Follow the People! The Institute for Research on Innovation and Science

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• “Wrapping it up in a person”
• IRIS: A new approach to data about research
• Measuring impact on three time frames
• Questions & Discussion
"The best way to send information is to wrap it up in a person."

**Wrapping it up in a person:** Examining employment and earnings outcomes for Ph.D. recipients

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In evaluating research investments, it is important to establish whether the expertise gained by researchers in conducting their projects propagates into the broader economy. For eight universities, it was possible to combine data from the UMERICS project, which provided administrative records on graduate students supported by funded research, with data from the U.S. Census Bureau. The analysis covers 2010–2012 earnings and placement outcomes of people receiving doctorates in 2009–2011. Almost 40% of supported doctorate recipients both federally and nonfederally funded, entered industry and, when they disproportionately got jobs at large and high-wage establishments. Although geographic clustering of resea

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[Image: Diagram showing annual earnings and placement of doctoral recipients supported by grants by field.]
Women are credited less in science than men

Matthew B. Ross1, Britta M. Glennon2, Raviv Murciano-Goroff3, Enrico G. Berkes4, Bruce A. Weinberg5 & Julia I. Lane6

There is a well-documented gap between the observed number of women and men in science, with clear consequences for promotion of women. The gap might be a result of the fact that at least part of this gap is the research teams are significantly less productive. The findings are consistent across a first source—large-scale administration of credit—and a second source—a given article or patent produced by a third source—qualitative responses—suggest likely to be credited is because their work is ignored. At least some of the observed gender differences in scientific contributions may be due to differences in scientific contribution, but

A new way to approach the "missing millions"
Shifting the Level of Analysis

• From dollars and documents to
• People, careers, and teams
IRIS is...

...a national consortium of research universities organized around an IRB-approved data repository, providing resources to help understand, explain and improve the public value of research and higher education.
HOW IRIS OPERATES

IRIS: IRIS links member data with other datasets, protects the security of the data, and produces and documents de-identified research data.

MEMBERS: Universities contribute data, support IRIS infrastructure, and contribute to IRIS governance.

DATA REPORTS & TOOLS: Members receive campus-specific reports and tools showing the internal and external impact of their research enterprise.

DATA SECURITY: Data improvement.

OTHER DATA SOURCES: Steppingblocks, Federal Agencies, Bureau van Dijk, 50+ others.

PARTNERS: Approved partners such as the U.S. Census Bureau and NCSES receive data from IRIS which they improve and make accessible through their own secure systems.

USERS: Approved users securely access de-identified datasets.

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THE IRIS-UMETRICS DATASET

2022 Data Release

Over 535,000 funded awards at 80+ member campuses

$127 billion in sponsored project spending

About $31 billion in payments to more than 970,000 vendors

Wages to about 864,000 employees

- More than 500 research users
- From 150+ institutions
Three time frames for impact

1. **Short term**
   - Grants allow investigators to hire the people and buy the stuff necessary to do research work – *Economic Stimulus*

2. **Medium term**
   - Work on research teams helps educate highly skilled people who can apply cutting edge knowledge in new situations – *Wrapping it up in a person*

3. **Long term**
   - New discoveries can generate technologies, businesses and sometimes entire industries - *Entrepreneurship*
Short term stimulus

Research Vendor Profile: Coy Laboratory Products

Coy Laboratory Products Incorporated, located in Grass Lake, Michigan (Jackson County) was founded in 1969 as a result of a collaboration between Richard Coy, owner of a small machining company and Dr. Ralph Prete, a UM Microbiology professor.

"Together they developed the concept and design of the world’s first anaerobic chamber dedicated to microbiology research." (https://coylab.com/ company)

Today the company manufactures a full line of related laboratory projects at its Grass Lake facility.

Data developed by the Institute for Research on Innovation and Science at the University of Michigan highlights the important role that these products play in scientific research and education around the country. Twenty-five major US research universities purchased nearly $1.4 million of Coy products in the last five years.

At the University of Michigan more than 30 externally funded projects use Coy products in their labs. Research tools developed and built in Jackson County also get used in introductory science courses through the University’s "Authentic Research Methodology" initiative. That project, funded by the Howard Hughes Medical Institute, moves introductory undergraduate science classes "beyond the cookbook approach" of standard laboratory sections by bringing faculty research projects into the lab.

Collaborations between Coy and UM continue. The company’s latest new product, a Mechanical Conflict avoidance System, is a novel approach to preclinical pain studies, "to a collaborative effort with the University of Michigan" (see coylab.com website).

Coy Laboratory Products Facility, Grass Lake, MI
Medium term: Skilled technical workforce

• Data: Research-trained employees work in many industries and locations.

• Takeaway: Research is teaching; investment in research results in a skilled workforce.

• Source: IRIS Employee Report
Long term: Innovation & Economic Dynamism

A Key to Future Economic Growth


JOINING IRIS

Members receive:

- Reports:
  - Vendor Profile Report
  - Spending Report
  - Government Relations Reports
  - Employee Report
  - Aggregate / Benchmarking Data
  - More...

- Access to the IRIS-UMETRICS dataset for researchers on your campus

- A voice in governance

Members provide:

- Data from HR, procurement and sponsored projects twice a year

- Data contact and communications contact

- $25,000 / year fee to maintain IRIS infrastructure and staff
Questions?