

# Using Data to Inform Science Workforce Policies and Programs

Misty L. Heggeness, PhD, MPP, MSW  
*U.S. Census Bureau*

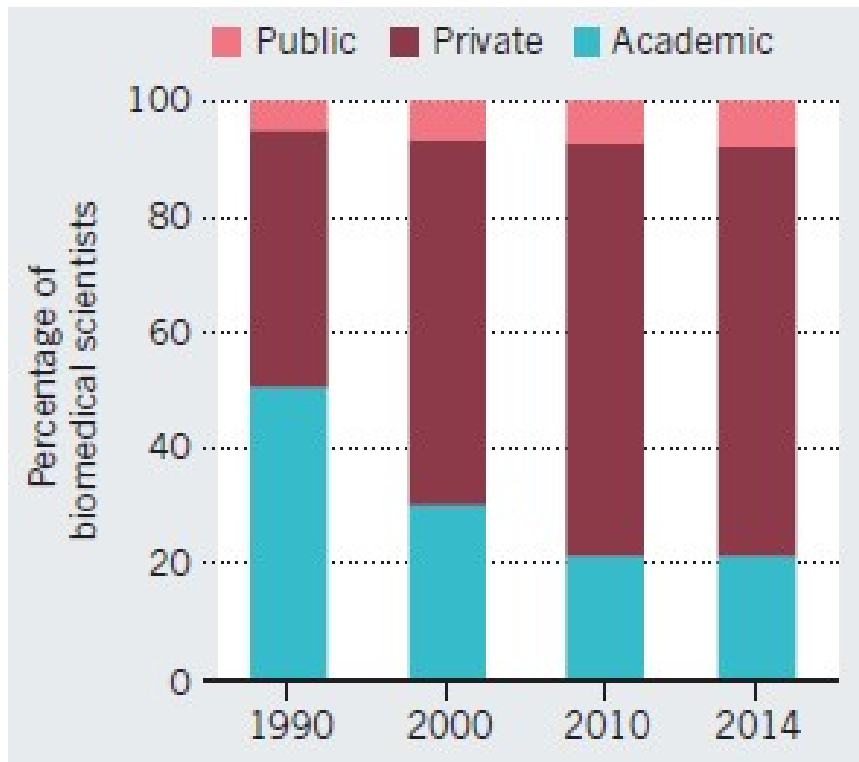
National Academies of Science (NAS)  
Next Generation Researchers Initiative

January 9, 2017

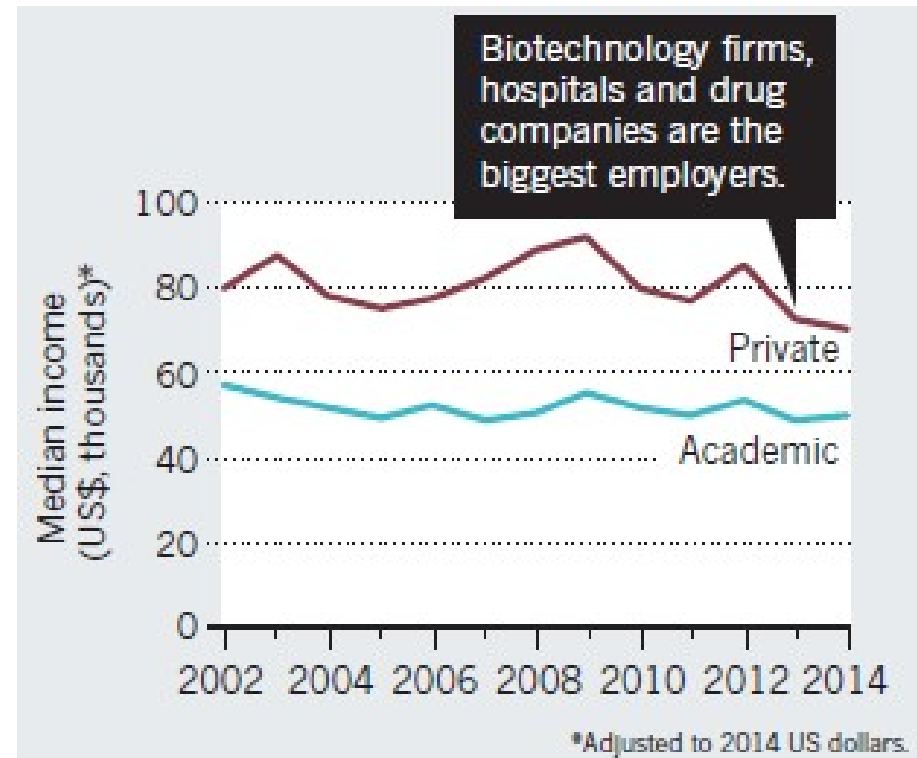
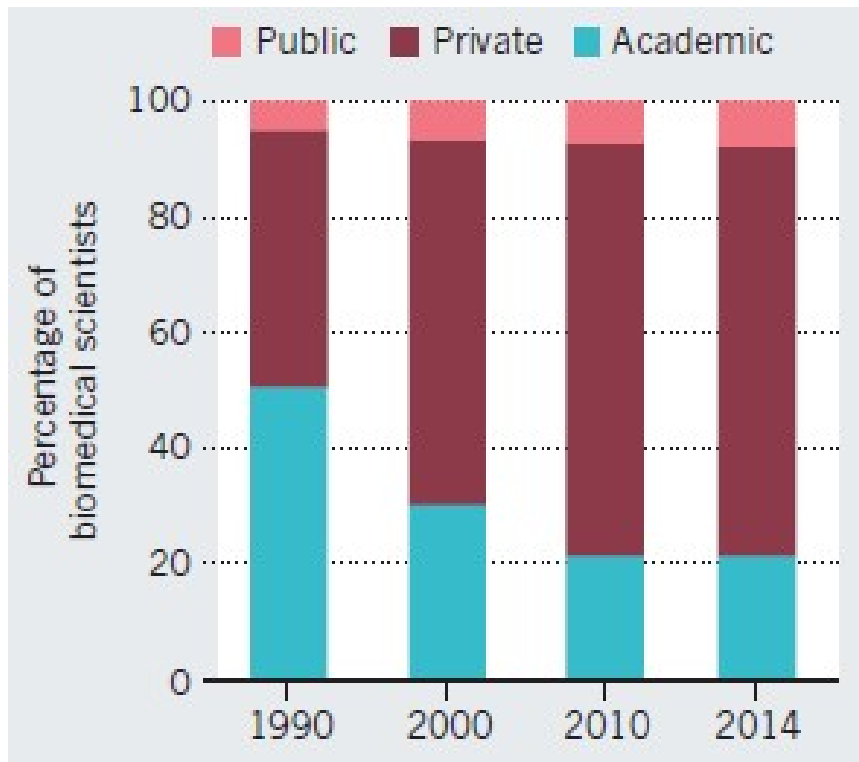
DISCLAIMER: The views expressed here, including those related to statistical, methodological, technical, operational issues, and any errors are solely those of the author and do not necessarily reflect the official positions or policies of the Census Bureau. This presentation has undergone more limited review than official publications.

# Labor Market Trends

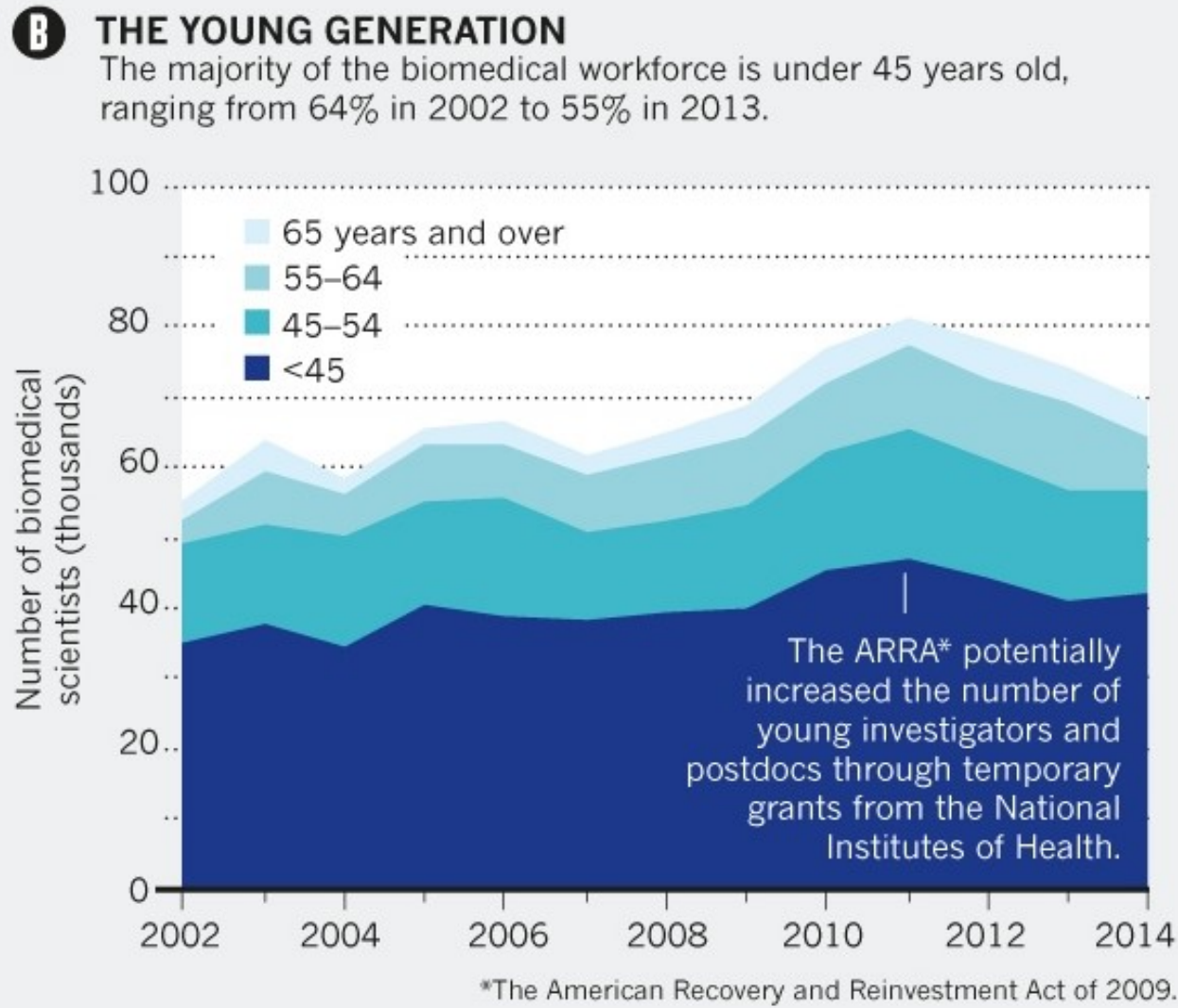
# Industry



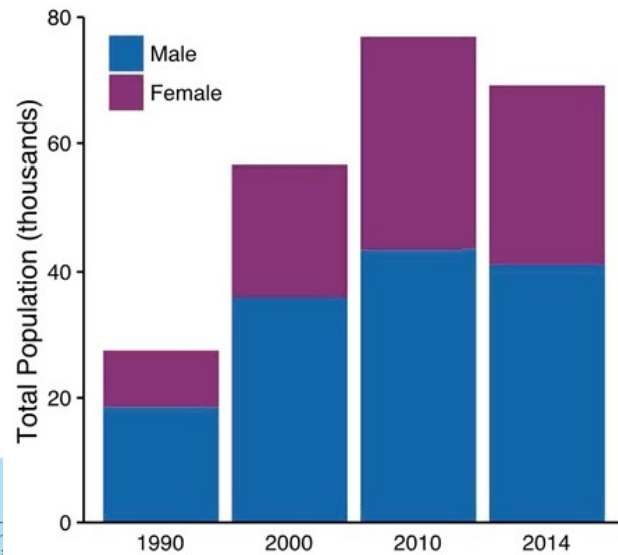
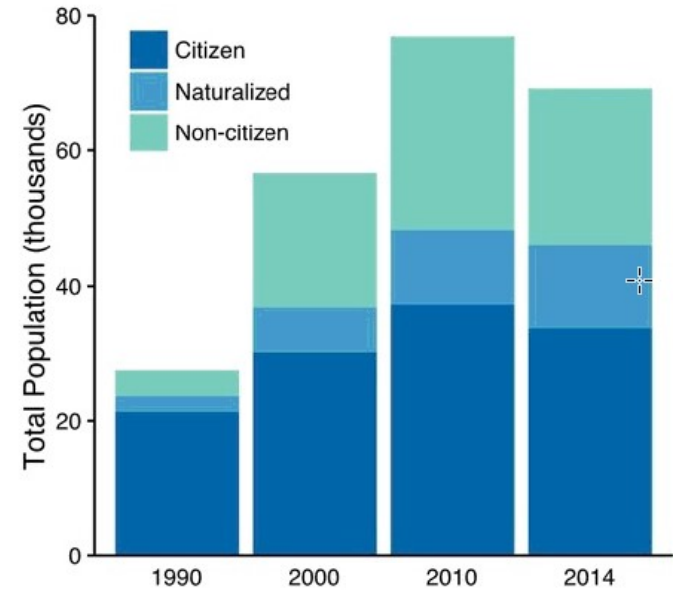
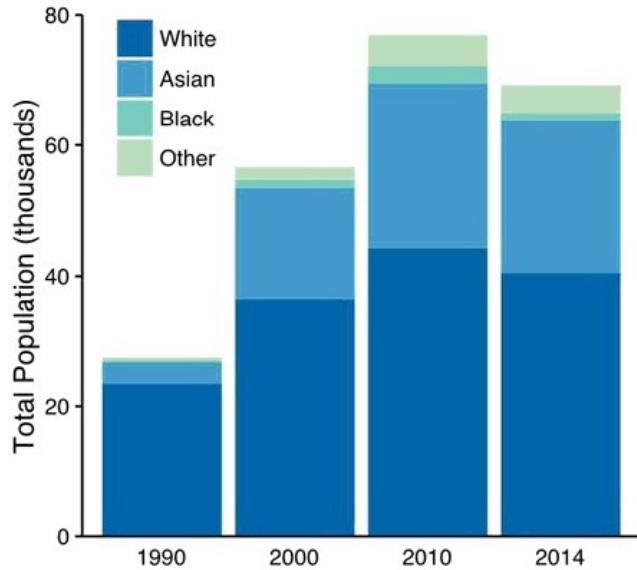
# Industry and Income



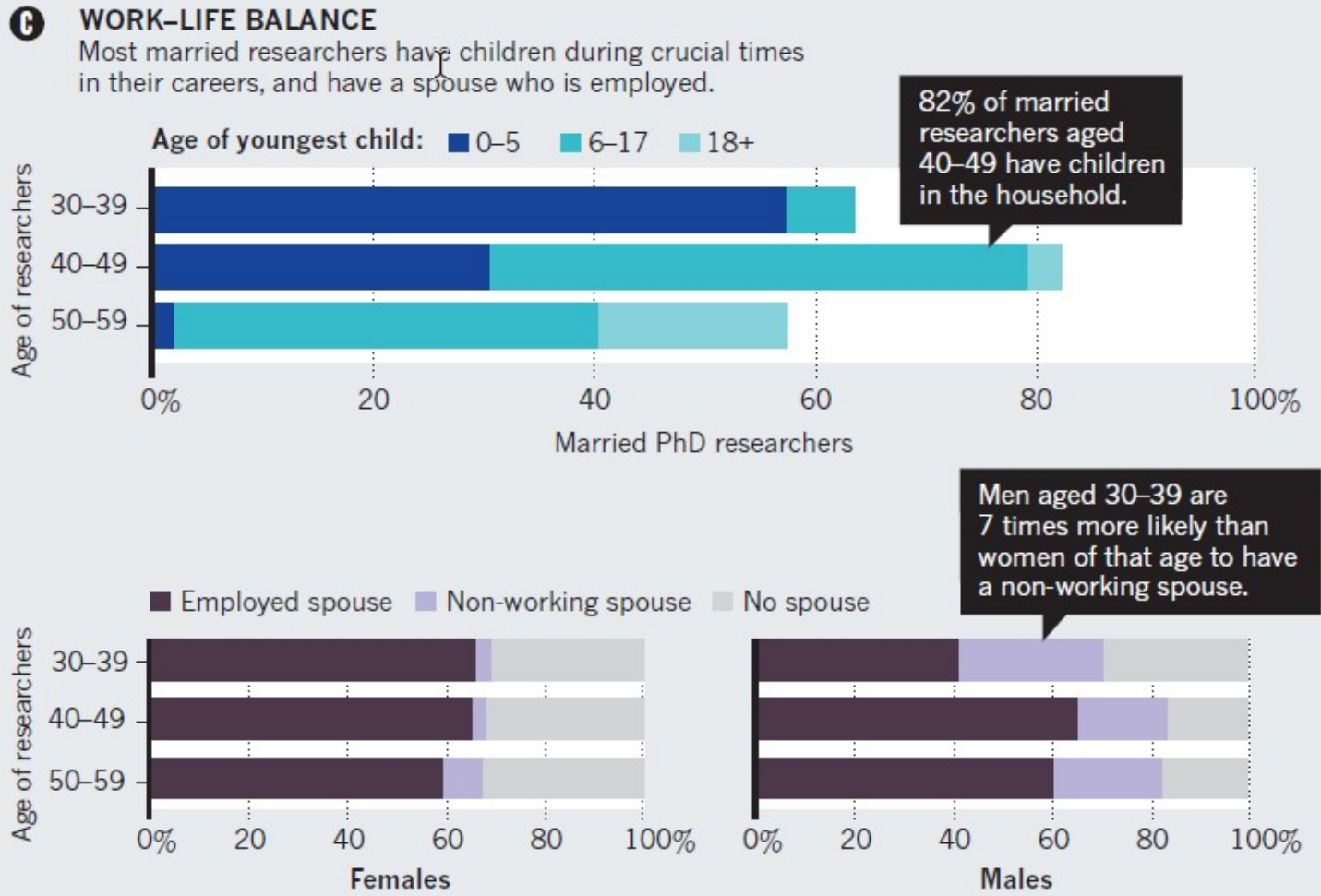
# Demographics: Age



# Demographics: Diversity



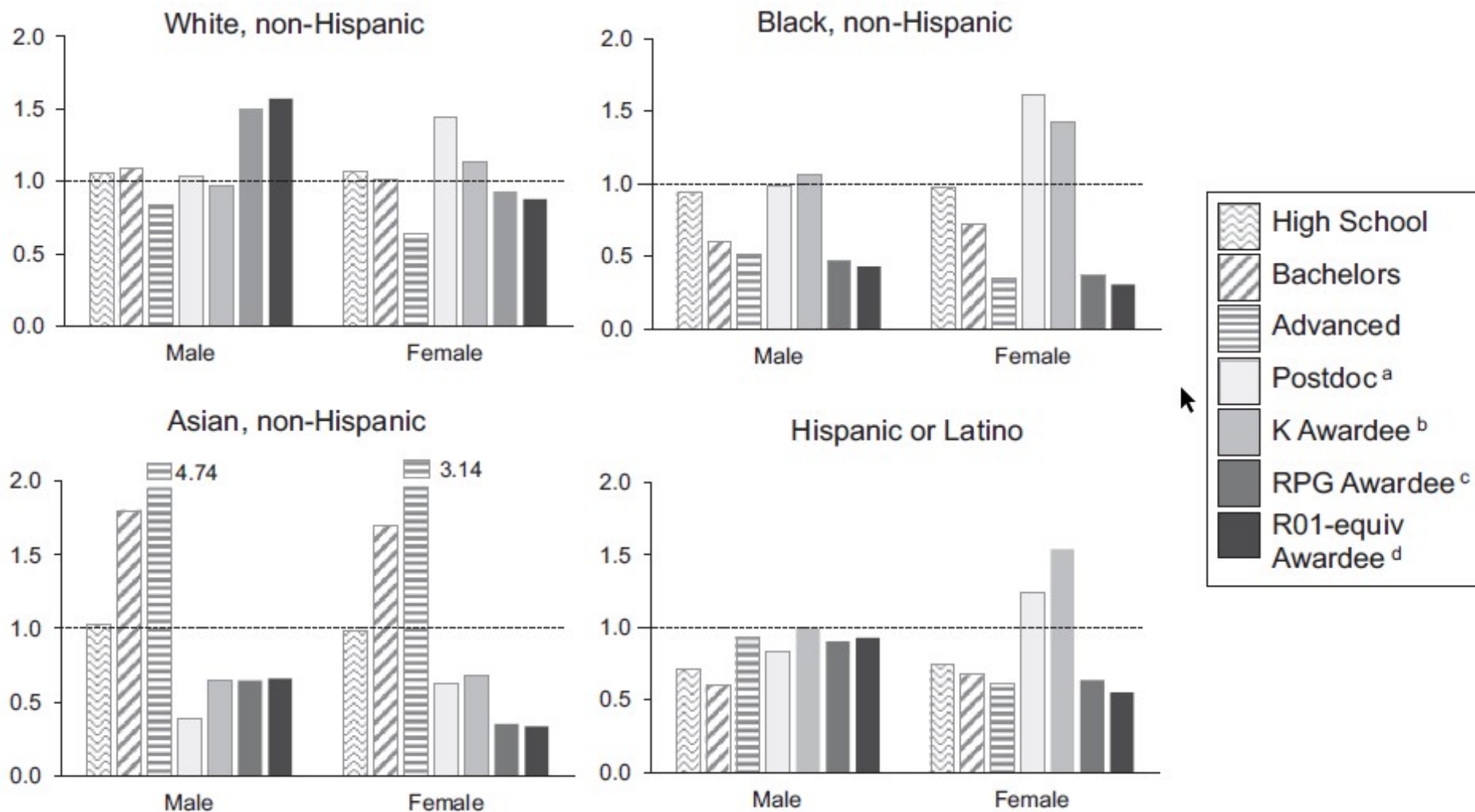
# Demographics: Family-Work Life Balance



# Research and Evaluation

- Representation Study
  - Women and minorities overrepresented in training; underrepresented in independent research



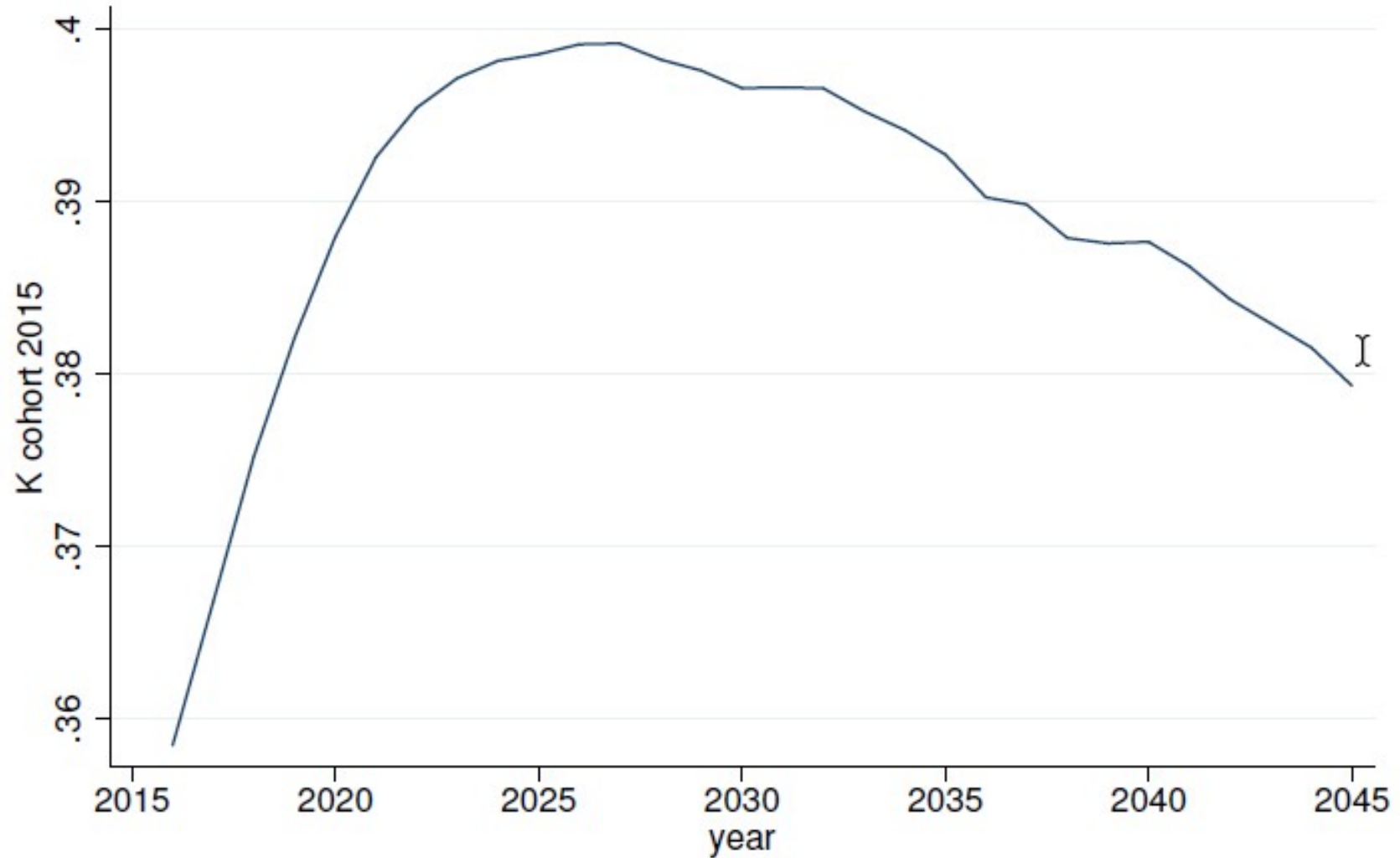


Heggeness et al., *Academic Medicine*, 2016

# Research and Evaluation

- Representation Study
  - Women and minorities overrepresented in training; underrepresented in independent research
- Modeling Women in Leadership Study
  - With no policy intervention, women's representation in RPGs increases only 4-6%

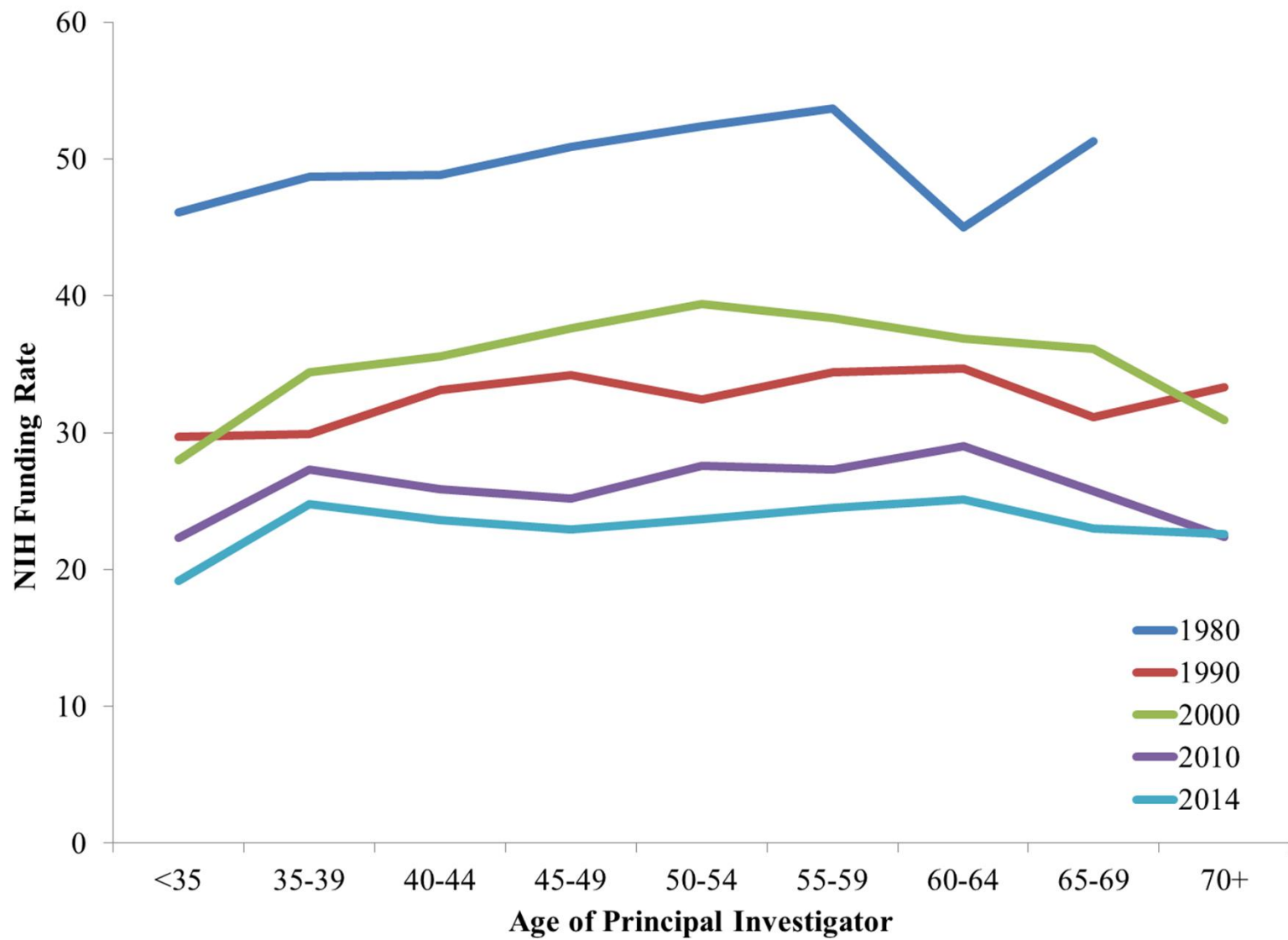
## Share of Women in RPG Awardees for Cohort 2015



Zeng & Heggeness, Will the Gender Diversity of Young Scientists Today Improve the Diversity of Older Cohorts in the Future?, *Under Review*

# Research and Evaluation

- Representation Study
  - Women and minorities overrepresented in training; underrepresented in independent research
- Modeling Women in Leadership Study
  - With no policy intervention, women's representation in RPGs increases only 4-6%
- NIH-Funded Aging Workforce
  - Young scientists are funded at similar rates to older scientists



Heggeness et al., *Cell Stem Cell*, 2016

# Other National Initiatives

- Federal Commission for Evidence-Based Policymaking
  - Larger efforts to generate policies using data and evaluations

# Other National Initiatives

- Federal Commission for Evidence-Based Policymaking
  - Larger efforts to generate policies using data and evaluations
- Census Initiatives
  - Innovation Measurement Initiative (IMI)
    - Huge potential to benefit NIH/NSF and other federal agencies that fund scientists
    - Origins in *Starmetrics*
  - Master Demographic File (MDF)
    - Master File with core demographics which can be linked to administrative records for evaluation studies
  - American Opportunity Study
    - <http://www.census.gov/about/adrm/linkage/projects/aos.html>

# Barriers to Innovating Data

- Barriers to Data Access:
  - Difficult for social science researchers to access federal data making evaluation and research on biomedical scientists challenging
- To reduce barriers, encourage collaboration:
  - Across agency (Census, NIH, NSF, USDA)
  - Among federal agencies and researchers within:
    - Fed. Statistical Research Data Centers (FSRDCs)
    - Interagency Agreements (IAA) with researchers



# Collaborative Partnerships are KEY

- Very important to PARTNER with social scientists who have training in evaluation and understand issues of causality and how to correct for it
  - E.g.: *Nature* Jan 5, 2017 publication and corresponding working paper
  - Across agency (e.g. NIH with Census)
  - Across entity (e.g. NIH with academic experts; Census with academic experts)

# Collaborative Partnerships are KEY

- Very important to PARTNER with social scientists who have training in evaluation and understand issues of causality and how to correct for it
  - E.g.: *Nature* Jan 5, 2017 publication and corresponding working paper
  - Across agency (e.g. NIH with Census)
  - Across entity (e.g. NIH with academic experts; Census with academic experts)
- These partnerships provide validity in:
  - How to structure evaluations and research that provide explanatory reasons
  - Help identify factors that work for making the workforce the most vital and rigorous that it can be

# Thank you

Misty L. Heggeness, PhD, MPP, MSW  
Chief, Longitudinal Research, Evaluation, and Outreach Branch  
Social, Economic, and Housing Statistics Division  
U.S. Census Bureau

[misty.l.heggeness@census.gov](mailto:misty.l.heggeness@census.gov)