

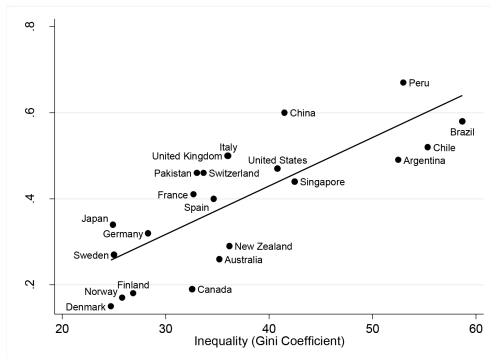
Social Mobility: Geography and Demography

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Figure 1: Intergenerational Mobility and Inequality: The “Gatsby Curve”

$$\text{IGE: } \underbrace{\ln Y_1}_{\text{Income in current generation}} = \alpha + \beta \underbrace{\ln Y_0}_{\text{Income of parents}} + \varepsilon$$

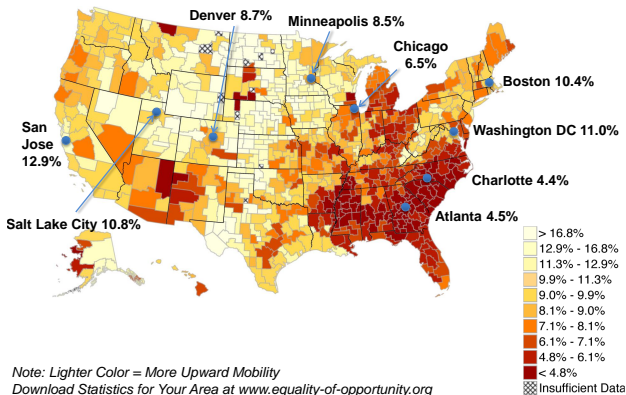


Source: Corak (2013)

- Inequality is measured **after taxes and transfers**.
- Gini index defined on **household income**.
- IGE measured by **pre-tax and transfer** income of **individual** fathers and sons. Notice inconsistencies.

Figure 2: The Geography of Upward Mobility in the United States

Chances of Reaching the Top Fifth Starting from the Bottom Fifth by Metro Area



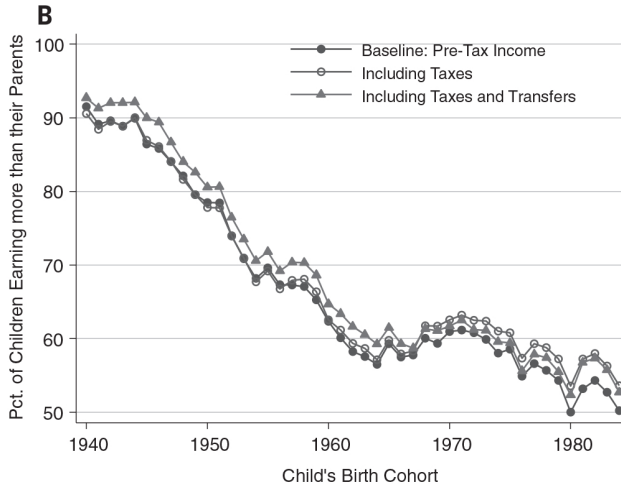
The ranks are from national income distribution.

Source: Chetty (2016)

Note: The measure of $P(\text{Child in Q5} - \text{Parent in Q1})$ derived from within-CZ OLS regressions of child income rank against parent income rank.

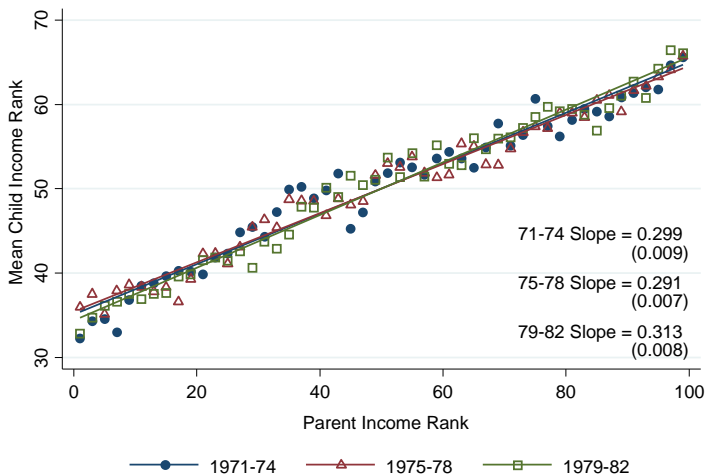


Figure 3: Fig. 3. Trends in absolute mobility: Sensitivity analysis



Source: The fading American dream: Trends in absolute income mobility since 1940.

Figure 4: Child Income Rank vs. Parent Income Rank by Birth Cohort



Source: Chetty et al. (2014).

Some Basic Questions

How to Interpret These Relationships?

What Policies (If Any) Should Be Adopted to Promote Social Mobility? To Reduce Inequality?

Is Income a Proper Measure of Welfare of Agents? Per Capita or Household or Extended Family Unit

Direction of Causality for Gatsby Curve?

- Inequality $\uparrow \Rightarrow \beta \uparrow$?
- $\beta \uparrow \Rightarrow$ inequality \uparrow ?
- Limited access to credit and labor markets \Rightarrow both $\beta \uparrow$ and inequality \uparrow ?
- Family or place? In what proportion?
- What exactly is place? What features determine place?

Understanding the Sources of Inequality and Social Immobility is Essential for Devising Effective Policies

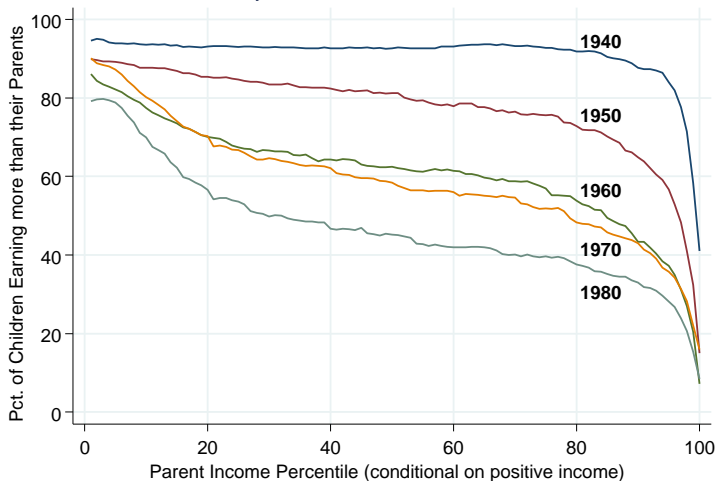
**Families? Schools? Neighborhoods? Peers?
Tax/Transfer Policy? Macro Policy?**

Which Measure of Mobility to Use?

- Rank (positional) Mobility? (and in what distribution?)
- Absolute Mobility (child doing better in real value terms than parent)?
- Mobility Within a Lifetime?

**Recent Cohorts Appear to be Doing Worse Than Previous
Ones:
Effects Concentrated Among Younger Entrants Within
Cohorts
Negative Effects Much More Pronounced for Males**

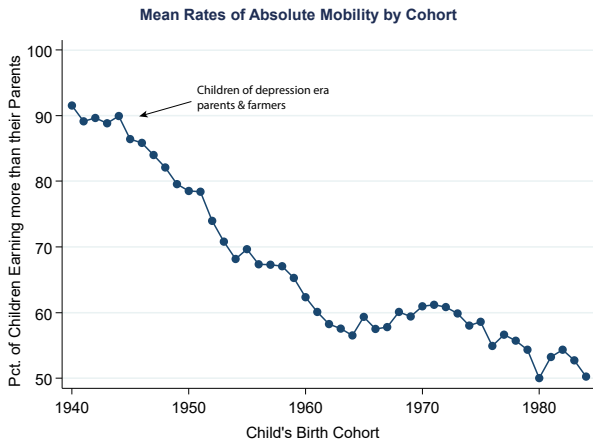
Figure 5: Percent of Children Earning More than their Parents By Parent Income Percentile



Source: Chetty et al. (2017)

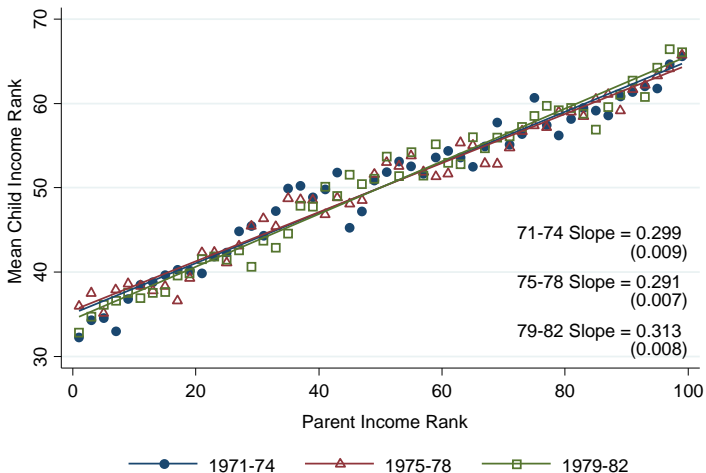
Relative Mobility Has Been Stable Over Recent Periods

Figure 6: Mean Rates of Absolute Mobility (Probability Children Do Better Than Parents) by Cohort



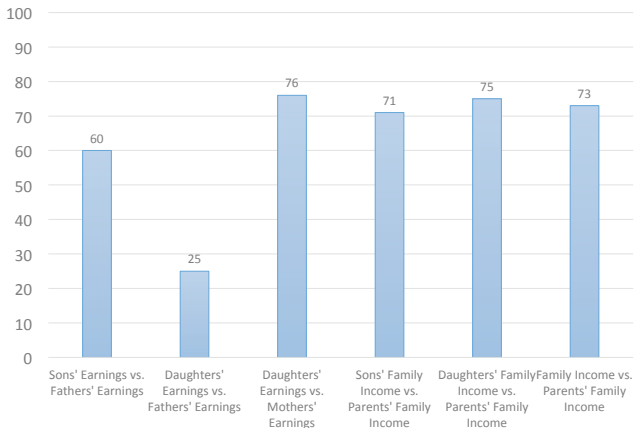
Source: Chetty et al. (2017)

Figure 7: Child Income Rank vs. Parent Income Rank by Birth Cohort



Source: Chetty et al. (2014).

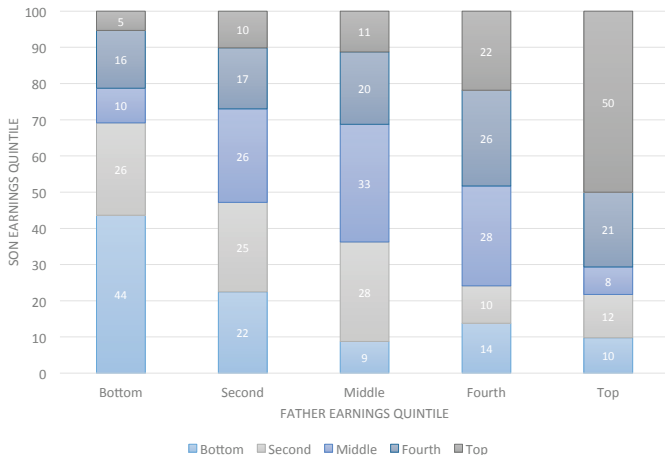
Figure 8: Percent of Grown Children Surpassing the Income of Parents



Source: Winship (2017). Author's analysis of the Panel Study of Income Dynamics (PSID).

Note: The sample begins with all parent-child pairs with income measured at either age 38, 39, 40, 41, or 42, and that single year of income is used (starting with age 40 and moving outward if unavailable). It then is restricted to pairs in which the parent turned 40 after 1974 and the child before 2006. Up to seven years of income are then averaged, using every other year, within a 13-year window. Family incomes are size-adjusted and all earnings and income measures are adjusted for inflation. Sample sizes are 129 for sons, 175 for daughters, and 308 for pooled family income. See Appendix 1 for methodological details.

Figure 9: Percent of Grown Sons in Each Fifth of Male Earnings by Each Fifth of Father Earnings



Source: Winship (2017). Author's analysis of the Panel Study of Income Dynamics (PSID).

Note: The sample includes the 442 father-son pairs where fathers had at least 8 years of non-missing earnings (out of a maximum of 15) and sons had at least 9 years. See Appendix 1 for methodological details.



Figure 10: Percent of Grown Daughters in Each Fifth of Female Earnings by Each Fifth of Mother Earnings

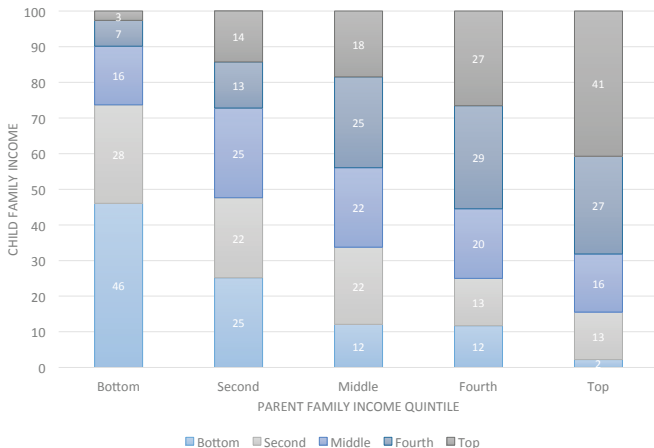


Source: Winship (2017). Author's analysis of the Panel Study of Income Dynamics (PSID).

Note: The sample includes the 854 mother–daughter pairs where mothers had at least 5 years of non-missing earnings (out of a maximum of 15) and daughters had at least 7 years. See Appendix 1 for methodological details.



Figure 11: Percent of Grown Children in Each Fifth of Family Income by Each Fifth of Parental Income



Source: Winship (2017). Author's analysis of the Panel Study of Income Dynamics (PSID).

Note: The sample is restricted to the 719 parent-child pairs where parents had at least 10 years of non-missing income and children had at least 9 years. Incomes are adjusted for family size. See Appendix 1 for methodological details.



Table 1: Summary of Key Measures of Persistence

Measure	Men's Earnings	Women's Earnings	Family Income
Persistence of Relative Inequality			
Intergenerational rank association (rank-rank)	.44-.52 (.51)	.31-.40 (.37)	.51-.53 (.53)
Persistence of Absolute Inequality			
Intergenerational elasticity	.44-.78 (.77)	.27-.54 (.40)	.59-.66 (.66)
Intergenerational correlation	.38-.51 (.48)	.35-.42 (.39)	.51-.53 (.53)
Sibling Similarity			
Sibling rank association	.38-.39 (.39)	.24-.32 (.31)	.36-.43 (.43)
Sibling correlation	.33-.45 (.39)	.22-.31 (.30)	.35-.45 (.45)

Source: Winship (2017).

Note: Estimates are preferred ranges and, in parentheses, preferred point estimates. See the text for selection criteria. Women's earnings compare women to their mothers or sisters. Family incomes are adjusted for family size. All earnings and incomes are adjusted for inflation.

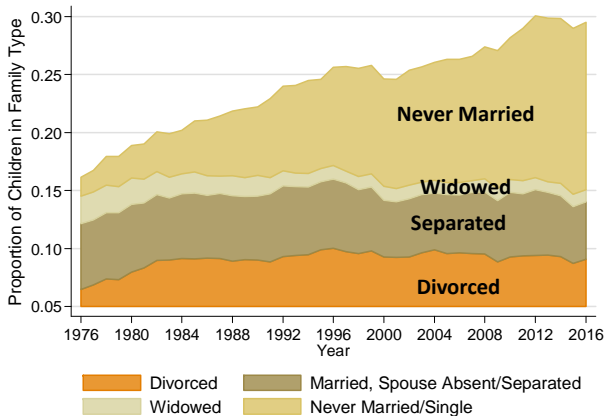
What are Effective Policies to Promote Social Mobility?

Recent Analyses Recognize:

- 1 Fundamental importance of skills in modern economies
- 2 Multiplicity of skills
- 3 The multiple sources of skills
 - a Schools
 - b Families
 - c Neighborhoods and peers
 - d Firms
- 4 The importance of supporting and incentivizing all of these sources of skill
- 5 The importance of the early life origins of adult skills
- 6 Effective targeting by age of skill formation strategies
- 7 Need for evaluations of skill formation approaches accounting for costs and benefits measured in terms of social opportunity costs

The Family as Producer of Child Quality and as a Source of Inequality: Early Family Environments are Deteriorating

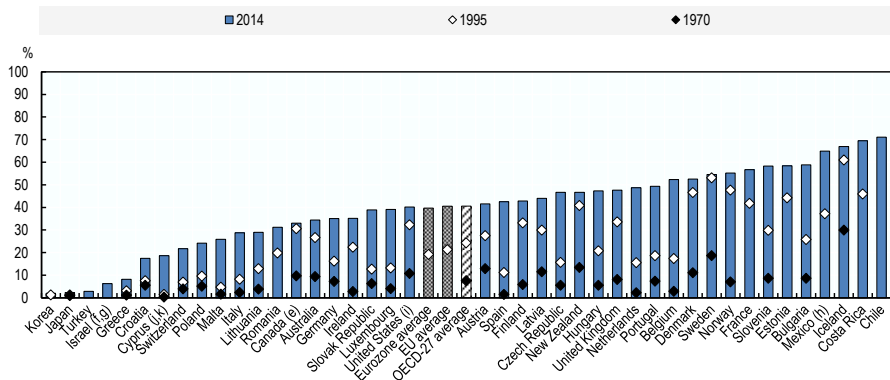
Figure 12: Children Under 18 Living in Single Parent Households by Marital Status of Parent



Note: Parents are defined as the head of the household. Children are defined as individuals under 18, living in the household, and the child of the head of household. Children who have been married or are not living with their parents are excluded from the calculation. Separated parents are included in "Married, Spouse Absent" Category.

Source: IPUMS March CPS 1976-2016.

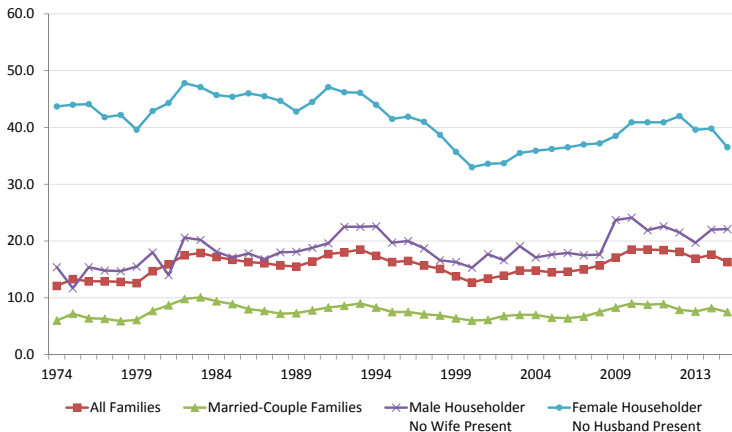
Figure 13: Share of births outside of marriage, 1970^a, 1990^b and 2014 or latest available year^c — Proportion (%) of all births where the mother's marital status at the time of birth is other than married^b



Source: OECD Family Database

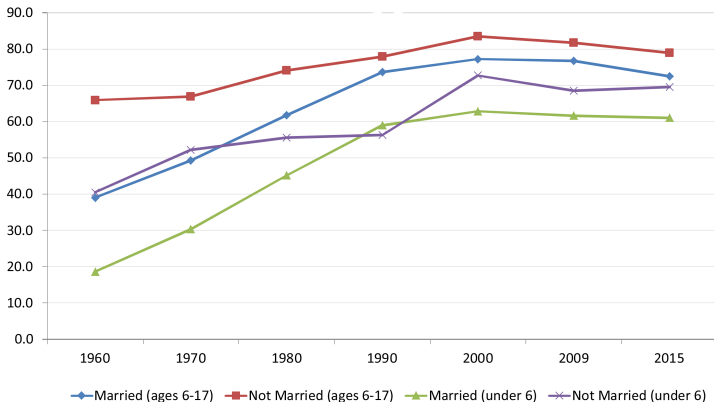
Demographic Factors: Change in Households and Household Behavior

Figure 14: Family Poverty Rates by Household Type, 1974-2015 :
Households with Children Under Age 18



Sources: <http://www.census.gov>.

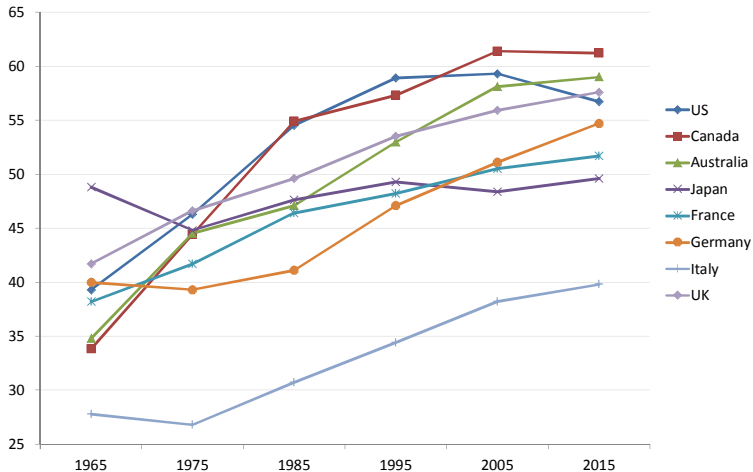
Figure 15: Labor Force Participation Rates of Mothers by Marital Status and Child's Age , US



Note: Married category includes married husband present. Single category includes never married, widowed, divorced or separated and married with spouse absent.

Source: Census The 2012 Statistical Abstract, Women in the Labor Force: A Databook 2015, United States Department of Labor.

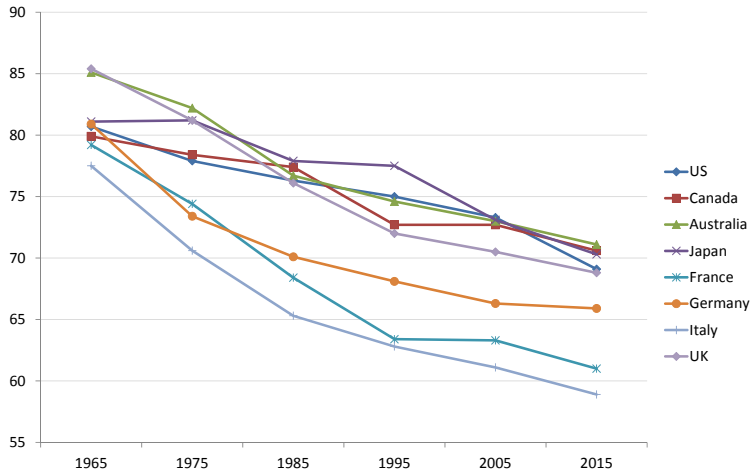
Table 2: Female Labor Force Participation Rates, 15+



Source: Browning, Martin, Pierre-Andre Chiappori, and Yoram Weiss. Economics of the Family. Cambridge University Press, 2014 and OECD.stat.



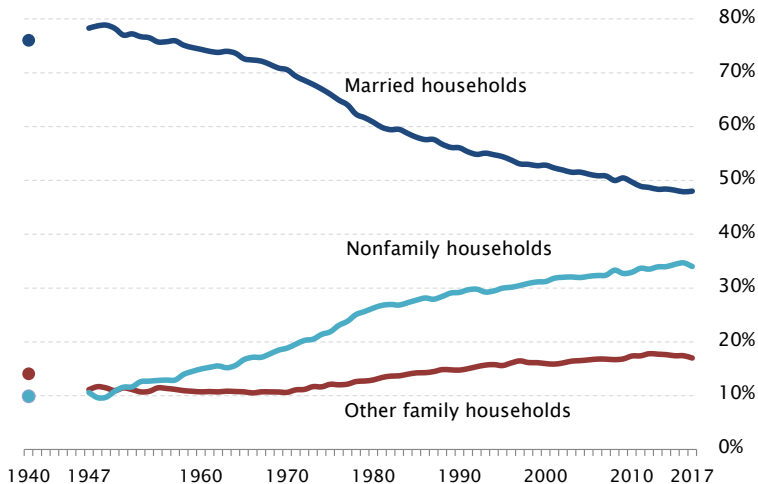
Table 3: Male Labor Force Participation Rates, 15+



Source: Browning, Martin, Pierre-Andre Chiappori, and Yoram Weiss. Economics of the Family. Cambridge University Press, 2014 and OECD.stat.

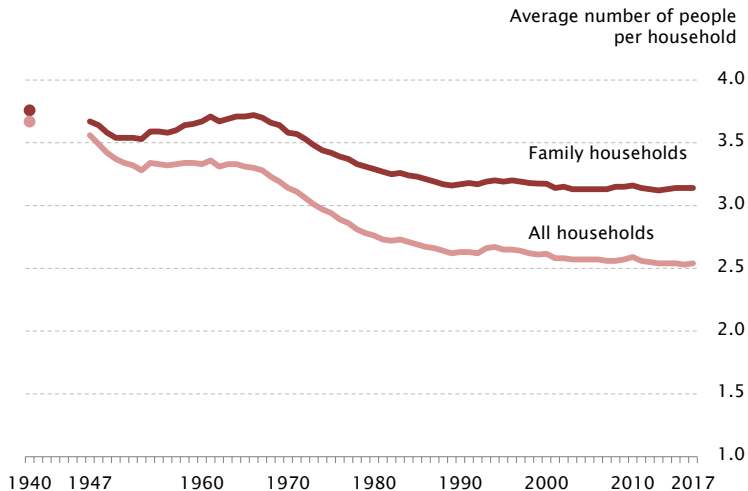


Figure 16: Percent of households by type



Source: U.S. Census Bureau, Decennial Census, 1940, and Current Population Survey, Annual Social and Economic Supplements, 1968 to 2017.

Figure 17: Changes in household size

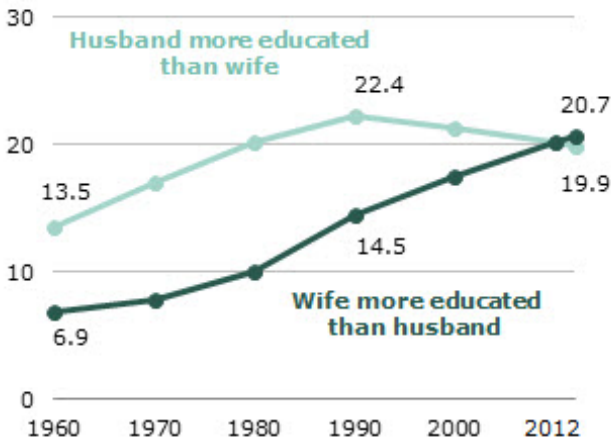


Source: U.S. Census Bureau, Current Population Survey, Annual Social and Economic Supplements, 1940 and 1947 to 2017.



Figure 18: More Women Marrying Down

% of currently married couples



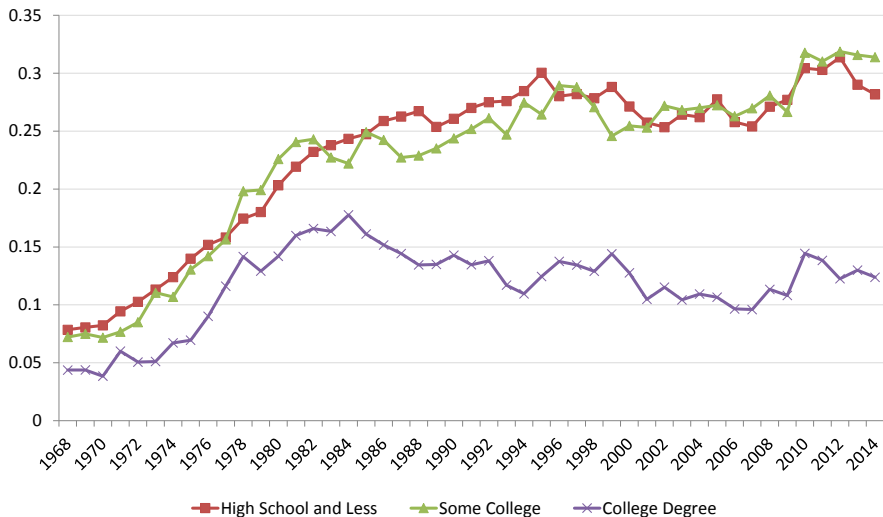
Source: Pew Research Center (2014) analysis of the Decennial Census and American Community Survey, IPUMS files.

Figure 19: Share of Marriages Between Less-Educated Declines



Source: Pew Research Center (2014) analysis of the Decennial Census and American Community Survey, IPUMS files.

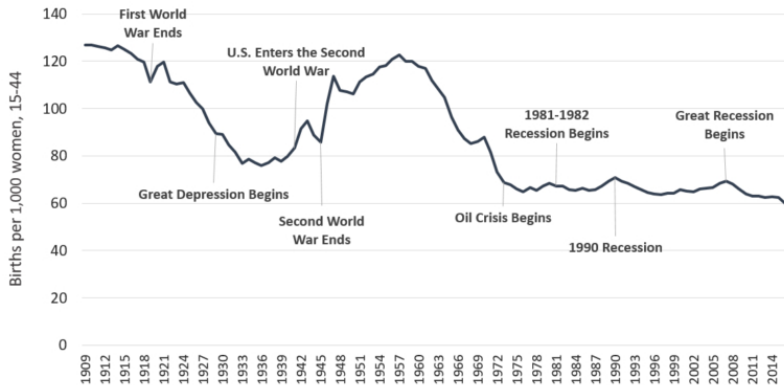
Figure 20: Divorce Rates by Schooling, US



Source: IPUMS CPS. Divorce Rate is defined as (% divorced ages 30-35) / (% married age 25-30).

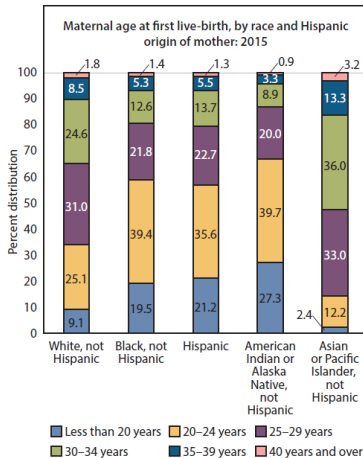
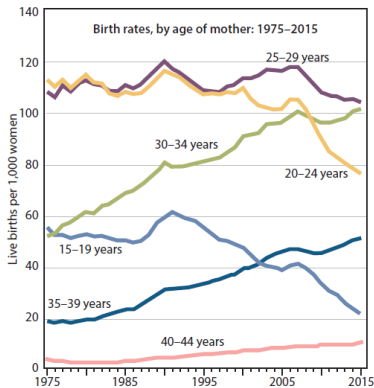


Figure 21: Birth Rates, 1909-2016



Source: Population Research Institute. NCHS, National Vital Statistics Report, Vol 66, No 1 (for data 1960–2015). NCHS, Vital Statistics of the United States, 2003, Volume 1, Natality (for data 1909–1960).

Figure 22: Birth rates, by age of mother and age at first live-birth: United States, 1975–2015

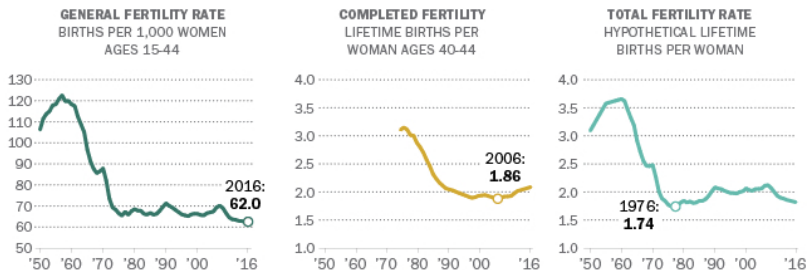


NOTE: See data table for Figure 9.

SOURCE: NCHS, National Vital Statistics System (NVSS).

Figure 23: U.S. Fertility Hits All-Time Low in 2016... and 2006... and 1976

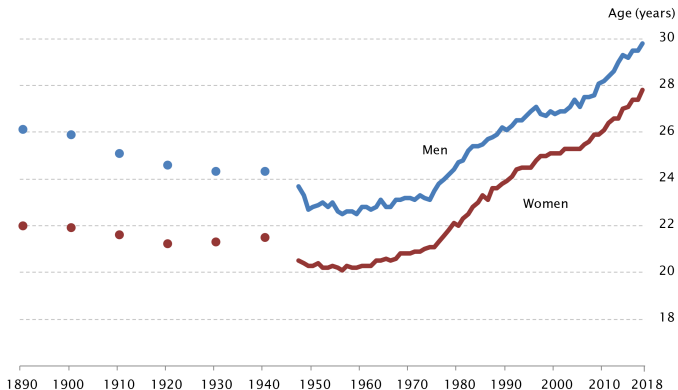
Fertility indicators



Note: Completed fertility data available for 1976-2012 only. Where necessary, TFR and completed fertility values are interpolated. All values based upon live births.

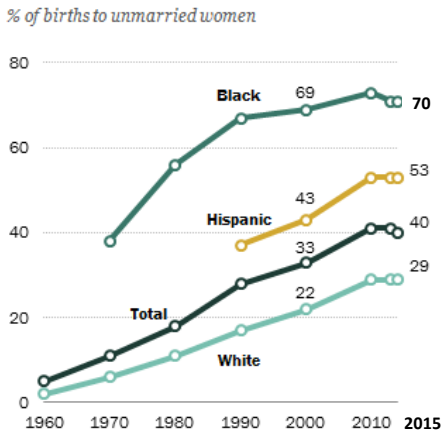
Source: Pew Research Center (2015). Data for GFR obtained from National Center for Health Statistics and Heuser (1976); for completed fertility, U.S. Census Bureau, Current Population Survey; for TFR, National Center for Health Statistics.

Figure 24: Median Age at First Marriage, 1890 to Present



Source: United States Census Bureau. Decennial Census, 1890 to 1940, and Current Population Survey, Annual Social and Economic Supplements, 1947 to 2018.

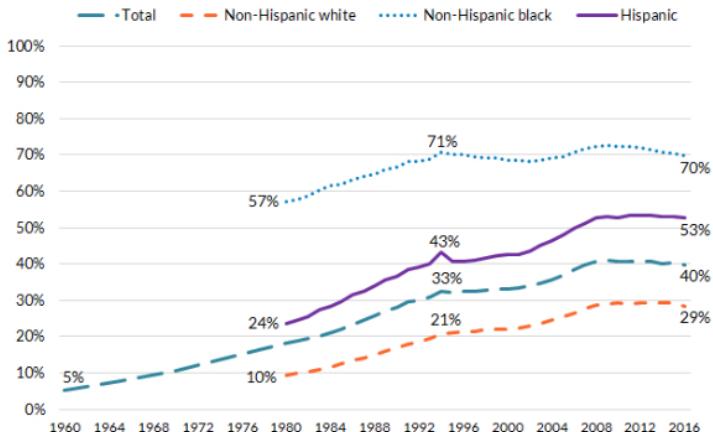
Figure 25: The Decoupling of Marriage and Childbearing



Note: Whites and blacks include only single-race non-Hispanics. Hispanics are of any race. 2014 data are preliminary. Data for Asians only not available.

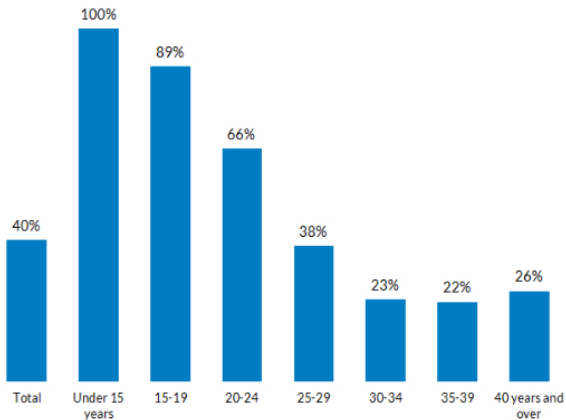
Source: National Center for Health Statistics natality data, PEW Research Center.

Figure 26: Percentage of All Births that Were to Unmarried Women, by Race and Hispanic Origin: Selected Years, 1960-2016



Source: Data by race and Hispanic origin for 1980–1989: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics (2014).

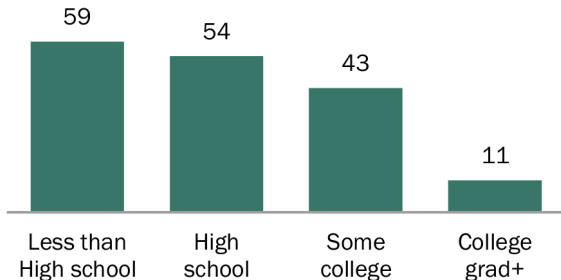
Figure 27: Percentage of All Births That Were to Unmarried Women, by Maternal Age: 2016



Source: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System (2018). CDC Wonder (data tool).

Figure 28: For the Less Educated, More Births Outside of Marriage

% of new mothers who are unmarried



Note: Based on women ages 15–44 who have given birth in the past year. Marital status is based on time of survey.

Source: Pew Research Center analysis of 2014 American Community Survey (IPUMS).