement

Environment (continued)

VI. Expanded government-academic opportunities

- A. Growth in sophisticated statistical toolkit, data
- B. Statistical agency challenges more interesting to academic partners
- C. More career opportunities for students
- D. Altered funding environment pushes academics to be entrepreneurial

Thus -- ample avenues, opportunities and incentives to align research with operational environment.

Goals of government-academic partnerships

I. Methodological research

If Government Statistics = Pure Public Good

*Then Methodology for Government Statistics =
*(Pure Public Good)*²*

- A. Methodological topics from May 7-8 all important
- B. Prospective disruptive innovations
 - ▶ Methods to assess stakeholder information needs
 - ▶ Adaptive designs and analyses
 - ▶ Alternative data sources (including “big data”)
 - ▶ Statistical production systems – standardization
 - ▶ Cost structures – measurement and modeling
 - ▶ Enhanced dissemination and exploration tools

Goals (continued)

II. Substantive research

- A. Enhances data's value to policymakers, businesses, individuals, other stakeholders
 - ▶ Per Session 2 this morning: "Uses and Benefits from Government Statistics"
 - ▶ Crucial contributions
 - Case-specific guidance for decisions
 - Models of underlying processes (simulations, forecasts)
 - Context for narratives

Goals (continued)

- B. Enables innovation in statistical agencies
 - ▶ Enhance measurement, dissemination, range of products
 - ▶ Identify emerging economic, health and social phenomena that we should measure better
- C. Observation about working in a dynamic world
 - ▶ Phenomena of greatest current importance (to policy or stakeholders) are often hardest to measure (new concept, measurement and data access challenges)
- D. Examples in labor and price economics
 - ▶ Wage records
 - ▶ Emerging forms of employment and markets
 - ▶ Disease-based price indices

Goals (continued)

III. Education

- ▶ Train statistical agency staff
- ▶ Educate future data users

Thus -- many opportunities to align goals.

Structure and function of partnership

- I. Who works on what? (see Adoption and Diffusion of Innovations Rogers, 2003; many others)
 - A. Broad spectrum—early, middle, late adopters
 - B. Resources limited in statistical agencies and universities
 - C. Different parts of spectrum fit with skills, information, risk profiles, constraints of
 - ▶ General academic research
 - ▶ Academic research directly supported through federal statistical system
 - ▶ Research by agency personnel
 - ▶ Agency program development, implementation

Structure and function (continued)

- II. Communication (federal → academia) to ensure that academic partners understand
 - A. Complex operational context (operational and information constraints, related uncertainties)
 - B. Integration of methods, data sources w/systems

Structure and function (continued)

- III. Communication (academia → federal) to facilitate technology transfer from academia to statistical agencies
- A. Projects directly funded by statistical agencies
 - B. Research from related areas
 - ▶ General statistical theory and methods
 - ▶ Biostatistics
 - ▶ Economics and econometrics
 - ▶ Behavioral sciences
 - ▶ Etc.

Success requires effective structure and function.

Realistic expectations and processes

I. Issues

- A. Resource requirements, timelines, outcomes?
- B. Steps to assess progress and optimize results?

II. Clear understanding of concrete goals and limitations

III. Strong feedback loops

Thus -- 'nuff said....

In closing

- Thanks to conference presenters for advancing an important ongoing conversation
- Rephrased session title:

How Best Can Government-Academic Partnerships Help
Enhance the Future of the Federal Statistical System?

- Burgeoning opportunities—if we get 4 things right:
 - ▶ Align research with operational environment
 - ▶ Clear vision of partnership goals
 - ▶ Effective partnership structure and function
 - ▶ Realistic expectations and processes

Contact Information

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Additional Material

Topics from Census-NCRN Mini-Workshop: May 7, 2015

Evaluation of Field Operations

Adaptive Design and Use of Paradata

Usability Testing

Microsimulation Modeling

Record Linkage

Metadata and Collaborative Editing

Additional Material (Continued)

Topics of the CNSTAT-NCRN Seminar – May 8, 2015

- 1: NCRN - Next Generation of Government Statisticians
- 2: Uses of, and Benefits from, Government Statistics
- 3: Geographic Aspects of Statistics
- 4.A: Confidentiality
- 4.B: Statistics and Unstructured Data