

SOLUTIONS

1. Components of two-page policy brief about the birth weight study.
 - a. Title: “Does socioeconomic status explain racial/ethnic differences in birth weight in the United States?”
 - b. Statement of importance of the research question, edited from box 11.1:

“Low birth weight is a widely recognized risk factor for infant mortality and a variety of health and developmental problems that can persist into childhood and even adulthood. In 1999, US infants born weighing less than 2,500 grams (5.5 pounds) were 24 times as likely as normal birth weight infants to die before their first birthday (60.5 deaths per 1,000 live births and 2.5 deaths per 1,000, respectively; Mathews, MacDorman, and Menacker 2002). Although they comprised about 7.5% of all births, low birth weight infants accounted for more than 75% of infant deaths (Paneth 1995).

“Costs associated with low birth weight are substantial: in 1995, Lewit and colleagues estimated that \$4 billion—more than one-third of all expenditures on health care for infants—was spent on the incremental costs of medical care for low birth weight infants. Higher risks of special education, grade repetition, hospitalization, and other medical costs added more than \$85,000 (in 1995 dollars) per low birth weight child to costs incurred by normal birth weight children through age 15 (Lewit et al. 1995).

“Despite considerable efforts to reduce the incidence of low birth weight, the problem remains fairly intractable: between 1981 and 2000, the percentage of low birth weight infants rose from 6.8% to 7.6% of all infants, in part reflecting the increase in multiple births (Martin et al. 2002). Rates of low birth weight among black infants remained approximately twice those among white infants over the same period (13.0% and 6.5% in 2000, respectively). This study analyzes the extent to which that pattern is due to the lower socioeconomic status of black children compared to children of other races in the United States.”

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WRITING FOR APPLIED AUDIENCES

ISSUE BRIEFS, CHARTBOOKS, POSTERS, AND GENERAL- INTEREST ARTICLES

c. Tables and charts:

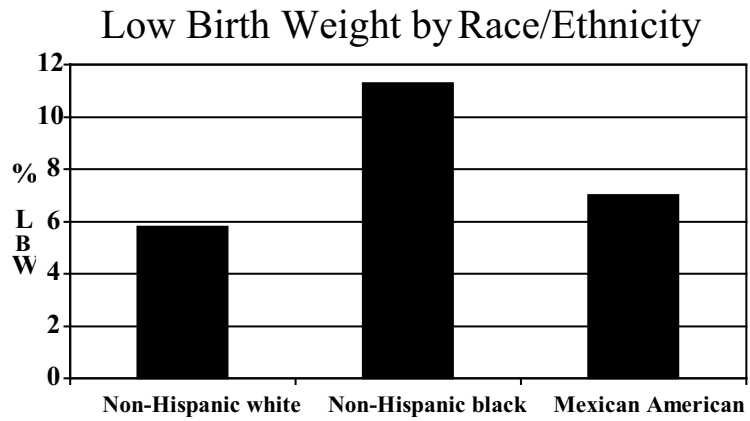


Figure 13A

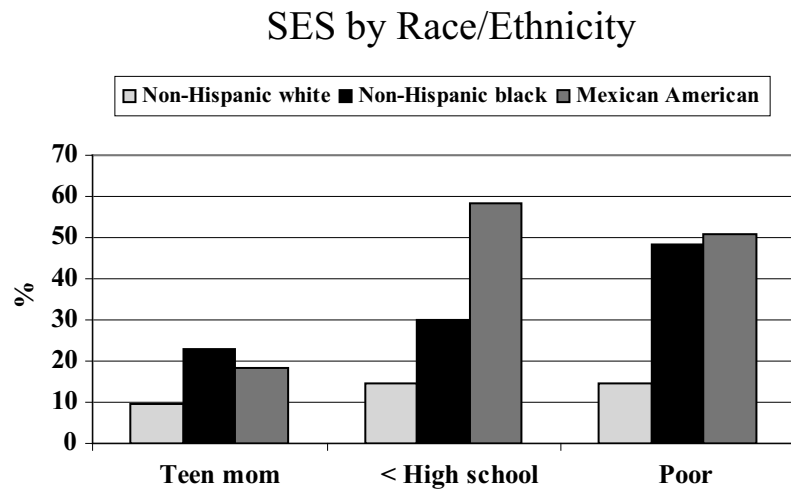


Figure 13B

Maternal Smoking by Race/Ethnicity	
	<i>Smoked cigarettes (%)</i>
Non-Hispanic white	26.8
Non-Hispanic black	22.9
Mexican American	10.1

Figure 13C

- d. Descriptions of the tables or charts, adapted from material in box 11.2b:
- i. Figure 13A: “Non-Hispanic black infants were nearly twice as likely as non-Hispanic white infants to be low birth weight (11.3% versus 5.8%). Mexican-American infants were only about 20% more likely than whites to be low birth weight.”
 - ii. Figure 13B: “In every dimension of socioeconomic status studied here, non-Hispanic black and Mexican American mothers were substantially disadvantaged relative to their non-Hispanic white counterparts. They were twice as likely as non-Hispanic white mothers to be teenagers at the time they gave birth, and two to three times as likely to be high school dropouts. Mean income/needs ratios for non-Hispanic black and Mexican American families were roughly half that of non-Hispanic white families.”
 - iii. Figure 13C: “In contrast to the socioeconomic patterns, maternal smoking—an important behavioral risk factor for low birth weight—was more common among non-Hispanic white women (27%) than non-Hispanic black (23%) or Mexican American women (10%).”
- e. Paragraphs describing how findings apply to two sets of stakeholders.
- i. “Obstetricians should be aware that non-Hispanic black infants at all socioeconomic levels are more likely than non-Hispanic

white infants to be low birth weight. They should provide outreach to increase enrollment rates of non-Hispanic black women into prenatal care, and provide appropriate screening for risk factors for preterm birth to reduce the prevalence of low birth weight.”

ii. “Researchers should continue to investigate mechanisms that have been proposed for higher risks of low birth weight among non-Hispanic black infants, including less access to health care, higher rates of poor health behaviors, greater social stress, and intergenerational transmission of risk factors for low birth weight.”

f. Sidebar of study methods:

“Data are from a national survey conducted in the United States in 1988–1994. All information was collected at an interview with an adult in the child’s household. Low birth weight (LBW) is defined as less than 2,500 grams or 5.5 lbs (World Health Organization).”

3. Figure 13D is a diagram of the layout for a poster about the birth weight study, referring to figures or boxes in *Writing about Numbers, 2nd Edition*, from which the poster components are to be drawn.

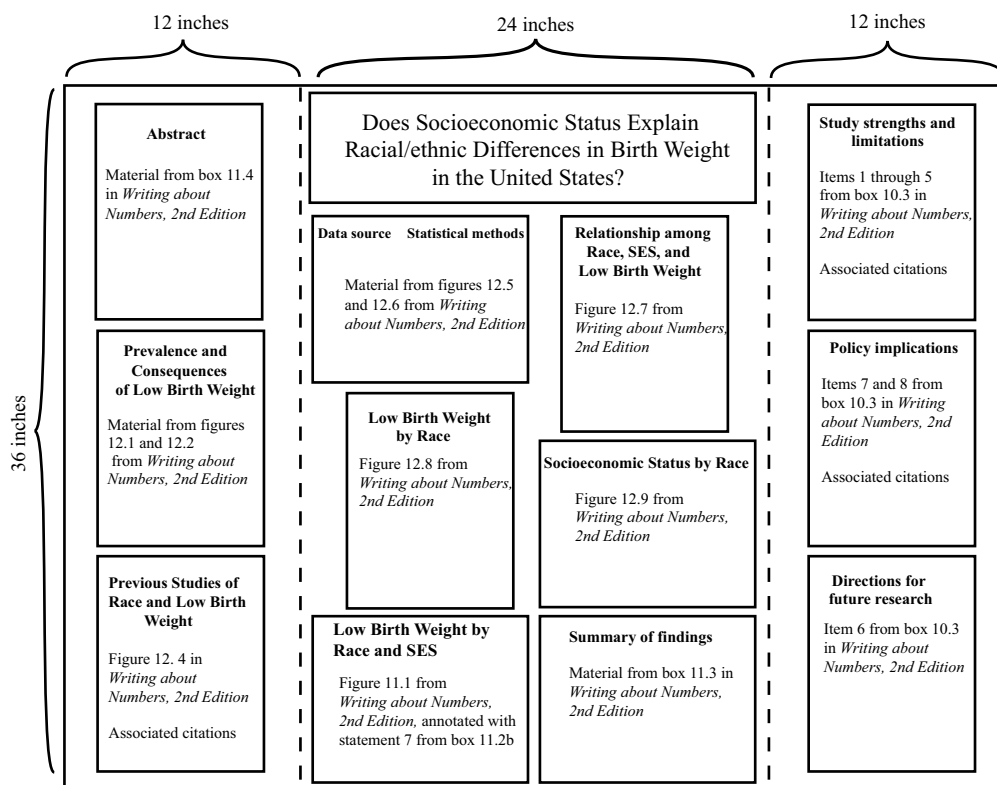


Figure 13D

5. Chartbook pages to present information on patterns of student aid in the United States to an applied audience.

Total Student Aid and Funds Used to Finance the Postsecondary Education Expenses of Undergraduates, billions of \$, US, 2010-11 Academic Year

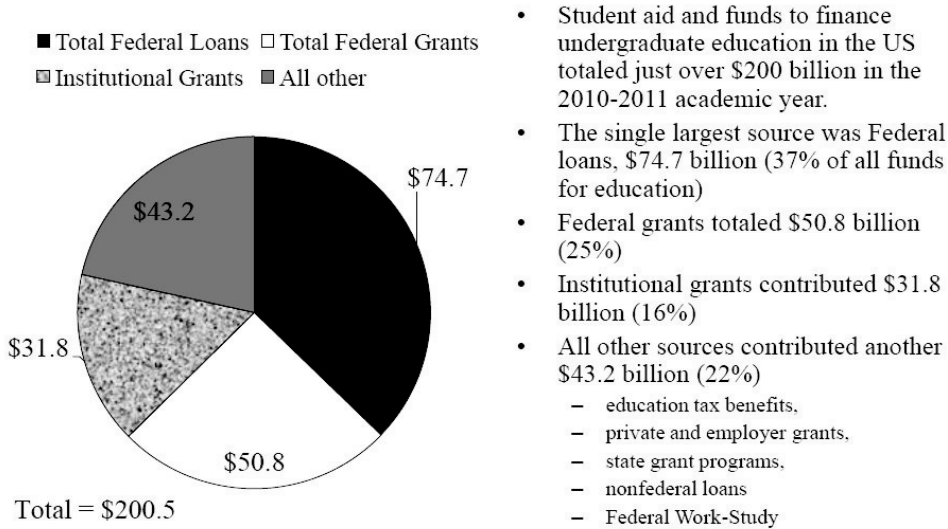


Figure 13E

Total Student Aid and Funds Used to Finance the Postsecondary Education Expenses of Undergraduates Academic Years 1990-91 to 2010-11

- Between 1990-91 and 2010-11, total student aid and funds to finance undergraduate education expenses quintupled, from \$42 billion to \$201 billion adjusted for inflation.

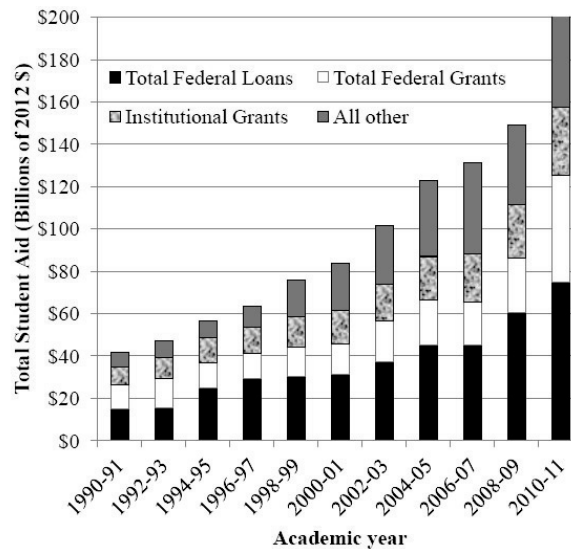
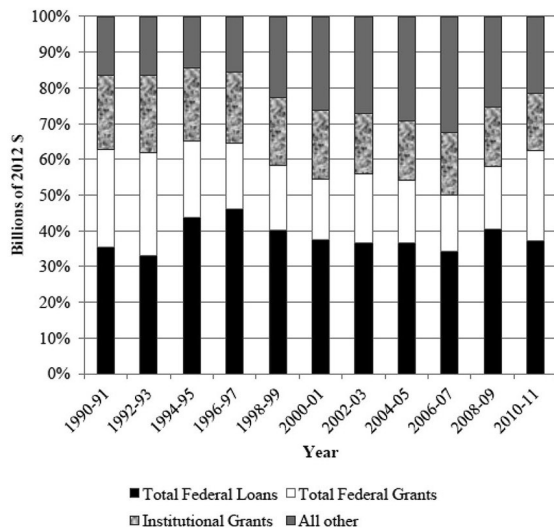


Figure 13F

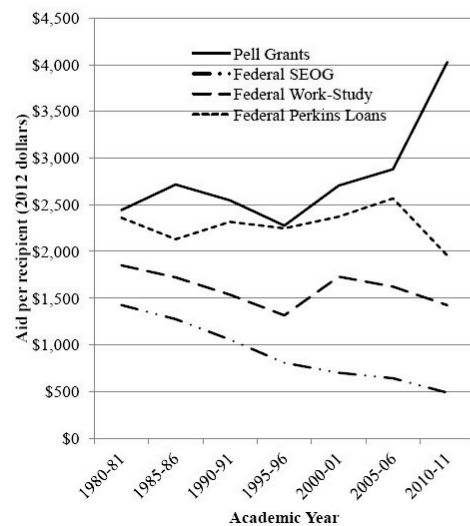
Shares of Total Student Aid and Funds Used to Finance the Postsecondary Education Expenses of Undergraduates by Major Source, Academic Years 1990-91 to 2010-11



- Throughout that period, Federal loans remained the single largest source of financing
 - 33% to 46% of all funds
- Between 1990 and 2006, Federal grants declined from 29% to 16% of all funds before rising to 25% in 2010-11.
- The share from all other sources doubled between 1990 (17%) and 2006 (33%) before declining to 22% in 2010-11.
- Institutional grants contributed roughly one-fifth of all education funds throughout the period.

Figure 13G

Average Aid per Recipient for Selected Sources of Federal Grants, 1980-81 to 2010-11



- Between 1980-81 and 2010-11, Pell grants were the single largest Federal source of educational aid, followed by Perkins loans, Federal Work-Study, and Federal Supplemental Educational Opportunity Grants (SEOG).
 - E.g., in 1980-81, Pell grants and Perkins loans each averaged about \$2,400 per aid recipient, while Federal Work-Study and SEOG averaged 76% and 58% of that amount, respectively.
- Pell grants increased nearly 40% between the 2005-6 and 2010-11 academic years, from \$2,880 to \$4,028 per aid recipient in constant 2012 dollars.
- The gap between Pell grants and each of the three other Federal sources widened considerably. As a percentage of Pell Grant aid, by 2010-11 average aid from these sources declined to:
 - Average Perkins loan aid per recipient: 49%
 - Work-Study: 35%
 - Supplemental Educational Opportunity Grants: 12%

Figure 13H

Total Amount Borrowed by 2009 by Students Beginning Postsecondary Education in 2003-04, US

- Of US students who began their postsecondary education during the 2003-4 academic year, within five years, 57% borrowed money to pay for their education.
- Of those who borrowed,
 - About 4 out of 10 had accumulated a total educational debt of less than \$10,000
 - 28% had debt between \$10,000 and \$20,000
 - 26% had a debt of \$20,000 or more.

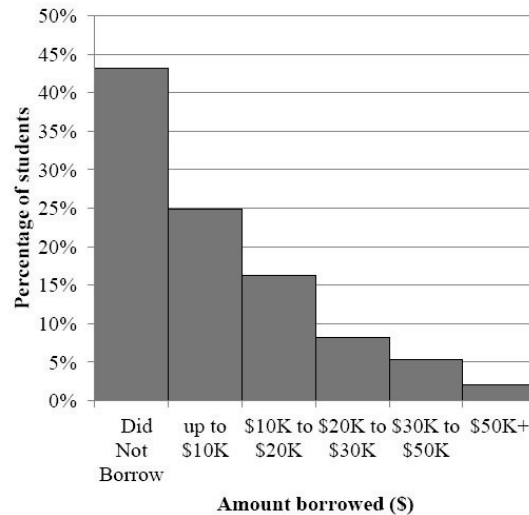


Figure 13I

7. An executive summary for the report on student aid.
 - This report documents grant aid from US federal and state governments, colleges and universities, employers, and other private sources, as well as loans, tax benefits, and Federal Work-Study assistance. In addition to reporting 2012 funding levels and types, financial aid per recipient, and debt incurred by students as they pursue higher education, the report examines trends in those measures over the past 30 years.
 - Data are from the National Center on Educational Statistics.
 - Key findings:

Types of student aid

- Student aid and funds to finance undergraduate education in the US totaled just over \$200 billion in the 2010–11 academic year (Figure 13E).
- The single largest source was Federal loans: \$74.7 billion (37% of all funds for education).
- Federal grants constituted 25%.
- Institutional grants contributed 16%.
- All other sources, including education tax benefits, private and employer grants, state grant programs, nonfederal loans, and Federal Work-Study, contributed another 22%.

Trends in student aid

- Between the 1990–91 and 2010–11 academic years, total student aid and funds to finance undergraduate education expenses quintupled, from \$42 billion to \$201 billion in constant 2012 dollars (Figure 13F).
- Throughout that period, Federal loans remained the single largest source of financing, contributing 33% to 46% of all aid funds (Figure 13G).
- Between 1990 and 2006, Federal grants declined from 29% to 16% of aid funds before rising to 25% in 2010–11.
- The share from all other sources doubled between 1990 (17%) and 2006 (33%) before declining to 22% in 2010–11.
- Institutional grants contributed roughly one-fifth of all education aid funds throughout the period.

Average financial aid per recipient, by source

- Between 1980–81 and 2010–11, Pell grants were the single largest Federal source of educational aid, followed by Perkins loans, Federal Work-Study, and Federal Supplemental Educational Opportunity Grants (SEOG) (Figure 13H).
- Pell grants increased nearly 40% between the 2005–6 and 2010–11 academic years, from \$2,880 to \$4,028 per aid recipient in constant 2012 dollars.
- The gap between Pell grants and each of the three other Federal sources widened considerably. By 2010–11, average Perkins loan aid, Work-Study, and SEOG aid per recipient were 49%, 35%, and 12%, respectively, of Pell Grant levels.

Student debt

- Of US students who began their postsecondary education during the 2003–4 academic year, within five years, 57% had borrowed money to pay for their education (Figure 13I).
- Of those who borrowed,
- about 4 out of 10 had accumulated a total educational debt of less than \$10,000;
- 28% had debt between \$10,000 and \$20,000;
- 26% had a debt of \$20,000 or more.