



# **Doctoral Career *Beginnings*: Findings from the 2008 SED**

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[www.nsf.gov/statistics](http://www.nsf.gov/statistics)

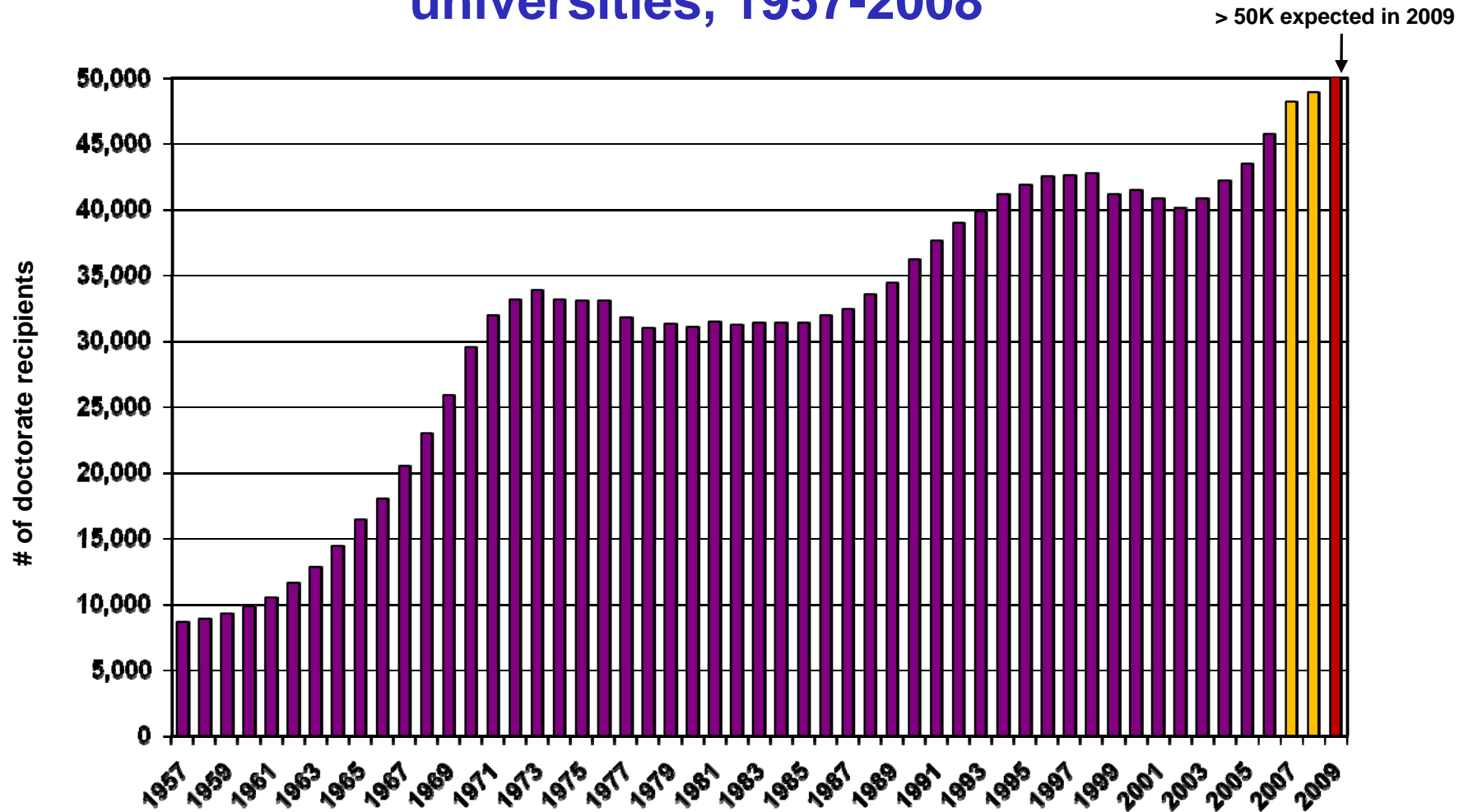


# Survey of Earned Doctorates

- Annual census of all individuals receiving research doctorates from U.S. institutions
- Conducted annually since 1957-58; cumulative database includes data back to 1920
- Response Rate
  - 45,596 doctorate recipients in 2006, 48,112 in 2007, 48,802 in 2008
  - 92% response rate in each of those years



## Doctorates awarded by U.S. colleges and universities, 1957-2008



SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2008 Survey of Earned Doctorates.



# SED Data Used in Presentation

## Postgraduation Plans

- Definite commitments for coming year (or not)
- Employment vs. postdoc
- Sector of employment
- Location of employment
- Salary

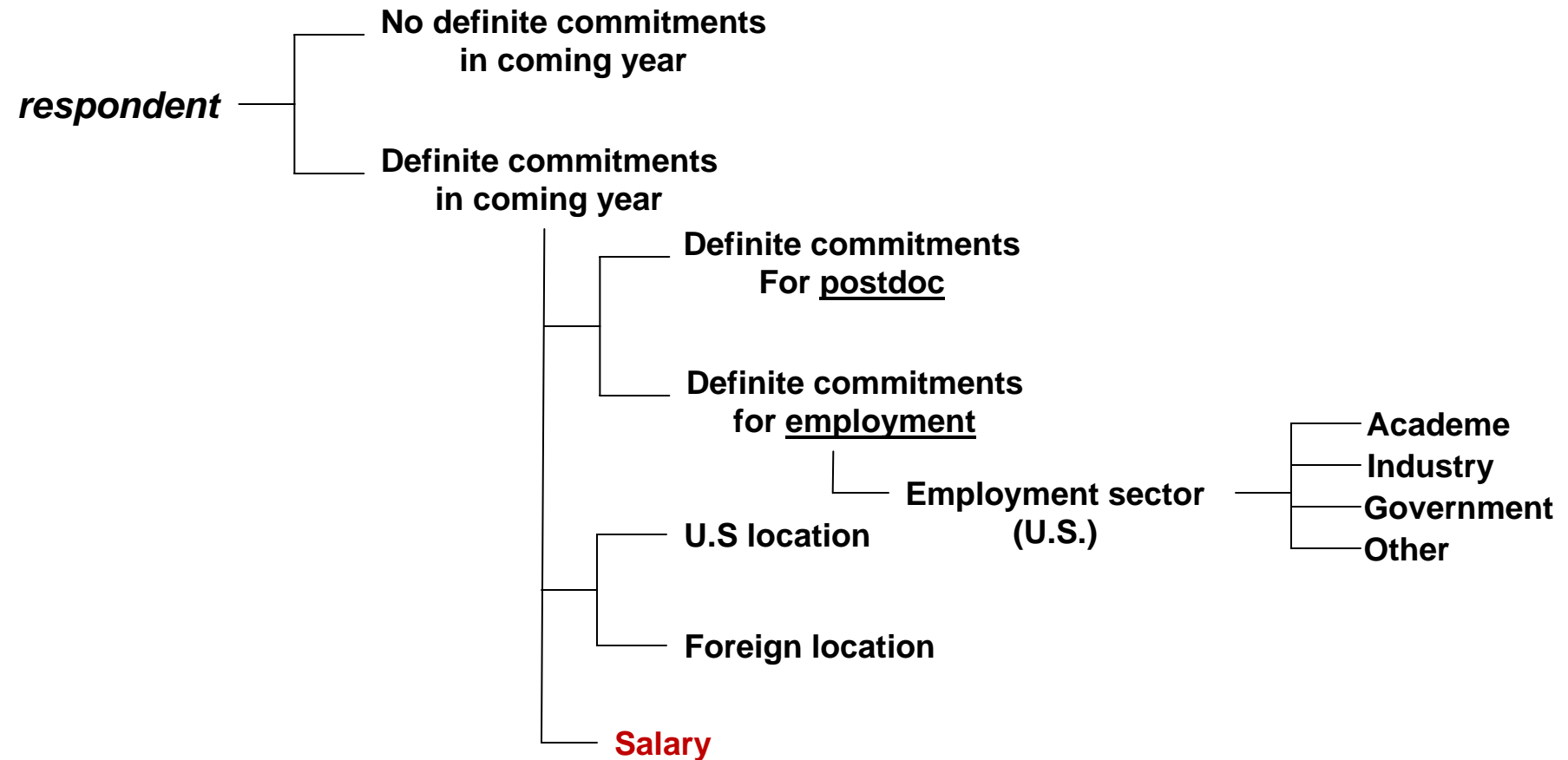
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## Demography & Education

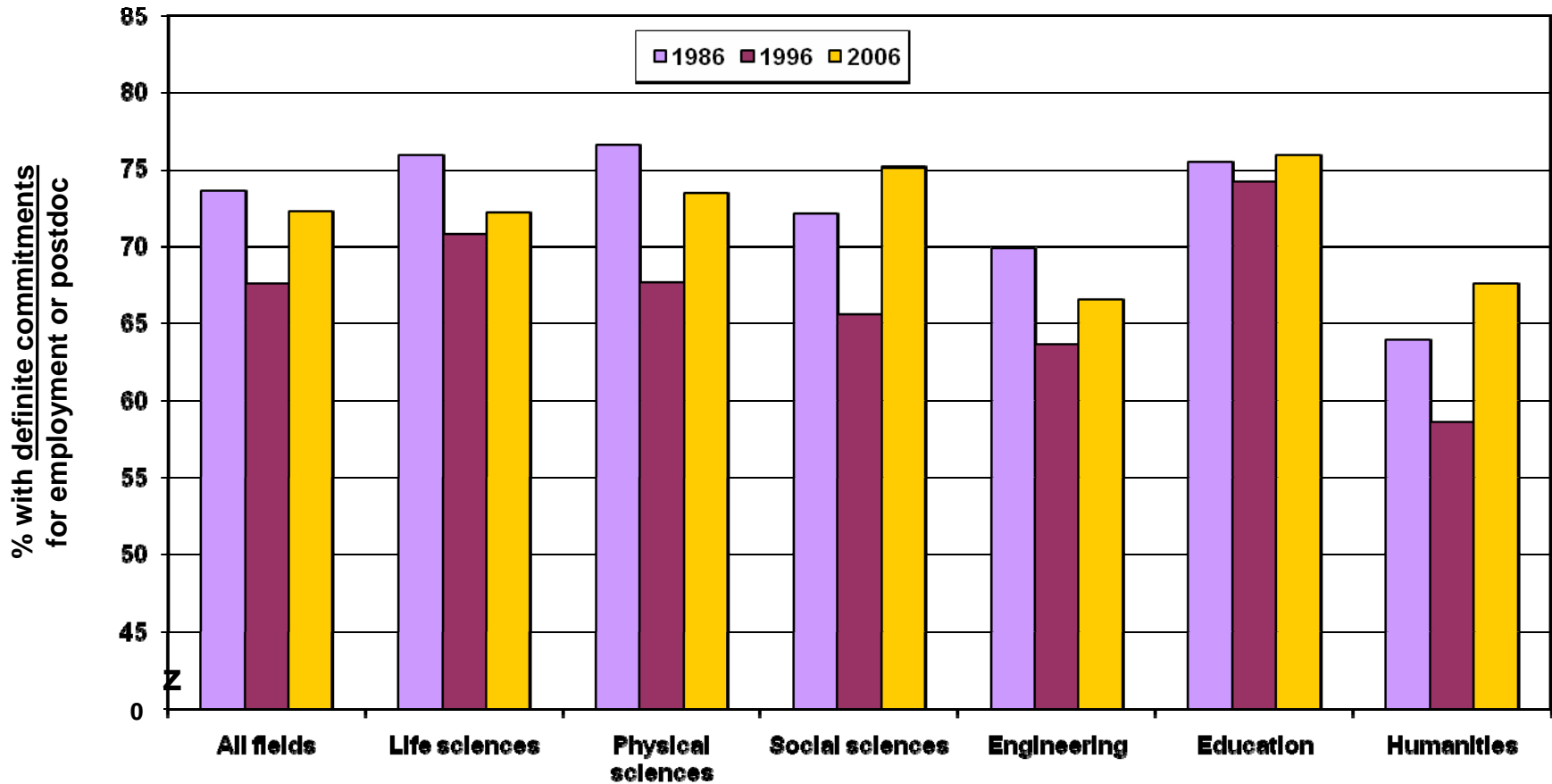
- Broad field of degree
- Gender
- Race/ethnicity
- Citizenship at time of Ph.D.



## Relationships Among Postgraduation Plans Data

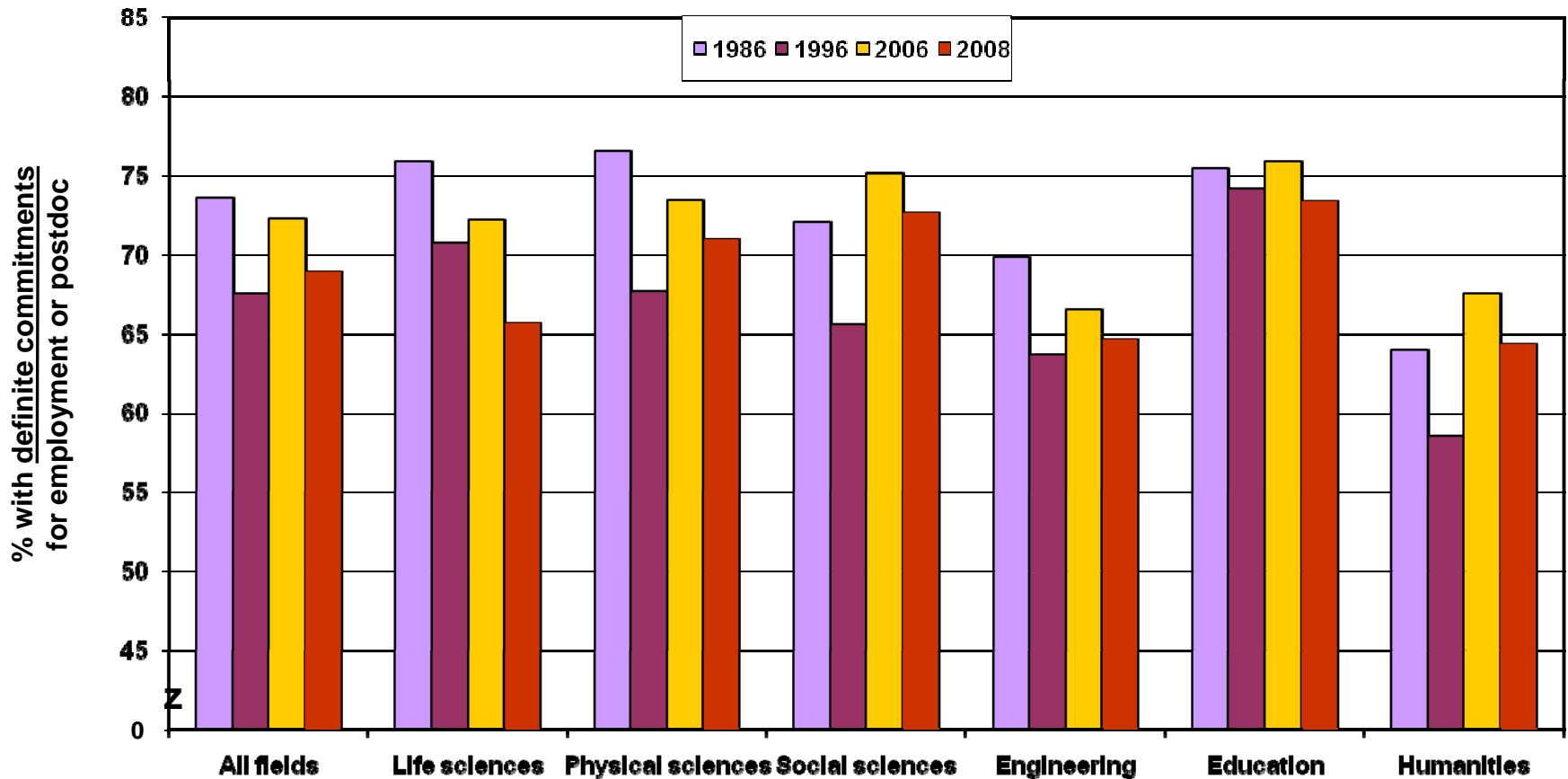


## Postgraduation status of doctorate recipients by field of study, 1986-2006



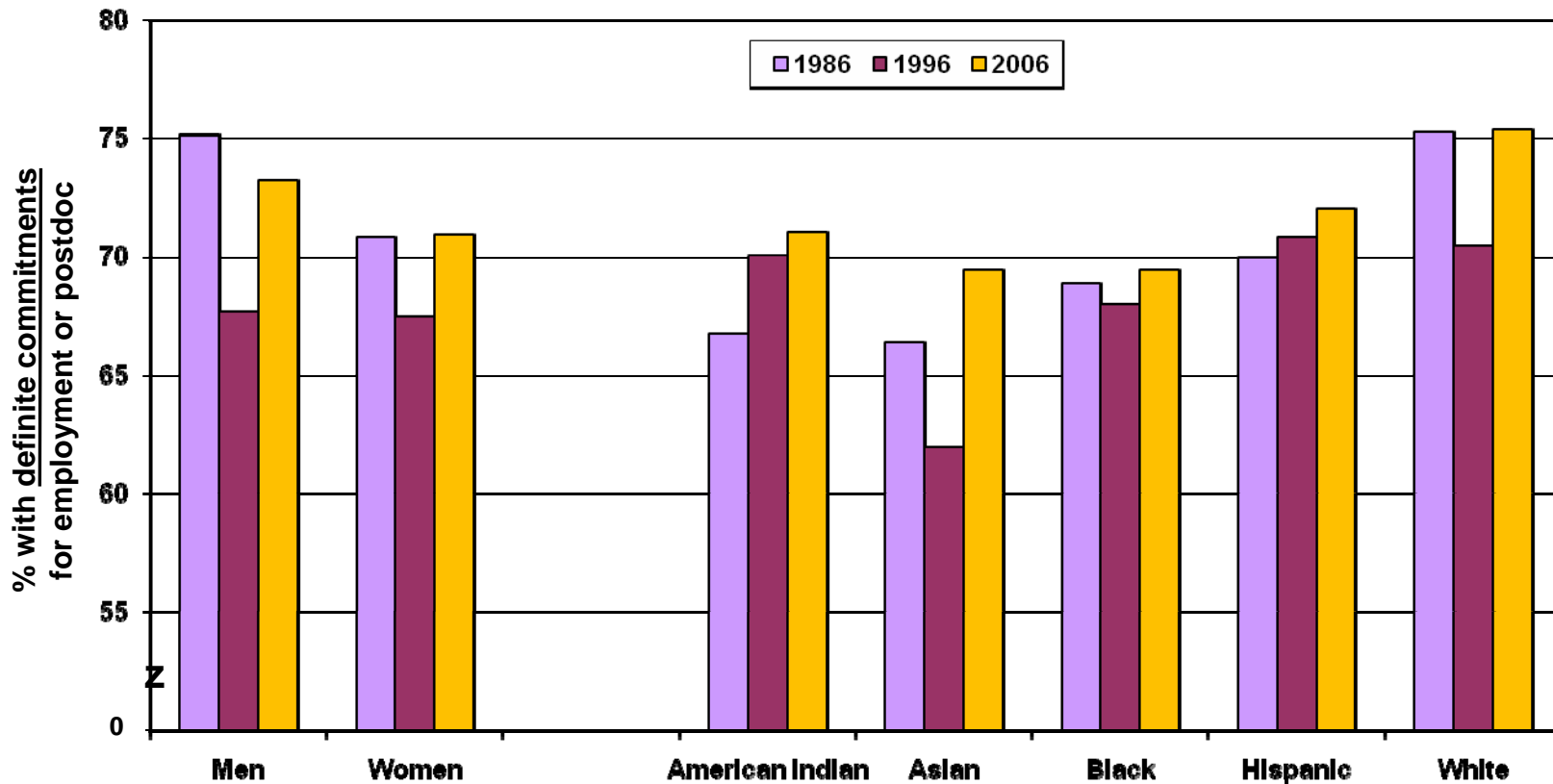
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2006 Survey of Earned Doctorates.

## Postgraduation status of doctorate recipients by field of study, 1986-2006 plus 2008



SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2006 & 2008 Survey of Earned Doctorates.

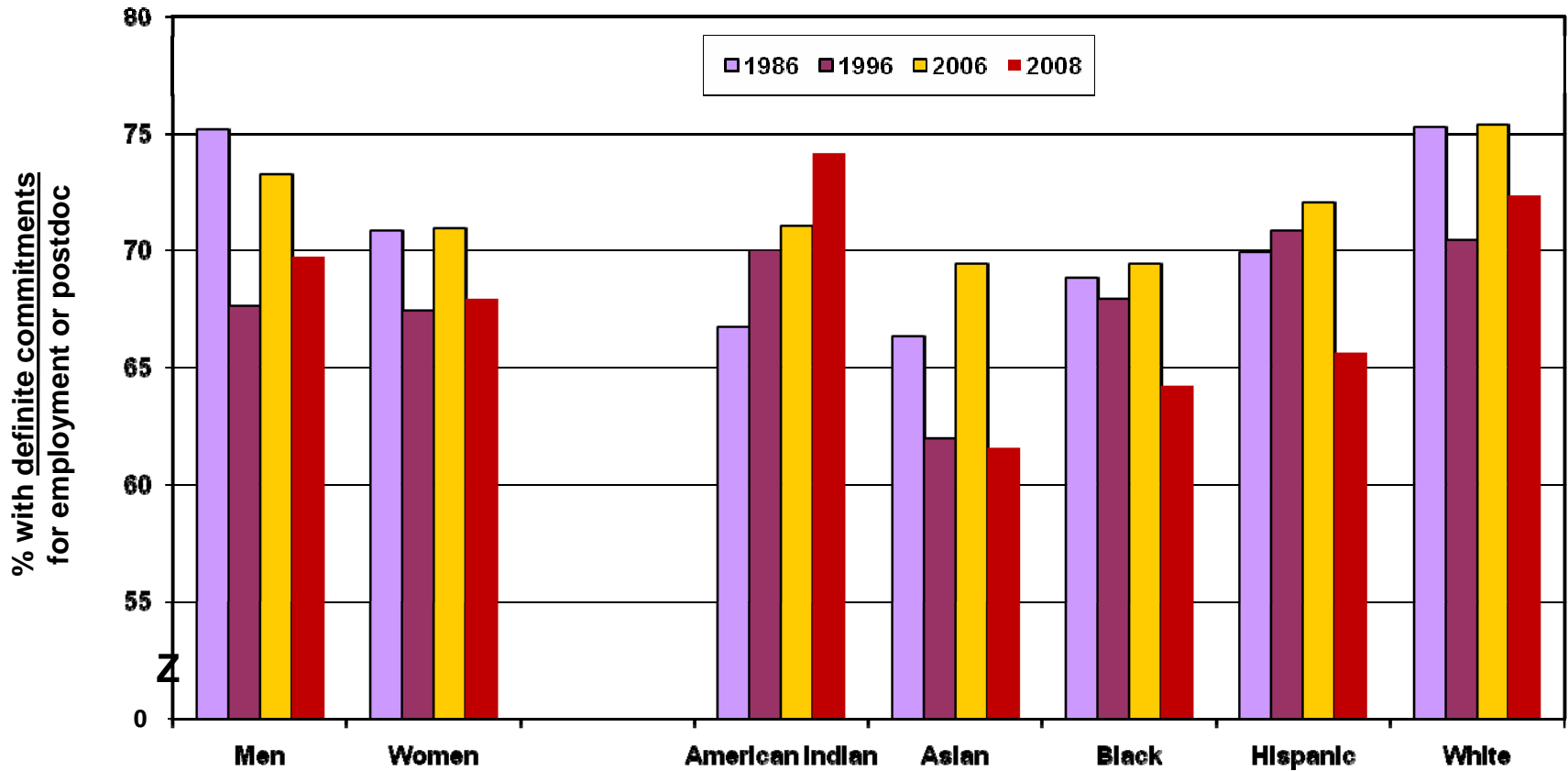
## Postgraduation status of doctorate recipients by selected demographic groups, 1986-2006



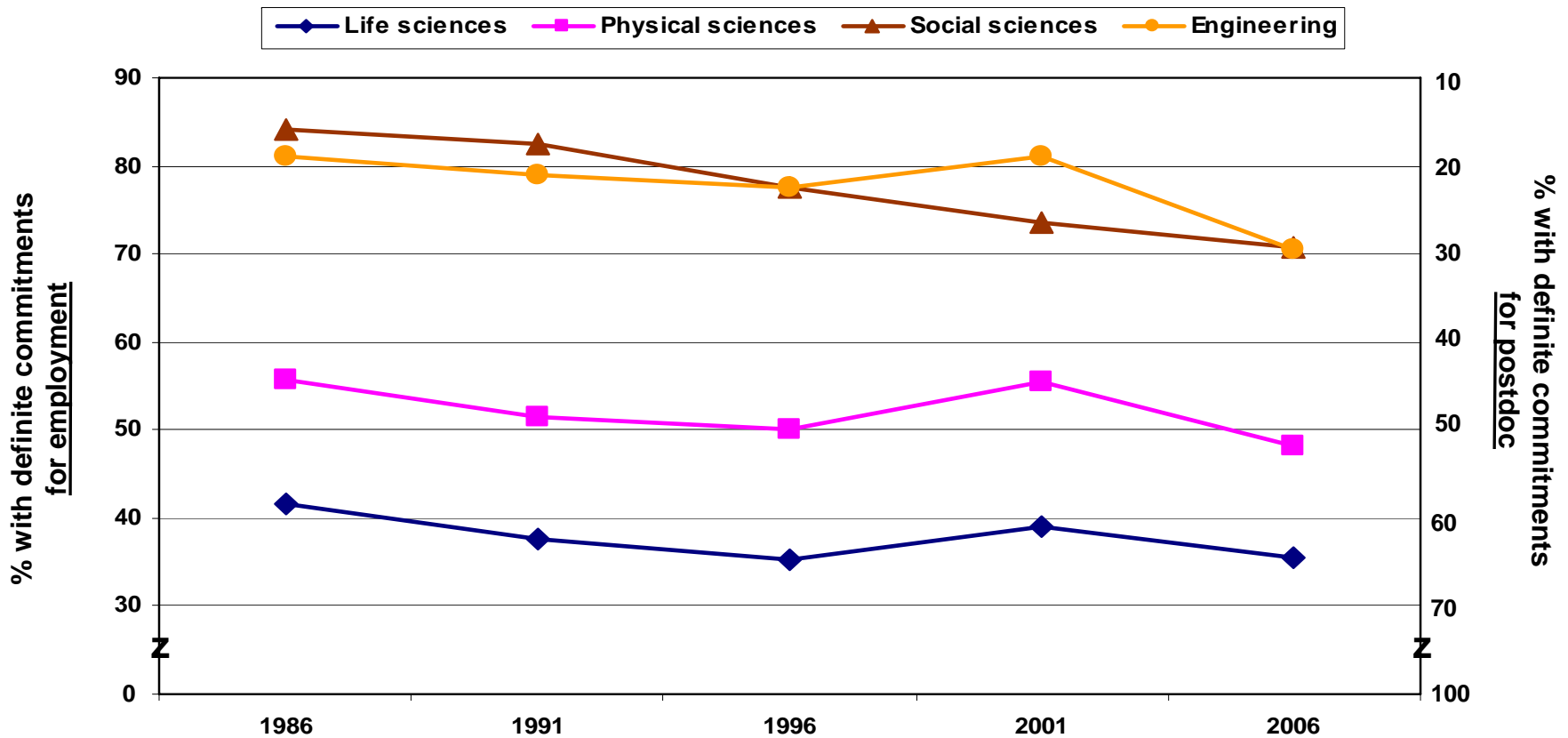
SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2006 Survey of Earned Doctorates.



## Postgraduation status of doctorate recipients by selected demographic groups, 1986-2006 and 2008



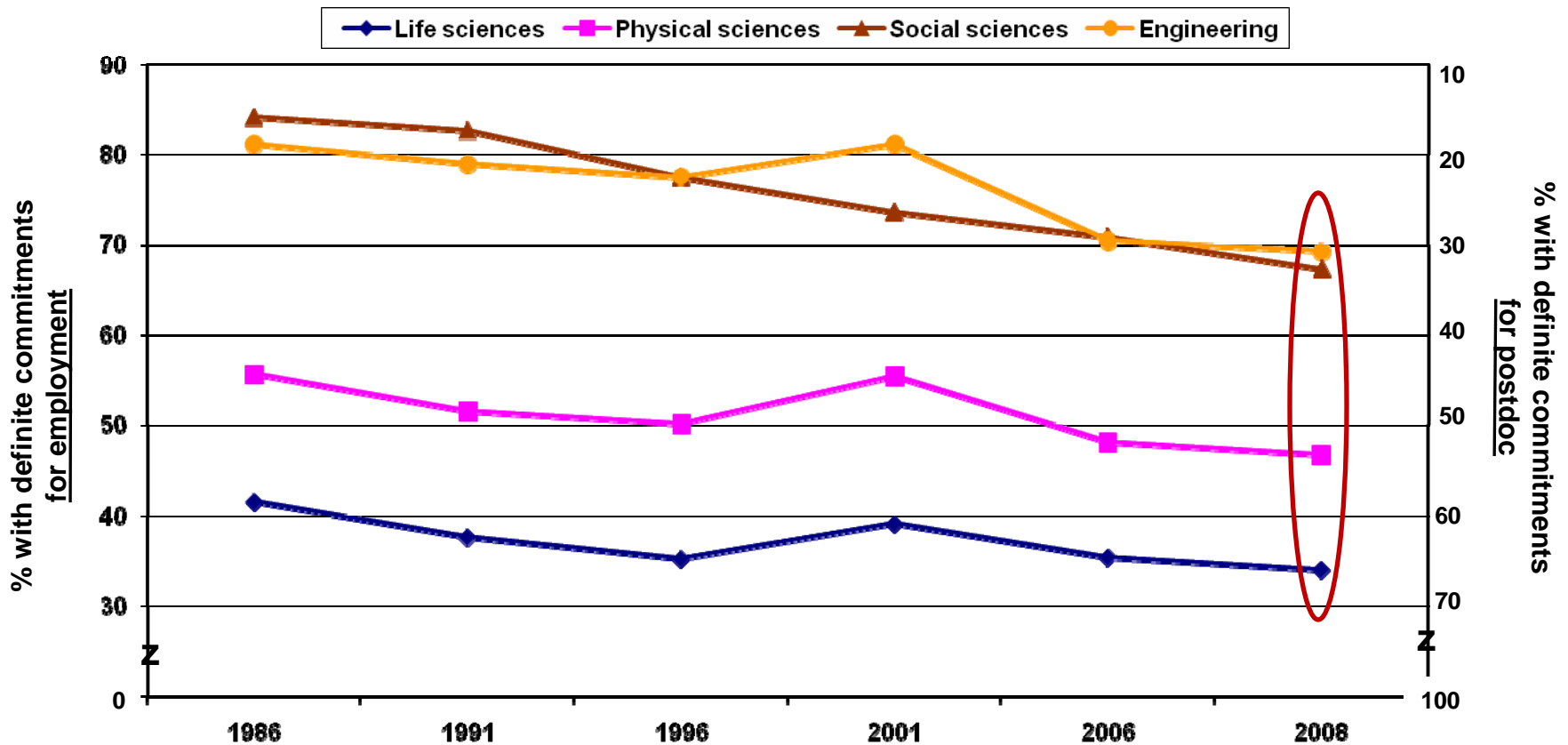
## Postgraduation plans of doctorate recipients by field of study, 1986-2006



NOTE: Percentages are based on the number reporting definite commitments for employment or postdoc.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2006 Survey of Earned Doctorates.

## Postgraduation plans of doctorate recipients by field of study, 1986-2006 and 2008

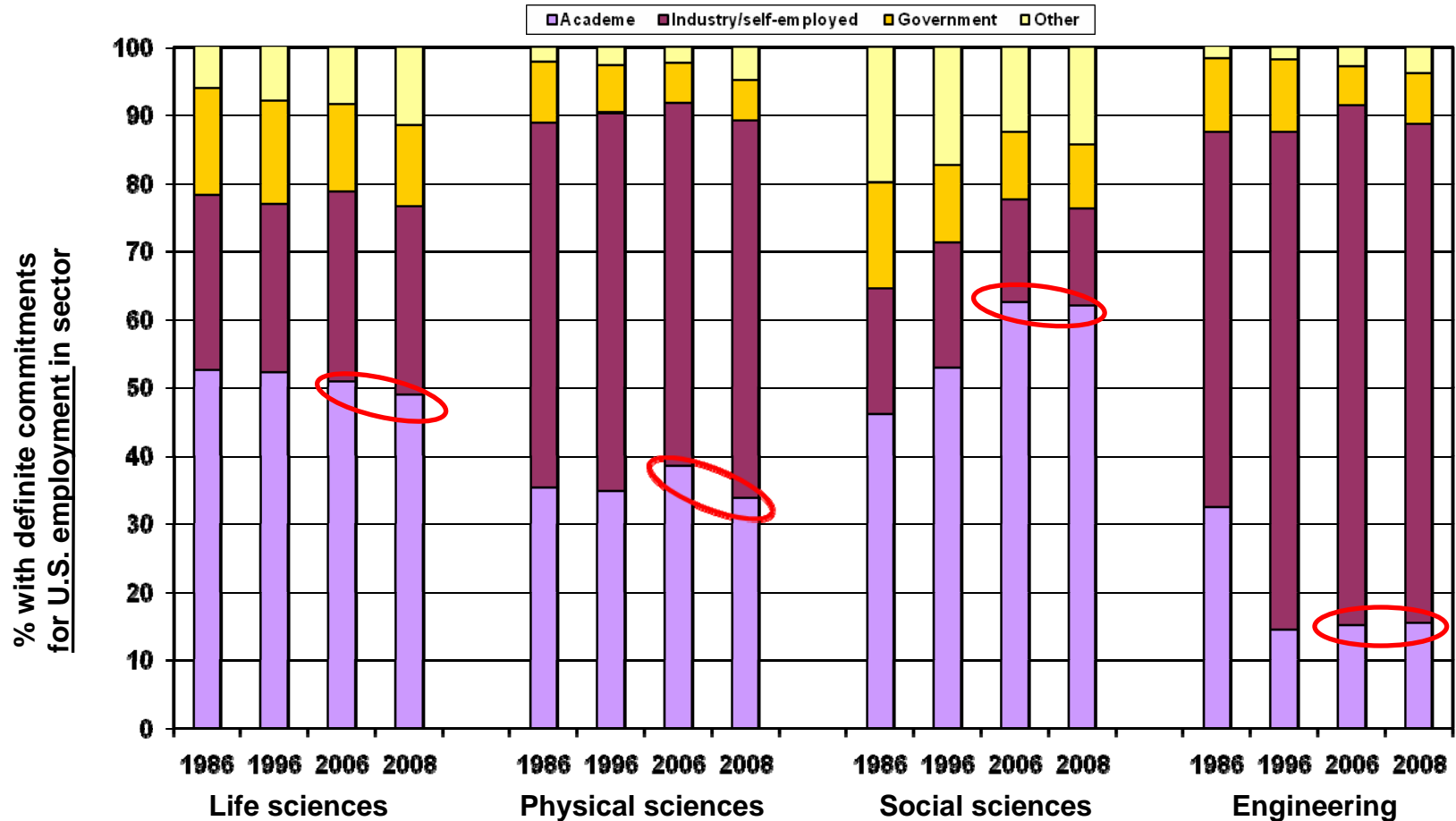


NOTE: Percentages are based on the number reporting definite commitments for employment or postdoc.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2006 & 2008 Survey of Earned Doctorates.



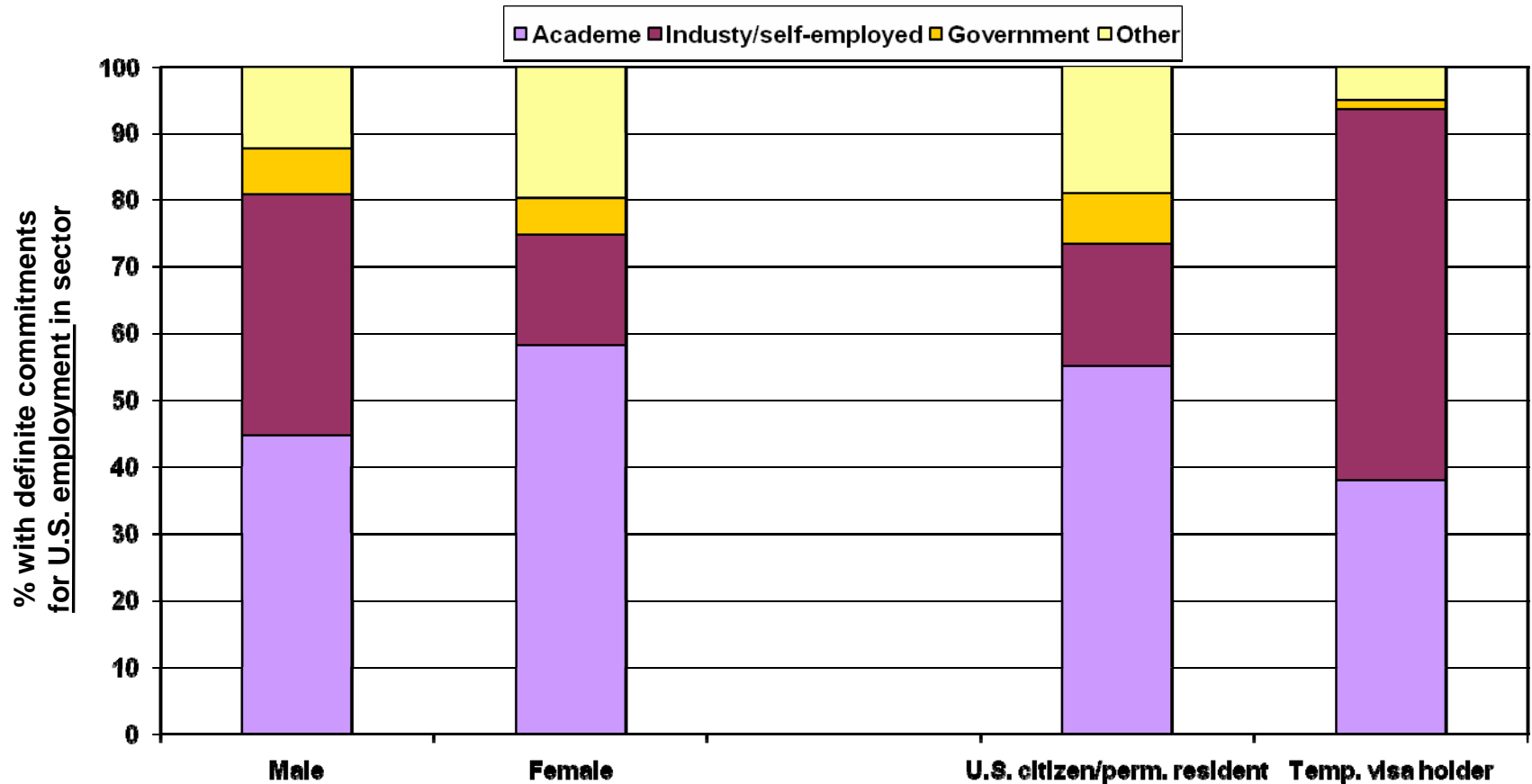
## U.S. Employment sector of S&E doctorate recipients by field of study, 1986-2006 and 2008



NOTES: Percentages are based on the number reporting definite commitments for U.S. employment to a sector. The "Other" sector includes employment in elementary/secondary schools and non-profit organizations.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2006 & 2008 Survey of Earned Doctorates.

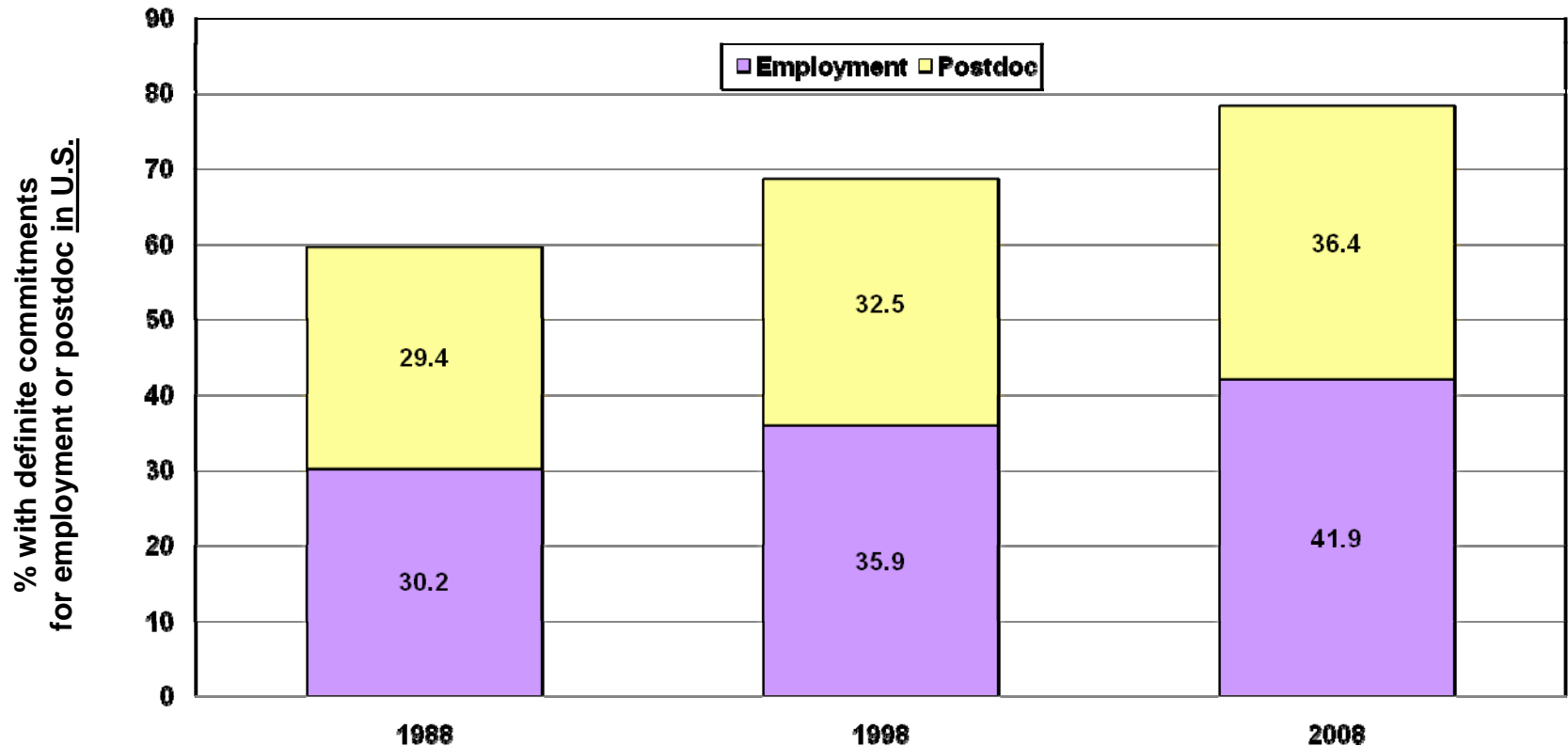
## Employment sector of doctorate recipients by sex and by citizenship status, 2008



NOTES: Percentages are based on the number reporting definite commitments for U.S. employment to a sector. The "Other" sector includes employment in elementary/secondary schools and non-profit organizations.

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2008 Survey of Earned Doctorates.

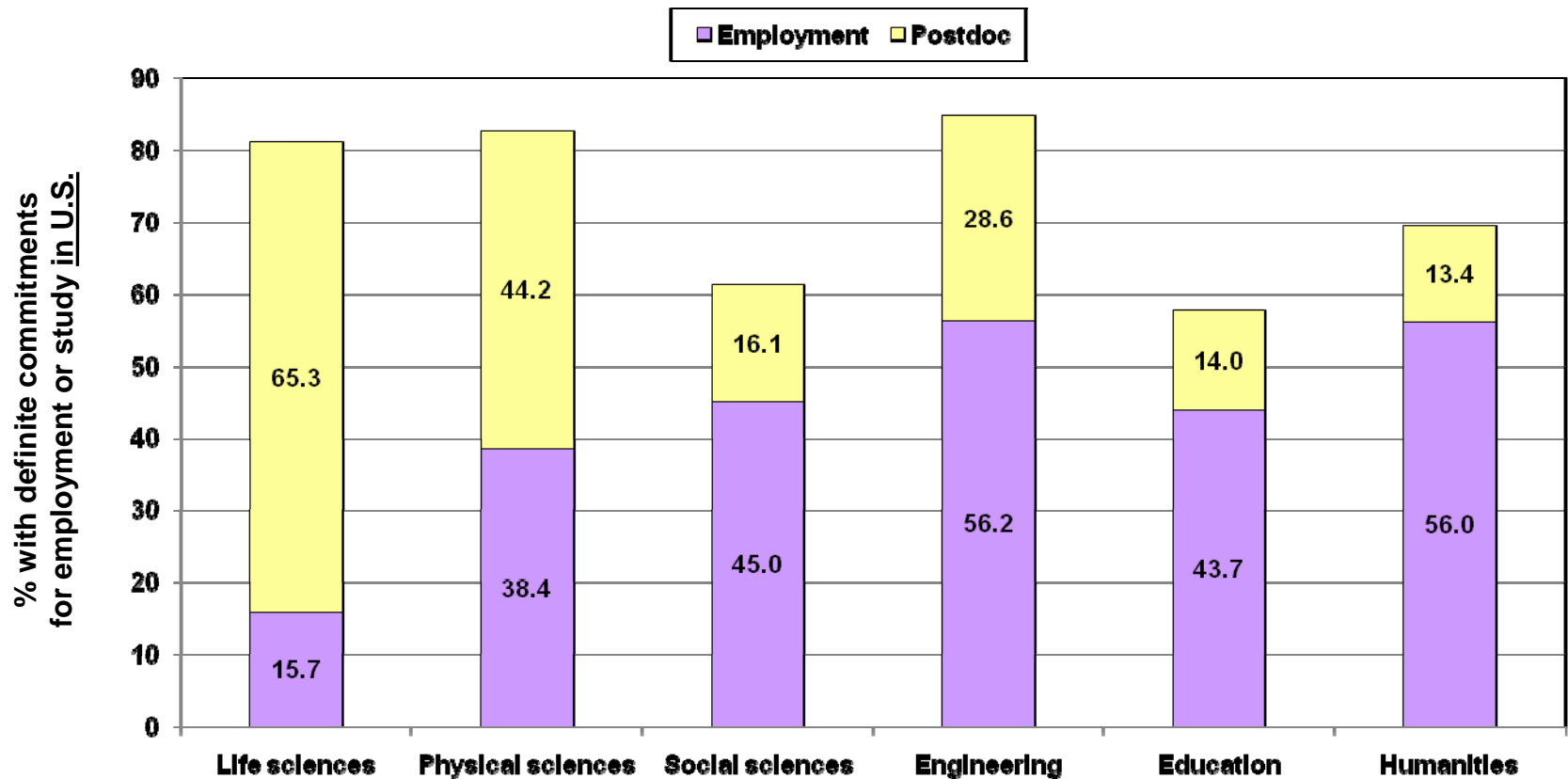
## Postgraduation location of temporary visa holders with definite commitments, 1988-2008



NOTES: Percentages are based on the number of temporary visa holders reporting definite commitments for employment or postdoc with responses to location (U.S. or foreign).

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2008 Survey of Earned Doctorates.

## Postgraduation location of temporary visa holders with definite commitments by field of degree, 2008



NOTES: Percentages are based on the number of temporary visa holders reporting definite commitments for employment or postdoc with responses to location (U.S. or foreign).

SOURCE: NSF/NIH/USED/NEH/USDA/NASA, 2008 Survey of Earned Doctorates.



## **New item in 2008 SED: Basic Annual Salary for principal job in the next year**

- **Salary data currently under review**
- **Sample data tables under consideration:**
  - **Salary (academic sector versus industry sector) by field of study**
  - **Salary (in academic sector) by field of study and by gender**
  - **Salary (in academic sector) by field of study and by race/ethnicity**
  - **Salary of postdocs by field of study**





## (near) Future of the SED

- **New data access and reporting**
  - Data enclave
  - REG Tables and new disclosure protection approach
  - New electronic access to summary tables
- **New data collection procedures**
  - Web transition pilot
  - Hybrid SED/ExitSurvey pilot
- **New data items**
  - Exploring collection of impressionistic data
  - Data user workshops, experts panels

We need your help . . . please contact us if interested

Three blue arrows originate from the text 'We need your help . . . please contact us if interested'. One arrow points vertically upwards to the 'Data user workshops, experts panels' item. Another arrow points diagonally upwards and to the right to the 'Exploring collection of impressionistic data' item. A third arrow is a curved arrow that starts from the text and points to the 'Hybrid SED/ExitSurvey pilot' item.



## Related Developments

- **International Survey of Doctorate Recipients (ISDR)**
  - Tracking overseas respondents
  - Conducted feasibility and pilot of ISDR
  - Module will become a permanent feature of SDR in 2010
- **Higher Education R&D (HERD) Survey (formerly Academic R&D)**
  - Major redesign underway (pilot now in field); will include new items:
    - composition of the R&D
    - proposals & awards
    - clinical trials
    - multi disciplinary research
  - Next will be the development of methods to obtain data on technology transfer/IP, economic development, and R&D personnel



## Related Developments (cont.)

- **Postdoctorate Data Collection System**
  - **Collecting data on U.S. degreed postdoc's will be relatively easy**
  - **Foreign degreed postdoc's will be difficult unless we get access to the H1B and SEVIS lists**
  - **Intend to collect SDR type data for postdoc's in all sectors and fold the respondents into the SDR longitudinal sample**
  - **Testing whether aggregate data on postdoc's can be collected from the graduate deans in a pilot this fall**



## For further information on the SED:

- **Doctorate Recipients from U.S. Universities:  
Summary Report 2007-08**  
<http://www.nsf.gov/statistics/nsf10309/>
- **2008 SED data release InfoBrief:**  
<http://www.nsf.gov/statistics/infbrief/nsf10308/>