Household Formation over Time: Evidence from Two Cohorts of Young Adults*

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Abstract

This paper examines how various demographic and economic factors impact household formation both within and across cohorts. The results show substantial differences in the share of young adults living with their parents over time. Differences in demographics, housing costs, and business-cycle conditions can explain as much as 70 percent of the difference in household-formation rates across cohorts, a result driven in large part by increased sensitivity of young adults' household-formation decisions to economic conditions. Changes in parenting styles and shifting social norms likely also play roles.

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1 Introduction

The share of young adults living independently from their parents has trended down recently. Whereas some attribute this change to the effects of the Great Recession, Bitler and Hoynes (2015) show that the trend began before the economic downturn.[1] Young adults are living with their parents longer than they did in the past, and they are also returning home more often after having lived independently. The potential reasons for this behavior include: economic conditions, insufficient income and/or high levels of debt, being enrolled in school, cultural norms, and having a close relationship with one's parents. While economic conditions are cyclical and young adults today may be more likely to take unpaid or low-paying internships to begin their career, the idea that economic conditions and/or a young adult's earnings affect his/her household-formation (parental co-residence) decision is not new (see, for example Haurin, Hendershott, and Kim 1993; Ermisch 1999; Ermisch and Di Salvo 1997). A key question therefore is, what change over time has resulted in more young adults living with their parents today than in the past? Shifting housing costs, lower young-adult incomes, or other economic conditions could explain the change in the share of parental co-residence. Additionally, young adults' decisions to live at home could be more sensitive today than in the past to economic and other factors because it has become more comfortable or socially acceptable to live with one's parents. Understanding the parental co-residence behavior of young adults is important, because it has implications for homeownership, residential investment, wealth building, and fertility—factors that matter for both the macroeconomy and the well-being of young adults.

This paper investigates changes over time in the share of individuals who are living with parents (LWP) by comparing the behavior of two cohorts of young adults (1979

[1] For a further discussion of the recent patterns of young adults living with their parents, see, for example, Fry (2015); Dey and Pierret (2014); Matsudaira (2016).

and 1997) from the National Longitudinal Survey of Youth (NLSY). With two cohorts separated by roughly 20 years, as well as detailed demographic, income, employment, and other data for the members of each group, we can examine the conditions that influence whether young adults live with their parents and how these factors have changed. We also have detailed data on the location of each young adult's residence, which allow us to control for local business-cycle conditions and local housing costs. Because each cohort is followed over time, we can track when cohort members switch from LWP to living independently as well as whether they move back home after living on their own.

We find that young adults aged 23 to 33 were, on average, 3.9 percentage points more likely to live with (their) parents during the mid- to late 2000s than they were during the early to mid-1980s. The rate of LWP is higher at every age within this range for the 1997 cohort, and demographic factors explain little of the decline in independent living over time. Instead, differences in economic conditions—especially local housing costs relative to income—explain much of the variation. This result is consistent with the findings of Matsudaira (2016), who determines that economic factors can explain 70 to 80 percent of the increase between 1970 and 2011 in parental co-residence rates for young adult men, and 50 to 60 percent of the increase for young adult women. Paciorek (2016) also shows that economic conditions, especially housing costs, are important for explaining why household-formation rates changed over time.

We also document the effect of local economic conditions on the likelihood that a young adult will come back home after living independently—Matsudaira (2016), the study closest to ours, does not analyze return-to-home rates. Individual factors, mainly employment status and labor income, explain some of the difference in return rates between the two cohorts, and local economic conditions play a limited additional role once these individual-specific variables are included. However, a good portion of the

difference in return rates remains unexplained.[2] Greater student debt only slightly raises the likelihood that a young adult will return home after living independently, and student debt does little to explain the remaining gap in return rates across cohorts. Student loans also have little effect on whether young adults will live with their parents.

To our knowledge, this paper is the first to examine whether the decline in the share of young adults living independently is due to changes in economic conditions themselves, or whether young adults' co-residence decisions have become more sensitive to these conditions. In particular, we produce counterfactuals where we apply the estimated sensitivity of LWP to demographics and economic conditions for one cohort to the actual conditions faced by the other cohort to determine the degree to which changing sensitivities explain differences in LWP across cohorts. We obtain a rate of LWP that is more similar across the two cohorts if we apply the estimated sensitivity of the 1997 cohort members to the economic conditions and demographics associated with the 1979 cohort. However, this is not true when we reverse the exercise and apply the estimated sensitivity of the 1979 cohort to the economic conditions and demographics of the 1997 cohort. These results show that the increase in LWP rates between cohorts is due in part to the increased sensitivity of young adults' decisions to live at home to economic conditions, and not to just higher housing costs or worse employment opportunities alone.

Many of the numerous possible explanations for the shift in the sensitivity of young adults' parental co-residence decisions to economic conditions center on the idea that it has become more comfortable for young adults to live at home. Not only are family sizes smaller and homes larger now than in the past, but parenting styles have potentially become more accommodating, leading to young adults' increased willingness to live at home. Indeed, we find that members of the 1997 cohort who have "permissive" parents are more likely to live with their parents than are respondents with "authoritarian" par-

[2] Bleemer et al. (2015) find that economic conditions affect young adults' return rates calculated using credit bureau data, but they cannot control for individual-specific factors related to economic conditions.

ents. An additional potential reason for the shift in sensitivity of parental co-residence decisions to economic conditions is a shift in social norms or attitudes toward LWP. Although changing social norms are difficult to quantify, Giuliano (2007) documents cultural change that led to increased parental co-residence rates among southern-European families. She argues that family structure, combined with a late-1970s "sexual revolution" in Europe, allowed young adults to "obtain their sexual independence at home and still take advantage of the benefits of living with their parents." Similarly, the General Social Survey (GSS) documents more favorable views over time in the United States of "older people sharing a home with grown children." Cultural attitudes toward LWP are potentially endogenous, and we do not have exogenous variation to sort out the direction of causality: Young adults could stay home because of changed attitudes, or attitudes could have changed because more young adults stayed at home. However, we find that when we proxy for changes in attitudes with sufficiently lagged LWP shares by state, we can explain some of the remaining gap between the two cohorts in the share of respondents who are LWP. Taken together, these results suggest that changing attitudes and changing parenting styles over time potentially play roles in the decline in the share of young adults living independently.

The remainder of this paper proceeds as follows: Section 2 describes the data and how we determine whether an individual lives with at least one of his/her parents. Section 3 describes our main results. Section 4 considers alternative explanations for LWP, and Section 5 concludes.

2 Data: The Changing Pattern

The data used in this paper come from two cohorts of the National Longitudinal Survey of Youth (NLSY)—a survey conducted by the U.S. Bureau of Labor Statistics (BLS). The

first cohort (the 1979 cohort) is a nationally representative sample of 12,686 individuals who were 14 to 22 years old in 1979. These individuals were born between the start of 1957 and the end of 1965, and by the early- to mid-1980s most were about 25 years old—an age when many young adults transition to living on their own. The second cohort (the 1997 cohort) is a nationally representative sample of about 9,000 individuals who were 12 to 16 years old as of December 31, 1996. Born between 1980 and 1984, these individuals were about 25 in the years 2005 to 2010. Members of the 1979 cohort were surveyed annually from 1979 through 1993 and have been surveyed biennially since 1994. The most-recent available data are for 2012, when the respondents were 47 to 55 years old. Members of the 1997 cohort were surveyed annually from 1997 through 2011 and biennially thereafter. The most-recent available data are for 2013, when the respondents were 29 to 33 years old. The two cohorts are useful for studying changes in U.S. household formation over time, because the surveys cover two representative groups of youth entering adulthood roughly 20 years apart, and they contain detailed information on the respondents' living situations.

These two NLSY surveys—often referred to as the NLSY79 and the NLSY97—record information on the respondents' education, employment history, and income when they were entering adulthood, along with other demographic and financial information from that period of their lives.[3] In addition, both NLSY surveys contain a so-called household roster, which tracks as many as 17 individuals living in the same residence as the respondent and notes the relationship of each to the respondent. We use these data to determine whether the respondent was living with his/her parents at the time of the survey as opposed to living independently.[4] We define a respondent as LWP if at least

[3]Tables A.1 and A.2 in the Appendix provide relevant summary statistics for the two cohorts.

[4]In the NLSY, the youth are the survey participants and information on their parents is limited, even in the first interview. In particular, the NLSY data do not distinguish between the head of the household and other family members, so we cannot differentiate between situations where the respondent is the head of the household and cases where the young adult's parent is the head of household. All we observe is whether parents and respondents share the same residence.

one biological, adoptive, or step-parent is present in the household in a given interview round.

We focus our analysis on individuals 23 to 33 years old to hedge against spurious findings due to roster questions that are slightly different between the two surveys. In particular, there are differences across cohorts in how the NLSY handles respondents who are living in temporary quarters such as college dormitories. Whereas respondents in the NLSY79 cohort are asked to answer the household roster questions with regard to their *permanent* residence, respondents in the NLSY97 are asked in rounds 1 to 6 to report based on their permanent residence, but in later rounds they are asked to report on their current residence. We focus our analysis on respondents 23 years old and older to ensure that most respondents have finished school by the time we evaluate their LWP status. The oldest age we observe for individuals in the NLSY97 cohort is 33.[5] Either way, the difference in the treatment of respondents who are living in temporary quarters works *against* finding a gap in LWP across cohorts (NLSY79 respondents would be more likely to be classified as LWP, and NLSY97 respondents would be more likely to be classified as not LWP).[6]

The top panel of Figure 1 depicts the share of respondents who are LWP by age in the 1979 cohort (solid line) compared with the share LWP in the 1997 cohort (dashed line).[7] The proportion of respondents LWP is noticeably greater for the 1997 cohort than for the 1979 cohort at all ages, and the rate of LWP, not surprisingly, declines with age in both cohorts.[8] The bottom panel of Figure 1 shows how household formation varies

[5]Comparisons starting at age 30 should be viewed with some caution, as we observe many more 30 to 33 year-old individuals in the 1979 cohort than in the 1997 cohort.

[6]In our econometric analysis we control for whether a respondent is enrolled in school. While we cannot easily interpret the coefficient on this variable, differences in respondents' answers to roster questions due to college enrollment will be absorbed by this control.

[7]To compute the share of respondents LWP at a certain age, we treat each respondent in each survey year as an independent observation. NLSY respondents turn a certain age in different years. For example, NLSY79 respondents turn 23 between 1980 and 1988, while NLSY97 respondents turn 23 between 2003 and 2007.

[8]These patterns have been documented using alternative data sources, for example Census data. See

across three racial groups: non-blacks/non-Hispanics, blacks, and Hispanics. Blacks and Hispanics are more likely than non-black/non-Hispanic young adults to LWP.[9] The figure also shows shifts by race in the share of respondents who are LWP over time. In the 1997 cohort, non-black/non-Hispanic and Hispanic young adults, regardless of age, were more likely than their 1979 counterparts to be LWP, while the rate of LWP for black young adults was unchanged. In addition, the differences across cohorts in the share of respondents who are LWP by race are economically meaningful. For example, a Hispanic young adult in 1997 is roughly 20 percentage points more likely to be LWP than a non-black/non-Hispanic young adult in 1979. Overall, these results show an important variation in household formation by race both within a given cohort and over time.

Household formation occurs when individuals move out of their current residence and form a residence of their own—a process that can be reversed by individuals moving back in with their parents or combining their household with another one due to, for instance, marriage. Anecdotal evidence suggests an increase, especially since the Great Recession, in the rate of young adults who "boomerang back" to live with their parents.[10] Because we observe the same respondents in consecutive waves of each NLSY survey, we can track young adults who move back in with their parents after living independently. Figure 2 shows the share of respondents, by age, who transition back to LWP (right panel).[11] The figure shows that at all ages after 23, members of the 1997 cohort are much more likely than their 1979 counterparts to move back in with their parents after living independently. These differences in return rates across cohorts could reflect the different economic conditions faced by the respondents.

Matsudaira (2016) and Rappaport (2015).

[9]The share of black youth LWP is substantially lower at young ages in both cohorts, perhaps due to the high incarceration rate of black males (not depicted).

[10]See, for example, http://blogs.wsj.com/economics/2015/07/29/boomerang-millennials-get-cozy-at-home/.

[11]A respondent "moves back" if he/she is LWP at age X but lives *without* a parent at age $X-2$. We utilize a two-year transition rate because data collection becomes biennial for the NLSY97 starting with the 2013 wave.

To further investigate differences in LWP across cohorts, we obtained geographic data for each respondent, specifically the state and the Core Based Statistical Area (CBSA, formerly MSA) where the respondent resided during each survey period.[12] These geographic identifiers allow us to examine how LWP varies geographically across cohorts. Figure 3 depicts by state and cohort the share of respondents LWP.[13] The darker-shaded states have a relatively larger portion of respondents who are LWP than do other states, and the figure shows more darker-shaded states for the 1997 cohort than for the 1979 cohort. The disproportionately large share of respondents in the 1997 cohort who are LWP is especially true in California, the Northeast, and the mid-Atlantic region, where higher housing costs and other economic factors in recent years likely have made it more difficult than it was in the 1980s for young adults to live independently.

The geographic identifiers also allow us to incorporate location-based economic data in our analysis—such as local economic conditions (unemployment rates) and housing costs—that are not otherwise available in the NLSY. We obtain local (state-level) unemployment-rate data from the BLS, and we calculate housing costs as the ratio of median home values relative to the median income of young adults in a given location.[14] We focus on the median income of young adults, because it likely captures their purchasing power better than the median income of all individuals, which likely is dominated by the earnings of prime-age workers—those age 35 to 54. Specifically, we calculate median income for 20 to 30 year-old individuals by state, using data from the March supplement of the Current Population Survey (CPS).[15] We obtain median home values using decennial

[12]These data were obtained under a restricted data access contract with the BLS, designed to protect the confidentiality of the respondents.

[13]The grouping of states in this and other state-based maps must be broad enough to satisfy BLS confidentiality and releasability requirements. We measure the share of respondents LWP by state (and cohort) by pooling all respondents who are 23 to 33 years old in that state in any year of our sample for a given cohort and taking the mean of the LWP dummy variable.

[14]Using a measure of local rents relative to income produces similar results.

[15]Our results are unchanged if we use alternative age cut-offs, such as ages 25 through 34, for calculating young adults' median income.

Census data and location-specific house-price growth data from CoreLogic. For example, the median house price in state X in 1983 equals the median house value in state X in the 1980 Census multiplied by 1 plus the growth rate of house prices in state X between 1980 and 1983. Similarly, the median house price in state X in 1986 equals the median house value in state X in the 1990 Census deflated by 1 plus the growth rate in house prices in state X between 1986 and 1990. We use the prior Census for years ending in the numeral 5 (for example, the 1980 Census for 1985 house prices).

Figure 4 depicts housing costs and unemployment rates by state and cohort. The graphs show that young people in the 1997 cohort face, on average, higher housing costs than do young people in the 1979 cohort (darker shades correspond to higher housing costs). Unemployment rates are also higher, on average, for the 1997 cohort, although the difference is not as striking. This variation in economic conditions across cohorts is due, at least in part, to the fact that the respondents in the two cohorts enter young adulthood at different points in the business and housing cycles. Figure 5 depicts variation in local economic conditions for the two cohorts over time (by state and CBSA).[16] Note that respondents in the 1979 cohort are 23 to 33 years old between 1980 and 1996, and members of the 1997 cohort are 23 to 33 between 2003 and 2013. The graphs show that individuals in the 1997 cohort experience rising housing costs followed by high unemployment rates, whereas individuals in the 1979 cohort experience elevated unemployment rates but mostly stagnant housing costs.

Overall, the data in Figures 4 and 5 show substantial geographical variation in housing costs and unemployment rates both within and across cohorts—location-based differences in economic conditions that likely influence young adults' co-residence decisions.

[16] We report results for a sample of respondents living in large CBSAs later in this paper.

3 The Role of Economic Conditions on LWP

In this section, we investigate who is LWP, both within and across cohorts, using a linear probability model (OLS). This approach allows us to analyze patterns of household formation conditional on age, education, employment, economic conditions, and other factors that are likely to affect young adults' parental co-residence decisions. Our baseline regressions include respondents who are 23 to 33 years old—an age range that we can most easily compare across the cohorts and also one that includes the ages when young adults typically form their own households.

The dependent variable in our main empirical specification is an indicator that takes a value of 1 if the respondent is LWP in a given year and is 0 otherwise. The main controls are the respondent's age, which we allow to enter nonlinearly by including dummy variables for each age in our sample, and various demographic characteristics, including race, region of residence, parental education, gender, whether the respondent is enrolled in school, whether the respondent has completed college, and whether he/she grew up in an urban or rural area as measured in the first interview.[17] Our baseline specifications also include state-level economic data to capture economic conditions (when respondents are a given age) that might influence household formation. In particular, respondents are probably more likely to be LWP when employment prospects are limited and/or housing costs are elevated. For robustness, we also consider specifications that control for economic conditions at a more disaggregated (CBSA) level.

3.1 Pooled Cohort Analysis

Table 1 summarizes the results from regressions that pool respondents from the two cohorts—an approach that allows us to examine whether there is a so-called cohort (or

[17] To maximize the number of observations, we include dummy variable indicators for missing values in the set of regressors listed above, as needed.

time) effect on household formation after controlling for observable demographic and economic factors. For completeness, we include coefficient estimates for nearly all our control variables in Table 1, but in subsequent tables we report only the effects of economic conditions—our main variables of interest—and a few relevant additional controls. When we condition the LWP estimates on age only, column (1), we obtain an average gap of 3.9 percentage points across the two cohorts (the age effects themselves are not shown); that is, young adults in the 1997 cohort are 3.9 percentage points more likely (conditional on age) to be LWP than are members of the 1979 cohort—an effect that is precisely estimated and is consistent with our earlier graphical evidence.[18] The estimated gap in LWP between the two cohorts is reduced only slightly when we add additional demographic controls, column (2), even though the demographic effects are consistent with what we would expect and in many cases are precisely estimated. Female respondents are, on average, less likely than male respondents to be LWP, and individuals overall are less likely to be LWP once they finish college. Respondents with more-educated fathers, a characteristic that may partially proxy for family wealth, are also less likely to be LWP. Hispanics and blacks have a greater likelihood of LWP, as do respondents living in the Northeast and those who grew up in urban locations.

Column (3) in Table 1 controls for the state-level unemployment rate in addition to controlling for the demographics. A 1 percentage point higher state-level unemployment rate leads to a 0.6 percent greater likelihood that respondents in that state are LWP, suggesting that the impact of business-cycle conditions on whether young adults are LWP is not large. The average annual unemployment rate across states in our pooled sample is 6.6 percent, with a standard deviation of about 2 percentage points. A 2 percentage point change would increase the likelihood of LWP by 1.2 percent—an impact that is about one-third the size of the likelihood that a respondent residing in an urban

[18]Robust standard errors are clustered at the individual level. Clustering at the state level yields nearly identical results.

area is LWP. Consistent with the relatively small impact of business-cycle conditions on the likelihood that young adults are LWP, controlling for differences in state-level business-cycle conditions explains only 0.4 percentage points of the remaining average (3.7 percentage point) gap in LWP between the two cohorts.

Columns (4) through (7) include a measure of housing costs (median home values relative to the median income of the young adults) to examine the role of housing costs in explaining differences in LWP across cohorts. This measure has been standardized to have a mean of 0 and a standard deviation of 1 for ease of discussion. We measure income of the young adults two different ways using data from the CPS: (1) as *household* income for CPS households with heads ages 20 to 30, column (4), and (2) as *individual* income of CPS respondents ages 20 to 30, columns (5) through (7). Using individual income for young adults may be preferable, because the household-income measure considers only young respondents who are already living independently. We present both measures for completeness.

Not surprisingly, the results show that higher housing costs relative to income increase the likelihood of LWP. One-standard-deviation-higher housing costs increase the probability of LWP from 2.7 to 3.4 percentage points, depending on the income measure and the inclusion of additional controls. In our sample, one standard deviation in housing costs is roughly 50 percent of the mean and is equivalent to, for example, moving in 2002 from Michigan to Massachusetts, where housing costs were relatively higher. The effect of housing costs is almost as large as the effect of having a college-educated father. More important, including housing costs helps explain a good portion of the remaining difference in LWP across cohorts—the gap is reduced by more than half relative to column (3), where we control only for demographics and state-level unemployment rates. Overall, we can explain about 70 percent of the original LWP gap between cohorts when we include all the demographic and economic controls in columns (4) and (5). The

housing-cost measure that uses individual income performs marginally better in this respect, and it will be our baseline housing-cost measure going forward. In sum, controlling for economic conditions—especially housing costs—substantially, but not completely, reduces the unexplained differences in average household-formation rates across the NLSY cohorts.

The estimates in columns (6) and (7) incorporate additional controls to see if they help explain the remaining gap in LWP. In column (6) we control for whether the respondent is employed, and for his/her NLSY derived "intelligence score."[19] Intelligence scores and current employment are negatively correlated with LWP, because gainfully employed and/or particularly smart young adults are more likely to have the means to live on their own.[20] In column (7) we also control for respondents' own income, which also is negatively correlated with LWP. Including this income measure predictably knocks out the "employed" effect, but including these additional controls does little to explain the remaining average LWP gap across cohorts. Table A.3 in the Appendix repeats the estimates in Table 1, but it uses a probit model instead of OLS. Our findings are essentially unchanged—indeed, the estimated marginal effects from the probit specifications are not statistically different from our baseline estimates.

[19]Respondents in both cohorts are asked questions that allow the survey staff to derive a so-called intelligence score, on a scale of 0 to 100, for him/her. The average score is 49.5 for the NLSY79 cohort and 51 for the NLSY97 cohort, consistent with the Flynn effect (increasing IQ scores over time). The intelligence measure for the 1979 cohort is based on an Armed Forces Qualification Test (AFQT), which measures four areas of intelligence: arithmetic reasoning, mathematics knowledge, paragraph comprehension, and word knowledge. Participants in the NLSY97 survey were given a computer adaptive form of the Armed Services Vocational Aptitude Battery Test—a test similar to the AFQT test. It also has four parts: mathematical knowledge, arithmetic reasoning, word knowledge, and paragraph comprehension. All the respondents in each cohort were eligible for the test, but some respondents chose not to participate. Individuals with missing information regarding the test in either cohort are assigned the average intelligence score for that cohort and flagged with a dummy variable in the regressions, indicating missing data. Excluding these individuals from the regressions does not affect the results.

[20]We include intelligence scores as an additional control because labor income at young ages is likely not a complete measure of an individual's future earning potential.

3.2 Robustness

Alternative Samples and Controls

Table 2 presents a series of results that test the robustness of our main findings. Columns (1) and (2) consider the sample of respondents for whom we have relevant CBSA-level information and examine whether we can explain more of the average LWP gap across cohorts using data on economic conditions at a more local level. In particular, some states are large and contain varied labor and housing markets that may not be characterized accurately by average state-level data. For instance, the labor and housing markets in New York City are quite different from the labor and housing markets in upstate New York cities such as Rochester and Buffalo. This robustness analysis focuses on respondents living in large CBSAs, because CPS data, from which we obtain our measures of young adults' income, are noisy at the CBSA level—especially for smaller metropolitan locations.[21] As a result, the number of observations in columns (1) and (2) of Table 2 is much lower than in our baseline results in Table 1. Also, note that when we focus on large CBSAs—column (1)—the gap between the cohorts in the average share of respondents who are LWP is larger than in our baseline sample (8.3 percentage points vs. 3.9 percentage points). This result is consistent with our previous finding that growing up in an urban area makes young people more likely to be LWP. Adding CBSA-level economic controls—column (2)—helps explain roughly 70 percent of the LWP gap—a bit more than what we achieve (67 percent) when we add state-level economic controls to our larger, baseline sample. Because we cannot explain much more of the LWP gap with CBSA-level controls, the (state-level) setup in Table 1 will remain our baseline specification.

[21]Small cities have limited respondents in the CPS. The large CBSA-based cities and metropolitan areas we include are: Atlanta, Baltimore, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Dallas-Fort Worth, Denver, Detroit, Hartford, Houston, Indianapolis, Las Vegas, Los Angeles, Miami-Ft.Lauderdale, Minneapolis-St.Paul, New York City, Philadelphia, Phoenix, Portland (OR), San Francisco-Oakland, San Jose, Seattle, and Washington, DC.

Column (3) shows estimates where we restrict the sample to respondents whose oldest parent is younger than 65 years old. A potential concern is that some respondents may be LWP not by choice, but because their parents are older and require living assistance. The need for care is likely lower for younger parents, and thus the respondents are more likely to be living with their parents as dependents rather than caregivers.[22] The results are very similar to our baseline findings with this sample restriction, suggesting that respondents living at home to care for their older parents, to the extent it occurs in our sample, has little effect on the results. The estimates in column (4) add interaction terms between state-level economic conditions and indicators for different age groups within our sample.[23] This approach tests whether the relationship between economic conditions and LWP is stronger for younger sample members who are likely less established in their careers and have fewer resources to fall back on when the economy falters or housing costs rise. Although the estimated interaction effects are not large, they are all negative and increase monotonically (in absolute value). This finding suggests that economic conditions have a somewhat greater effect on younger respondents' decisions to live at home than on those of the older, more established respondents. Still, the inclusion of these additional controls does not affect the remaining average LWP gap between cohorts.

In addition, column (5) shows estimates that use an alternative housing-cost measure based on rental costs relative to income instead of median home values.[24] With this alternative rent-based housing-cost measure, we can explain less of the gap between the two cohorts. Our interpretation of this result is that if young adults aspire to become homeowners, the cost of owning property rather than renting may better represent the

[22]The NLSY data do not identify whether the youth or his/her parent is the head of the household.

[23]The excluded category is respondents who are 23 to 25 years old.

[24]Our rent data come from the Department of Housing and Urban Development (HUD) and are based on the gross rent estimates HUD primarily uses to determine payment standard amounts for the Housing Choice Voucher program. In particular, HUD annually estimates fair market rents for 530 metropolitan areas and 2,045 non-metropolitan county areas. The data available to us start in 1984, and thus the sample for this rent-based analysis is smaller than our baseline sample.

financial constraints on their ability or desire to live independently.

Another possible concern with our results is that the two cohorts are not homogeneous enough to compare due to the broader age range of respondents in the NLSY79. Columns (7) through (9) show estimates where we create a more homogenous sample across cohorts by excluding respondents in the NLSY79 who were older than 18 in 1979. The results with this age restriction are qualitatively and quantitatively very similar to our baseline findings. After including controls for economic conditions, we can explain a touch more of the average LWP gap between cohorts with this more-age-homogeneous sample, but the overall difference in LWP over time persists.

Overall, our results appear robust to different analysis samples and additional controls. Even with these alternative approaches, however, we cannot fully explain the higher average rate of LWP for members of the NLSY97.

Alternative Sources of Variation in Local Economic Conditions

Two potential sources of variation—cross-sectional and intertemporal—could explain the correlation between economic conditions and the likelihood that a young adult is LWP. Cross-sectional variation comes from within-year variation in economic conditions based on respondents living in different locations; intertemporal variation arises from changes over time in housing costs and unemployment rates within a state. We isolate cross-sectional variation in economic conditions by subtracting the average yearly unemployment rate (across states) from the unemployment rate data, and the average yearly housing costs from the housing cost data. Similarly, if we subtract average economic conditions in a given state from our economic-conditions variables we are left primarily with temporal variation. Columns (3) and (4) of Table 3 report estimates incorporating these alternative measures of economic conditions. (Columns (1) and (2) in Table 3 repeat our baseline estimates from columns (1) and (7) of Table 1, respectively, for convenience.)

These results show that we can explain more of the average gap in LWP across cohorts by using temporal variation in economic conditions rather than cross-sectional variation. However, temporal variation alone is not sufficient to achieve the reduction in the LWP gap that we observe in our baseline results. Indeed, even though housing costs have risen over time, as shown in Figure 5, the variation in costs across states has also increased, and we need both features to help explain the LWP gap.

3.3 Returning Home

So far, our analysis has focused on the predictors of young adults' LWP (rather than leaving and living independently). However, Figure 2 shows that members of the 1997 cohort are also more likely than members of the 1979 cohort to move back in with their parents after living independently. We therefore investigate which factors influence whether a young adult returns home to live with his/her parents in the current period after living independently in the previous period(s).

Table 4 shows the relevant results. Columns (1) and (2) report estimates from a linear probability model for whether young adults return home after living independently. The analysis focuses on members of our baseline sample who are living independently in a given year, and it shows that members of the 1997 cohort (aged 23 to 33) are 1.5 percentage points more likely to return home after living away from their parents (column 1).[25] Not surprisingly, being employed and having higher levels of individual income reduce young adults' likelihood of returning home after they move out. Even after we control for local economic conditions (column 2), the difference in average return-to-home rates across cohorts declines somewhat (from 1.5 to 1.2 percentage points) but remains significant. Higher housing costs increase a young adult's likelihood of returning home. By comparison, local business-cycle conditions have little effect on whether young adults

[25]The differential rate with only age controls is 2.4 percent.

return home—suggesting that for predicting return rates, individual-specific income and employment status matter more than the local unemployment rate. Regardless, the difference in the return rates of the two cohorts persists even after controlling for demographic and economic conditions.

A linear probability model, however, may not be the best econometric approach for estimating the likelihood that young adults will return to live with their parents after living independently. In particular, a young adult can return home only if he/she previously moved out of his/her parents' home. A bivariate probit model with selection is potentially a more appropriate econometric approach for modeling this decision process. The actual likelihood function for the bivariate probit model with selection is described in the Appendix, but the key insight is that one must account for the fact that some respondents choose not to live independently and hence are not potential candidates for returning home.[26]

Columns (3) and (4) show estimates (marginal effects) from the bivariate probit model that predicts whether respondents return home after living independently.[27] Overall, the results are qualitatively similar to the linear probability model estimates even though the average gap in the return rates between cohorts is considerably larger with the bivariate probit estimates.[28] Lagged employment, income, and economic conditions matter for predicting whether a young adult returns home in the current period. However, as with the linear probability model estimates, adding economic conditions to the bivariate probit specification only slightly reduces the average gap in return rates across cohorts.

Regardless of the estimation approach, the results in Table 4 show that members of

[26]A related example is credit card default. An individual cannot default if he/she never applied for a credit card.

[27]Table A.4 in the Appendix shows the first-stage results for the bivariate probit. The first stage predicts whether young adults were living alone (1-LWP) in the period prior to their deciding about returning home.

[28]The results are very similar, and the average gap in return rates is closer in magnitude to the linear probability model estimates if we use a probit model for the "return home" regressions rather than the bivariate probit model (see Table A.3 in the Appendix).

the 1997 cohort are more likely to return home after living independently, even after we control for differences in economic conditions and young adults' individual resources. This finding is consistent with our previous evidence, and we conjecture that young adults and their parents may be more open to living together to save money in times of economic hardship.

3.4 Cohort-by-Cohort Analysis

Table 5 presents additional results *within* each cohort that examine the effect of respondents' income and economic conditions on LWP or returning home after living alone. A full set of results including individual characteristics and other demographic controls is available in the Appendix (Table A.5). For this analysis, we pool all available observations on the respondents within a cohort, but we analyze the cohorts separately. With this approach we can determine whether the effect of a demographic or economic factor on respondents' likelihood of LWP (or returning home) has changed substantially over time. For example, we can test whether the effect of housing costs on the likelihood of LWP is larger, or smaller (or the same) for the 1997 cohort than for the 1979 cohort. Without loss of generality, we report results based on our baseline specification with the full set of controls (Table 1, column 7). The first column in Table 5 shows results for the 1979 cohort, and the second column presents results for the 1997 cohort. The third column denotes whether the coefficient estimates are statically different across the two cohorts.[29]

The results in Table 5 show that economic conditions have a somewhat greater effect in the 1997 cohort than in the 1979 cohort in determining whether young adults are LWP. This difference is statistically significant (at the 1 percent level) for the unemployment

[29] As in Table 1, the regressions reported in Table 5 include dummy variables for the age of the respondent even though the coefficient estimates are not shown.

rate, but not for housing costs (p-value of 0.22). (For ease of comparison, housing costs have been standardized across the pooled sample of households to have a mean of 0 and standard deviation of 1.) Respondents' income also has a statistically different effect on the likelihood of LWP across the two cohorts. Young adults with higher (personal) income in the 1997 cohort are less likely to be LWP than their counterparts in the 1979 cohort, suggesting that personal resources have become more important recently in determining living arrangements. Overall, these results suggest that individual resources and economic conditions have played greater roles recently in determining whether a young adult is LWP. Young adults are more likely to live at home when their financial situation is weaker, housing costs are higher, or business-cycle conditions (as measured by the unemployment rate) deteriorate.

In addition, the effect of demographic factors on the probability that someone is LWP is quite similar across the two cohorts, suggesting shifts in the predictors of household formation over time based on individual characteristics have been limited (see Table A.5). Gender and race are two effects that are statistically different over time. Whereas females in general are less likely than males to LWP, females in the 1997 cohort are somewhat more likely than females in the 1979 cohort to LWP. In addition, African Americans are more likely to be LWP overall, but African Americans in the 1997 cohort are less likely than those in the 1979 cohort to be LWP.[30]

3.5 The Role of Student Debt

We also examine the role of student debt in explaining the differential LWP and return-to-home rates between the NLSY79 and NLSY97 cohorts. While both cohorts were asked questions about the use of loans to finance education, as well as the loan amount(s) when

[30]The coefficient for being enrolled in school is larger for the NLSY79 cohort (and statistically different from the NLSY97 coefficient), which likely reflects the wording change in the household roster questions between the cohorts.

applicable, the actual questions are not necessarily comparable across the two cohorts. In particular, NLSY79 participants were asked about total loans, whereas the NLSY97 separates loans given by family and friends, from loans issued by the government and other institutions. Also, the NLSY97 reports loan amounts for respondents at ages 25 and 30, whereas loan amounts in the NLSY79 are mostly collected in the year the loan was obtained (we sum the loan amount for all loans obtained by each respondent). Everything else being equal, these data differences would mean that loan amounts for the NLSY79 cohort could be biased upward relative to the NLSY97 cohort if 1979 cohort members repaid a significant amount of their loans by age 25—something that is relatively unlikely. Still, these differences should be kept in mind when interpreting the results in Table 6.[31]

The results in Table 6 are split between predicting LWP and predicting return-to-home rates. The first column in each set of estimates reports results from pooling respondents across cohorts, while the second and third columns consider the effect of student debt within cohorts. (The return-home regressions are estimated using the bivariate probit approach.) Overall, differences in student loan burdens do not seem to explain any of the remaining gap across cohorts in the rate of LWP or returning home. Indeed, the estimated cohort effects in column (1) and column (4) are very similar to the equivalent estimates in column (7) of Table 1 and column (3) of Table 4, respectively.[32] The estimated effects for the other controls are also quite similar to what we reported earlier.

The estimated coefficient for student debt itself is very small and not statistically different from 0 in the LWP regressions. In the return-home regressions, the estimated

[31]In the 1979 (1997) cohort 27.7 (34.5) percent of respondents had a loan (from an institution or from family) for education purposes at one point in time. By comparison, 43 (55) percent of NLSY79 (NLSY97) respondents report more than a high school education. Conditional on having a loan, the mean (median) loan amount (in 2009 dollars) is $16,000 ($8,250) for the NLSY79 cohort and $21,550 ($15,000) for the NLSY97 cohort.

[32]In the regressions, we use loans from the government and other institutions at age 25 as our measure of student debt for the NLSY97 cohort. Using alternative definitions for student debt, such as the sum of family and government/institutional debt and/or interpolations of student debt to other ages based on the data available at age 25 and age 30, do not change the finding that student debt does not explain any remaining differences in the rate of respondents who are LWP or returning home over time.

coefficient for student debt is significant in our pooled regression and in our separate estimates for the 1979 cohort, but it is very small: A $10,000 increase in student debt increases the probability of returning home by 0.1 percentage points. However, the estimated student debt coefficient is not significant for the NLSY97 cohort (column 6)—a finding consistent with the evidence in Houle and Warner (2017), who use the NLSY97 to study the impact of student debt on returning home. Including a dummy variable for whether a respondent has student debt, instead of the quantity of debt, does not change these findings (results not reported for brevity).

3.6 Counterfactuals: Changing Economic Conditions or Changing Sensitivity to Economic Conditions

The observation that economic conditions explain much of the gap between the shares of 1997 and 1979 cohort members who are LWP, could be interpreted two different ways. First, housing (or rental) costs could be higher today (or good-paying jobs more difficult to obtain) than in the past, as implied by the analysis of Matsudaira (2016).[33] Alternatively, young adults could face job situations and housing costs similar to those in the past, but their parental co-residence decisions could be more sensitive to a given set of economic conditions.

The results in Table 5 show that economic conditions have a greater effect for the 1997 cohort than for the 1979 cohort on whether a respondent is living at home. To test whether the gap in LWP over time is explained better by this shift in sensitivity to economic conditions than by the change in the economic conditions themselves, we conduct a series of counterfactual exercises. Specifically, we apply the coefficient estimates from the cohort-by-cohort regressions for the 1997 cohort to the data realizations for the 1979 cohort, and vice versa.

[33] Figure 7 in the Appendix depicts the adverse effect of the Great Recession on young adults' income.

Figure 6 shows the results from this counterfactual exercise. The top panel depicts the case in which we apply the coefficients from the 1997 cohort estimates to the 1979 cohort's data and economic conditions, and the bottom panel applies the estimated coefficients from the 1979 cohort to the data and economic conditions of the 1997 cohort members. The results show that the gap between the cohorts is due in large part to young adults' becoming more sensitive over time to economic conditions when deciding whether to live independently or with their parents. Demographics (counterfactual 1) and demographics plus individual controls (counterfactual 2) do little to explain the LWP gap between the two cohorts (bottom panel), but when we apply the 1997 cohort's estimated sensitivity to economic conditions and other factors to the 1979 cohort members and the economic conditions they faced, the LWP gap between the cohorts nearly disappears (top panel, counterfactual 3). In contrast, when we use the estimated coefficients from the 1979 cohort and apply them to the economic conditions faced by the 1997 cohort members, we close some, but not all, of the gap between the cohorts (dashed lines). These findings suggest that though the economic conditions faced by the 1997 cohort members as young adults may have been worse than the conditions that the 1979 cohort members faced at the same ages, and thus increased their likelihood of LWP, one must incorporate the changed sensitivity of LWP to economic conditions in the 1997 cohort to fully understand the change over time in parental co-residence rates.

We also present a traditional Blinder-Oaxaca decomposition (Blinder 1973; Oaxaca 1973) in Table 7 to further explore the role of changing conditions over time—versus changing sensitivity to those conditions—in explaining the greater share of young adults who are LWP in the NLSY97.[34] Changes in endowments across the two cohorts explain 74.2 to 86 percent of the differential rate of LWP, depending on the cohort used as the baseline case, and we achieve more explanatory power when using the 1997 cohort as

[34]The regressions for the Blinder-Oaxaca decomposition use the same controls as the specification in column (7) of Table 1.

the baseline. Local economic conditions alone explain 30.6 (with the NLSY79 as the baseline) to 48.1 percent (with the NLSY97 as the baseline) of the difference in LWP.

4 Discussion

The differing economic conditions that the members of the two NLSY cohorts faced as young adults can explain most, but not all, of the changes in the shares of respondents who were LWP over time or returned home. However, they do not tell us why young adults are more likely than they were in the past to be LWP when the economy is weak or housing costs are high. Danzinger and Rose (2007) present a collection of papers investigating the reasons behind the rise in parental co-residence by young adults—at least through the early 2000s. While the editors and authors of the papers do not reach any firm conclusions, they propose a number of possible reasons for increased co-residence over time that also relate to the increased sensitivity of LWP to economic conditions. These reasons fall into two main categories: financial and comfort, and they include young adults' maturity (personal and financial), parents' resources and their ability to financially assist their children, smaller family sizes, and greater parental attention.

Parents' capacity for supporting their children who are living independently when economic conditions are unfavorable (or housing costs are rising) may be reduced relative to the past, and/or young adults' resources to support living on their own may be lower. A lack of resources, coupled with higher housing costs, makes it more difficult to live alone. Indeed, the NLSY data show that young adults in the 1997 cohort had lower wealth at age 25 and at age 30 than did their counterparts in the 1979 cohort (see Figure 8). Fewer resources may be related to young adults' starting with unpaid internships or lower-paying jobs to get a "foot in the door" at a particular company, or in a particular industry. Young adults also have transitioned between jobs with greater frequency in

recent years, and early in their careers they have faced more employment and earnings instability, and, in some instances, a lack of consistent health insurance coverage. Levy (2007) refers to this instability among young adults as "financial immaturity," which affects their transition to adulthood. Job instability and its related financial instability contrast with situations in the past when workers spent their entire careers working for one company—a phenomenon referred to in Farber (2007) as being a "company man."

At the same time, for a given set of economic conditions, more-limited financial resources may be less of a problem for young adults than in the past, because it has become easier and more comfortable for them to live at home. For one, many families have fewer children and can invest more in each one (financially and emotionally), creating greater parental dependence and reducing the incentive to live independently (see Newman and Aptekar 2007). Also, living quarters likely are less cramped because the young adults have fewer siblings and their parents own larger homes—the average house size has grown larger over time—which additionally reduces the incentive to move out.

The increased comfort of living at home, combined with the different economic situations faced by young adults in the 1979 and 1997 cohorts, could also help explain the increased sensitivity of LWP to economic conditions. In particular, the economic downturn faced by members of the 1997 cohort (Great Recession) was more severe than the recession in the early 1980s. As a result, members of the 1997 cohort may have been more "scarred" by their economic experiences. This greater scarring could have increased the relative risk aversion of the 1997 cohort members. Also, having witnessed or experienced the sharp losses in wealth and house values during the financial crisis, these young adults may feel that, prior to living independently, they need to accumulate more assets than similar young adults did in the past. The timing of (an) economic downturn(s) relative to when young adults are starting out on their own may also matter. A recession could be more disruptive to a young adult's plans when he/she is beginning a career and living

independently than when he/she still lives at home or when he/she is older and more established. Many of these explanations are a bit speculative, but at the same time they are plausible given the trends in the data.

Changes in parenting styles over time may also have contributed to an increased comfort of living at home. Young adults may stay longer at home, or return home in times of economic need, if their parents are more supportive or understanding. While we do not have information on parenting styles for the NLSY79, we do have such data in the NLSY97. We know whether parents are uninvolved, permissive, authoritative, or authoritarian—as defined by the psychological literature. Permissive parents do not impose many rules or standards, and are typically warm and indulgent. Uninvolved parents fail to set limits on behavior or expectations, and offer little affection or sensitively to their children's needs. In contrast, authoritarian parents tend to demand blind obedience from their children. Authoritative parents are somewhere in between, setting rules and high standards while being nurturing and responsive to their children's needs.[35]

Our findings, summarized in Table 8, indicate that parenting style matters.[36] Children with authoritarian parents, or, to a lesser extent uninvolved parents, are less likely to be LWP than children with permissive parents.[37] Children of authoritarian parents are about 5 percent less likely to live at home than are children of permissive or authoritative parents—an effect that is considerably larger than the effect of a one-standard-deviation

[35]See Baumrind (1966). For a primer and references see also http://www.parentingscience.com/authoritative-parenting-style.html.

[36]In our 1997 sample, 2.6 percent of parents are classified as uninvolved, 17.5 percent as permissive, 66.3 as authoritative, and 13.6 percent as authoritarian. In its first three waves, the NLSY97 collected information on parenting styles for mothers and fathers separately. We construct two measures of parenting style. The first measure uses the mothers' information for 1997 if available, and the fathers' information if not. With this definitional approach, 10.6 of parents are uninvolved, 35.7 percent are permissive, 41.4 are authoritative, and 12.6 percent are authoritarian. The second measure is constructed as follows. First, we order parenting styles from fewer rules to more rules (uninvolved, permissive, authoritative, and authoritarian) and find the greatest value over the three years of data for each parent. Then, we take the maximum of the father's and mother's values.

[37]There is no statistical difference between the behavior of young adults' with authoritative parents and those with permissive parents.

increase in our housing-cost measure. Unfortunately, without parenting style data for the 1979 cohort, we cannot quantify the role of changing parenting styles in explaining the remaining LWP gap across cohorts. Still, our results suggest that comfort matters for determining whether young adults are LWP, and changes in parenting styles over time are potentially important for explaining the household-formation decisions of young adults and the increased sensitivity of LWP to economic conditions.

Danzinger and Rose (2007) note that, while difficult to quantify, changing social norms and attitudes may also play roles in the increased likelihood of parental co-residence. Indeed, Giuliano (2007) finds that cultural change helps explain the increase over time in parental co-residence among southern-European families. Changing societal attitudes toward LWP could also help explain some of the remaining average LWP gap between our two cohorts; that is, society may view young adults' living at home more favorably now than in the past, or it may be more socially acceptable for young adults to be LWP if their peers in a given location have similar living arrangements. To test this idea, we control for the share of young adults who are LWP in the respondent's state of residence (lagged two years) as a proxy for local attitudes toward LWP.[38] Our cultural-attitudes proxy is positively correlated with the likelihood that a young adult is LWP—Table 2, column (6)—and further reduces the average gap in LWP rates between cohorts, suggesting that a more favorable view in recent years of LWP helps explain the reduced rate of household formation; that is, young adults are more likely to be LWP when there is less societal stigma associated with such behavior. Even though our proxy variable is potentially endogenous—states with higher shares of young adults who are LWP could,

[38]We focus on the share of 23 to 33 year-old individuals who are LWP in a given state to be consistent with the age restriction in our baseline analysis. The state LWP-share data are determined using the annual March CPS. In particular, we calculate the share of households in a state and year in which at least one household member is 23 to 33 years old and resides with one or more individuals identified as a parent, relative to the total number of households in the state with a household member aged 23 to 33. Our approach to identifying young adults who are LWP follows the methodology in Bitler and Hoynes (2015). We count households as LWP if the parent is the household head and the adult child is a household member or if the adult child is the head and a parent is listed as a household member.

for instance, have social programs or other benefits that make LWP appealing—this finding is consistent with the results of Giuliano (2007).[39]

Regardless of the exact reason for the increased sensitivity of LWP to economic conditions or the average gap in LWP that we observe over time in our data, it is important to consider the implications of rising rates of LWP. Living at home longer likely means delaying marriage, childbearing, and other events associated with living independently and eventually forming one's own larger household. Indeed, as Figure A.1 shows, marriage rates have trended down since the 1970s especially for younger individuals. In addition, Danzinger and Rose (2007) highlight that the share of women who are childless at age 35 has increased substantially for recent birth cohorts.

Of course, LWP, maritial status, and having children are all interrelated, and it is not clear which way the causality runs. It is difficult to disentangle whether, for instance, a young adult is LWP because he/she is not married or whether he/she is not married because of his/her living situation. Some would argue that young adults' desire to wait longer to marry reduces their impetus for moving away from home. Similarly, being childless makes it easier to be LWP (ignoring childcare assistance needs). Nevertheless, we can close the remaining LWP gap across our cohorts if we include indicators for marital status and having children (not shown). Given the potential endogeneity of these additional controls, however, it is not clear that including them is a fair test of our ability to eliminate the average gap in LWP across cohorts.

An increase in the number of young adults who delay leaving home has important consequences for the broader economy as well. Less household formation at younger ages leads to lower demand for housing, which impacts residential investment and overall economic output. The composition of residential investment is also affected, as discussed in Rappaport (2015). The author notes how even if children move out of their parents'

[39] Also, local economic conditions can be quite persistent, but lagging the LWP share for as long as five years delivers similar results.

home, by delaying marriage and childbearing, they alter the type of housing units demanded. Whereas families tend to live in single-family structures, young adults living independently tend to live with roommates, which shifts the composition of demand from single-family toward multi-family units. These shifts matter not only for builders but also for the broader economy, given the differences in value added from multi-family versus single-family units.

Overall, there are a number of possible explanations for the increase in parental co-residence over time. Additional data and research are needed to better quantify the causes of changing parental co-residence rates and to better understand the consequences of these shifts on marriage, fertility, and other societal and economic outcomes.

5 Conclusion

In this paper, we present evidence documenting the demographic and economic factors that influence the household-formation behavior of young adults. We find that the factors one expects would influence whether young adults live with their parents—business-cycle conditions, housing costs, and the young adult's age—do indeed play a role. Whether an individual is married or enrolled in school also affects the likelihood that he/she lives independently, although these latter effects are highly endogenous.

We further show that an individual's race noticeably impacts the likelihood that he/she is LWP within cohorts and especially over time. These results could be driven by cultural differences, proxied by race, in attitudes toward young adults who are LWP. For example, within certain communities, the choice of a young adult to live at home after finishing high school or college may be widely accepted, whereas in other communities this preference may be viewed less favorably. Using a proxy variable approach, we show that cultural attitudes do matter for explaining the likelihood that young adults are LWP over

time. Still, consideration of the role of cultural attitudes toward LWP warrants further research using better data.

Changing economic conditions can explain a large part of the increase in LWP (and the decline in household formation) between the early 1980s and the mid- to late 2000s. However, while the housing bubble and ensuing Great Recession had a big effect on the economic conditions faced by young adults, we show that a key factor in the decline in household formation is an increase in the sensitivity of young adults' co-residence decisions to economic conditions relative to the past.

To a certain degree, young adults seem inherently more likely to live with parents now, potentially due to shifting social norms. Smaller family sizes, larger homes, or changes in parenting styles also may make it easier for young adults to cohabitate comfortably with their parents relative to the past. Another possibility, which should be considered in future work, is that parents themselves are more strapped for cash than in the past and cannot provide the monetary transfers that would allow their children to continue living independently during times of hardship, so children return home instead. Overall, if parental cohabitation has become more socially acceptable or more convenient, household formation may not increase as rapidly going forward as economic fundamentals alone would predict.

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Table 1: Living with Parents. Pooled Cohorts

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1997 Cohort[1]	0.039***	0.037***	0.033***	0.014***	0.012**	0.012**	0.013***
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Female		–0.078***	–0.078***	–0.078***	–0.078***	–0.082***	–0.100***
		(0.004)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
Hispanic		0.083***	0.082***	0.077***	0.075***	0.060***	0.059***
		(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.006)
Black		0.106***	0.105***	0.102***	0.101***	0.078***	0.073***
		(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Northeast		0.068***	0.072***	0.042***	0.036***	0.037***	0.040***
		(0.007)	(0.007)	(0.008)	(0.008)	(0.008)	(0.008)
South		0.008	0.010*	0.006	0.004	0.002	0.004
		(0.006)	(0.005)	(0.006)	(0.006)	(0.006)	(0.005)
West		–0.003	–0.005	–0.050***	–0.055***	–0.056***	–0.055***
		(0.006)	(0.006)	(0.008)	(0.007)	(0.007)	(0.007)
Urban		0.038***	0.037***	0.035***	0.034***	0.036***	0.038***
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Rural/Urban Unknown		–0.013	–0.013	–0.009	–0.007	–0.004	–0.003
		(0.012)	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Enrolled in School		0.031***	0.030***	0.030***	0.030***	0.037***	0.030***
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Has Finished College		–0.024***	–0.024***	–0.026***	–0.026***	–0.001	0.012**
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Mom College		–0.005	–0.005	–0.007	–0.007	0.002	0.003
		(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
Dad College		–0.032***	–0.031***	–0.032***	–0.031***	–0.020***	–0.019***
		(0.006)	(0.006)	(0.006)	(0.006)	(0.006)	(0.006)
Unemployment Rate (state)			0.006***	0.007***	0.006***	0.005***	0.005***
			(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Housing Costs (HP/Y, state)				0.028***	0.032***	0.032***	0.035***
				(0.003)	(0.003)	(0.003)	(0.003)
Employed						–0.032***	–0.000
						(0.004)	(0.004)
Intelligence Score						–0.028***	–0.018***
						(0.003)	(0.003)
Respondent Income/10,000							–0.027***
							(0.001)
Constant	0.341***	0.298***	0.304***	0.331***	0.335***	0.360***	0.325***
	(0.005)	(0.007)	(0.007)	(0.008)	(0.008)	(0.009)	(0.008)
Observations	149073	149073	149073	149073	149073	149073	149073
Adj. R-squared.	0.03	0.07	0.07	0.07	0.07	0.08	0.08

Notes: [1] Indicator variable that takes a value of 1 if the respondent is in the 1997 cohort and 0 if the respondent is in the 1979 cohort. A linear probability model is used in the estimations. The dependent variable, LWP, is 1 if the respondent reports a parent in the house he/she lives in during the interview. Additional controls include a full set of age dummies from age 24 to age 33, with age 23 as the base category, and dummies for missing income and intelligence scores. Housing costs are measured as the median home value in the state divided by a measure of income of the young also at the state level. In column (4), income of the young is median household income of households headed by 20- to 30-year-old individuals from the CPS. In columns (5) through (7), income of the young is median individual income of individuals 20 to 30 from the CPS. Housing costs have been standardized to have a mean of 0 and a standard deviation of 1. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

Table 2: Living with Parents. Pooled Cohorts. Robustness

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	CBSA Sample		Parent< 65	Baseline			No Old-79		
1997 Cohort[1]	0.083***	0.025**	0.013**	0.014***	0.025***	0.007	0.037***	0.010*	0.011**
	(0.010)	(0.011)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)	(0.006)	(0.006)
Unemployment Rate		0.012***	0.004***	0.009***	0.001	0.004***		0.007***	0.010***
		(0.002)	(0.001)	(0.002)	(0.001)	(0.001)		(0.001)	(0.002)
Housing Costs		0.043***	0.034***	0.041***	0.029***	0.026***		0.037***	0.043***
		(0.005)	(0.003)	(0.003)	(0.003)	(0.003)		(0.004)	(0.004)
26–29 × Unemployment Rate				–0.003**					–0.003
				(0.002)					(0.002)
30–33 × Unemployment Rate				–0.005**					–0.006**
				(0.002)					(0.002)
26–29 × Housing Costs				–0.005*					–0.006*
				(0.003)					(0.003)
30–33 × Housing Costs				–0.016***					–0.018***
				(0.004)					(0.004)
L2.Culture Measure (state)						0.020***			
						(0.003)			
Employed	–0.010	–0.006	–0.000	–0.000	–0.003	–0.001	–0.001	0.001	0.002
	(0.008)	(0.008)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)	(0.005)	(0.005)
Respondent Income/10,000	–0.022***	–0.023***	–0.026***	–0.027***	–0.026***	–0.027***	–0.027***	–0.028***	–0.028***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	34910	34910	115102	149073	103816	149073	116091	116091	116091
Adj. R-squared.	0.10	0.11	0.08	0.08	0.08	0.09	0.08	0.08	0.08
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Local Economic Controls	No	CBSA	State	State	State	State	No	State	State

Notes: [1] Indicator variable that takes a value of 1 if the respondent is in the 1997 cohort and 0 if the respondent is in the 1979 cohort. A linear probability model is used in the estimations. The dependent variable, LWP, is 1 if the respondent reports a parent in the house he/she lives in during the interview. Additional controls as in column (7) of Table 1, including a full set of age dummies from age 24 to age 33, with age 23 as the base category. In all columns except (5), housing costs are measured as the median home value in the state divided by median individual income of individuals 20 to 30 from the CPS, and have been standardized to have a mean of 0 and a standard deviation of 1. In column (5), housing costs are calculated using fair market rent data for a two bedroom apartment in the county where there the respondent resides, relative to the income of the young. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01. Sample explanations: (1) CBSA: large cities; (2) Parent < 65: oldest parent younger than 65; (3) Baseline: full sample; (4) No Old-79: includes all NLSY97 respondents and NLSY79 respondents who were 18 or younger in 1979 to have more age-homogenous cohorts.

Table 3: Living with Parents. Cross-Sectional vs. Time Variation

	(1)	(2)	(3)	(4)
1997 Cohort[1]	0.039***	0.013***	0.042***	0.021***
	(0.005)	(0.005)	(0.005)	(0.006)
Unemployment Rate		0.005***		
		(0.001)		
Housing Costs		0.035***		
		(0.003)		
Unemployment minus Year Avg.			0.005***	
			(0.002)	
Housing Costs minus Year Avg.			0.035***	
			(0.003)	
Unemployment minus State Avg.				0.005***
				(0.001)
Housing Costs minus State Avg.				0.012***
				(0.003)
Observations	149073	149073	149073	149073
Adj. R-squared.	0.03	0.08	0.08	0.08
Individual Controls	No	Yes	Yes	Yes
State Fixed Effects	No	No	No	No
Time Fixed Effects	No	No	No	No

Notes: [1] Indicator variable that takes a value of 1 if the respondent is in the 1997 cohort and 0 if the respondent is in the 1979 cohort. A linear probability model is used in the estimations. The dependent variable, LWP, is 1 if the respondent reports a parent in the house he/she lives in during the interview. Individual controls as in column (7) of Table 1, including a full set of age dummies from age 24 to age 33, with age 23 as the base category. Housing costs are measured as the median home value in the state divided by median individual income of individuals 20 to 30 from the CPS. The housing cost measures have been standardized to have a mean of 0 and a standard deviation of 1. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

Table 4: Returning Home. Pooled Regressions

	(1)	(2)	(3)	(4)
	Linear Probability		Bivariate Probit	
1997 Cohort[1]	0.015***	0.012***	0.031***	0.029***
	(0.002)	(0.002)	(0.011)	(0.011)
L.Employed	–0.006***	–0.006***	–0.003	–0.003
	(0.002)	(0.002)	(0.002)	(0.002)
L.Respondent Income/10,000	–0.005***	–0.005***	–0.010**	–0.011*
	(0.000)	(0.000)	(0.004)	(0.006)
L.Unemployment Rate (state)		–0.000		–0.001**
		(0.000)		(0.001)
L.Housing Costs		0.005***		0.007
		(0.001)		(0.005)
Observations	89949	89949	89949	89949
Individual Controls	Yes	Yes	Yes	Yes

Notes: [1] Indicator variable that takes a value of 1 if the respondent is in the 1997 cohort and 0 if the respondent is in the 1979 cohort. These results are calculated using a linear probability model. The dependent variable, returning home, is 1 if the respondent reports a parent in the house he/she lives in during the interview, but no parent during the previous interview. Individual controls as in column (7) of Table 1 except lagged one period when time variant (e.g, employment, income). Housing costs are measured as the median home value in the state divided by the median income of 20- to 30-year-old individuals according to the CPS. The housing costs measure has been standardized to have a mean of 0 and a standard deviation of 1. Table reports marginal effects for the returning home equations. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

Table 5: Living with Parents by Cohort

	(1)	(2)	(3)
	NLSY79	NLSY97	Difference
Employed	–0.008	0.006	*
	(0.005)	(0.007)	
Respondent Income/10,000	–0.025***	–0.030***	***
	(0.001)	(0.002)	
Unemployment Rate	0.000	0.010***	***
	(0.001)	(0.001)	
Housing Costs	0.030***	0.038***	
	(0.005)	(0.004)	
Constant	0.338***	0.332***	
	(0.011)	(0.012)	
Observations	90939	58134	
Adj. R-squared.	0.09	0.07	

Notes: These results are calculated using a linear probability model. The dependent variable LWP is 1 if the respondent reports a parent in the house he/she lives in during the interview. Individual controls as in column (7) of Table 1. Housing costs are measured as the median home value in the state divided by the median income of 20- to 30-year-old individuals according to the CPS. We cannot reject the null that the age dummies (not reported) are the same. Housing costs have been standardized to have a mean of 0 and a standard deviation of 1 over the pooled sample of respondents from both cohorts. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

Table 6: The Role of Student Debt

	(1)	(2)	(3)	(4)	(5)	(6)
	Living With Parent			Returning Home (Bivariate Probit)		
	Pooled	NLSY79	NLSY97	Pooled	NLSY79	NLSY97
1997 Cohort[1]	0.013**			0.029**		
	(0.005)			(0.012)		
Student Loan Amount/10,000	–0.002	–0.001	–0.002	0.001*	0.001***	–0.003
	(0.001)	(0.002)	(0.002)	(0.001)	(0.000)	(0.003)
Unemployment Rate	0.005***	0.000	0.010***	–0.001**	0.000	–0.004**
	(0.001)	(0.001)	(0.001)	(0.001)	(0.000)	(0.002)
Housing Costs	0.035***	0.030***	0.038***	0.007	0.003**	0.042***
	(0.003)	(0.005)	(0.004)	(0.005)	(0.001)	(0.006)
Employed	–0.000	–0.008	0.006	–0.003	–0.001	0.004
	(0.004)	(0.005)	(0.007)	(0.002)	(0.002)	(0.010)
Respondent Income/10,000	–0.027***	–0.025***	–0.030***	–0.011*	–0.004***	–0.047***
	(0.001)	(0.001)	(0.002)	(0.006)	(0.001)	(0.004)
Observations	149073	90939	58134	89949	59829	30120
Individual Controls	Yes	Yes	Yes	Yes	Yes	Yes

Notes: [1] Indicator variable that takes a value of 1 if the respondent is in the 1997 cohort and 0 if the respondent is in the 1979 cohort. These results are calculated using a linear probability model. The dependent variable in columns (1) through (3), LWP, is 1 if the respondent reports a parent in the house he/she lives in during the interview. The dependent variable in columns (4) through (6), returning home, is 1 if the respondent reports a parent in the house he/she lives in during the interview, but no parent during the previous interview. Housing costs are measured as the median home value in the state divided by the median income of 20- to 30-year-old individuals according to the CPS. Housing costs have been standardized to have a mean of 0 and a standard deviation of 1. In columns (4) through (6), the unemployment rate, housing costs, and time varying individual controls are lagged to reflect economic conditions when the decision to return home was likely made. Individual controls as in column (7) of Table 1. Table reports marginal effects for returning home estimates. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

Table 7: Blinder-Oaxaca Decomposition

Mean Prediction for NLSY97: 0.253
Mean Prediction for NLSY79: 0.183
Raw Differential: 0.069

	NLSY79 coefficients	NLSY97 Coefficients	Average
Explained (Endowments):	0.051	0.059	0.055
Unexplained (Coefficents/Interactions):	0.018	0.010	0.014
Unexplained %:	25.8	14.0	19.9
Explained %:	74.2	86.0	80.1
Explained by Local Economics Conditions Alone %:	30.6	48.1	39.4

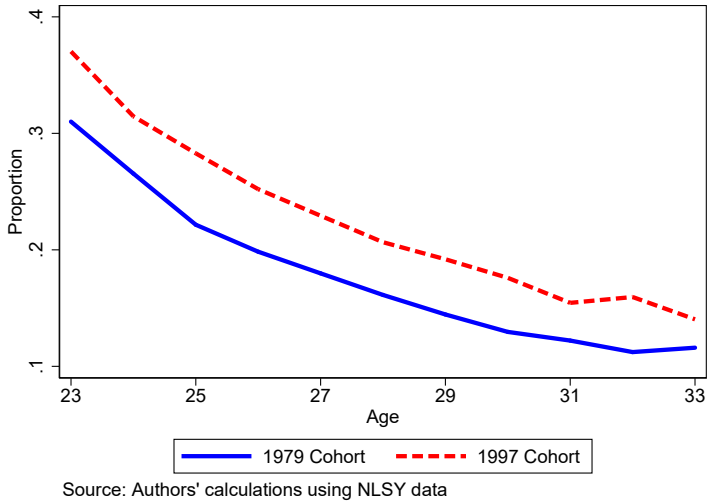
Notes: All controls as in column (7) of Table 1.

Table 8: The Effect of Parenting Style on LWP.
NLSY97 Cohort

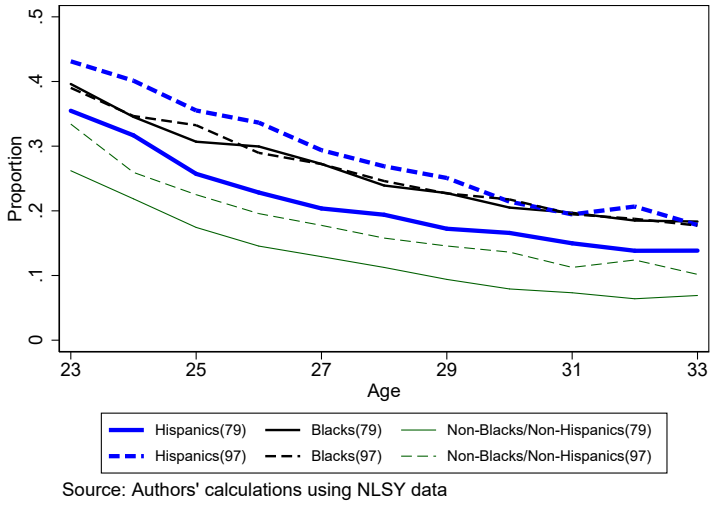
	(1)	(2)
	Measure 1	Measure 2
Uninvolved	–0.022*	–0.088***
	(0.012)	(0.021)
Permissive	Excluded	Excluded
	Category	Category
Authoritarian	–0.054***	–0.048***
	(0.011)	(0.012)
Authoritative	–0.009	0.009
	(0.008)	(0.010)
Unemployment Rate (state)	0.010***	0.010***
	(0.001)	(0.001)
Housing Costs (HP/Y, state)	0.038***	0.038***
	(0.004)	(0.004)
Employed	0.005	0.005
	(0.007)	(0.007)
Respondent Income/10,000	–0.030***	–0.031***
	(0.002)	(0.002)
Constant	0.345***	0.336***
	(0.013)	(0.014)
Observations	57279	57279
Adj. R-squared.	0.07	0.08
Individual Controls	Yes	Yes

Notes: These results are calculated using a linear probability model. The dependent variable LWP is 1 if the respondent reports a parent in the house he/she lives in during the interview. Measure 1 and Measure 2 refer to two alternative variables constructed to classify parenting style as described in the main text. Housing costs are measured as the median home value in the state divided by the median income of 20–30-year-old individuals according to the CPS. Housing costs have been standardized to have a mean of 0 and a standard deviation of 1. Individual controls as in column (7) of Table 1, including a full set of age dummies from age 24 to age 33, with age 23 as the base category. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

FIGURE 1: Living with Parents, Individuals 23–33



(a) All Respondents



(b) By Race

Figure 2: Two-Year Return Rates by Cohort

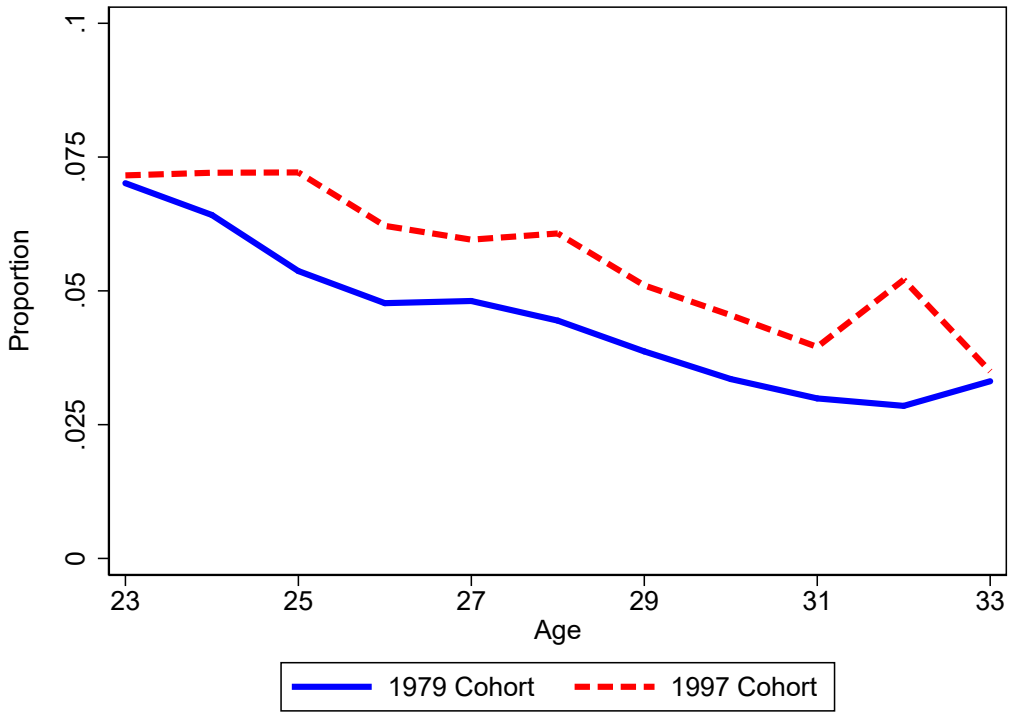
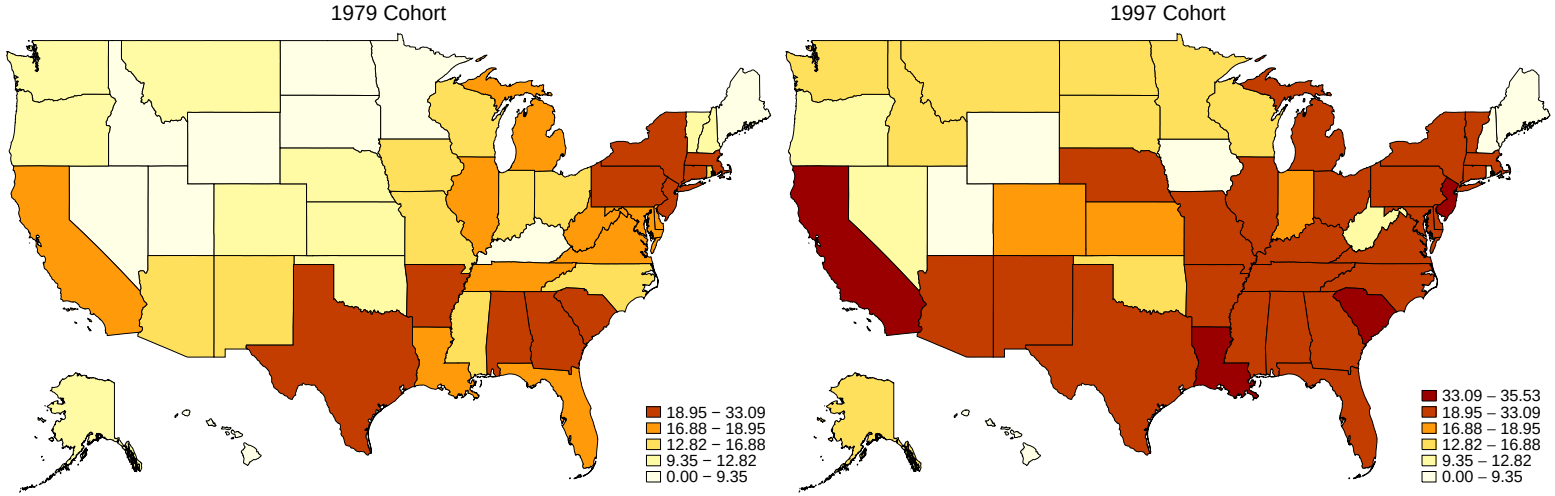
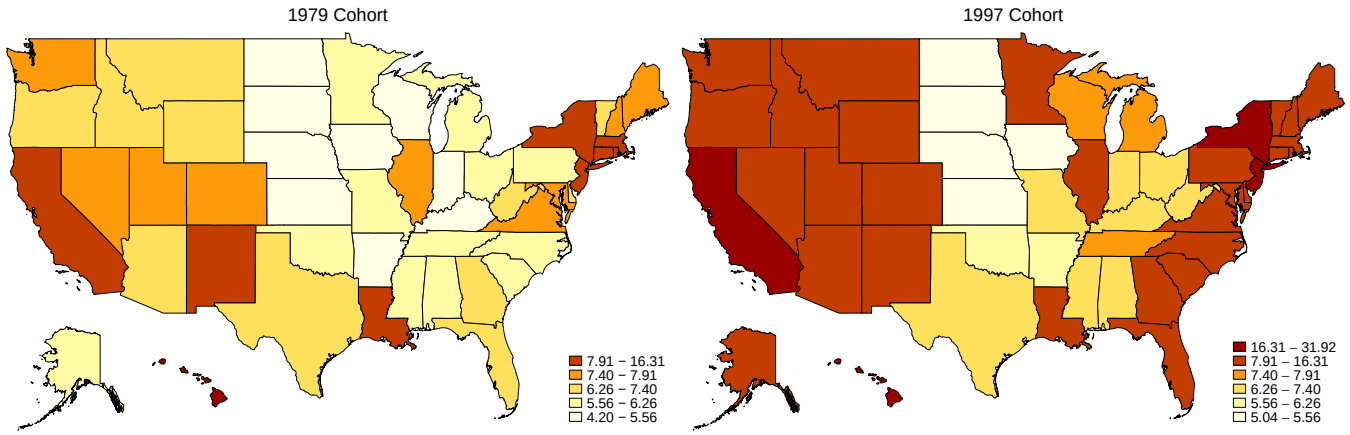


FIGURE 3: Living with Parents by State



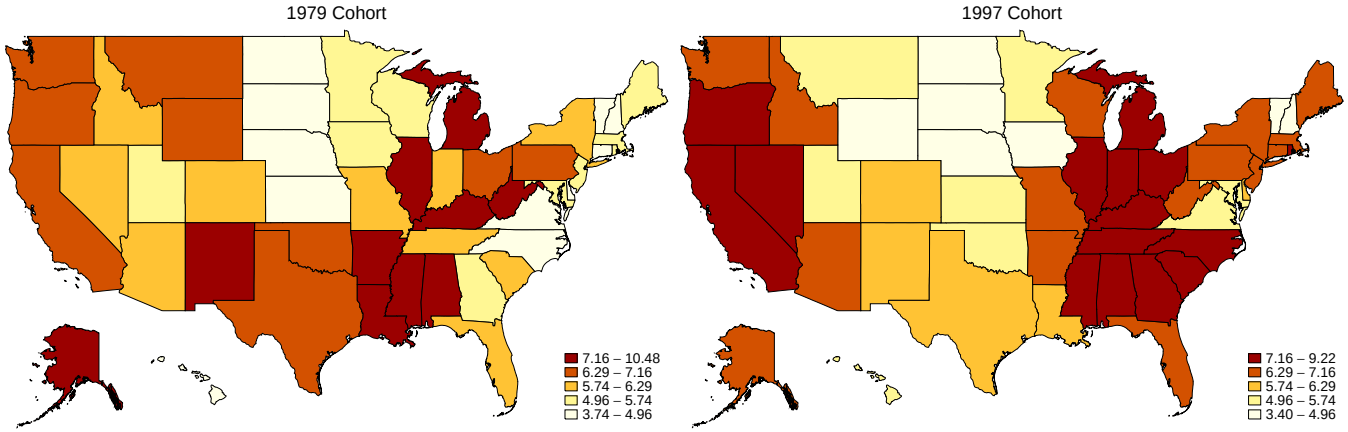
Source: Authors' calculations using NLSYdata.
Note: Average percentage of 23− to 33−year−old respondents living with parents.

FIGURE 4: Local Economic Conditions by State



Source: Authors' calculations using NLSYdata.
Note: Average of state−level house value to income ratios for 23− to 33−year−old respondents.

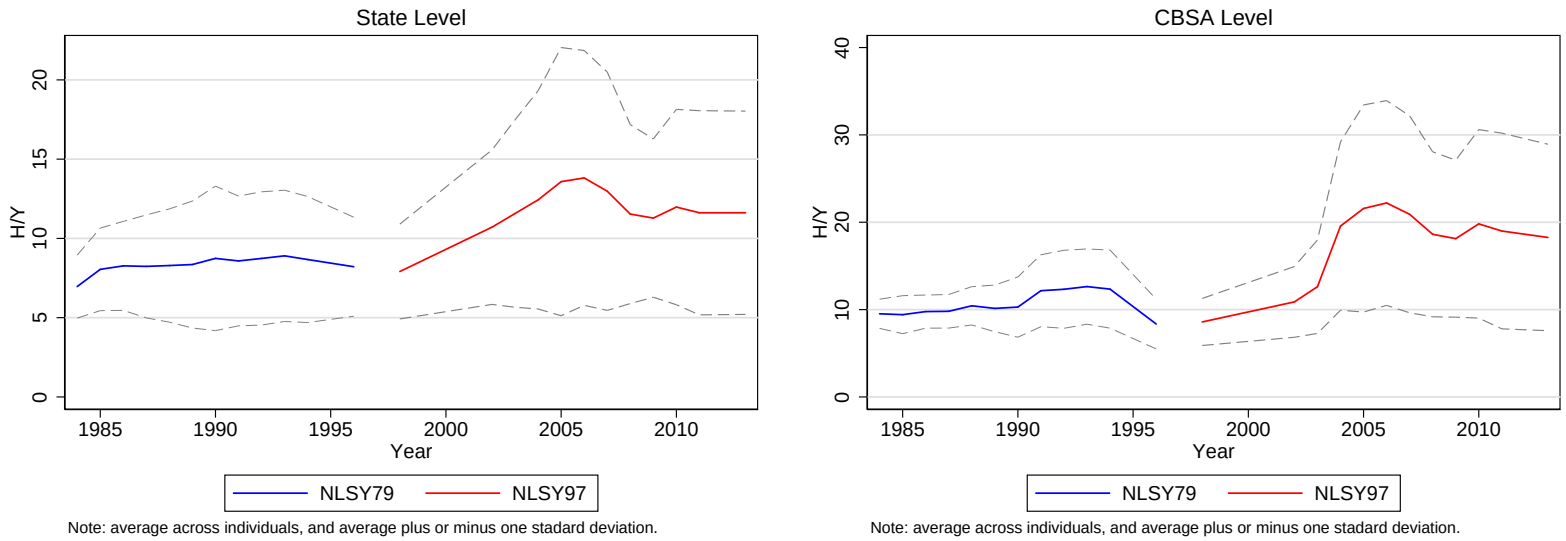
(a) Housing Costs



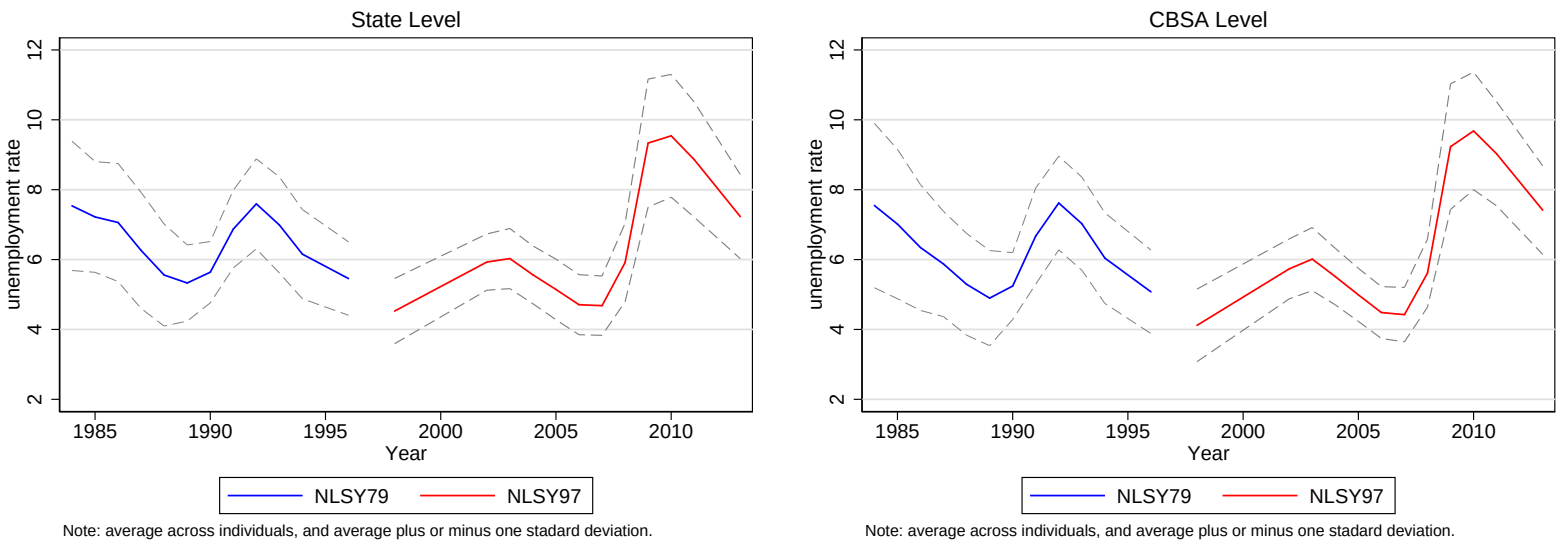
Source: Authors' calculations using NLSY data.
Note: Average of state−level unemployment rate for 23− to 33−year−old respondents.

(b) Unemployment Rates

FIGURE 5: Local Economic Conditions Over Time

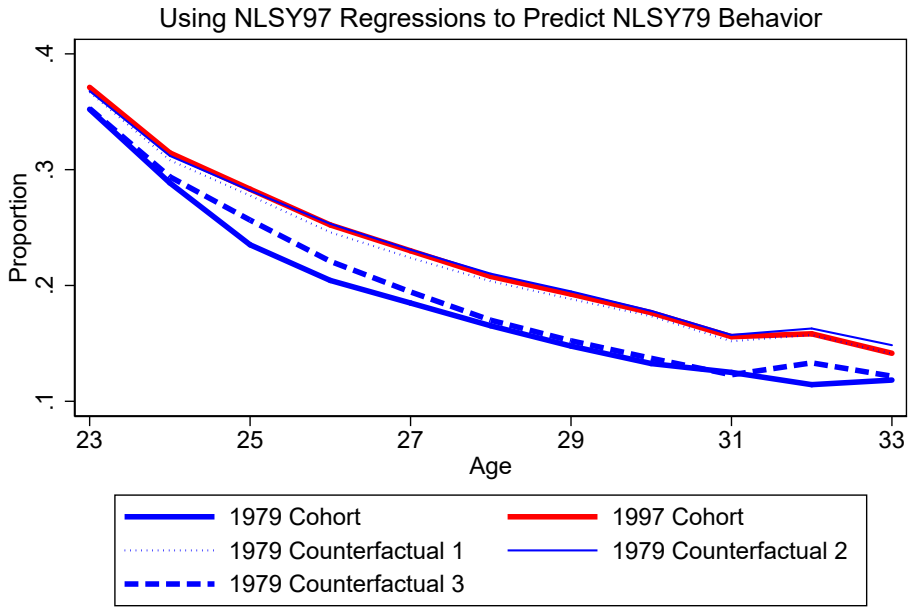


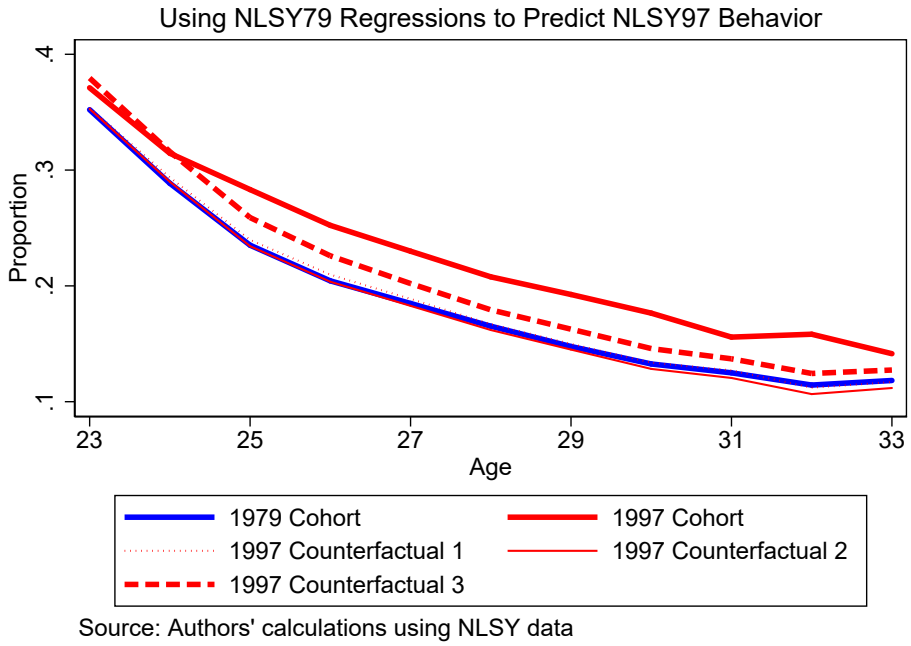
(a) Median Home Value/Income of 20- to 30 year-olds



(b) Unemployment Rate

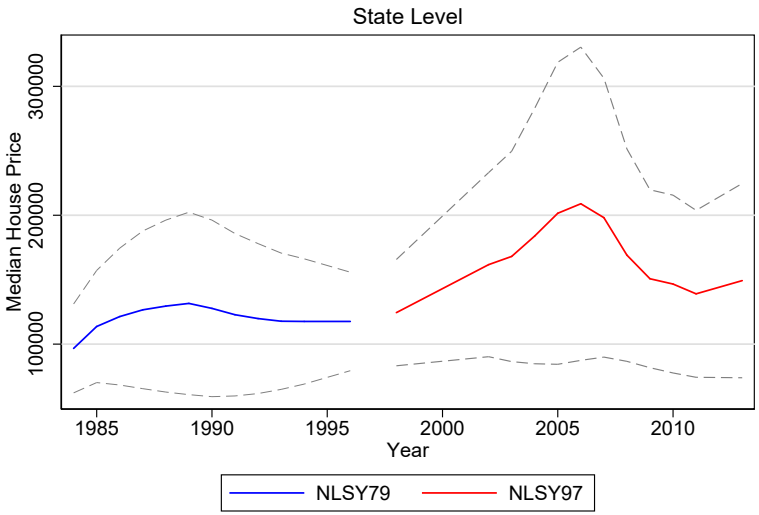
FIGURE 6: Counterfactual Exercises



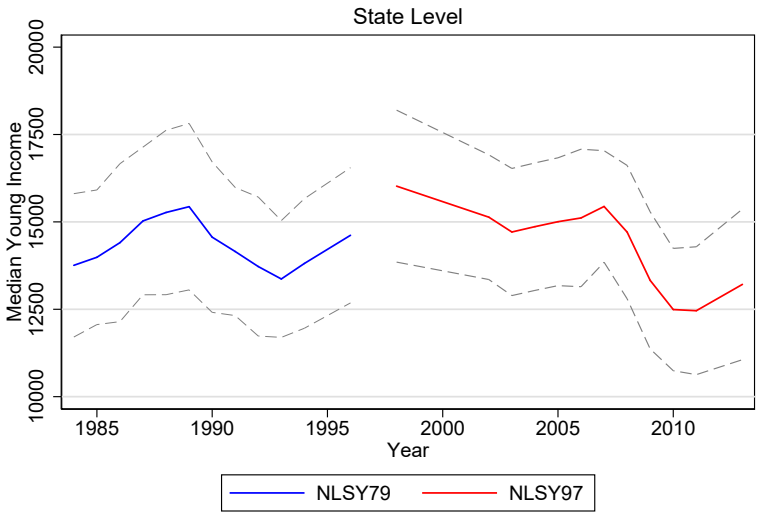


Notes: We use the estimated coefficients from regressions using the NLSY97 cohort only to predict the behavior of the NLSY79 cohort (top panel) and vice versa (bottom panel). Counterfactual 1: The cohort-specific regression controls for demographics (the same variables as in column (2) of Table 1, but separate regressions for each cohort). Counterfactual 2: We add individual-specific controls to the regressions including employment status, income, and intelligence score (same variables as in column (7) of Table 1). Counterfactual 3: We add state-level controls for economic conditions (unemployment and housing costs; same variables as in columns (5) through (7) of Table 1).

FIGURE 7: House Prices vs. Income of the Young

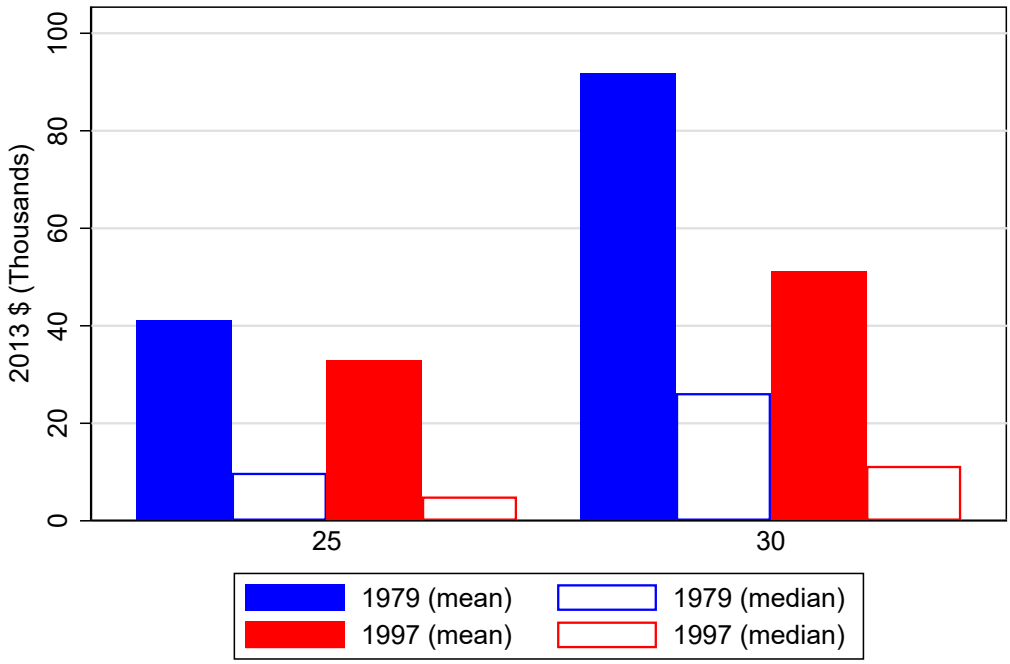


(a) Median Home Value



(b) Income of 20- to 30-year-olds

Figure 8: Net Worth at Ages 25 and 30 by Cohort



Source: Authors' calculations using NLSY data.
Note: Net Worth = Assets - Liabilities.

A Appendix

A.1 Bivariate probit with Selection

As a robustness check, we analyze our "return" regressions using a bivariate probit model with selection. This approach accounts for the fact that young adults who return home after living independently are actually making a series of choices of which we observe only the latent outcomes. They first choose to live away from their parents' home, and then conditional on that choice, they choose whether or not to return home to live with their parents in a subsequent period. The standard bivariate probit approach involves estimating two individual probit models, taking into account that the errors of the two models may be correlated—effectively it is the equivalent of running seemingly unrelated OLS regressions, but for a probit model. Our approach goes one step beyond controlling for potential cross-equation error correlations and incorporates possible selection issues, because we observe returns home only if respondents move away in the first place.

The bivariate probit model with selection can be written with the following functional form:

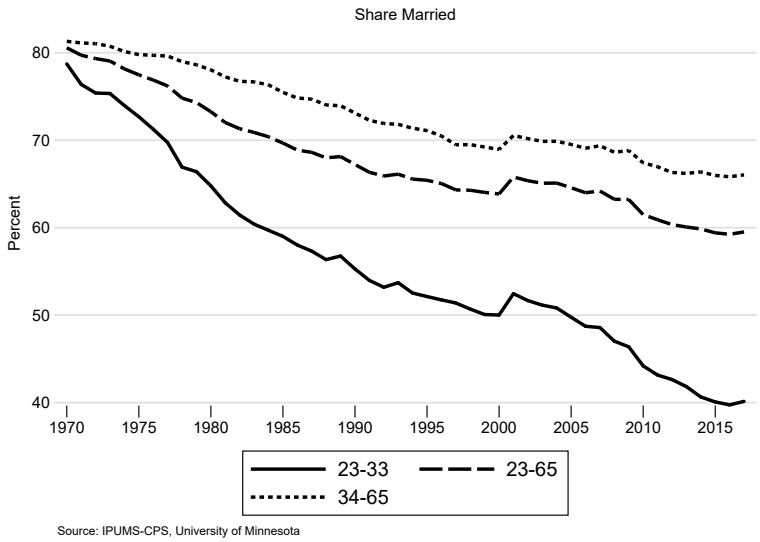
$$\begin{aligned} f(y_1, y_2) &= \text{Prob}[y_1 = 1 \mid y_2 = 1] \cdot \text{Prob}[y_2 = 1] \quad (y_1 = 1, y_2 = 1) \\ &= \text{Prob}[y_1 = 0 \mid y_2 = 1] \cdot \text{Prob}[y_2 = 1] \quad (y_1 = 0, y_2 = 1) \\ &= \text{Prob}[y_2 = 0]. \end{aligned}$$

where y_1 is observed only when $y_2 = 1$. The first two equations are distributed bivariate normal with mean 0 and cross-equation correlation parameter ρ. The final equation is distributed univariate normal. In our context y_2 is an indicator variable for whether an individual was living alone in the previous period, and y_1 is an indicator for whether an individual returns home in the current period. A standard bivariate probit approach excludes the last equation, but we must include it, because it accounts for some people never leaving home in the first place. The system is estimated via maximum likelihood.[40]

While Table 4 in the main text reports estimates of the likelihood of returning home ($y_1 = 1, y_2 = 1$), Table A.4 reports estimates from the first-stage regression predicting whether individuals live alone (1-LWP) in the previous period. The (marginal) effects are all similar, but they are opposite-signed relative to our baseline LWP estimates given that we are predicting *not* LWP in the first stage.

[40]This discussion draws heavily on Professor William Greene's lecture notes on this topic. Additional details are available at: pages.stern.nyu.edu/~wgreene/DiscreteChoice/Lectures/Part5-Bivariate&26Multivariateprobit.ppt

Figure A.1: U.S. Marriage Rates by Age Group



A.2 Additional Figures and Tables

Table A.1: Summary Statistics: NLSY79

	Count	Mean	SD	Min	Max
Living with Parents	90,939	0.16	0.36	0.00	1.00
Living with Parents (Recoded)	90,939	0.19	0.39	0.00	1.00
Age of Respondent	90,939	28.26	2.96	23.00	33.00
Female	90,939	0.50	0.50	0.00	1.00
Married	90,939	0.53	0.50	0.00	1.00
Have Child(ren)	90,939	0.48	0.50	0.00	1.00
Enrolled in School	90,939	0.06	0.24	0.00	1.00
Has Finished College	90,939	0.18	0.38	0.00	1.00
Employed	90,939	0.79	0.40	0.00	1.00
Hispanic	90,939	0.06	0.24	0.00	1.00
Black	90,939	0.14	0.35	0.00	1.00
Non-Hispanic/Non-Black	90,939	0.80	0.40	0.00	1.00
Northeast	90,939	0.19	0.39	0.00	1.00
North Central	90,939	0.28	0.45	0.00	1.00
South	90,939	0.34	0.48	0.00	1.00
West	90,939	0.18	0.38	0.00	1.00
Mom College	90,939	0.10	0.29	0.00	1.00
Dad College	90,939	0.17	0.37	0.00	1.00
Rural	90,939	0.21	0.41	0.00	1.00
Unemployment, State	90,939	6.40	1.64	2.32	14.80
Housing Costs (HP/Y)	90,939	8.12	3.55	3.54	19.09
Region Unknown	90,939	0.00	0.00	0.00	0.00
Urban/Rural Unknown	90,939	0.02	0.12	0.00	1.00
Intelligence Test Score	87,248	49.55	29.05	0.00	100.00

Notes: Authors' calculations for the NLSY79 cohort using sample weights.

Table A.2: Summary Statistics: NLSY97

	Count	Mean	SD	Min	Max
Living with Parents	58,134	0.23	0.42	0.00	1.00
Living with Parents (Recoded)	58,134	0.27	0.44	0.00	1.00
Age of Respondent	58,134	26.67	2.67	23.00	33.00
Female	58,134	0.49	0.50	0.00	1.00
Married	58,134	0.33	0.47	0.00	1.00
Have Child(ren)	58,134	0.44	0.50	0.00	1.00
Enrolled in School	58,134	0.15	0.36	0.00	1.00
Has Finished College	58,134	0.24	0.43	0.00	1.00
Employed	58,134	0.80	0.40	0.00	1.00
Hispanic	58,134	0.13	0.33	0.00	1.00
Black	58,134	0.17	0.37	0.00	1.00
Non-Hispanic/Non-Black	58,134	0.70	0.46	0.00	1.00
Northeast	58,134	0.16	0.37	0.00	1.00
North Central	58,134	0.25	0.43	0.00	1.00
South	58,134	0.37	0.48	0.00	1.00
West	58,134	0.22	0.41	0.00	1.00
Mom College	58,134	0.20	0.40	0.00	1.00
Dad College	58,134	0.22	0.41	0.00	1.00
Rural	58,134	0.27	0.44	0.00	1.00
Unemployment, State	58,134	6.93	2.32	2.61	13.78
Housing Costs (HP/Y)	58,134	11.85	6.45	4.17	35.63
Region Unknown	58,134	0.00	0.00	0.00	0.00
Mom College Unknown	58,134	0.00	0.00	0.00	0.00
Dad College Unknown	58,134	0.00	0.00	0.00	0.00
Urban/Rural Unknown	58,134	0.04	0.20	0.00	1.00
Intelligence Test Score	46,974	50.87	29.14	0.00	100.00

Notes: Authors' calculations for the NLSY97 cohort using sample weights.

Table A.3: Living with Parents. Probit Estimates. Pooled Cohorts

	(1)	(2)	(4)	(5)
	LWP		Return	
1997 Cohort[1]	0.038***	0.013***	0.012***	0.010***
	(0.004)	(0.005)	(0.002)	(0.002)
Unemployment Rate (state)		0.006***		0.000
		(0.001)		(0.000)
Housing Costs (HP/Y, state)		0.032***		0.004***
		(0.003)		(0.001)
Observations	149073	149073	89949	89949
Pseudo R-squared.	0.03	0.09	0.02	0.04
Individual Controls	No	Yes	Yes	Yes

Notes: LWP is 1 if the respondent reports a parent in the house he/she lives in during the interview. Return is 1 if the respondent reports a parent in the house he/she lives in during the current interview, and he/she did not in the previous interview. For list of controls see column (7) of Table 1. Table reports marginal effects. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

Table A.4: Living Alone (1-LWP). Pooled Regressions
First Stage, Bivariate Probit

	(1)	(2)
	Live Alone	
1997 Cohort[1]	–0.073***	–0.047***
	(0.005)	(0.005)
Employed	–0.011***	–0.012***
	(0.004)	(0.004)
Respondent Income/10,000	0.039***	0.040***
	(0.002)	(0.002)
Unemployment Rate (state)		–0.001
		(0.001)
Housing Costs		–0.034***
		(0.003)
Observations	115641	115641
Individual Controls	Yes	Yes

Notes: [1] Indicator variable that takes a value of 1 if the respondent is in the 1997 cohort and 0 if the respondent is in the 1979 cohort. These results are from the first stage of a bivariate probit model. The dependent variable, returning home, is 1 if the respondent reports a parent in the house he/she lives in during the interview, but not in the previous interview. Individual controls as in column (7) of Table 1. Housing costs are measured as the median home value in the state divided by the median income of 20- to 30-year-old individuals according to the CPS. The housing-cost measure has been standardized to have a mean of 0 and a standard deviation of 1. Table reports marginal effects. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.

Table A.5: Living with Parents and Returning Home by Cohort

	(1)	(2)	(3)
		LWP	
	NLSY79	NLSY97	Difference
Female	–0.108***	–0.088***	**
	(0.006)	(0.007)	
Enrolled in School	0.047***	0.019***	***
	(0.008)	(0.007)	
Has Finished College	0.014*	0.005	
	(0.007)	(0.008)	
Hispanic	0.055***	0.061***	
	(0.008)	(0.010)	
Black	0.100***	0.030***	***
	(0.008)	(0.010)	
Northeast	0.044***	0.035***	
	(0.010)	(0.013)	
South	–0.002	0.018**	*
	(0.007)	(0.009)	
West	–0.051***	–0.058***	
	(0.009)	(0.012)	
Mom College	0.014	–0.002	
	(0.010)	(0.010)	
Dad College	–0.015*	–0.024**	
	(0.008)	(0.010)	
Urban	0.038***	0.039***	
	(0.006)	(0.008)	
Employed	–0.008	0.006	*
	(0.005)	(0.007)	
Intelligence Score	–0.016***	–0.022***	
	(0.003)	(0.005)	
Respondent Income/10,000	–0.025***	–0.030***	***
	(0.001)	(0.002)	
Unemployment Rate	0.000	0.010***	***
	(0.001)	(0.001)	
Housing Costs	0.030***	0.038***	
	(0.005)	(0.004)	
Constant	0.338***	0.332***	
	(0.011)	(0.012)	
Observations	90939	58134	
Adj. R-squared.	0.09	0.07	

Notes: These results are calculated using a linear probability model. The dependent variable LWP is 1 if the respondent reports a parent in the house he/she lives in during the interview. Additional controls include a full set of age dummies from age 24 to age 33, with age 23 as the base category, and dummies for missing values for intelligence score, urban/rural and respondent income. Housing costs are measured as the median home value in the state divided by the median income of 20- to 30-year-old individuals according to the CPS. We cannot reject the null that the age dummies (not reported) are the same. Housing costs have been standardized to have a mean of 0 and a standard deviation of 1 over the pooled sample of respondents. Standard errors are clustered at the respondent level: * p<0.10, ** p<0.05, *** p<0.01.