
The Consequences of Declining Fertility for Social Capital

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social capital project

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KEY POINTS

- In 2020, the total fertility rate in the United States reached its lowest point on record. Fertility rebounded slightly in 2021, but Americans continue to not have enough children to maintain the current population.
- Lower fertility rates mean adults have fewer and smaller families, reducing the quality of community participation and undermining social capital.
 - According to JEC estimates, the share of adults at prime parenting age who do not have children increased from 14 percent in 1970 to 31 percent in 2021. Non-Hispanic white males experienced the largest increase in childlessness over this period, rising from 16 percent to 35 percent.
 - Compared to non-parents, parents are more likely to belong to religious organizations, volunteer, and spend time with relatives, and are less likely to feel isolated.
- Lower fertility rates lead children to have fewer siblings or to have no siblings at all. Sibling relationships are often the longest relationships a person has in their life, providing stability and support.
 - According to JEC estimates, the share of 10-year-old children without any siblings increased from 7 percent in 1970 to 16 percent in 2021.
 - Children with strong sibling relationships tend to gain stronger interpersonal skills and exhibit more self-control.
- Fewer and smaller families weaken the emotional and physical support networks of the elderly.
 - According to JEC estimates, the share of 75-year-old adults with any children of their own declined from 85 percent in 2008 to 76 percent in 2022 and will fall further to 58 percent by 2061.
 - Elderly adults who live with their adult children have better mental and physical health outcomes than elderly adults who live alone.

INTRODUCTION

Children are our future, the saying goes. Yet, the fertility rate in the United States has been declining steadily for more than a decade and reached its lowest level on record in 2020.¹ The total fertility rate ticked up slightly in 2021, despite some researchers predicting continued declines, made worse by the COVID-19 pandemic.² Still, the 2021 U.S. fertility rate was 1.7, well below the replacement rate of 2.1 children per woman and has been below replacement almost every year since the early 1970s. The United States is not alone. Nearly every high-income country in the world has below-replacement fertility, led by South Korea which has the lowest total fertility rate in the world.³ Some lower-income countries also have below-replacement fertility or are moving in that direction.⁴

Economists and political leaders point to various implications of low fertility, including a shrinking labor force and a reduction in innovation due to declining human capital.⁵ Declining fertility also means fewer people to serve in the military or support government programs that rely on taxpayer funding.

¹ World Bank, Fertility Rate Total for the United States, Retrieved from the Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/SPDYNTFERTINUSA>.

² Brady E. Hamilton, Joyce A. Martin, and Michelle J.K. Osterman, "Births: Provisional Data for 2021," U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, May 2022, <https://www.cdc.gov/nchs/data/vsrr/vsrr020.pdf>; Melissa S. Kearney and Phillip Levin, "The Coming COVID-19 Baby Bust: Update," The Brookings Institution, December 17, 2020, <https://www.brookings.edu/blog/up-front/2020/12/17/the-coming-covid-19-baby-bust-update/>;

³ The World Bank, "Fertility rate, total (births per woman)," <https://data.worldbank.org/indicator/SP.DYN.TFRT.IN>.

⁴ The World Bank, "Fertility rate, total (births per woman)." See also: James Feyrer, Bruce Sacerdote, and Ariel Dora Stern, "Will the Stork Return to Europe and Japan? Understanding Fertility within Developed Nations," *Journal of Economic Perspectives* 22 no. 3(Summer 2008): 3-22; Darrell Bricker and John Ibbitson, *Empty Planet: The Shock of Global Population Decline*, (New York: Crown, 2019).

⁵ Nicole Maestas, Kathleen J. Mullen, and David Powell, "The Effect of Population Aging on Economic Growth, the Labor Force and Productivity," NBER Working Paper no. 22452, July 2016, https://www.nber.org/system/files/working_papers/w22452/w22452.pdf; Lee Haye-ah, "Yoon Pledges 12 Mln-Won Allowance For Couples After Childbirth," *Yonhap News Agency*, January 11, 2022, <https://en.yna.co.kr/view/AEN20220111005400315>; Peter Landers, "Japanese Births Fall Again, Despite Abe's Drive to Encourage Families," *The Wall Street Journal*, June 5, 2020, <https://www.wsj.com/articles/japanese-births-fall-again-despite-abes-drive-to-encourage-families-11591355963>; Reuters Staff, "Italy Faces Existential Threat Over Low Birthrate: President," *Reuters*, February 11, 2020, <https://www.reuters.com/article/us-italy-population/italy-faces-existential-threat-over-low-birthrate-president-idUSKBN2052E1>; "China Concerned about Falling Birth Rate amid Decline in Marriage Registrations," *Firstpost*, April 27, 2022, <https://www.firstpost.com/world/china-concerned-about-falling-birth-rate-amid-decline-in-marriage-registrations-10607491.html>.

This report focuses on a much less frequently discussed, yet highly important consequence of declining fertility—weakened social capital. Fewer parents in society may have implications for the ways or frequency with which people engage in their communities. Declining fertility also means fewer siblings and extended family members to whom people can turn for support throughout life, as well as fewer adult children upon whom parents can rely for care and companionship in old age. Unlike the economic costs of declining fertility, which can be remedied through higher levels of immigration, fewer and smaller families present a unique set of social costs that are not easily remedied.

In this report, we begin by documenting the trend of declining fertility in the United States. We then analyze the consequences of declining fertility for social capital, distinguishing between the short-term (prior to children reaching adulthood) and the long-term (after children reach adulthood). Focusing first on the short-term, we show that as a result of lower fertility, adults are decreasingly likely to have any children whatsoever in their household, and that conditional on having any children in their household, they have fewer of them. Relatedly, we show that a given child is less likely to have any siblings in their household. The result is lower-quality community participation among adults who have fewer or no children in their household as well as worse social outcomes among children who have no siblings.

Focusing next on the long-term, we show that elderly adults are decreasingly likely to have adult children and siblings, and that this trend will worsen in the coming decades. Fewer adult children and siblings will lead to less care and emotional support for older Americans.

TRENDS IN TOTAL FERTILITY IN THE UNITED STATES

The *total fertility rate* is the number of births each woman is projected to have during her childbearing years, based on current age-specific fertility rates. If the total fertility rate exceeds the replacement level of 2.1, then the population will grow over time, but if the total fertility rate is below the replacement level, the population will fall (holding constant migration flows and the death rate).⁶ The replacement rate is currently slightly higher than two to account for mortality, but it is

⁶ OECD Data, Fertility Rates, <https://data.oecd.org/pop/fertility-rates.htm>.

lower than in earlier generations when mortality rates were higher.⁷ For example, in the 1930s the replacement rate was around 2.3, and it was around 2.2 in the 1940s (Figure 1).⁸ Another measure of fertility is the *general fertility rate*, which is the number of children born per 1,000 women each year. In this report we focus on the total fertility rate, since the total fertility rate provides information about whether the population is replacing itself, which has social capital implications, particularly when it comes to caretakers for elderly parents.

The total fertility rate in the United States was more than seven children per woman in the early 1800s.⁹ By the early 1930s, the total fertility rate had declined to approximately two children per woman (Figure 1). During the Baby Boom era, the total fertility rate climbed and peaked at around four children per woman and then began to decline thereafter, although remaining above the replacement rate of 2.1 until the early 1970s. Since 1972, however, total fertility has stayed below replacement level nearly every year. In 2020, after several years of steady fertility decline following the Great Recession, total fertility reached its lowest level in U.S. history, at 1.6 children per woman. The decline between 2019 and 2020 was the largest one-year decline since

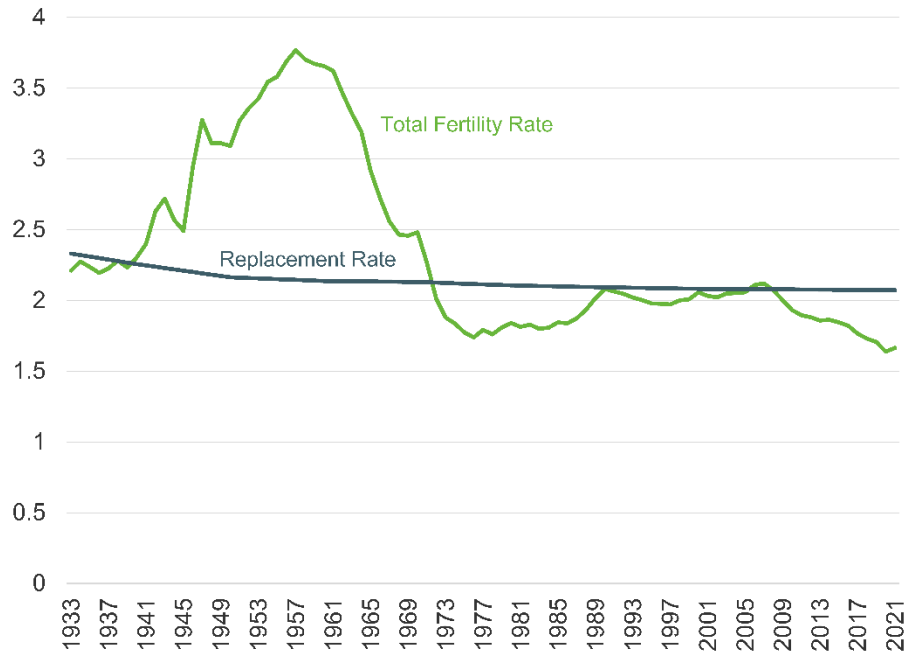
⁷ See Thomas J. Espenshade, Juan Carlos Guzman, and Charles F. Westoff, "The Surprising Global Variation in Replacement Fertility," *Population Research and Policy Review* 22 (2003): 575-583, <https://www.jstor.org/stable/40230841>.

⁸ The replacement rate in Figure 1 is calculated using the formula found in Thomas J. Espenshade, Juan Carlos Guzman, and Charles F. Westoff, "The Surprising Global Variation in Replacement Fertility." The formula from Espenshade et al. divided one plus the sex ratio at birth (the ratio of males to females born each year) by the probability of surviving to the mean age of the fertility schedule. Sex ratio at birth for 1940 is from T.J. Matthews and Brady E. Hamilton, "Trend Analysis of the Sex Ratio at Birth in the United States," U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics System, June 14, 2005, Table 1, https://www.cdc.gov/nchs/data/nvsr/nvsr53/nvsr53_20.pdf. Sex ratio at birth for 1950 – 2021 is from United Nations, Department of Economic and Social Affairs, Population Division, <https://population.un.org/wpp/Download/Standard/MostUsed/>. Data for probability of survival by age are available by decade from Felicitie C. Bell and Michael L. Miller, "Life Tables for the United States Social Security Area 1900-2100," Social Security Administration, August 2005, https://www.ssa.gov/oact/NOTES/pdf_studies/study120.pdf, Table 7. Values for mean age at childbearing for 1933 and 1940 are calculated using CDC, Live Births by Age of Mother and Race: United States: 1933-98, <https://www.cdc.gov/nchs/data/natal/mage33tr.pdf>. Values for mean age at childbearing for 1950 through 2021 are from United Nations, Department of Economic and Social Affairs, Population Division, <https://population.un.org/wpp/Download/Standard/MostUsed/>. We calculated the replacement rate for the beginning year of each decade between 1930 and 2020. We then linearly interpolate the replacement rate for each year between the beginning of one decade and the beginning of the next decade.

⁹ Lyman Stone, "Declining Fertility in America," American Enterprise Institute, December 2018, <https://www.aei.org/wp-content/uploads/2018/12/Declining-Fertility-in-America.pdf>, 8.

1972.¹⁰ In 2021, total fertility rose slightly for the first time in several years, increasing to 1.7, although this was still a lower rate than in every year except 2020.¹¹

Figure 1. Total Fertility Rate, United States, 1933–2021



Source: Total Fertility Rate, 1933–1958: Michael R. Haines, “Ethnic Differences in Demographic Behavior in the United States: What Can We Learn from Vital Statistics about Inequality?” NBER Working Paper no. 23827, September 2017,

https://www.nber.org/system/files/working_papers/w23827/w23827.pdf, Table 4; Total Fertility Rate 1960 – 2020: World Bank, Fertility Rate Total for the United States, Retrieved from the Federal Reserve Bank of St. Louis; Total Fertility Rate 2021: Brady E. Hamilton, Joyce A. Martin, and Michelle J.K. Osterman, “Births: Provisional Data for 2021,” 1.

Note: The replacement rate is calculated using the formula found in Thomas J. Espenshade, Juan Carlos Guzman, and Charles F. Westoff, “The Surprising Global Variation in Replacement Fertility,” *Population Research and Policy Review* 22 (2003): 575-583.

The U.S. fertility decline since the 1960s and 1970s has mostly been attributed to the rapid increases in educational attainment and labor force participation among women, as well as to the introduction of hormonal birth control and increased abortions during these decades.¹²

¹⁰ World Bank, Fertility Rate Total for the United States, Retrieved from the Federal Reserve Bank of St. Louis, <https://fred.stlouisfed.org/series/SPDYNTFERTINUSA>.

¹¹ Brady E. Hamilton, Joyce A. Martin, and Michelle J.K. Osterman, “Births: Provisional Data for 2021.”

¹² See Natalia Kanem, Christopher J. Murray, and Thomas J. Bollyky, “The Emptying Planet: The Global Impact of Declining Fertility Rates, A Virtual Roundtable,” Council on Foreign Relations

The reasons for the fertility decline since 2008 are unclear. While it was expected that the fertility rate would drop during the 2008 recession, fertility was also expected to rebound once the economy recovered. However, the fertility rate continued to fall despite economic recovery. Some researchers hypothesize increased financial burdens—such as high student loan debt, increased housing prices, and high child care costs—have driven the decline in fertility in recent years. Melissa S. Kearney, Phillip B. Levine, and Luke Pardue reject this hypothesis, finding little association between declining fertility since 2008 and these types of financial factors.¹³ Research from the Joint Economic Committee also finds weak evidence that student loan debts are associated with declining fertility.¹⁴ Kearney et al. instead suggest declining fertility may be due to shifting priorities among adults during the last 15 years, with adults now focusing more on personal autonomy than past generations and less on childrearing.¹⁵ Kearney et al. also suggest declining fertility in recent years may be due to changing perspectives on parenting, where parenting is seen as requiring more resources than in the past.¹⁶

On a similar note, in a 2019 Joint Economic Committee hearing, Lyman Stone of the American Enterprise Institute explained that while raising children has become more affordable due to increased household income, parents spend more on their children than in past decades, likely due to higher expectations and social norms regarding what children require.¹⁷

The small increase in the total fertility rate between 2020 and 2021 may have been due to people postponing pregnancies in early 2020 in response to the pandemic. Melissa S. Kearney and Phillip B. Levine

event, July 15, 2020, <https://www.cfr.org/event/emptying-planet-global-impact-declining-fertility-rates-virtual-roundtable>.

¹³ Melissa S. Kearney, Phillip B. Levine, and Luke Pardue, “The Puzzle of Falling US Birth Rates Since the Great Recession,” *Journal of Economic Perspectives* 36 no. 1(Winter 2022): 151-176, <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.36.1.151>.

¹⁴ Patrick T. Brown, “Examining the Relationship Between Higher Education and Family Formation,” U.S. Joint Economic Committee, November 3, 2021, <https://www.jec.senate.gov/public/index.cfm/republicans/2021/11/examining-the-relationship-between-higher-education-and-family-formation>.

¹⁵ Melissa S. Kearney, Phillip B. Levine, and Luke Pardue, “The Puzzle of Falling US Birth Rates Since the Great Recession.”

¹⁶ Ibid.

¹⁷ Lyman Stone, “Affordability or Achievability? The Challenge for Family Policy in America,” Testimony to the U.S. Senate Joint Economic Committee, September 10, 2019, https://www.aei.org/wp-content/uploads/2019/09/Lyman_Stone_Affordability_or_achievability.pdf?x91208.

estimate that conceptions dropped in the early part of 2020 with the onset of the COVID-19 pandemic but then recovered later in 2020 as unemployment rates fell and household spending increased.¹⁸ As a result of delayed conceptions in early 2020, there was a substantial decline in births in the latter part of 2020 followed by a boost in births in 2021.¹⁹

Higher birth rates post pandemic may not only be due to a timing shift in births though. While national data for 2022 are not yet available, Martha J. Bailey, Janet Currie, and Hannes Schwandt find that California birth data (which track closely with birth data in the nation) remained elevated through the third quarter of 2022 compared to pre-pandemic trends.²⁰

FEWER AND SMALLER FAMILIES

In this section and the following section we analyze the short-term consequences of declining fertility for social capital. The short-term encompasses the time period before children enter adulthood and considers the consequences for both adults and children. We begin by documenting the most direct consequences of declining fertility—fewer children living in the households of adults, and children living in households with fewer siblings. We then discuss the implications of these changing household structures for community engagement and children’s social outcomes.

Fewer Families and Smaller Families

The most direct effect of lower fertility is fewer children in the home. For adults, this can entail either a smaller likelihood of having any children in the home at all, or conditional on having at least one child in the home, having fewer children. To consistently track the existence and number of children in the homes of adults over time, we focus on adults in what we call their “prime parenting age.” We calculate the prime parenting age by identifying the age in each year at which adults had the highest average number of children in the home. We use the measure of prime-parenting age to account for changes over time in

¹⁸ Melissa Schettini Kearney and Phillip B. Levine, “The US COVID-19 Baby Bust and Rebound,” NBER Working Paper no. 30000, April 2022, https://www.nber.org/system/files/working_papers/w30000/w30000.pdf.

¹⁹ Melissa Schettini Kearney and Phillip B. Levine, “The US COVID-19 Baby Bust and Rebound.”

²⁰ Martha J. Bailey, Janet Currie, and Hannes Schwandt, “The COVID-19 Baby Bump: The Unexpected Increase in the U.S. Fertility Rates in Response to the Pandemic,” NBER Working Paper no. 30569, October 2022, <https://www.nber.org/papers/w30569>, 19.

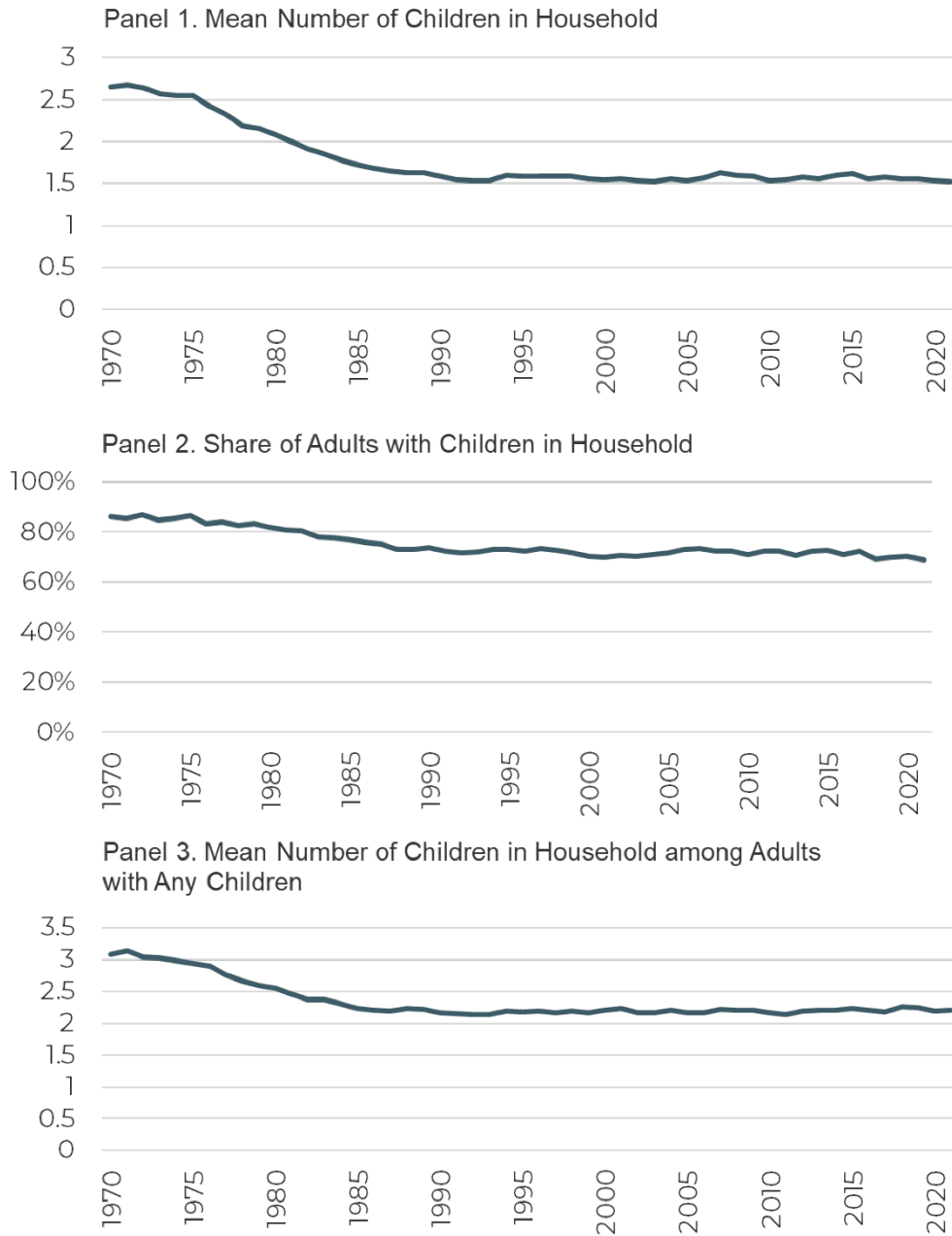
the age at which people become parents. We also calculate prime-parenting age by sex and race, since men typically become parents at a later age than women, and the age at which people tend to have children varies by race.

Using the Current Population Survey Annual Social and Economic Supplement (CPS ASEC), we estimate that the average number of own children (including biological, step, or adopted children) an adult at their prime parenting age had in their household in 1970 was 2.7.²¹ By the late 1980s, that number had dropped by about one child and has been around 1.6 ever since (Figure 2). As seen in the second panel of Figure 2, this decline is a result of both fewer adults having any children whatsoever, and among adults with children having fewer total children. The share of adults at their prime parenting age with no children of their own in the household nearly doubles during this period, from 14 percent in 1970 to 27 percent in the late 1980s, and has hovered around there since. Among those who have any children at all, the average number of children dropped from about 3.0 in 1970 and has been about 2.2 since the mid-1980s.

The average number of children in the home by year, shown in Panel 1 of Figure 2, is the product of Panel 2 and Panel 3—the result of multiplying the share of adults in each year with any children in the home (Panel 2) by the average number of children among those with any children at all (Panel 3).

²¹ Sarah Flood, Miriam King, Renae Rodgers, Steven Ruggles, J. Robert Warren and Michael Westberry, Integrated Public Use Microdata Series, Current Population Survey: Version 9.0 [dataset], Minneapolis, MN: IPUMS, 2021, <https://doi.org/10.18128/D030.V9.0>.

Figure 2. Children in Household at Prime Parenting Age, 1970–2021



Source: IPUMS, CPS ASEC data, 1970-2021, <https://cps.ipums.org/cps/>; JEC calculations.
 Note: Values are shown for all adults in each year who are of the prime parenting age in that year. We define the prime parenting age as the age at which adults in that year had the maximum average number of their own children in the home. The prime parenting age ranges from 36-42, depending on the year.

Differences by Sex and Race

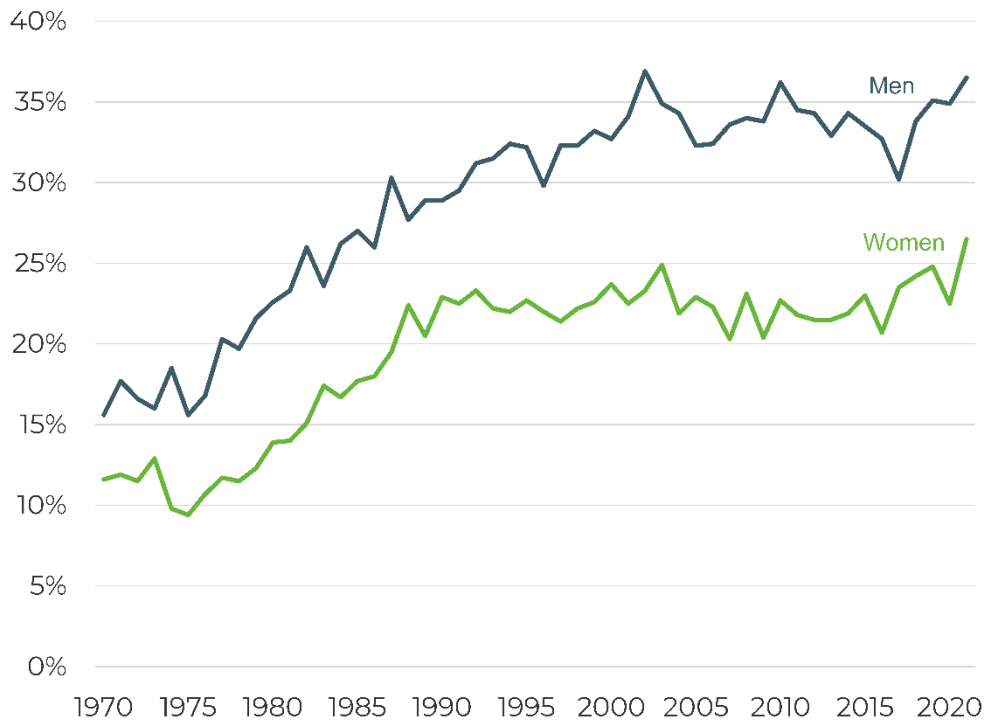
Men are much less likely to live with children than are women. As Figure 3 shows, 37 percent of men at their prime parenting age had no children of their own in the home in 2021, up from 16 percent in 1970. In comparison, 27 percent of women at their prime parenting age had no children of their own in their home in 2021, up from 12 percent in 1970. The discrepancy between the share of men and women without children in their household has grown over time.

The disparity between men and women is at least partly due to far greater numbers of single-mother homes compared to single-father homes. Also, the increase in men without children coincides with the decrease in labor force participation among prime-age men since the 1970s.²² Men without children or who do not live with their children are much less likely to participate in the labor force compared to fathers.²³

²² Christina King, Scott Winship, and Adam N. Michel, "Reconnecting Americans to the Benefits of Work," U.S. Joint Economic Committee, October 27, 2021, <https://www.jec.senate.gov/public/index.cfm/republicans/2021/10/reconnecting-americans-to-the-benefits-of-work>.

²³ U.S. Joint Economic Committee, "Inactive, Disconnected, and Ailing: A Portrait of Prime-Age Men Out of the Labor Force," September 18, 2018, <https://www.jec.senate.gov/public/index.cfm/republicans/analysis?id=D72FFEAB-DE2D-4F2C-9BCD-670B9B1BE9C3>; Nicholas Eberstadt, "Men Without Work," American Enterprise Institute, January 30, 2018, <https://www.aei.org/articles/men-without-work-2/>.

Figure 3. Share of Adults of Prime Parenting Age without Children in the Household by Sex, 1970–2021

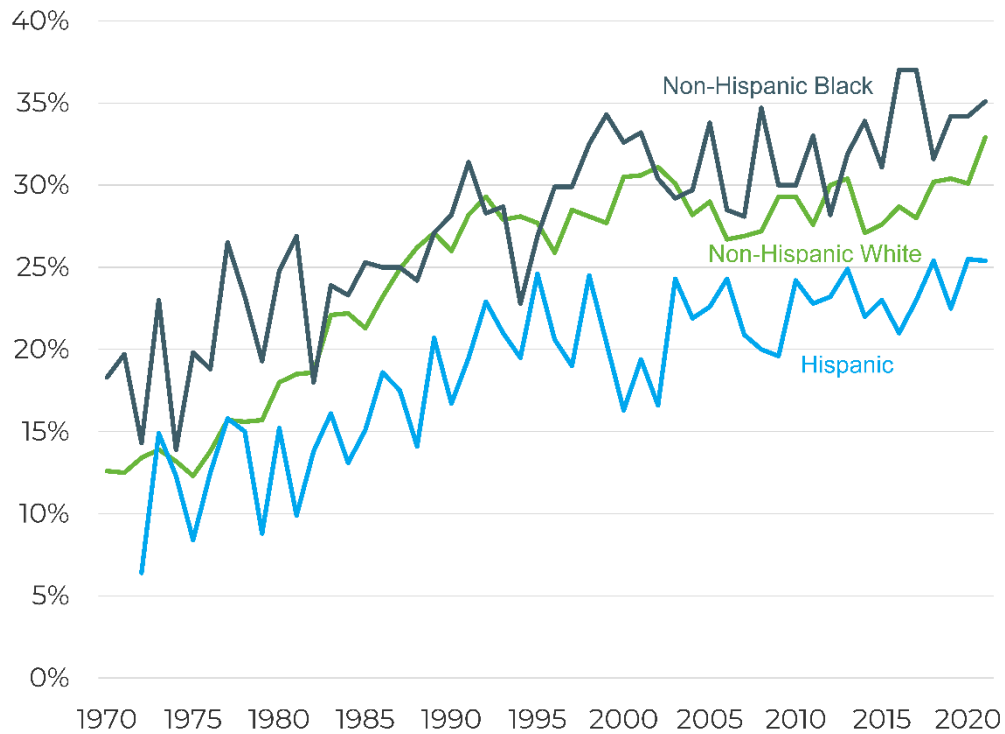


Source: IPUMS, CPS ASEC data, 1970–2021, <https://cps.ipums.org/cps/>; JEC calculations.

Note: Values are shown for both men and women in each year at their prime parenting age, the age at which each group in that year had the maximum average number of their own children in the home. The prime parenting age ranges from 37–44 for men and from 35–41 for women.

Figure 4 shows that childlessness has risen across all races and ethnicities. As of 2021, 35 percent of non-Hispanic blacks and 33 percent of non-Hispanic whites of prime parenting age had no children in their household. Meanwhile, a much lower 25 percent of Hispanic adults of prime parenting age had no children in their household.

Figure 4. Share of Adults at Prime Parenting Age without Children in the Household by Race/Ethnicity, 1970–2021



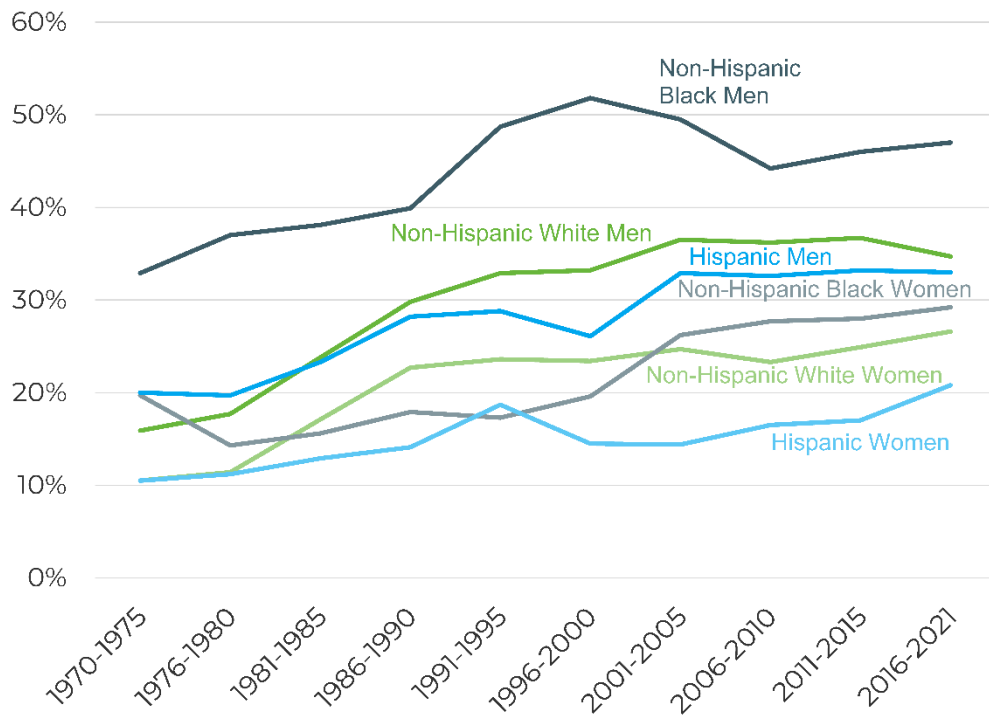
Source: IPUMS, CPS ASEC data, 1970–2021, <https://cps.ipums.org/cps/>; JEC calculations.

Note: Values are shown for each race at the prime parenting age, the age at which each group in that year had the maximum average number of their own children in the home. Ages range from 36–43 among non-Hispanic whites; 33–43 among non-Hispanic blacks; and 36–43 among Hispanics.

Figure 5 examines differences in childlessness by both race and sex, in this case as five-year averages due to the smaller sample size for each group in a single year. As of 2021, non-Hispanic black men were far more likely than any other group to be without children of their own in their home. Nearly half, 47 percent, of non-Hispanic black men at their prime parenting age were without children of their own in the home in 2016–2021, followed by 35 percent of non-Hispanic white men, and 33 percent of Hispanic men. Among women, 29 percent of non-Hispanic black women at their prime parenting age were without children of their own in the home in 2016–2021, followed by 27 percent of non-Hispanic white women, and 21 percent of Hispanic women.

The largest rise in childlessness among all groups was among non-Hispanic white men, who in the early 1970s had the third lowest rate of childlessness (16 percent) among all six groups considered, and in the five-year period ending in 2021 had the second highest rate of childlessness (35 percent). Childlessness also increased a great deal among white women, climbing from 11 percent to 27 percent during this period. Meanwhile, childlessness among non-Hispanic black women rose substantially starting in the late 1990s and into the early 2000s.

Figure 5. Share of Adults at Prime Parenting Age without Children in the Household by Race/Ethnicity and Sex, 1970–2021



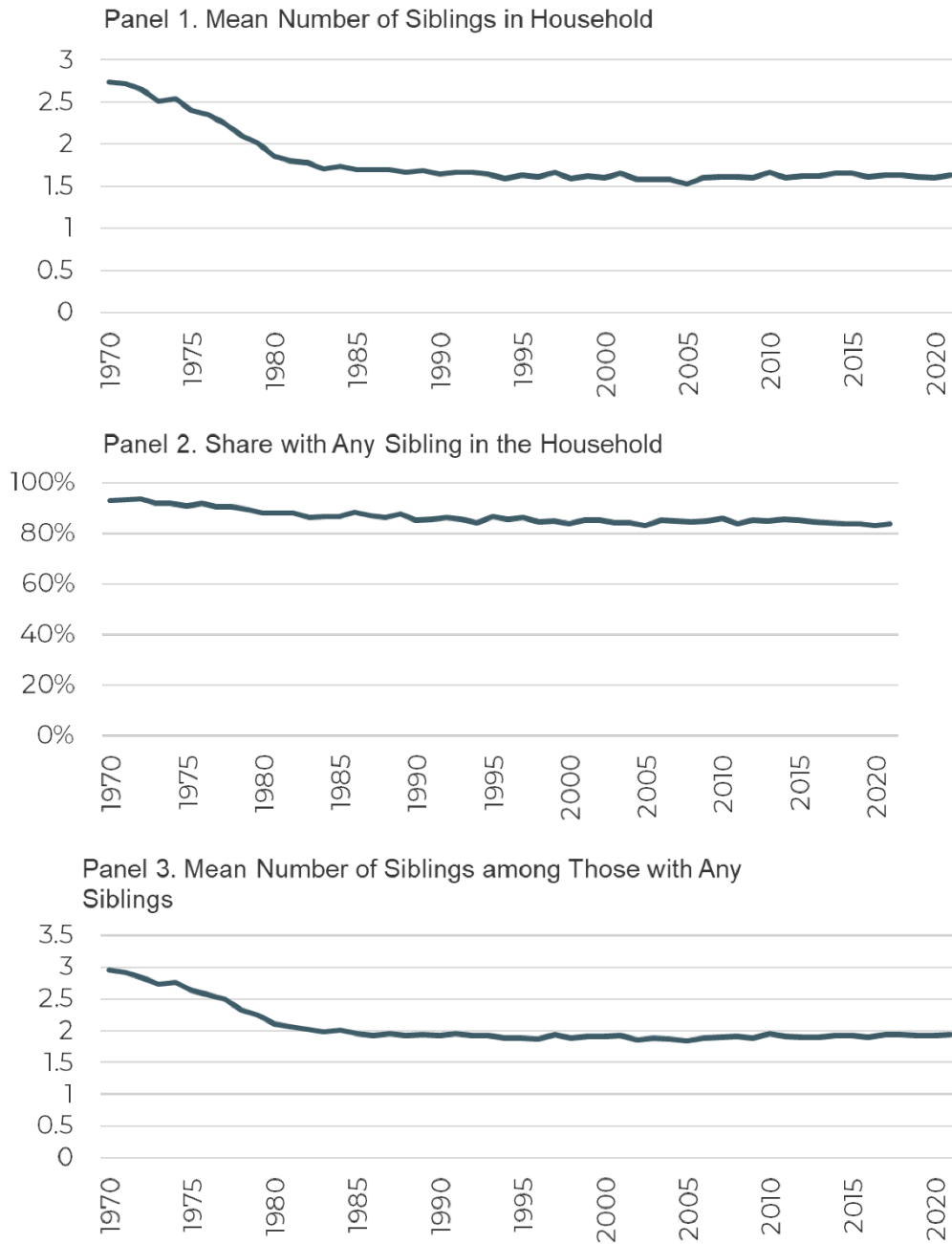
Source: IPUMS, CPS ASEC data, 1970–2021, <https://cps.ipums.org/cps/>; JEC Calculations.
 Note: Values are shown for each group at the prime parenting age, the age at which each group in each range of years had the maximum average number of their own children in the home. Ages range from 39–42 for non-Hispanic white men; 37–42 for non-Hispanic black men; 38–43 for Hispanic men; 36–39 for non-Hispanic white women; 34–39 for non-Hispanic black women; and 37–40 for Hispanic women.

The decline in the number of children that adults have in their household conditional on having any children at all (as shown previously in Figure 2), also means any given child is less likely to have a sibling in their household. In the first panel of Figure 6, we estimate in

each year since 1972 the mean number of siblings among all 10-year-old children. We choose the age of 10 to minimize the likelihood of missing siblings before they are born or after they leave the household in adulthood. The average 10-year-old in 1972 had 2.7 siblings in their household. Since 1983, the average 10-year-old has only had an average of between about 1.6 and 1.7 siblings in the household.²⁴ In Panel 2 of Figure 6, we estimate the share of children with any siblings at all (i.e., those who are not an only child), and in Panel 3 of Figure 6 we estimate the mean number of siblings, conditional on having at least one sibling. The share of children who have any siblings at all has declined, as has the mean number of siblings, conditional on having at least one sibling.

²⁴ Although in 2005 the average 10-year-old had only 1.5 siblings in the household.

Figure 6. Siblings in the Household among 10-year-olds, 1970–2021



Source: IPUMS, CPS ASEC data, 1970–2021, <https://cps.ipums.org/cps/>; JEC Calculations.

SHORT-RUN SOCIAL CAPITAL IMPLICATIONS OF FEWER AND SMALLER FAMILIES

As shown in the previous figures, adults have become less likely to have children in their households and those who do have children have fewer of them. Meanwhile, children have become less likely to have siblings and those who do have siblings have fewer siblings. Smaller and fewer families have important consequences for social capital. In the short-term these consequences include a potential reduction in some of the most valuable types of community participation among adults, along with worse social well-being for children.

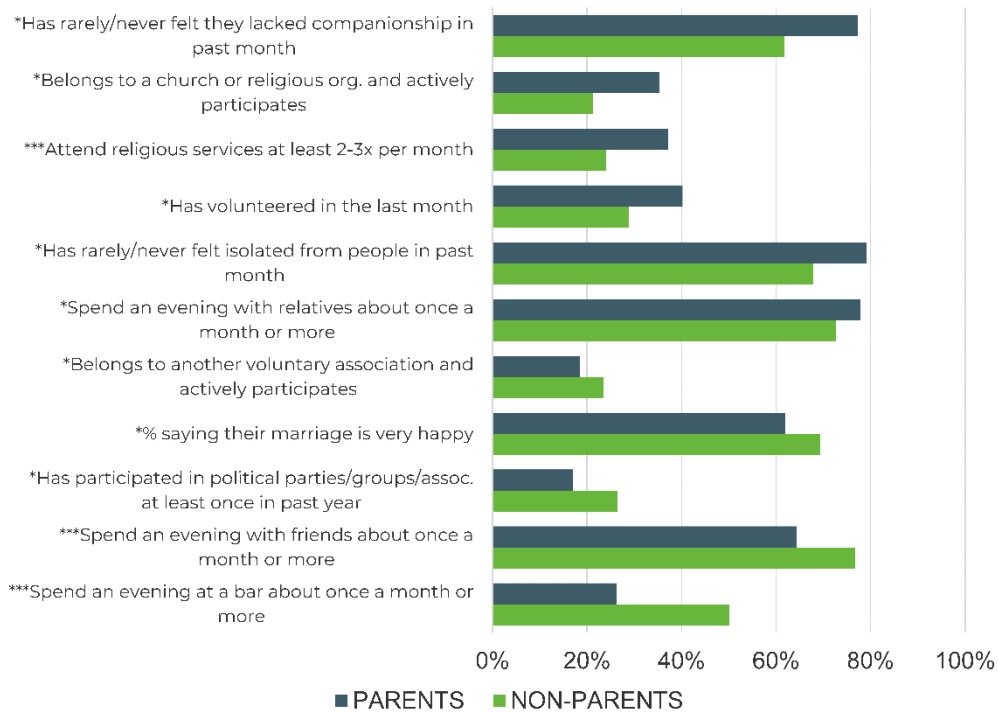
Parenting and Community Participation

Fewer children means fewer parents in communities. The share of adults without children in their household increased from 15 percent in 1970 to around 30 percent by the early 1990s. If parenting is associated with greater community participation, then fewer parents could mean less community engagement. On the one hand, parents may be more likely to invest in their communities because they tend to be less transitory than childless adults (e.g., parents are more likely to be homeowners) or because they seek out community involvement for the sake of their children.²⁵ On the other hand, childless adults may have more time to participate in community and social activities than parents. Thus, whether the decline in parenting reduces the quantity and quality of community participation is an empirical question.

We use data from the General Social Survey to compare parents and non-parents in terms of their community participation. We restrict the sample to adults aged 30 to 45 because people in this age range are old enough to have at least started having children but generally young enough that children have not yet moved out of the household. We use this group to understand how those who are actively parenting (have children in the home) differ in community participation from similarly aged adults without children. The results are shown in Figure 7.

²⁵ Based on CPS analyses, parents between the ages of 30 and 45 are more likely to own their homes compared to non-parents, (56 percent of those without their own children in the household owned their home in 2021 compared to 68 percent of those with their own children in the household).

Figure 7. Social Capital Participation among Parents and Non-Parents aged 30–45, Various Years between 2010 and 2021, Sorted by Gap between Parents and Non-Parents



Source: General Social Survey, 2010-2021, <https://gssdataexplorer.norc.org/home>.

Note: Levels of statistical significance of differences between parents and non-parents denoted by: * = < .05, ** = < .01, and *** = < .001. The data are not all from the same years because GSS does not include every question in every survey year. The years and sample size for each measure are as follows: lacking companionship in the past month (n = 99 for non-parents and 232 for parents; data year is 2018); belonging to a church or religious organization (n = 100 for non-parents and 279 for parents; year 2014); frequency of attending religious services (n = 875 for non-parents and 2,497 for parents; years 2010, 2012, 2014, 2016, 2018, and 2021); volunteered in past month (n = 182 for non-parents and 564 for parents; years 2012 and 2014); spend an evening with relatives (n = 585 for non-parents and 1,664 for parents; years 2010, 2012, 2014, 2016, 2018, and 2021); belongs to a sports/leisure/cultural group (n = 100 for non-parents and 281 for parents; year 2018); spend an evening with neighbors (n = 584 for non-parents and 1,664 for parents; years 2010, 2012, 2014, 2016, 2018, and 2021); has done voluntary work for charity in the past year (n = 183 for non-parents and 564 for parents; years 2012 and 2014); given money to a charity in past year (n = 182 for non-parents and 564 for parents; years 2012 and 2014); marriage is very happy (n = 266 for non-parents and 1,455 for parents; years 2010, 2012, 2014, 2016, 2018, and 2021); participated in political parties/groups/associations in past year (n = 99 for non-parents and 232 for parents; year 2018); spend an evening with friends (n = 585 for non-parents and 1,665 for parents; years 2010, 2012, 2014, 2016, 2018, and 2021); and spend an evening at a bar (n = 584 for non-parents and 1,665 for parents; years 2010, 2012, 2014, 2016, 2018, and 2021).

We find important differences in the amount and types of community participation between parents and non-parents. A larger share of parents compared to non-parents belonged to a church or other

religious organization and attended church regularly. Parents are more likely to have volunteered within the last month and they more frequently spent time with relatives compared to non-parents. Fewer parents than non-parents said they felt isolated from others or had lacked companionship within the past month.

On the other hand, a greater share of non-parents participated in a political organization within the last year, and non-parents also more frequently spend time with friends and at bars. Among those who are married, non-parents were also more likely to say they were very happy in their marriage. On several other social capital-related measures examined, there were no significant differences between parents and non-parents.²⁶

The differences between how parents and non-parents participate in community can be meaningful. Robert Putnam of Harvard University and author of *Bowling Alone: The Collapse and Revival of American Community* explains that half of all volunteering occurs in a religious context, for example.²⁷ Because non-parents are less likely to participate in a religious community, this may partly explain why they are also less likely to volunteer. However, even among religious participants, parents tend to volunteer more than non-parents. According to JEC analysis, there is a statistically significant positive association between being a parent and volunteering in the past month even when controlling for religious attendance.

Religious participation is important for other reasons besides volunteering. Research by Raj Chetty et al. points to the significance of religious participation for economic mobility, not only for oneself but economic mobility for others. Chetty et al. find that religious groups are where people are most likely to build friendships across socioeconomic lines, more so than in other institutions, including: schools, the

²⁶ There were no statistically significant differences between parents and non-parents on the following measures: feeling left out in the past month; belonging to and participating in a sports, leisure, or cultural group; belonging to a trade union or other professional association; looking after the plant or pet of others while away; spending an evening with neighbors; donating blood; giving to the homeless; letting someone borrow an item of value; carrying a stranger's belongings; trusting other people; saying it is important to vote in elections; saying it is important to obey laws; saying it is important to be active in political or social associations; participating in an organization for sports, culture, or leisure; participating in charitable or religious volunteering; participating in an organization for sports, culture, or leisure in past year; participating in charitable or religious volunteering in past year; has done voluntary work for a charity at least once in the past year; and has given money to charity at least once in the past year.

²⁷ Robert Putnam, *Bowling Alone: The Collapse and Revival of American Community* (New York: Simon & Schuster, 2000), 66.

workplace, neighborhoods, and recreational groups.²⁸ Building connections across socioeconomic lines is important because such friendships are strongly linked with economic mobility for those with low socioeconomic status. Thus, if fewer parents in a community means fewer people attending houses of worship it could subsequently mean fewer friendships across socioeconomic lines and less upward mobility.

Overall, parents are more likely than non-parents to engage in more substantive forms of social capital, especially religious participation, which can have important long-term effects on well-being. Future research should examine the extent to which the relationship between parenting and engagement in various forms of social capital is causal or due to selection effects, in which those who are more religious are more likely to have children in the first place.²⁹ Parenthood is not usually a catalyst for religious involvement, although some researchers find that a child entering their school-age years may induce some parents to become active religiously.³⁰ While more research is needed, the decline in parenting poses a risk for a weakening of social capital among adults.

Siblings and Social Well-Being

Another consequence of smaller families is fewer siblings to provide friendship and support, which due to the length and certainty of sibling relationships, could mean a significant loss in social capital throughout a person's life. Many people point to siblings as their closest friends, or name a sibling as a person they would call first in an emergency.³¹

Besides companionship and support, siblings may also help shape a child's social development and promote stronger social capital in childhood and beyond. For example, Douglas B. Downey and Dennis J.

²⁸ Rachel Sheffield and Kole Nichols, "New Research Confirms Importance of Social Capital and Two-Parent Families for Upward Mobility," U.S. Joint Economic Committee, August 2022, <https://www.jec.senate.gov/public/index.cfm/republicans/2022/8/new-research-confirms-importance-of-social-capital-and-two-parent-families-for-upward-mobility>; Raj Chetty et al., "Social Capital II: Determinants of Economic Connectedness," *Nature* 608, no. 7921(August 2022): 122-134, <https://www.nature.com/articles/s41586-022-04997-3>.

²⁹ Lyman Stone, "America's Growing Religious-Secular Fertility Divide," Institute for Family Studies, August 8, 2022, <https://ifstudies.org/blog/americas-growing-religious-secular-fertility-divide>.

³⁰ Cyrus Schleifer and Mark Chaves, "Family Formation and Religious Service Attendance: Untangling Marital and Parental Effects," *Sociological Methods & Research* 46, no. 1(2017): 125-152. <https://doi.org/10.1177/0049124114526376>; Barna, "Does Having More Children Make Parents More Active Churchgoers?" May 24, 2010, <https://www.barna.com/research/does-having-children-make-parents-more-active-churchgoers/>.

³¹ Lynn K. White and Agnes Reidmann, "Ties Among Adult Siblings," *Social Forces* 71, no. 1 (September 1992): 85-102, 92.

Condrón find that kindergartners with siblings were rated by their teachers as having better interpersonal skills, fewer externalizing behaviors, and higher self-control compared to kindergartners without siblings.³² A follow-up study by Downey, Condrón, and Deniz Yucel finds that children with one sibling experienced greater increases in interpersonal skills and self-control between kindergarten and fifth grade compared to only children. There were no differences between only children and children with more than one sibling on changes in social skills though.³³

Examining the link between sibling quantity and social outcomes among adolescents, Donna Bobbitt-Zeher and Douglas B. Downey failed to find a significant relationship between the number of siblings an adolescent has and sociability.³⁴ However, in a later study, Yucel, Bobbitt-Zeher, and Downey find that *high quality* sibling relationships were positively related with sociability among adolescents.³⁵ Thus, for adolescents, the quality of sibling relationships may matter more than their quantity.³⁶

Of course, poor quality sibling relationships, or siblings who encourage or model poor behavior (i.e., illicit drug use, criminal activity), can reduce a child's well-being.³⁷ Furthermore, Toni Falbo and Denise F. Polit and others have found that children from larger families have

³² Douglas B. Downey and Dennis J. Condrón, "Playing Well with Others in Kindergarten: The Benefit of Siblings at Home," *Journal of Marriage and Family* 66 (May 2004): 333-350, <https://doi.org/10.1111/j.1741-3737.2004.00024.x>.

³³ Douglas B. Downey, Dennis J. Condrón, and Deniz Yucel, "Number of Siblings and Social Skills Revisited Among American Fifth Graders," *Journal of Family Issues* 36, no. 2 (2015): 273-296.

³⁴ Donna Bobbitt-Zeher and Douglas B. Downey, "Number of Siblings and Friendship Nominations Among Adolescents," *Journal of Family Issues* 34, no. 9 (2012): 1175-1193.

³⁵ Deniz Yucel, Donna Bobbitt-Zeher, and Douglas B. Downey, "Quality Matters: Sibling Relationships and Friendship Nominations among Adolescents," *Child Indicators Research* 11 (2018): 523-539, <http://dx.doi.org/10.1007/s12187-017-9448-9>.

³⁶ In a 1987 meta-analysis by Toni Falbo and Denise F. Polit that examined 141 studies of only-children, Falbo and Polit find little difference between only-children and children with siblings on outcomes of: sociability, character (i.e., leadership, maturity, citizenship), personal control (i.e., autonomy, self-control), and personal adjustment (i.e., self-esteem, anxiety, emotional stability). The researchers also find that only-children had significantly better outcomes on achievement motivation compared to children with siblings. However, the quality of studies used in Falbo and Polit's analysis were below average, based on their own quality rating score. Falbo and Polit's meta-analysis also examined studies that relied on relatively old data (1963 was the mean year of study publication and 1942 was the mean year of study participants' birth). Denise F. Polit and Toni Falbo, "Only Children and Personality Development: A Quantitative Review," *Journal of Marriage and the Family* 49 (May 1987): 309-325, <https://doi.org/10.2307/352302>.

³⁷ Susan M. McHale, Kimberly A. Updergraff, and Shawn D. Whiteman, "Siblings Relationships and Influences in Childhood and Adolescence," *Journal of Marriage and Family* 74, no. 5 (October 2012): 913-930, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3956653/>.

poorer academic outcomes compared to only children or children from smaller families, presumably because parents with more children are unable to invest as much time in each child.³⁸ Still, having siblings is associated with better overall social outcomes for children, and when it comes to academic outcome, Falbo and Polit find that the differences between only children and children with siblings is small.³⁹

LONG-RUN SOCIAL CAPITAL IMPLICATIONS OF SMALLER AND FEWER FAMILIES

Fewer children and siblings while growing up has longer run implications for individuals as well, especially in old age. In this section we first estimate the shrinking of family support networks in old age resulting from declining fertility, due both to fewer children and fewer siblings. Next, we discuss the implications for social capital.

Shrinking Family Support Networks in Old Age

As seen previously in Figure 2, the share of adults who have children has fallen over time. One consequence is that when those adults age, they will not have children available to care for them. To see this more directly, we estimate the share of individuals aged 75 who have children of their own. Because the CPS ASEC does not ask individuals to report the existence or number of their own children who live outside of the household, and because elderly individuals often receive support from children who live outside the home, we instead impute the share of elderly individuals with children using lagged survey data.

Specifically, we estimate the share of 35-year-old adults in a given year who live with at least one child of their own. Making the simplifying assumption that adults with children have the same mortality rates as adults without children, it follows that 40 years later when the adults are 75-years-old, the share with at least one child of their own is the same as the share for 35-year-old adults 40 years ago.⁴⁰

Figure 8 reports for each given year the share of 75-year-olds who lived with a child of their own at age 35. The share of 75-year-olds with any children of their own in the household declined from 85 percent in

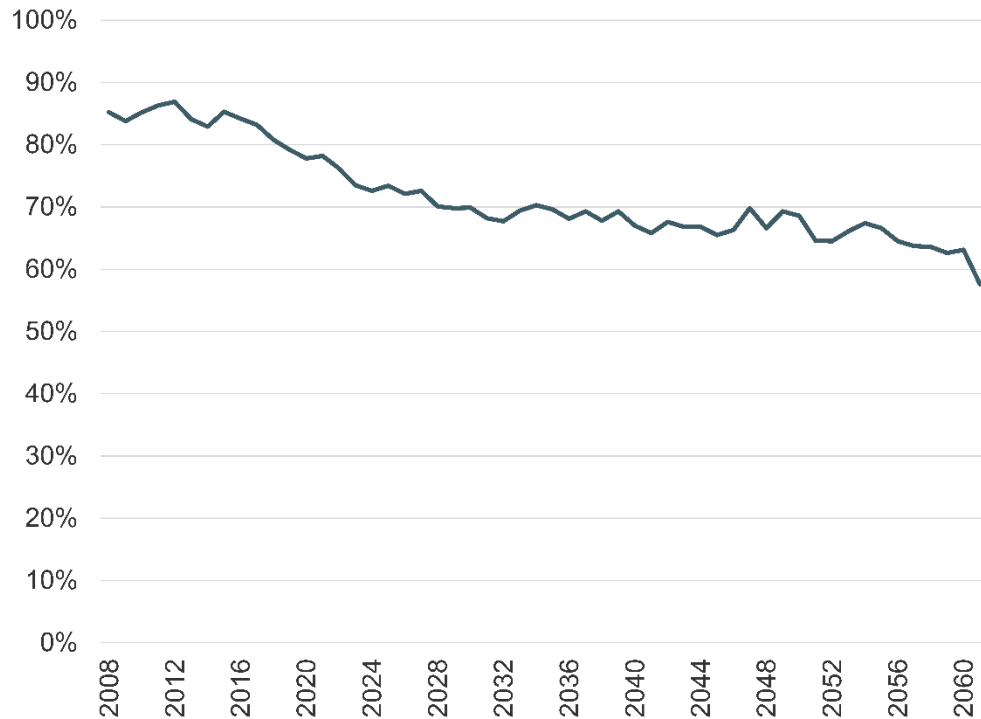
³⁸ Toni Falbo, "Only Children: An Updated Review," *The Journal of Individual Psychology* 68, no. 1 (Spring 2012): 38-49.

³⁹ Toni Falbo and Denise F. Polit, "Quantitative Review of the Only Children Literature: Research Evidence and Theory Development," *Psychological Bulletin* 100, no. 2 (1986): 176-189

⁴⁰ We are unable to observe whether the child is alive 40 years later. Given increases in life expectancy over time, we may slightly overstate the downward trend in the share of 75-year-olds with any *living* children.

2008 to 76 percent in 2022, and will fall further to 58 percent by 2061.

Figure 8. Share of 75-year-old Adults with Any Children of their Own in the Household at Age 35, 2008–2061



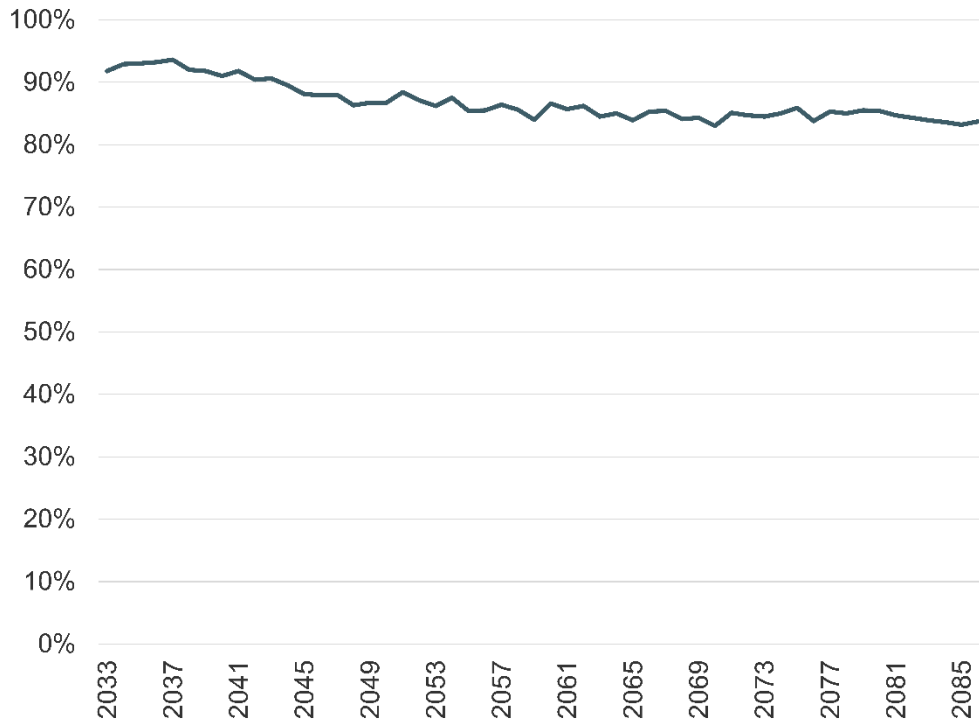
Source: IPUMS, CPS ASEC data, <https://cps.ipums.org/cps/>; JEC calculations.

Note: Figure assumes that parents have the same mortality rate as non-parents. We do not condition on the survival of children into adulthood. See text for further details.

The number of siblings a person has can also have implications for old age. The drop in number of siblings since the early 1970s, as previously seen in Figure 6, means that fewer older Americans will have siblings upon whom they can rely for support in their later years. Because the CPS ASEC does not ask adults to report their siblings, we again rely on lagged data to impute the share of 75-year-old adults with at least one sibling. In this case we determine the share of 10-year-old children with at least one sibling in their household, and assuming equal mortality rates among individuals with and without siblings, take this as the

share of 75-year-old adults with at least one sibling 65 years later.⁴¹ As Figure 9 shows, the share of 75-year-olds who lived with any siblings at age 10 is projected to fall from 92 percent in 2033 to 84 percent in 2086. Because our imputation requires data from 65 years prior to a given year, we are only able to impute the trend for future years.

Figure 9. Share of 75-year-olds with Any Siblings in Their Household at Age 10, 2033–2086



Source: IPUMS, CPS ASEC data, <https://cps.ipums.org/cps/>; JEC calculations.

Note: Figure assumes that children with and without siblings have the same mortality rate. We do not condition on the survival of siblings into adulthood. See text for further details.

Implications of Shrinking Support Networks in Old Age

The present and future reduction in the number of elderly adults who have children or siblings will lead to less familial support for the elderly. This is particularly a problem for men and most so for non-Hispanic black men, who are the least likely to have children of their own in the

⁴¹ We are unable to determine whether the siblings are alive 65 years later. Given increases in life expectancy over time, we may slightly overstate the downward trend in the share of 75-year-old adults with any *living* siblings.

home at prime parenting age. While not all men without children in the household are truly childless, fathers who do not reside with their children are less likely to be involved in their child's life.⁴²

Currently, family members provide the majority of long-term care to elderly adults in the United States.⁴³ If the elderly have fewer family members to assist them in old age, they are more likely to rely on paid care, and they are also less likely to have the social and emotional benefits of family support. Joseph E. Gaugler, Sue Duval, Keith A. Anderson, and Robert L. Kane find that nursing home admittance is less likely if older adults have more living children.⁴⁴ Fewer family caregivers thus can have implications for the cost of government health care programs, not to mention for the emotional well-being of the elderly.

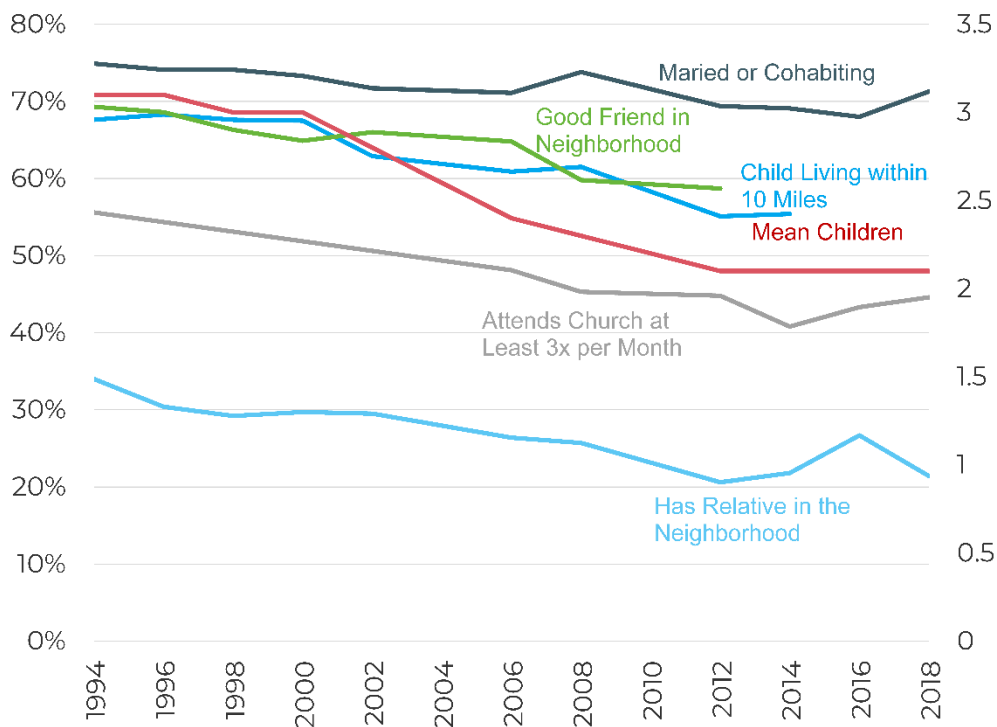
Previous research from the Joint Economic Committee (*An Invisible Tsunami: 'Aging Alone' and Its Effect on Older Americans, Families, and Taxpayers*) finds that social capital among retirement-age adults has declined throughout the past two decades or so, partly as a result of people having fewer children. Figure 10 shows that between 1994 and 2018, the average number of children among adults near retirement age (ages 61-63) dropped from 3.1 to 2.1, consistent with the trend we report in Figure 8 for a longer but less historical period. Other measures of social capital also declined for this age group, exacerbating the weakening of social capital, such as the share of near-retirement-age adults who: are married or cohabiting, have a good friend in their neighborhood, have a child living within 10 miles, attend church regularly, and have a relative in their neighborhood.

⁴² Natasha J. Cabrera, Gina A. Cook, Karen E. McFadden, and Robert H. Bradley, "Father Residence and Father-child Relationship Quality: Peer Relationships and Externalizing Behavioral Problems," *Family Science* 2 (2011): 109-119; Judith A. Seltzer, "Relationships Between Fathers and Children Who Live Apart: The Father's Role After Separation," *Journal of Marriage and the Family* 53 (February 1991): 79-101.

⁴³ Donald Redfoot, Lynn Feinberg, and Ari Houser, "The Aging of the Baby Boom and the Growing Care Gap: A Look at Future Declines in the Availability of Family Caregivers," AARP, August 2013, <https://www.aarp.org/home-family/caregiving/info-08-2013/the-aging-of-the-baby-boom-and-the-growing-care-gap-AARP-ppi-ltc.html>.

⁴⁴ Joseph E. Gaugler, Sue Duval, Keith A. Anderson, and Robert L. Kane, "Predicting Nursing Home Admission in the U.S. A Meta-Analysis," *BMC Geriatrics* 7, no. 13 (2007), <https://doi.org/10.1186/1471-2318-7-13>.

Figure 10. Measures of Social Capital among Adults Ages 61–63, 1994–2018



Source: Health and Retirement Survey, Longitudinal Data, 1994–2018, <https://hrs.isr.umich.edu/>.

In a 2017 Joint Economic Committee hearing, Robert Putnam explained that the reduction in informal caregiving available to the elderly due to declining social capital, driven in part by declining childbearing, will place substantial strain on government health care programs. His tentative estimate is that Baby Boomers “are entering retirement with one-third less social support than their parents had at the same stage of life.”⁴⁵ Given the decline in childbearing in the last decade or so, future generations of aging Americans will have even fewer adult children to turn to for care and support in later life, likely straining health care systems further.

Adult children can also provide companionship and emotional support to aging parents.⁴⁶ Family relationships may be especially important in

⁴⁵ Robert D. Putnam, Testimony, U.S. Joint Economic Committee, May 17, 2017, https://www.jec.senate.gov/public/_cache/files/222a1636-e668-4893-b082-418a100fd93d/robert-putnam-testimony.pdf.

⁴⁶ See Tineke Fokkema, Jenny De Jong Gierveld, and Pearl A. Dykstra, “Cross-National Differences in Older Adult Loneliness,” *The Journal of Psychology* 146, no. 1-2 (2012): 201-228,

old age as other social connections diminish, such as social connections made in the workplace. Soohyoung Rain Lee and Laurie S. Kim find that older adults who live with their adult children have better mental and physical health as well as greater self-acceptance (i.e., feeling satisfied with their life and liking themselves) compared to elderly adults who live alone.⁴⁷ Multiple research studies show that people who are integrated socially and have a broad array of relationships, including relationships with family, have better health and longevity.⁴⁸

In addition to quantity, the quality of the parent-child relationship can affect aging adults' well-being. If an aging parent does not have a high-quality relationship with their child, receiving care from that child is associated with poorer outcomes for parents.⁴⁹ Stressful life events for adult children can also be a source of stress for parents.⁵⁰ However, having a high-quality relationship with an adult child is overall linked with greater well-being for elderly adults.⁵¹

Siblings also have implications for social capital in adulthood, including in old age. For example, Joseph Merry, Donna Bobbitt-Zeher, and Douglas Downey find that married adults with more siblings are significantly less likely to divorce.⁵² The researchers hypothesize that growing up with sibling relationships may prepare people to handle conflict and learn to compromise, helping individuals to better deal with conflict in their marriages. Furthermore, in a Japanese study, Yukako Tani, Aya Isumi, Satomi Doi, and Takeo Fujiwara, find that children who grew up with siblings had stronger social capital in

https://www.researchgate.net/publication/221804288_Cross-National_Differences_in_Older_Adult_Loneliness.

⁴⁷ Soohyoung Rain Lee and Laurie S. Kim, "Coresidence of Older Parents and Adult Children Increases Older Adults' Self-Reported Psychological Well-Being," *International Journal of Alzheimer's Disease*, January 2022, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8813294/>.

⁴⁸ Sheldon Cohen and Denise Janicki-Deverts, "Can We Improve Our Physical Health by Altering Our Social Networks?" *Perspectives on Psychological Science* 4, no. 4 (July 1, 2009): 375-378, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2744289/>.

⁴⁹ Eva-Maria Merz, Nathan S. Consedine, Hans-Joachim Schulze, and Carlo Schuengel, "Wellbeing of Adult Children and Ageing Parents: Associations with Intergenerational Support and Relationship Quality," *Ageing & Society* 29, no. 5 (2009): 783-802, <https://doi.org/10.1017/S0144686X09008514>.

⁵⁰ Melissa A. Milkie, Alex Bierman, and Scott Schieman, "How Adult Children Influence Older Parents' Mental Health: Integrating Stress-Process and Life-Course Perspectives," *Social Psychology Quarterly* 71 no. 1 (March 2008): 86-105.

⁵¹ Eva-Maria Merz, Nathan S. Consedine, Hans-Joachim Schulze, and Carlo Schuengel, "Wellbeing of Adult Children and Ageing Parents: Associations with Intergenerational Support and Relationship Quality."

⁵² Joseph Merry, Donna Bobbitt-Zeher, and Douglas Downey, "Number of Siblings in Childhood, Social Outcomes in Adulthood," *Journal of Family Issues* 41, no. 2 (February 2020): 212-234.

adulthood. Participants who grew up with two or three siblings, but not just one sibling or not more than three siblings had greater social support in adulthood and greater group affiliation (meaning belonging to clubs, groups, or associations) than only children.⁵³

Sibling support and caregiving may be especially important for people with disabilities, as individuals with disabilities often need more care throughout adulthood and are also less likely to have a spouse or partner upon whom they can rely. In a study by Sanne A. H. Giesbers et al., researchers interviewed 138 adults with mild intellectual disability living in the Netherlands regarding the support they receive from family members. While parents and other extended family members were typically the people participants identified as their most significant source of support, half of the participants also pointed to siblings as sources of support. Later in life, sibling relationships may become even more important for adults with disabilities, as aging parents become unable to provide care or are no longer living.⁵⁴

Despite the particular importance of siblings for youth with disabilities, they have slightly fewer siblings on average than youth without disabilities. Using the CPS ASEC we estimate that in 2021, 15-year-olds with a disability had an average of 1.3 siblings in the household (the number has fluctuated between an average of 1.1 and 1.5 siblings since 2009, the earliest year for which data are available). In comparison, 15-year-olds without a disability had an average of 1.5 siblings in the household in 2021. (We used age 15 because the CPS ASEC does not collect data on disabilities for those under the age of 15.) Youth with disabilities are also less likely to have any siblings in the home compared to youth without disabilities. In 2021, 29 percent of youth with disabilities had no siblings in the home, compared to 20 percent of 15-year-olds without disabilities.

Fewer siblings means not only a smaller immediate family. It also means fewer extended family members—cousins, aunts, uncles, nieces, nephews, and grandchildren—to turn to for companionship, financial

⁵³ Yukako Tani, Aya Isumi, Satomi Doi, and Takeo Fujiwara, "Number of Siblings and Social Capital Among Parents Rearing Schoolchildren: Results from the A-CHILD Study," *Journal of Epidemiology*, May 28, 2022, <https://pubmed.ncbi.nlm.nih.gov/35644534/>. Note: among study participants who grew up with just one sibling, only the eldest sibling reported greater social support.

⁵⁴ S.A.H. Giesbers, A.H.C. Hendriks, R.P. Hastings, A. Jahoda, T. Tourneur, and P.J.C.M. Embregts, "Social capital and the Reciprocal Nature of Family Relationships: The Perspective of Individuals with Mild Intellectual Disability," *American Journal on Intellectual and Developmental Disabilities* 125, no. 3 (2020): 170-185, <https://doi.org/10.1352/1944-7558-125.3.170>.

support, and caretaking, particularly in times of need.⁵⁵ Ultimately, lower fertility means fewer family members and therefore thinner layers of the most fundamental type of social capital.

CONCLUSION

Along with the economic and labor force implications of declining fertility, policymakers and other leaders should consider the social capital implications of declining fertility. Fewer children and siblings mean a smaller network of family members upon which people can rely for assistance, including caretaking in old age. Although the causes of declining fertility in recent years are not completely clear, policies that make it more affordable to raise a family and that encourage healthy family relationships can support and strengthen parents and their children.

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Joint Economic Committee

⁵⁵ Adriana M. Reyes, "Mitigating Poverty through the Formation of Extended Family Households: Race and Ethnic Differences," *Social Problems* 67, no. 4 (November 2020): 782-799, <https://doi.org/10.1093/socpro/spz046>; Peggye Dilworth-Anderson and Paula Y. Goodwin, "A Model of Extended Family Support: Care of the Elderly in African American Families," in *African American Family Life: Ecological and Social Diversity*, Eds. Vonnie C. McLoyd, Nancy E. Hill, and Kenneth A. Dodge, Guilford Press (New York City), 2007.