



# Restructuring Research at the Census Bureau

Roderick Little

Associate Director for Research and  
Methodology

Bureau of the Census

# Who am I?

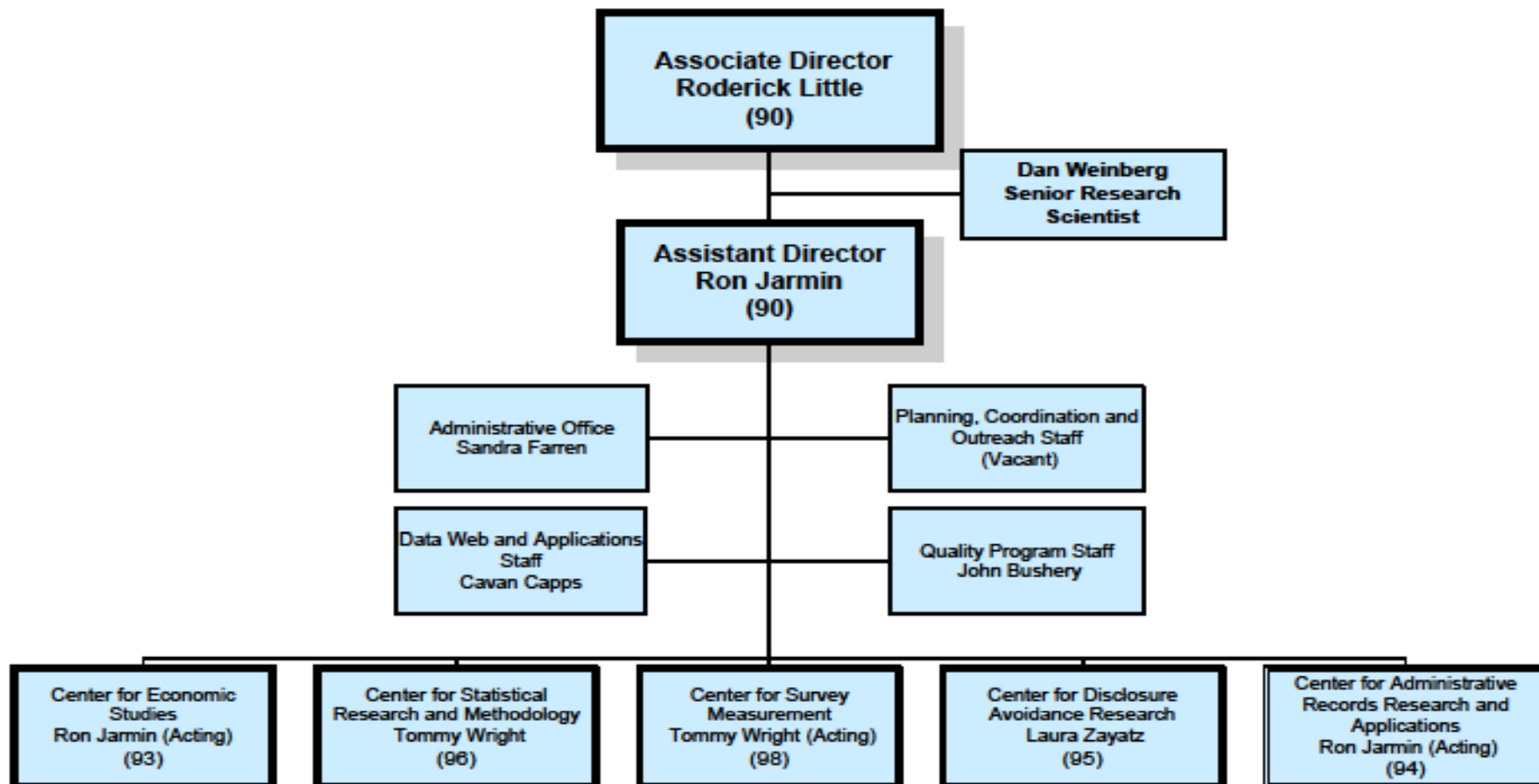


- Associate Director for Research and Methodology
  - Three years, IPA
- Professor, University of Michigan 1993-present
  - Department of Biostatistics (Chair 1993-2001, 2006-2009)
  - Department of Statistics, Institute for Social Research
- Research interests
  - missing data, survey sampling inference
  - collaborative research in social and biomedical sciences
- Census Bureau activities
  - ASA/Census/NSF Fellow 1980-82
  - Member of two NRC Panels on Census 2000, 2010
  - Occasional consultant, most recently for SAIPE program

# What is the R&M Directorate?



## Research and Methodology Directorate



# Why are we doing this?



- Good government increasingly demands timely, complex and useful data. Our mission is to produce relevant and credible statistics about key social and economic phenomena.
  - We need to produce statistical products that data users need now – not what they needed in the past.
  - Our more complex society requires more complex measurement.

# Why are we doing this?



- Statistical agencies face complex challenges
  - Individuals less willing to respond to requests for information, voluntary or not
  - Surveys and censuses are expensive and challenging to mount
  - Combining information from a variety of data sources is attractive in principle, difficult in practice
  - Statistical agencies face large challenges in keeping pace with changing demand for data products.

# Why are we doing this?



- What will future censuses look like?
  - Mobile populations, non-traditional families, rapidly changing dwelling structures
  - Increased use of internet over “snail mail”
  - Personal interviews are expensive
  - Including people who are hard to reach, reluctant to participate.
  - New technology offers new data collection tools.
  - Administrative records offer promise, but how should they be used?
  - How to assess census quality?

# Why are we doing this?



- The world of survey methods is changing rapidly.
  - Participation rates are declining.
  - True (fully-measured) probability samples are an admirable but now an unrealistic goal
  - New technology offers new data collection tools.
  - New data resources via administrative records offer promise when linked with traditional surveys.
  - Combining information across multiple sources to yield reliable estimates is a challenging statistical problem

# Why are we doing this?



- We face increased competition from rival estimation systems employing the internet and other data sources capable of offering near real-time monitoring.
- Efforts to shore-up the traditional methods are producing excessive cost inflation.
- In short, the current "business model" of survey design is unsustainable.



# Why are we doing this?



- Preserving and enhancing both relevance and credibility of our data products requires us to innovate to keep up with new world.
- Successful innovation requires scientific methods
  - Controlled comparisons of alternative approaches.
  - Exploiting and developing modern statistical analysis tools.
- Hence, Census Bureau needs a strong research directorate to remain relevant to the U.S. society.

# Research and Methodology



- To be successful, research and production need closer bidirectional ties
- My background: biostatistics research model
  - peer-reviewed methods research
  - serious collaborative research – knowledge of science, solving the real problem, grant writing, statistical content of substantive papers, strong communication skills
- Much to learn about Census environment, but I believe this biostatistics model has something to offer the Research Directorate

# More on collaboration



- To be sustainable, the Research Directorate must be a valuable and valued partner to program areas.
- Research directorate must ally with program staff, collaborate with external experts and engage data users to work on key problems.
- Researchers need to
  - find generalizable knowledge, allowing a solution discovered in one area to be applicable in others.
  - create real innovation within practical work processes, solving economic and social measurement problems.

# New data products and processes



- From new surveys
- From new uses of admin records
- From new uses of integrated data
- Research seen as a key tool for new product development.
- R&M area will take promising research findings and develop beta versions of data products. This will include training of staff in the construction of the data products. These staffs will be then moved to the program areas.

# Role of the R&M Directorate



- Identify unmet data needs
- Identify new uses for the data we already provide
- Work on problems that matter to the Census Bureau
- Provide technical guidance and training to the Program Areas
- Collaborate with researchers and staff from the Program Areas to improve processes and methods for existing programs and products
- Collaborate with researchers and staff from the Program Areas to introduce new products

# Role of the Research Community



- Identify unmet data needs
- Identify new uses for the data we already provide
- Work on problems of interest to the Census Bureau
- Collaborate with Census researchers
  - LED Network
  - External Research Network
  - Research Data Centers
- Provide critical feedback on new and/or improved Census data products

# Some Challenges



- Recruit the best researchers
  - Census Bureau employees, and outside researchers on grants and contracts and as consultants
  - Citizenship issues, competitive salaries, creating an exciting research environment
  - Value peer-reviewed publication, visibility in the wider research community
  - Promoting and fostering research excellence in a large, production-oriented, bureaucratic institution
- Build better links between research and production
- Institutionalizing research excellence

# Role of LED partnership



- We need your help!
- Let people know that the Census Bureau has a new research directorate with exciting plans
- Give us your ideas
  - LED is one of the best examples of innovation in the Bureau. (QWI, OnTheMap)
  - ADRM wants to engage LED state partners and other data users and work with them to develop new and improved Census data products.
- We value your advice and constructive criticism!