The Dynamics of Co-Residence, Wealth, and Family Formation

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Abstract

Parental co-residence has become an increasingly popular choice for young adults (YAs) over the years. This paper examines how YAs' co-residence status affects net worth and family formation decisions. Dynamic event studies are used to observe outcomes around a move and instrumental variable (IV) analyses are used to estimate causal effects. In the event studies, no significant differences are found for net worth. YAs are more likely to be married and have more children after moving out. For the IV, co-residence is instrumented using predicted state rental unaffordability. Unfortunately, the analyses suffer from weak instrument bias.

1   Introduction

A Pew Research Center report found that in 2021, a quarter of 25- to 34-year-old U.S. adults resided in a multi-generational family household, up from 9% in 1971 (Fry 2022). Multi-generational living has increased for all age groups over the past five decades, particularly for young adults (YAs) co-residing with their parents. These YAs are generally younger, less educated, and more financially constrained than individuals living outside of the family home. At the same time, typical milestones we associate with the transition to adulthood – marriage and childbearing – have been delayed as the age at which YAs begin forming their own families increased over the years. In 2023, the median age at first marriage was 30.2 for men and 28.4 for women, up from the 1980 mean age of 24.7 and 22.0, respectively (United States Census Bureau). A smaller number of YAs are choosing to get married and a larger number remain never married. The average age of first-time parents has also seen a similar trend. In 1970, the mean age of a first-time mother was 21.4 and 27.4 in 2022 (Mathews and Hamilton 2002, Osterman et al. 2024). This increase is in part due to the decline in teenage pregnancies. For fathers, the average age was 30.9 in 2016, up from 27.4 in 1972 (Goldman 2017). These delays in family formation coincide with the increase in the number of individuals pursuing higher education and investing in their careers. As the transition period into adulthood lengthens and co-residence increases, it is important to study why YAs choose to co-reside and how it contributes to these delays.

My paper answers the question of why YAs may choose parental co-residence and how it may affect their expectation of when they will form their own family. Wealth, labor market activity, and housing costs have been well researched and are found to affect one's co-residence status. Marriage and child-bearing are also important characteristics found to influence parental co-residence, but they are not studied as extensively.

This paper contributes to the literature on co-residency by examining the role of parental co-residence on wealth and other individual characteristics, such as divorce and health. Previous research has demonstrated the importance of individual differences on the decision to co-reside. Fewer jobs, low wages, and rental costs all lead to an increase in parental co-residency (Matsudaira 2016; Cooper and Luengo-Prado 2018). Demographics also play a role, as young black adults react more strongly to rent and their white counterparts to employment rates (Newman, Holupka, and Ross 2018). Bleemer et al (2014) found that differences in academic backgrounds also impact the decision to return home. In states with higher graduation rates, individuals respond more strongly to changes in tuition, with increases in schooling costs similarly increasing the likelihood of living at home. On the other hand, individuals who live in states with lower graduation rates are more impacted by the job market conditions. Houle and Warner (2017) observed that failing to attain a college degree increased the risk of moving back home, and the association between student debt and returning home was stronger for black than white youths. Employment shocks that reduced labor market activity are found to increase the hazard of moving back home (Kaplan 2009; Engelhardt, Eriksen, and Greenhalgh-Stanley 2019), as did less job availability (particularly for college graduates) and lower wages (Albanesi, Gihleb, and Zhang 2022). After a job displacement, Krolikowski, Zabek, and Coate (2020) observed that earnings completely recovered for YAs living in their parents' neighborhood, whereas earnings permanently declined the further the individual lived away from home. Additionally, co-residence allows for a longer search for better jobs with high earnings growth potential (Kaplan 2012). Another paper found that YAs that return home move to weaker labor markets (Chan, O'Regan, and You 2021). For working mothers, there were increases in both their labor supply and working hours due to the ability of the parents of YA to provide childcare (Liao and Paweenawat 2022; Compton and Pollak 2014; Arpino, Pronzato, and Tavares 2014).

I also contribute to the literature on housing costs and family formation decisions by considering how costs might impact the latter through co-residence. As early as the 1990s, higher regional relative house prices have been found to significantly slow home leaving in England, delay the formation of partnerships, and encourage returns to the parental home (Ermisch 1999). A significant portion of the rise in co-residence among YAs can be attributed to the decline in housing affordability since 2000 (Acolin, Lin, and Wachter 2024). Using macro data from 1983 to 2017, Srinivas (2019) finds that the rents have been progressively unaffordable, making it a significant influence on parental co-residence. He also shows that using home

prices instead of rental costs may understate the effect of housing costs on parental co-residence and possibly overstate other factors. In the US, immigrants receiving DACA (Deferred Action for Childhood Arrivals) are less likely to live in a multigenerational household, which could in part be explained by the lower rental costs paid relative to non-DACA recipients (Gihleb, Giuntella, and Lonsky 2023). A decline in marriage rates among DACA eligible individuals was also found, but there was no evidence of a clear impact on fertility.

My paper also contributes to the literature by trying to find a causal role of parental co-residence on expectations of important family formation decisions. It is unclear whether co-residence affects a YA's desire to form their own family or whether the effect goes in the other direction. Previous research has found that parental and marital status of the YA are strongly associated with the increase in co-residency. One paper finds that after controlling for both, white women are more likely than black women to co-reside (Joan R. Kahn and Goldscheider 2017). This has also been studied in Asian countries. For Taiwanese women, living with their husband's parents and working led to a delay in childbearing (Chu, Kim, and Tsay 2014). In Japan, Yu and Kuo (2016) found that parental co-residence is associated with a lower probability of forming romantic relationships. Their results suggest that co-residing with parents led never-married men to increase their contentment with their immediate social surroundings, but decreased women's psychological readiness to transition into adult roles.

I start by examining how different factors change as YAs adjust their co-residence status by running several dynamic event studies. The panel structure of the data allows me to observe YAs for several surveys, thus I can see how outcomes change as YAs choose to move in and out of the parental home. Since co-residence is a choice, this analysis is purely descriptive and not meant to determine causal effects.

To study the causal impact of co-residence on wealth and the expectations of future family formation events, I use an IV analysis. Co-residence is instrumented with the predicted state's rental housing unaffordability. This is done by calculating the sensitivity of each state's unaffordability to the regional rental unaffordability. The literature has generally focused on either rising housing costs or the delays in marriage and childbearing, but rarely both when considering parental co-residence.

No significant differences in net worth are found in the event studies, contrary to the existing literature. Selection out of parental co-residence is stronger than the selection into it. I see strong effects on marriage when a YA chooses to move out (they are more likely to be married after moving out), but not when they decide to move back in. YAs are also likely to have more children when they move out compared to YAs who continue co-residence. Again, no significant effects are observed when the YA moves in.

The unaffordability instrument is weak and causal interpretations cannot be formed. However, some patterns can be seen from the direction of the OLS and IV coefficients. Co-residing YAs are less likely to want children and if they do, would like fewer children. The results also suggest delays in family formation

if YAs co-reside; they expect their first marriage and first birth to occur at an older age compared to non-coresiding YAs.

The remainder of this paper proceeds as follows. Section 2 describes the TAS survey and the data used to construct the instrument. Section 3 details the two empirical strategies used. Section 4 reports the results. Section 5 extends the main IV analysis by adding additional controls and adjusting the instrument definition. Finally, Section 6 concludes.

2   Data

Data on YAs are drawn from the Transition to Adulthood Supplement (TAS), a supplemental survey of the Panel Survey of Income Dynamics (PSID). It is carried out every two years and follows children who are entering their young adulthood and who one day will become a core member of the main PSID study. The TAS started in 2005, following children from the original 1997 PSID Child Development Supplement until 2015. It was relaunched in 2017 to follow all children in the PSID sample aged 18-28. A plethora of information is collected on financial responsibilities, family formation, fertility-related behavior, employment and income, education, and career goals. The survey also collects information on wealth through a series of questions about different debt categories and the net value of different assets and investments. In this paper, financial assets include savings accounts, checking accounts, and the net value of other savings or assets such as money market funds, certificates of deposit, stocks, mutual funds, and bonds. Debt includes carryover balances on any credit cards or store cards and any other loans.[1] Both asset and debt values are winsorized at the 99th percentile for each year. The survey also provides information on where the YA resided for most of the reference year. It asks *"During last fall and winter, that is, October [PYEAR] through April [CYEAR], where did you live most of the time?"* and *"During [*CYEAR:*this/ CYEAR+1:*last] summer, that is, May through August of [CYEAR], where did you live most of the time?".*[2] If the YA chooses "Parents' home (house or apartment)" or "Spouse/partner's parent's home" for at least one of those questions, I consider them to have co-resided during the survey reference year.

Separate samples are used for the event study and IV analysis due to changes in the survey. For both samples, observations are dropped if YAs are under 18, co-residence status is unknown, or last year's income, health status, and state of residence is missing.

For the event study analysis, I further drop observations with more than a two-year gap (e.g., if a YA is interviewed for the 2005, 2009, and 2011 surveys, I drop 2005). It is unclear what the primary residence of

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1. In some cases, I include student loans to the calculation of net worth. Unless indicated, debt and net worth do not include student loans.

2. PYEAR and CYEAR represent previous and current year, respectively. Whether the YA is asked *this* or *that* for the summer residence item depends on when they were interviewed.

Table 1: YA Demographic Characteristics for DiD Sample

	Movers	Non-Movers	Diff
Panel A:	**Moved In**	**Never Co-Resided**	
Age	20.800	21.459	-0.659***
	(0.976)	(1.403)	
Male	0.505	0.465	0.039
White	0.713	0.743	-0.029
Employed	0.678	0.711	-0.033
Married	0.107	0.106	0.000
Number of Kids	0.300	0.383	-0.083*
	(0.743)	(0.769)	
Education			
Less than HS	0.394	0.228	0.166***
HS	0.334	0.418	-0.084
Some College	0.185	0.176	0.009
Associate's	0.043	0.059	-0.015
Bachelor's	0.044	0.114	-0.070**
Master's+	0.000	0.006	-0.006
Health (1:Poor-5:Excellent)	3.705	3.796	-0.090
	(0.926)	(0.824)	
Last Year's Income ($1k)	10.820	13.676	-2.856**
	(12.119)	(14.826)	
Net Worth ($1k)	3.842	3.443	0.399
	(13.111)	(8.611)	
With Student Loans	-1.768	-2.697	0.929
	(18.298)	(16.309)	
Number of YAs	444	500	
Observations	1,544	1,446	

Panel B:	Moved Out	Always Co-Resided	
Age	20.713	20.843	-0.130
	(0.896)	(1.105)	
Male	0.480	0.547	-0.068*
White	0.723	0.638	0.086**
Employed	0.708	0.722	-0.013
Married	0.033	0.006	0.027***
Number of Kids	0.177	0.127	0.050
	(0.532)	(0.539)	
Education			
Less than HS	0.286	0.317	-0.031
HS	0.387	0.299	0.089**
Some College	0.210	0.278	-0.068**
Associate's	0.047	0.065	-0.019
Bachelor's	0.069	0.041	0.028*
Master's+	0.001	0.000	0.001
Health (1:Poor-5:Excellent)	3.754	3.691	0.064
	(0.901)	(0.929)	
Last Year's Income ($1k)	10.621	11.292	-0.671
	(9.839)	(11.720)	
Net Worth ($1k)	3.412	3.526	-0.114
	(8.175)	(10.283)	
With Student Loans	-2.643	-2.018	-0.625
	(15.343)	(16.297)	
Number of YAs	944	524	
Observations	3,210	1,504	

Note: Statistics are presented for the DiD sample at the start of the observation. Last year's income and net worth are adjusted to 2015 dollar units. Estimates are weighted and standard errors are in parentheses and adjusted for sample design. Source: PSID Transition to Adulthood Supplement (2007 - 2019). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

the YA is during that missing year, so to prevent incorrect lead and lag times, the year before the gap occurs

is dropped. A YA is considered to have made a move if their co-residence status differs from the previous survey. Table 1 presents some demographic characteristics between these movers and non-movers at the start of their observation. Looking at Panel A, YAs who move back into the parental home are more likely to be younger than YAs who never co-resided at the start of the sample. They also tend to have less education relative to YAs who never moved in– they are significantly more likely to have less than a high school degree and a Bachelor's degree. YAs who never co-resided in the sample had more income in the previous year and more children (significant at 10%) at the start of the sample compared to YAs who eventually move back in with their parents. Although no other variable is significant, the differences are in the direction we would expect; health and employment status are negative, and those who move YAs are less likely to be white. On average, movers are observed to be co-residing for 1.753 (standard deviation = 0.839) surveys and not co-residing for 1.714 (sd = 0.828) surveys. YAs who never co-resided are observed for about 2.858 (sd = 0.781) surveys. Next, I compare the group of YAs who move out with the YAs who are never observed to make a move out of co-residence in Panel B. More YAs leave co-residence (944) than YAs who remain in the parental home in the sample (524). At the start of their observation, the YAs who eventually make the move out are more likely to have a high school degree but less likely to have some college education, more likely to be white, and married compared to the YAs who always co-resided. At the 10% level, they are also less likely to be male and more likely to have a Bachelor's degree. If the YAs make a move out, then we observe them in co-residence for about 1.626 (sd = 0.758) surveys and 1.742 surveys (sd = 0.769) living independently. YAs who always co-resided are in the sample for 2.830 surveys (sd = 0.856), on average.

I also break down the movers into three groups to compare demographic characteristics of YAs who only moved in, only moved out, and both moved in and out in Appendix Table A.1. YAs are more likely to only move out of the parental home than to only move in or both. A YA is more likely to be observed moving out than moving back home if only one move is made. If both moves are observed, they spend around the same amount of surveys co-residing and living independently. At the start of the observation, if only a move out is made, YAs are more educated and more likely to be employed compared to YAs who only moved in or moved both in and out. They are also less likely to be married and have fewer children. YAs who eventually co-reside are generally older at the start of the sample and have the highest net worth, even with the addition of student loans.

The 2005 to 2015 TAS surveys include questions about several family formation milestones. YAs are asked to rate their chance of marriage, a long-term (LT) committed relationship/commitment ceremony, or children[3]; possible answers include: No chance, Some chance, About 50-50, Pretty likely, It will happen,

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3. The likelihood of marriage and children items are asked to the YA only if they are not currently married and have no biological, adopted, or step-children, respectively.

Don't Know, and NA; refused. If a response other than "No chance" is given, they are asked at what age they think they these events will occur. Additionally, the question on the long-term relationship is asked only if the response to the likelihood of marriage is not "It will happen". YAs are also asked about the ideal total number of children. Figure 1 displays the percentage of responses to the likelihood questions and Table 2 presents the summary statistics of the ideal number of children and the likely ages at which these events are expected to occur. The sample consists of never-married YAs with no children and are not currently in a long-term relationship. Observations are dropped if the YA has no living parent or if all responses to the family formation questions are missing. The likelihood of marriage and parenthood is high. Over 50% of YAs respond that it is pretty likely to occur or that it will happen and less than 5% say that there is no chance. Fewer YAs expect to enter into a LT committed relationship or commitment ceremony if they were not to get married. The majority of YAs state that there is some chance, but less than 10% believe that it will happen. The average age at which the YA believes they will get married is 28 years old, while the age at first child is slightly higher at 29. If they were to enter into a LT relationship, they expect this to happen around 27 years old, which is earlier than the average expected age of marriage. YAs expect to have medium-sized families as the average ideal number of children is 2.23.

**Table 2:** Family Formation Summary Statistics

	Mean	StdDev	Min	Max	Obs
Likely Age at Marriage	28.08	3.56	19	61	4,803
Likely Age Begin LT Relationship	27.28	4.64	18	61	2,543
Likely Age at First Child	29.39	3.36	19	50	4,717
Ideal Number of Kids	2.23	0.91	0	12	4,938

Note: Statistics are shown for the YAs in the IV sample who are not married, parents, or currently in a long-term relationship. Source: Transition to Adulthood Supplement (2005 - 2015).

Appendix Table A.2 summarizes the characteristics of the YAs included in the IV estimation. It compares the YAs who co-resided at some point in the sample at the start of their observation to YAs who never co-resided. YAs observed to have co-resided are younger, less likely to be white, more likely to have less than a high school degree, and have earned less income in the previous year compared to YAs who never co-resided. They are also more likely to be male and less likely to have some college education, both of which are significant at the 10% level.

To construct the instrument in the IV analysis, I require data on rental costs and family income of each state over time. It is difficult to find yearly state data on median rental costs prior to 2001, so the U.S. Department of Housing and Urban Development's (HUD) Fair Market Rent (FMR) estimates are used as a
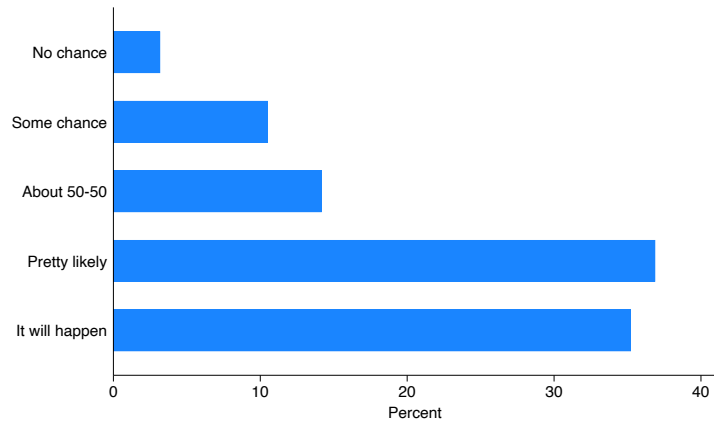
Figure 1: Responses of Likelihood Items
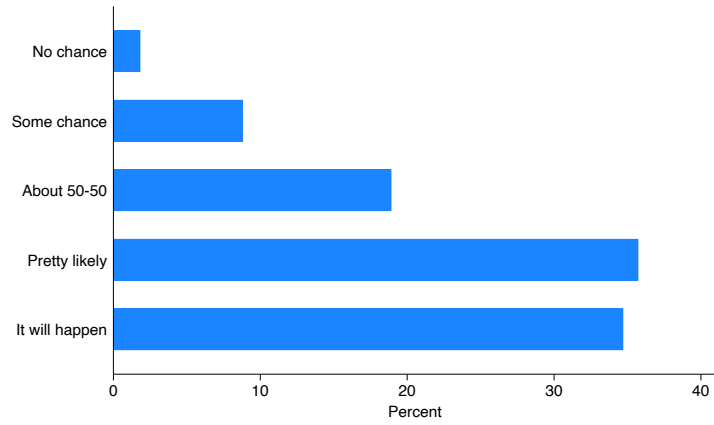
(a) Likelihood of Marriage
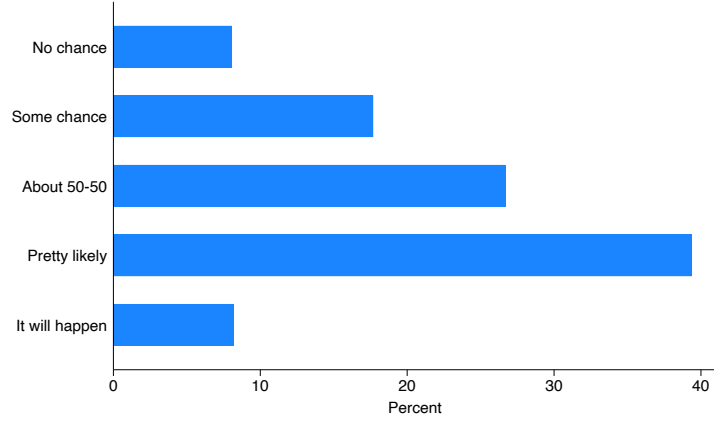
(b) Likelihood of a LT Committed Relationship/Commitment Ceremony

(c) Likelihood of Kids

Note: Responses are shown for the YAs in the IV sample who are not married, parents, or currently in a long-term relationship. The likelihood of a LT relationship item are only asked to YAs who did not respond "It will happen" to the likelihood of marriage question. Source: Transition to Adulthood Supplement (2005 - 2015).

proxy. Since 1974, FMRs have been used primarily to control costs in the Section 8 program, which helps low-income households obtain rental housing in the private rental market. It sets limits on the units that can be rented in the private market (Section 8 certificate program) and on the subsidy provided to the household (Section 8 voucher program). Beginning in 1995, the FMR is defined as the 40th percentile of gross rents for standard quality units within an Office of Management and Budget defined metropolitan area, some HUD defined subdivisions of OMB metropolitan areas, and each non-metropolitan county. To calculate the average FMR for each state, I multiply the cost of 0 to 4 bedrooms rentals by 12 to get the yearly value, then average them over the state. The median family incomes are taken from the estimates provided in HUD's Income Limits dataset, which are used to determine household eligibility for assisted housing programs. State median family income estimates are obtained by averaging over each metropolitan area and non-metropolitan county within the state. The FMR to median family income value is an underestimate of the true rent to income ratio, as the FMR are 40th percentile estimates.

In Section 5, I use vacancy rates and new housing units as controls. Annual vacancy rates for each state are retrieved from the U.S. Census Bureau Rental Vacancy Rate from the Federal Reserve Economic Data (FRED) website. The new housing units estimates comes from the U.S. Census Bureau Building Permits Survey. Annual estimates of the total units from new privately-owned housing unit authorizations are provided in the dataset. These will be weighted by population, which is taken from the FRED's state resident population series.

3   Empirical Strategy

To look at the different outcomes around a move-in or move-out decision between movers and non-movers, a dynamic event study is estimated:

$$Y_{it} = \sum_{k \neq -2} \tau_k * Move_{i,t-t_i^*=k} + \delta_i + \lambda_{st} + \varepsilon_{it} \tag{1}$$

Subscript i denotes a young adult, t denotes time which is measures in years, and s denotes state. The outcomes of interest Y are the net worth of the YA [4], marriage, and the total number of kids. The coefficients of interest are τ_k, where $Move_{i,t-t_i^*=k}$ is an indicator for whether the YA has moved by event time k. The reference year is set to the survey prior to the YA changing their co-residence status (i.e., two years). Individual and state-by-year fixed effects are included to control for time-invariant individual-specific characteristics and state-specific time trends, respectively.

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4. The inverse hyperbolic sine of net worth is used as it adjusts for the skewness of the variable and allows retaining the zero- and negative-valued observations. For large positive values, it behaves similarly to a logarithmic transformation.

Recent papers on dynamic differences-in-differences (DiD) have found issues in the comparison between treated and control units when treatment adoption is staggered. For a standard DiD, the coefficients are simply the weighted average of treatment effects. However, the different timing of treatments lead to problematic comparisons of units already treated, in addition to the comparisons between the treated and not-yet-treated. Furthermore, if treatment effects are heterogeneous, the weights used are likely to be incorrect, and could even have a negative weight. Solutions have been proposed, all of which make clear who is included in the control group. In Cengiz et al. (2019), they use a stacking method that manually removes already-treated units from the control group. Each treated unit is matched to controls that are not-yet-treated and separate fixed effects are estimated for each group. Callaway and Sant'Anna (2021, CS) propose an estimator that only includes units that never received treatment or all not-yet-treated as controls. It finds $ATT(g,t)$, the average treatment effect at time t for the cohort first treated at time g. To obtain the average treatment effect l periods after treatment across the different cohorts, $ATT(g,g + l)$ are multiplied by specified weights. These weights are chosen, and could for example, be set to weigh different cohorts equally or proportionally to their cohort size. These clean estimators are also used to calculate the treatment effects and then compared to the typical DiD event study estimates.

The main issue with this analysis is that co-residence is a choice and not a shock. Co-residence and one's financial and family status are jointly determined. This makes it difficult to conclude that a move is the only significant factor causing the change in the outcome variable between the movers and non-movers. Additionally, the assumption of no anticipation is likely to be violated. Nonetheless, these event studies are informative as they provide insights of reasons why people may choose to move.

In addition to the event studies, I also use an IV analysis. The goal is to estimate the causal effect of co-residence on similar outcomes of those from the event studies. This is done by estimating the following system using two-stage least squares:

$$Y_{it} = \beta \widehat{CoRes}_{it} + \delta_i + \mu_s + \kappa_t + \varepsilon_{it} \tag{2}$$

$$CoRes_{it} = \Pi UnAfford_{st} + \delta_i + \mu_s + \kappa_t + e_{it} \tag{3}$$

Equations 2 and 3 are the second and first stages, respectively. The outcomes of interest, Y_{it}, are the YA's expectations of the likelihood of and age at the start of several family formation events. $Cores_{it}$ is a dummy variable that indicates whether the YA i has co-resided with their parent(s) during most of survey year t. δ_i, μ_s, and κ_t represent individual, state, and year fixed effects, respectively. The state fixed effects control for unobserved heterogeneity that is constant over time but varies between states. Similarly, year fixed effects

control for year-specific characteristics or shocks common to all states. The instrument is $UnAfford_{st}$, the unaffordability estimate of the YA's state of residence s. This is defined as

$$UnAfford_{st} = \frac{FMR_{st}}{medInc_{st}}. \tag{4}$$

The cost of housing (in this case, rental) and one's financial situation are two important factors that are considered when deciding whether to live in or out of the parental home. YAs should be more likely to co-reside if they experience a high cost of rental housing and low income. Thus, the rental affordability of a state is important. However, within a region, differences can be seen between states (Figure 2). The instrument I use takes advantage of this difference. The affordability sensitivity of each state to the regional affordability is estimated using:

$$UnAfford_{st} = \rho_s UnAfford_{-srt} + \alpha_s + \pi_t + \nu_{st} \tag{5}$$

where $UnAfford_{st}$ is defined as in (4). $UnAafford_{st}$ and $UnAafford_{-srt}$ represent the state and regional affordability, respectively. When calculating the regional affordability, I exclude the state in question to avoid the same state on both sides of the equation. The coefficient of interest is ρ_s; there is a separate coefficient for each state. To calculate the instrument in (3), I multiply the estimated coefficient by the actual affordability for that region and year: $\widehat{UnAfford}_{st} = \rho_s UnAfford_{-srt}$. Different time periods are used to calculate (5) and construct the instrument; equation (5) is estimated using 1997 to 2004 and 2005 to 2015 are used for instrument construction.

4   Results

4.1   DiD Event Studies

A YA is considered to have moved in at year t when they indicate that they are living in the parental home after previously stating to have lived elsewhere; a move-out event is defined similarly. YAs may move several times during the survey, so a move is defined at the first observation. Movers are compared to those whose co-residence status did not change; those who moved in are compared to those who remain living independently and the control group for YAs who move out are the YAs who continue to co-reside. For each possible combination of outcome and move event, I estimate Equation (1) with three different estimators: first as a typical TWFE, the second using the stacked approach, and finally, with the CS estimator. The TAS is not a balanced panel data, but the CS estimator does not require a strongly balanced panel to apply

Figure 2: State Rental Unaffordability, by Region

(a) Northeast

(b) West

(c) Midwest

(d) South
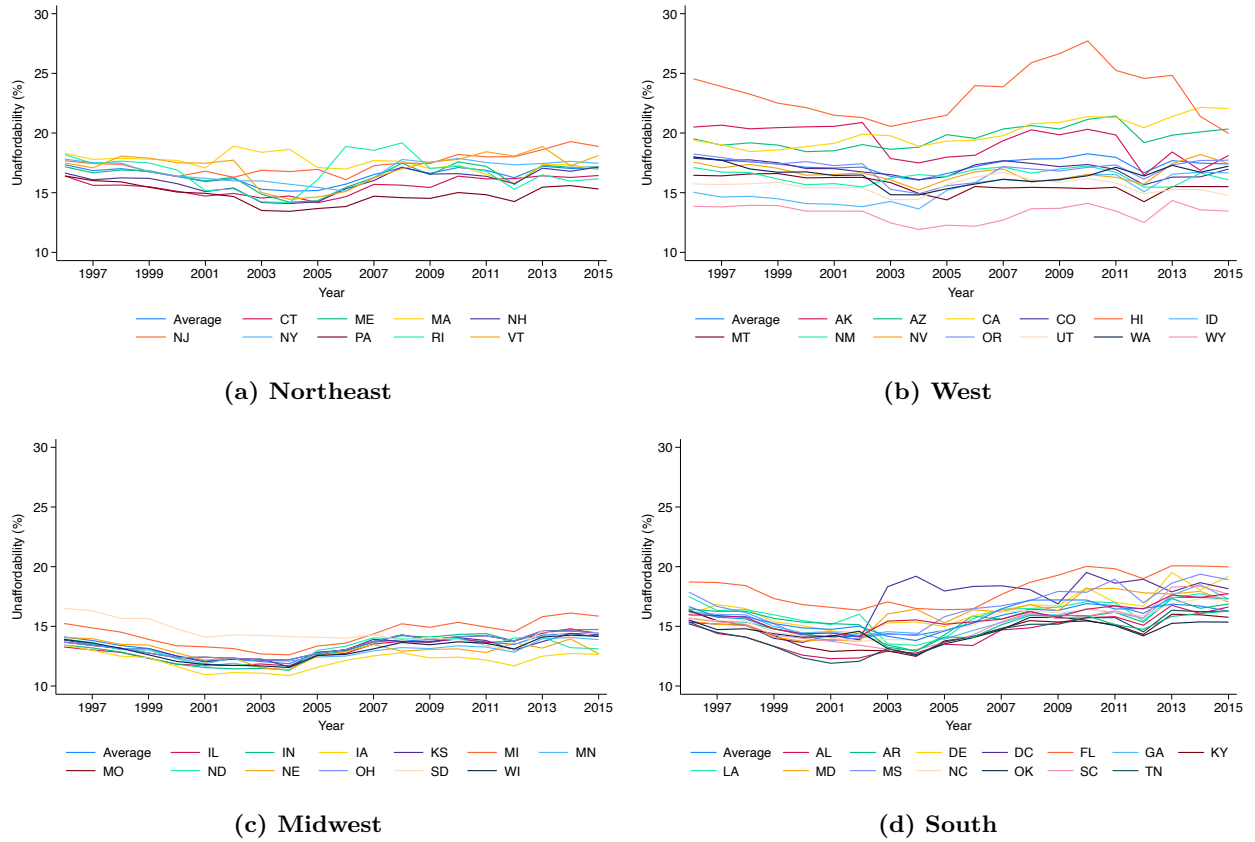
Source: U.S. Department of Housing and Urban Development's Fair Market Rent (1997-2015). U.S. Department of Housing and Urban Development's Income Limits (1997-2015).

the panel estimators. However, when it calculates each $ATT(g,t)$, only YAs with observations at the move and one period after are used.[5] In this paper, the different estimators produce similar treatment effects and are statistically insignificant from each other.

4.1.1   Wealth

I start by looking at the effects of wealth around the time of the event. When YAs move back into the parental home, they save on housing costs. This could be used to pay off any existing debt faster than if they were living on their own. It could also be saved so the YA has enough to move back out in the future. Depending on which goal is more important, and feasible, YAs who co-reside may have higher net worth because of their ability to pay off debt or save faster. When a YA moves out, expenses immediately increases. However, YAs who are able to leave the nest are probably financially better off than those who continue co-residing with their parents. It is more difficult to hypothesize how wealth is impacted when a YA decides to move out.

Figure 3 presents the estimates for net worth. Looking at panel (a), there is a zero effect. After a move out of the parental home, again, no significant differences are found. Four years prior to the move, the CS and stacked DiD estimates indicate that the net worth of YAs who eventually move out are less than that of YAs who did not move out, relative to the year before the move. The estimates are very close to the TWFE and contained within the TWFE's 95% confidence interval.

The event studies that look separately at total assets and debt are shown in Appendix Figures A.1 and A.2. No significant asset differences can be found between YAs who moved in and YAs who are never observed to co-reside. Similarly, there is no effect on total assets after a move out has been made. Four years prior to the move, there is a statistically significant difference in assets between the movers and non-movers for all three specifications. Relative to the year prior to the move, YAs who move out have approximately 15% less in assets than YAs who continue co-residing. The median assets of a YA in the sample is $1,200, so the difference between movers and non-movers is $180 four years prior to the move. No significant differences are detected for debt when examining a move in event. For a move out, the stacked DiD and CS estimates are significant in the year of move in; YAs who move out have approximately 5% more debt compared to a YA who continued co-residence relative to two years prior to the move.

Additionally, I look at how the inclusion of student debt affects the event studies of debt and net worth. Figures A.3 to A.4 in the appendix display these results. A zero effect is found for a move in when student loans are included in total debt. For a move out, in the year of the move, YAs who changed their co-

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5. The CS estimator will assume cross-sectional data if no panel identifier is declared, which will use all the data in an unbalanced panel. The repeated cross-section estimators first get the conditional means and then estimate the changes over time. The panel estimators calculate the first difference.

Figure 3: Net Worth Event Studies
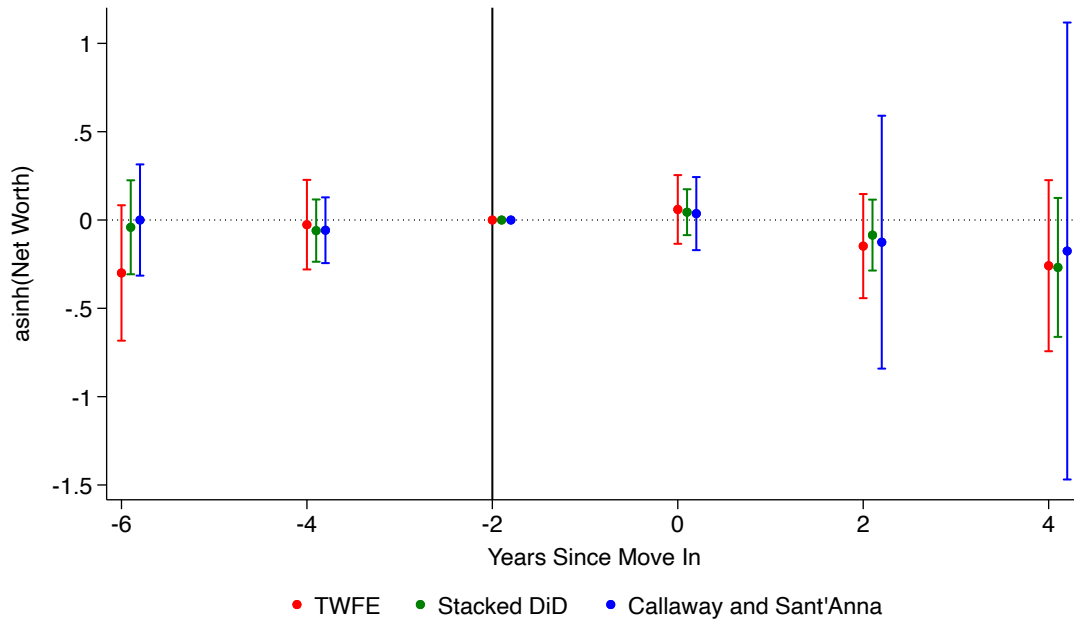
(a) Move In
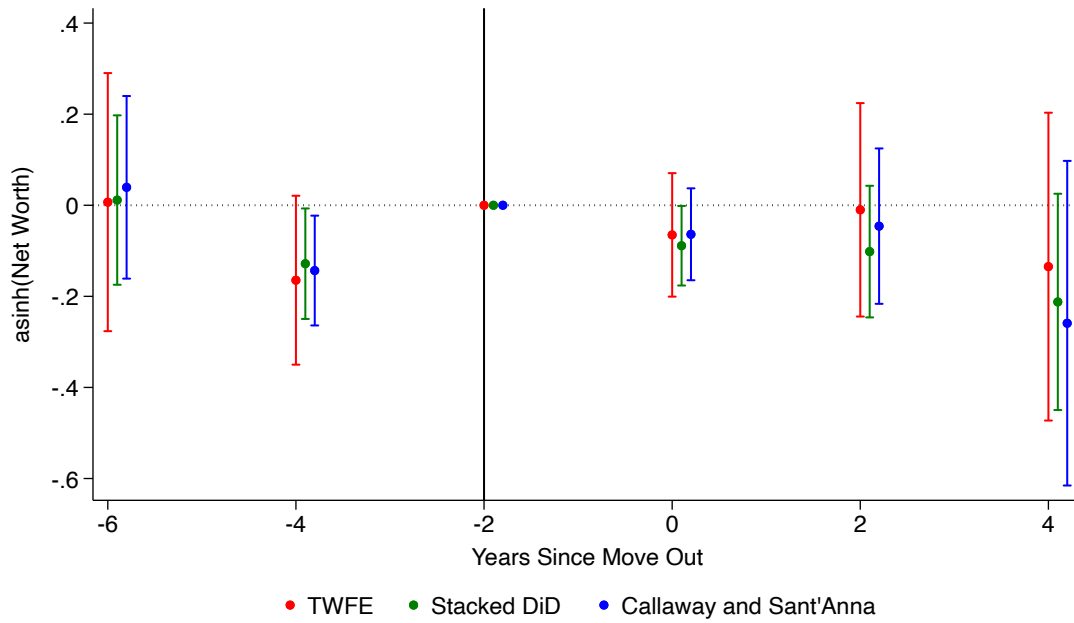
(b) Move Out

Note: Treatment effects are presented for the inverse hyperbolic sine of net worth in thousands of dollars. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

residence status have about 15% more debt compared to YAs who remained co-residing. This difference is small compared to the median of $211. Looking at net worth for a move in event, the TWFE and stacked DiD coefficients are significant two years after the move; the difference is about 50%, or $106 at the median. In the year of a move out, the stacked DiD and CS estimates are significant. The coefficient is -0.3, which tells us that movers have about 30% lower wealth ($63 at the median) compared to non-movers.

The appendix also presents the results of these event studies with the untransformed outcome variables in thousands of dollars. Any results found are likely driven by YAs with large wealth holdings. No significant differences are detected for net worth for a move in made and whether we include student loans or not. For a move out, the stacked DiD and CS estimates indicate that movers have about $2,000 more in net worth (without student loans) than non-movers. When student loans are included, the effect goes away. However, there is an significant instantaneous effect present, although the TWFE is marginally insignificant. YAs who move out have approximately $2,000 less in net worth compared to YAs who did not move. Similarly, for total debt excluding student loans, no strong significant differences between movers and non-movers are observed for both types of move. If student loans are included, there is still a zero effect for a move in. When the YA moves out, movers have $2,000 more debt compared to non-movers. This is significant for all three specifications. For assets when YAs choose to move back in with their parents, there are no statistically significant effects. For a move out, the CS and stacked DiD coefficients indicate that there is a positively significant difference of $2,000 two years after the move. As expected, these differences are much larger than those of the transformed variables.

YAs who are more financially constrained are believed to choose co-residence over independent living. With co-residence, they save on housing costs, which can be used to pay down their debt and increase savings. However, these patterns are generally not shown in the event studies. Next, I look at how family formation changes as parental co-residence status shifts.

4.1.2   Family Formation

As YAs grow older, they may want to leave their parents' home to start their own families. The hypothesis here is that YAs that are not married or parents themselves are more likely to co-reside. When they get married, they may prefer to live with their spouses. Similarly, as they start their fertility journey, they may want more space and privacy.

I begin by studying the marital status of the YA. Marriage is a dummy variable with 1 indicating currently married and 0 otherwise. Panel (b) of Figure 4 shows significant differences for all estimators in the probability of being married between movers and non-movers after the YA is observed to move out. After the move, these YAs are more likely to be married compared to YAs who did not move and the difference

increases over time. The coefficients range from around 5% in the year of the move to approximately 18% four years later. This supports the hypothesis that YAs would prefer to live with their significant other after marriage. In the year of the move in, there is a significant negative difference in the probability of marriage between YAs who moved back in and YAs who remained living independently for the TWFE and stacked DiD estimates. Additionally, four years prior to the move, YAs who eventually move are about 5% more likely to be married than YAs who are always observed to live independently. This is significant for the stacked and CS estimates and marginally insignificant for the TWFE. This effect is quite far from the year of the move, and it is possible that the YAs are getting divorced or separated. Panel (a) of Appendix Figure A.10 shows the event study around a move-in event, where the dependent variable is a dummy with 1 indicating that the YA is currently divorced or separated. There is a zero effect, so YAs do not seem to be moving back home for this reason. Panel (b) looks at a move-out event. The only significant coefficients are the stacked DiD and CS estimates (2-3% more likley to be divorced or separated) two years after the move.

Next, I look at the number of children a YA has. From panel (a) of Figure 5, it can be seen that there are no significant differences in the number of children that movers and non-movers have. For a move out, there are some statistically significant effects. YAs who move out have more children than YAs who continue co-residing when they make the move and two years after. In the year of the move, the difference is approximately 0.1 and then increases to about 0.15 two years later. These effects are significant for all three estimators.

In the appendix, I check for gender differences in the probability of marriage and divorce/separation and the number of children. No statistically significant differences are observed for both types of moves for all outcomes. Altogether, the results imply that it is the never-married YAs that are getting married and making the move out of the parental home. The selection into and out of co-residence based on divorce or separation is not strong.

Another possible explanation for moving back to the parental home is the declining health of the YA. Here, health is a dummy variable with 1 indicating that the YA reported that they are in at least good health and 0 if they report that their health is fair or poor. The results are presented in Appendix Figure A.14. The estimates do not support the idea that the YA's health is a significant factor in the decision to move back into or out of the parental home.

In general, the urge to move out is stronger than moving home. The significant patterns found for marriage and total offspring are expected as YAs are choosing when they would like to change their residence. YAs who start forming their own families are more likely to live independently than YAs who are still single with no kids. However, the decision to co-reside, one's financial status, total number of kids, and marital status are all jointly determined, making it impossible to know which way causation runs. To see if it is co-residence
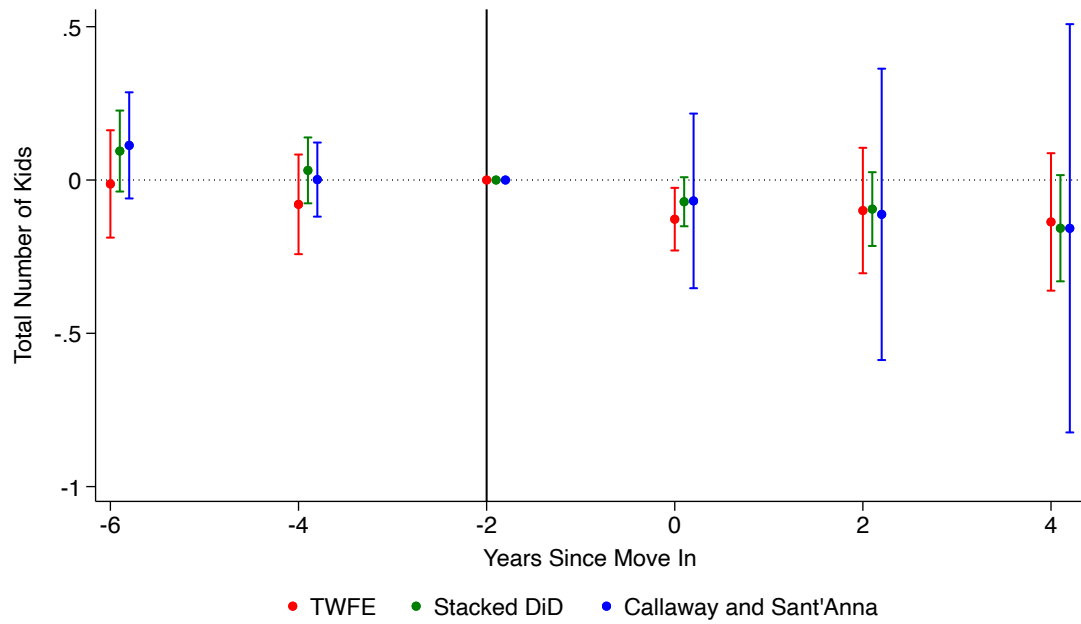
Figure 4: Marriage Event Studies
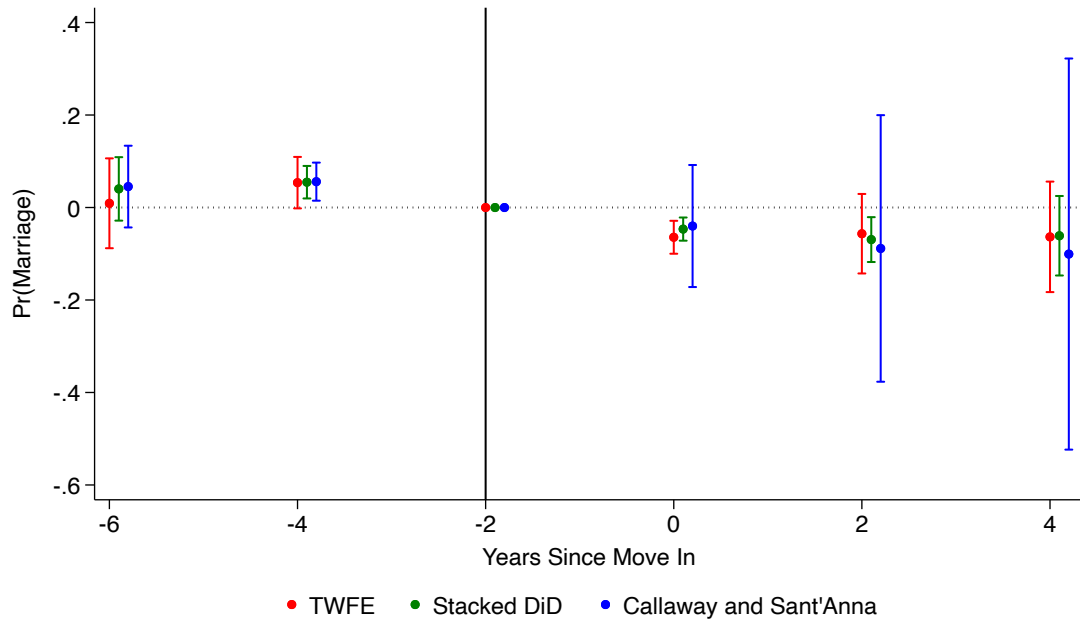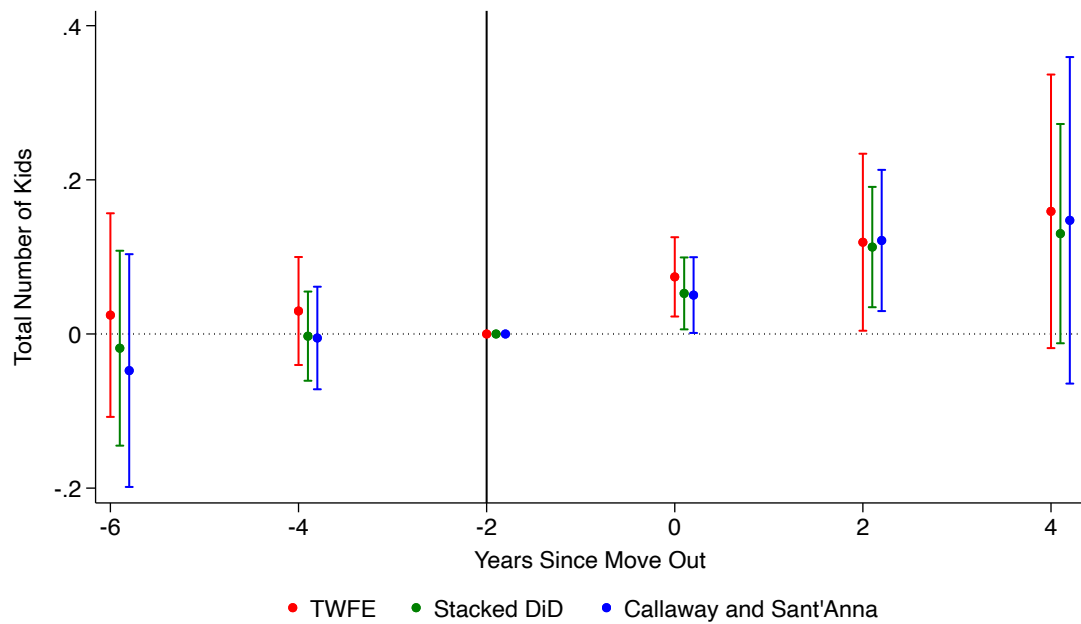

(a) Move In
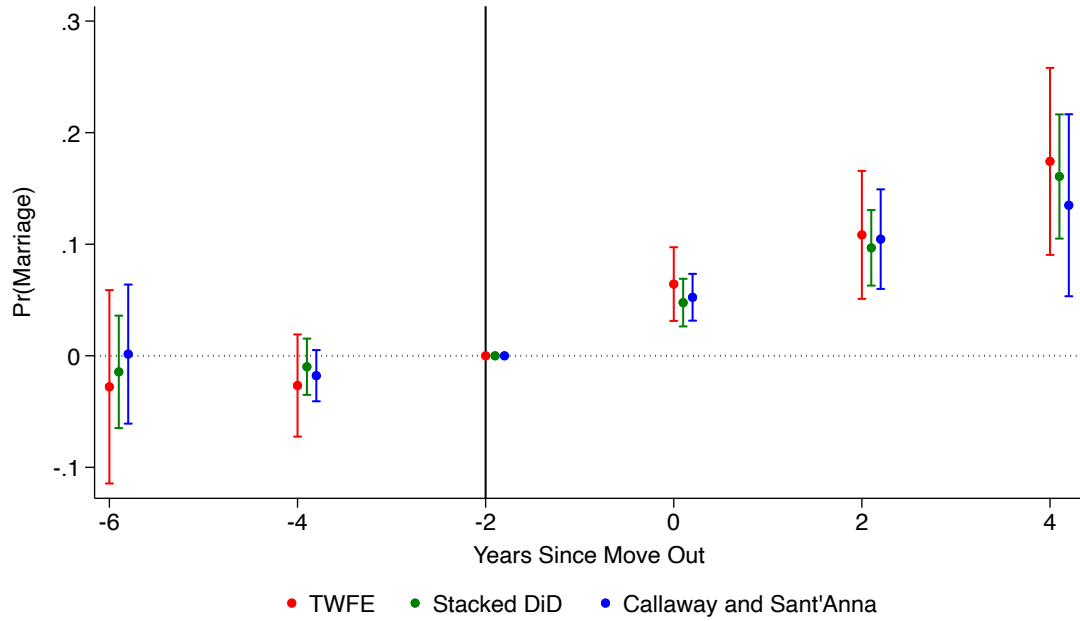
(b) Move Out

Note: Marriage is a dummy variable with 1 indicating that the YA is married and 0 otherwise. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure 5: Total Number of Kids Event Studies

(a) Move In

(b) Move Out

Source: PSID Transition to Adulthood Supplement (2007 - 2019).

affecting these decisions, I turn towards the IV analysis.

4.2 IV

The instrument used for co-residence is the predicted unaffordability of state s in the corresponding year. Panel (a) of Figure 6 shows the sensitivity estimate used to calculate the instrument ($\hat{\rho}_s$ of equation (5)). The darker colors indicate higher sensitivity. Most of the southern states are very sensitive to the regional unaffordability ratio. The states on the west coast are generally less sensitive compared to those inland in the West region. Panel (b) displays the CDF of the instrument by the YA's co-residence status. Negative values indicate that unafforability decreased, and positive values indicate increases in unaffordability. The functions are very similar.

4.2.1 Wealth

To begin, I look at how co-residence affects wealth. From the event studies, the selection into and out of co-residence based on wealth was not strong. Table 3 presents the net worth results using the IV approach. Looking first at the OLS estimates, YAs who co-reside have a higher net worth compared to YAs who are not co-residing. This coefficient is significant at the 10% level when we exclude student loans and significant at 1% when we include it. The IV estimates suggest the same; however, the coefficients are not significant. Breaking down net worth and looking at assets and debt separately (Appendix Table A.3), no significant effects are present for the IV estimates. The coefficients suggest that YAs who co-reside have more assets and debt (with and without student loans) than YAs who were not co-residing. The first stage F statistic is very weak, indicating that the unaffordability instrument is not highly correlated with co-residence. Thus, results should be interpreted with caution.

4.2.2 Family Formation

Next, I examine how co-residence may affect a YA's expectation of marriage and parenthood. The 2005 - 2015 TAS surveys ask YAs what they believe the likelihood of marriage, a LT relationship (if not married), and becoming a parent. Answers are provided in a 5-point Likert scale, which I convert to percentages for this analysis (i.e., 0:No chance, 0.25:Some chance, 0.5:About 50-50, 0.75:Pretty likely, 1:It will happen). No significant effects are found (Table 5). Both the OLS and IV estimates indicate a negative relationship between parental co-residence and the likelihood of kids. If the YA answers that there is at least some chance in the likelihood of the event, they are asked at what age they expect this to occur; the results are presented in Table 6. Similar to the regressions for the likelihood items, no significant effects are detected. The OLS

Figure 6: Unaffordability Instrument
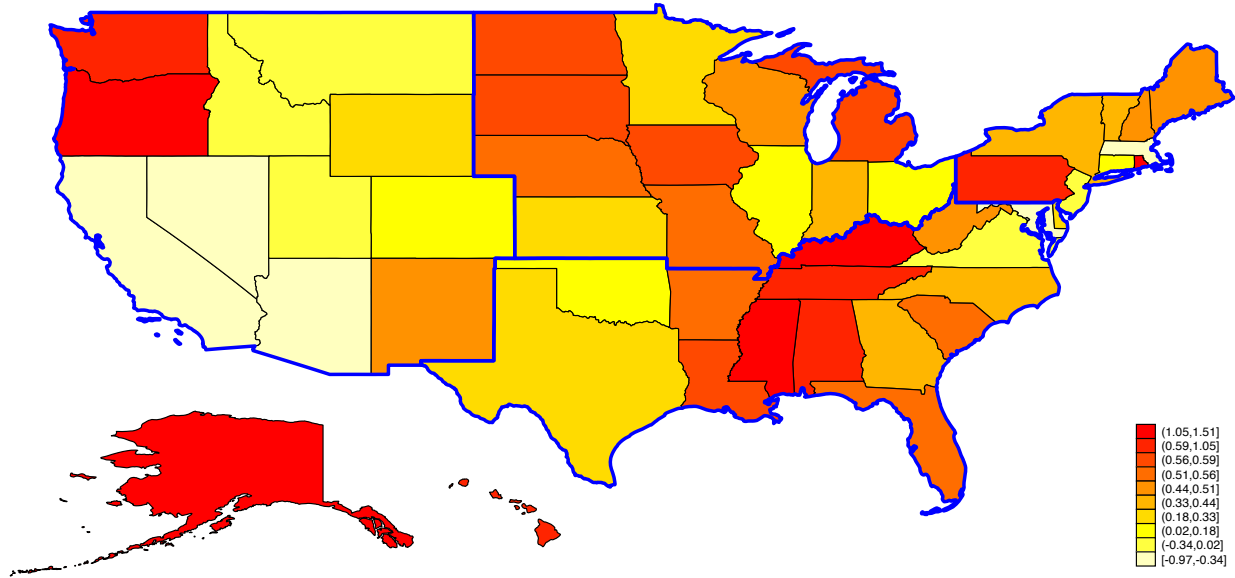
(a) State Sensitivity Estimate
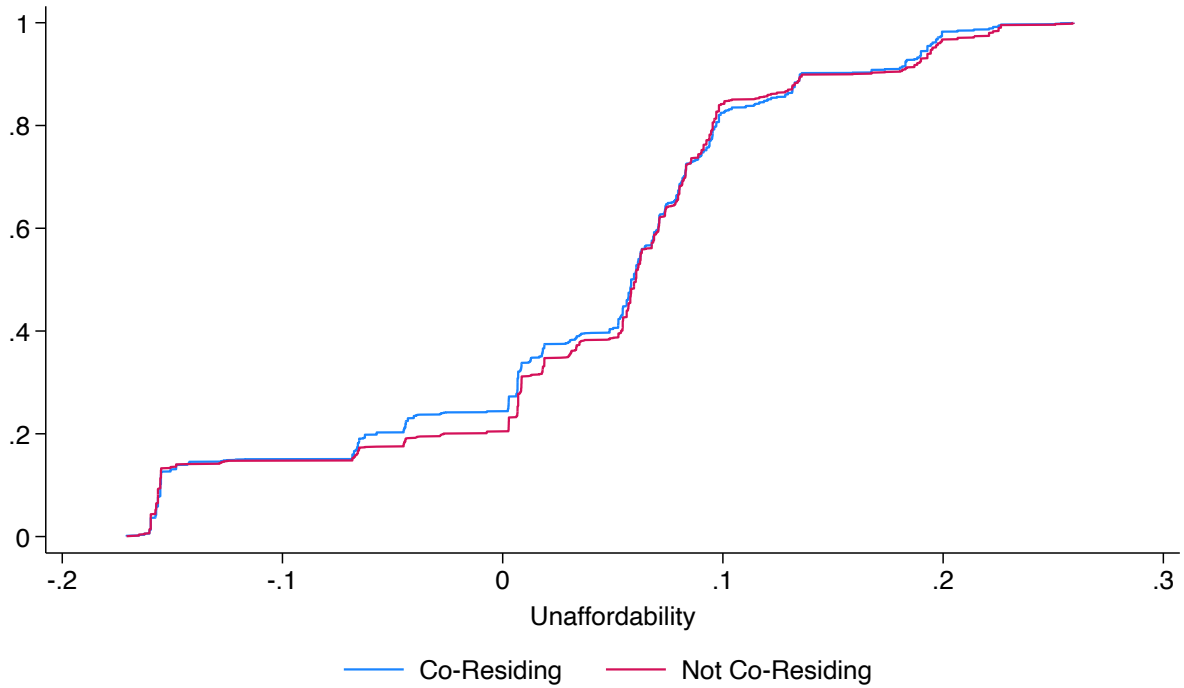
(b) CDF of Instrument

Note: Panel (a) presents the estimates of $\hat{\rho}_s$, the estimated sensitivity of the state's unafforability to the regional unaffordability. Panel (b) plots the CDF of the instrument by co-residence status.

Table 3: Regressions for asinh(Net Worth)

	Co-Residence	Excluding Student Loans			Including Student Loans		
	FS	OLS	RF	IV	OLS	RF	IV
Unaffordability	-2.366		-3.601			-7.307	
	(3.797)		(11.683)			(13.912)	
Co-Residence		0.117*		1.522	0.315***		3.088
		(0.063)		(5.309)	(0.105)		(7.517)
Mean of Dep. Var. ($1k)		4.755	4.755	4.755	-2.974	-2.974	-2.974
Mean of Dep. Var. (asinh)		1.140	1.140	1.140	-0.198	-0.198	-0.198
F	0.388		0.095			0.276	
N	4967	4967	4967	4967	4967	4967	4967

Note: Values of the outcome variables are in thousands of dollars and transformed to the inverse hyperbolic sine. Standard errors are in parentheses and adjusted for sample design. Reported F-statistic tests for the significance of the unaffordability instrument. All regressions include individual, state, and year fixed effects. Sources: PSID Transition to Adulthood Supplement (2005 - 2015). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

and IV coefficients for likely age at marriage and first child are the same sign; co-residing YAs expect to get married and have their first child at older ages compared to non-co-residing YAs. Again, the first stage F statistics are extremely weak, which may lead to biased estimates.

The survey also asks the YAs what their ideal number of children is. Although the first stage F statistic is weak and the coefficients are insignificant, both the OLS and IV results suggest that YAs who co-reside would like smaller families compared to a YAs who are not co-residing.

Together, these results imply that co-residence may delay the expectation of family formation. No significant effects are found and all first stages are weak; however, some important patterns emerged. There is a negative relationship between co-residence and the likelihood of kids. YAs who co-reside may expect marriage and the birth of their firstborn to occur at an older age. In addition, the sign of the OLS and IV estimates suggest that they may prefer to have smaller families.

5 IV Extensions

In this section, I extend the analysis done in Section 4.2.2. First, I add two region population-weighted controls to equation (5): new housing units and vacancy rates. Low vacancy rates can lead to higher prices, making it more difficult to afford rental units. New housing units help increase this rate, which can drive down housing costs. YAs living in states with low vacancy rates and few new housing units may move to nearby states with higher vacancy rates and/or more new housing units which would help to keep rental

Table 4: Regressions for Ideal Number of Children

	OLS	FS	RF	IV
Unaffordability		-2.712	3.471	
		(3.842)	(4.637)	
Co-Residence	-0.009			-1.280
	(0.035)			(2.791)
Mean of Dep. Var.	2.235		2.235	2.235
F		0.498	0.560	
N	4938	4938	4938	4938

Note: Standard errors are in parentheses and adjusted for sample design. Reported F-statistic tests for the significance of the unaffordability instrument. All regressions include individual, state, and year fixed effects. Sources: PSID Transition to Adulthood Supplement (2005 - 2015). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Likelihood Regressions

	Likelihood of Marriage				Likelihood of LT Relationship				Likelihood of Kids			
	OLS	FS	RF	IV	OLS	FS	RF	IV	OLS	FS	RF	IV
Unaffordability		-2.366	-1.142			-4.001	-0.827			-2.343	1.508	
		(3.797)	(1.940)			(4.638)	(2.093)			(3.796)	(1.518)	
Co-Residence	-0.010			0.483	-0.012			0.207	-0.004			-0.644
	(0.011)			(1.081)	(0.017)			(0.464)	(0.011)			(1.148)
Mean of Dep. Var.	0.737		0.737	0.737	0.553		0.553	0.553	0.720		0.720	0.720
F		0.388	0.347			0.744	0.156			0.381	0.987	
N	4967	4967	4967	4967	2909	2909	2909	2909	4963	4963	4963	4963

Note: The dependent variable is a 5-point Likert scale converted into percentages (i.e., 1:No chance, 0.25:Some chance, 0.5:About 50-50, 0.75:Pretty likely, 1:It will happen). Standard errors are in parentheses and adjusted for sample design. Reported F-statistic tests for the significance of the unaffordability instrument. All regressions include individual, state, and year fixed effects. Sources: PSID Transition to Adulthood Supplement (2005 - 2015). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Regressions for Expected Age

	Likely Age at Marriage				Likely Age Begin LT Relationship				Likely Age at First Child			
	OLS	FS	RF	IV	OLS	FS	RF	IV	OLS	FS	RF	IV
Unaffordability		-0.791	-14.929			-2.284	22.127			-2.485	-29.295	
		(3.813)	(23.721)			(4.760)	(38.464)			(3.822)	(18.907)	
Co-Residence	0.125			18.869	0.066			-9.690	0.205			11.787
	(0.200)			(99.262)	(0.293)			(25.439)	(0.148)			(19.050)
Mean of Dep. Var.	28.087		28.087	28.087	27.146		27.146	27.146	29.419		29.419	29.419
F		0.043	0.396			0.230	0.331			0.423	2.401	
N	4803	4803	4803	4803	2543	2543	2543	2543	4717	4717	4717	4717

Note: Standard errors are in parentheses and adjusted for sample design. Reported F-statistic tests for the significance of the unaffordability instrument. All regressions include individual, state, and year fixed effects. Sources: PSID Transition to Adulthood Supplement (2005 - 2015). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

costs low. Formally, I estimate:

$$UnAfford_{st} = \rho_s UnAfford_{-srt} + \sigma_s NewHousingUnits_{-srt} + \psi_s VacancyRate_{-srt} + \alpha_s + \pi_t + \nu_{st} \quad (6)$$

and construct the instrument by multiplying the estimated coefficients with the actual value in t and adding them on the right-hand side of (5):

$$\widehat{UnAfford}_{st} = \hat{\rho}_s UnAfford_{-srt} + \hat{\sigma}_s NewHousingUnits_{-srt} + \hat{\psi}_s VacancyRate_{-srt} \quad (7)$$

Since the controls are regional variables, I exclude the state in consideration when constructing them.

Next, I look at changes rather than levels. States are unlikely to respond to regional unaffordability changes equally. The states that respond more to an increase in regional unaffordability should be more likely to see an increase in co-residence compared to other states in that region that are less sensitive. This instrument takes advantage of this difference. The unaffordability sensitivity of each state to changes in regional affordability is estimated using:

$$\Delta UnAfford_{st} = \rho_s \Delta UnAfford_{-srt} + \alpha_s + \pi_t + \nu_{st} \quad (8)$$

Equation (5) is still used to construct the instrument, but changes are used rather than levels. The analysis with controls is also estimated. The control (if included) and outcome variables are first-differenced.

In general, the addition of controls does not significantly improve the strength of the instrument. The first stage F statistics are still very low and most of the coefficients are still insignificant. Some significance is found when estimating the likelihood of a LT relationship, shown in Table 7. The first stage F statistic is higher than that in 5, but is still considered weak.

The first stage F statistics of the regressions on changes are even weaker than those of all the previous specifications (less than 0.2). Adding controls improves the first stage, but the regressions are still subject to weak instrument bias.

6   Conclusion

This paper examines how parental co-residence affects wealth, marriage, and parenthood. The literature finds that YAs who co-reside are generally financially constrained and it delays family formation. I am unable to observe the wealth differences found in the literature, but found some support for the delays in family formation.

Table 7: Likelihood of LT Relationship, with Controls

	OLS	FS	RF	IV
Unaffordability		-2.162**	1.538**	
		(1.063)	(0.628)	
Co-Residence	-0.012			-0.711*
	(0.017)			(0.415)
Mean of Dep. Var.	0.553		0.553	0.553
F		4.134	5.998	
N	2909	2909	2909	2909

Note: The dependent variable is a 5-point Likert scale converted into percentages (i.e., 1:No chance, 0.25:Some chance, 0.5:About 50-50, 0.75:Pretty likely, 1:It will happen). Standard errors are in parentheses and adjusted for sample design. Reported F-statistic tests for the significance of the unaffordability instrument. All regressions control for population-weighted vacancy rates and population-weighted of new housing units. Individual, state, and year fixed effects are also included. Sources: PSID Transition to Adulthood Supplement (2005 - 2015). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

I begin by conducting event studies to observe how these different outcomes change as YAs move in and out of their parents' home. In general, I find that the selection into and out of co-residence because of net worth is weak. YAs seem to be moving back out when they get married and begin to have their own families. Effects of these events are not as strong when observing move-out events. These dynamic event studies are simply descriptive and we are unable to discern whether the outcomes are a result of co-residence or the other direction.

In an attempt to find a causal effect of co-residence on the expectations of these outcomes, I estimate several IV regressions. Co-residence is instrumented with an estimated rental unaffordability measure. Unfortunately, the instrument is weak and the results produced are inconsistent. This problem persists even with the addition of population-weighted controls and an analysis using changes.

Together, these show that parental co-residence is a very complex topic. YAs may also be moving for reasons other than those examined in this paper, such as companionship and the financial status of the parents. Future work studying other possible motives for choosing co-residence is important in further understanding why YAs may resort to this housing choice. As parental co-residence increases, it is also vital that we study how it helps (or hinders) their ability to live independently in the future and start their own families.

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Appendix

Table A.1: YA Movers Demographic Characteristics for DiD Sample

	Only Moved In	Only Moved Out	Both Moved In and Out
Age	21.102	20.753	20.609
	(1.129)	(0.922)	(0.811)
Male	0.449	0.457	0.540
White	0.710	0.726	0.716
Employed	0.639	0.711	0.702
Married	0.169	0.021	0.067
Number of Kids	0.407	0.156	0.232
	(0.820)	(0.465)	(0.683)
Education			
Less than HS	0.395	0.246	0.393
HS	0.309	0.401	0.350
Some College	0.198	0.223	0.176
Associate's	0.043	0.048	0.044
Bachelor's	0.055	0.081	0.037
Master's+	0.000	0.002	0.000
Health (1:Poor-5:Excellent)	3.729	3.778	3.690
	(1.004)	(0.909)	(0.874)
Last Year's Income ($1k)	11.376	10.678	10.467
	(14.243)	(9.553)	(10.587)
Net Worth ($1k)	5.563	3.662	2.748
	(18.835)	(8.385)	(7.508)
With Student Loans	1.211	-2.259	-3.661
	(22.024)	(15.349)	(15.264)
Surveys Observed Co-Residing	1.410	1.496	1.971
	(0.759)	(0.696)	(0.811)
Surveys Observed Not Co-Residing	1.601	1.725	1.786
	(0.857)	(0.756)	(0.801)
Number of YAs	176	676	268
Observations	535	2,201	1,009

Note: Statistics are displayed for the DiD sample at the start of observation. Last year's income and net worth are adjusted to 2015 dollar units. Estimates are weighted and standard errors are in parentheses and adjusted for sample design. Source: PSID Transition to Adulthood Supplement (2007 - 2019). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A.2: YA Demographic Characteristics for IV Sample

	Co-Resided	Never Co-Resided	Diff
Age	18.750	20.044	-1.294***
	(0.896)	(1.408)	
Male	0.542	0.430	0.112*
White	0.700	0.842	-0.141***
Employed	0.619	0.664	-0.045
Education			
Less than HS	0.318	0.194	0.124***
HS	0.650	0.700	-0.050
Some College	0.018	0.043	-0.025*
Associate's	0.012	0.037	-0.025
Bachelor's	0.002	0.026	-0.024
Master's+	0.001	0.000	0.001
Health (1:Poor-5:Excellent)	3.846	3.725	0.121
	(0.888)	(1.043)	
Last Year's Income ($1k)	8.728	12.833	-4.106**
	(10.032)	(14.536)	
Net Worth ($1k)	2.969	2.664	0.304
	(7.282)	(6.728)	
With Student Loans	0.549	-2.145	2.694
	(9.549)	(16.628)	
Number of YAs	1,531	101	
Observations	4,689	278	

Note: Statistics are shown for the YAs included in the IV estimation (i.e., never married, not currently in a long-term relationship, and have no children) at the start of their observation. Estimates are weighted and standard errors are in parentheses and adjusted for sample design. Last year's income and net worth are adjusted to 2015 dollar units. Source: PSID Transition to Adulthood Supplement (2005 - 2015). $*\ p < 0.10$, $**\ p < 0.05$, $***\ p < 0.01$

Figure A.1: Assets Event Studies
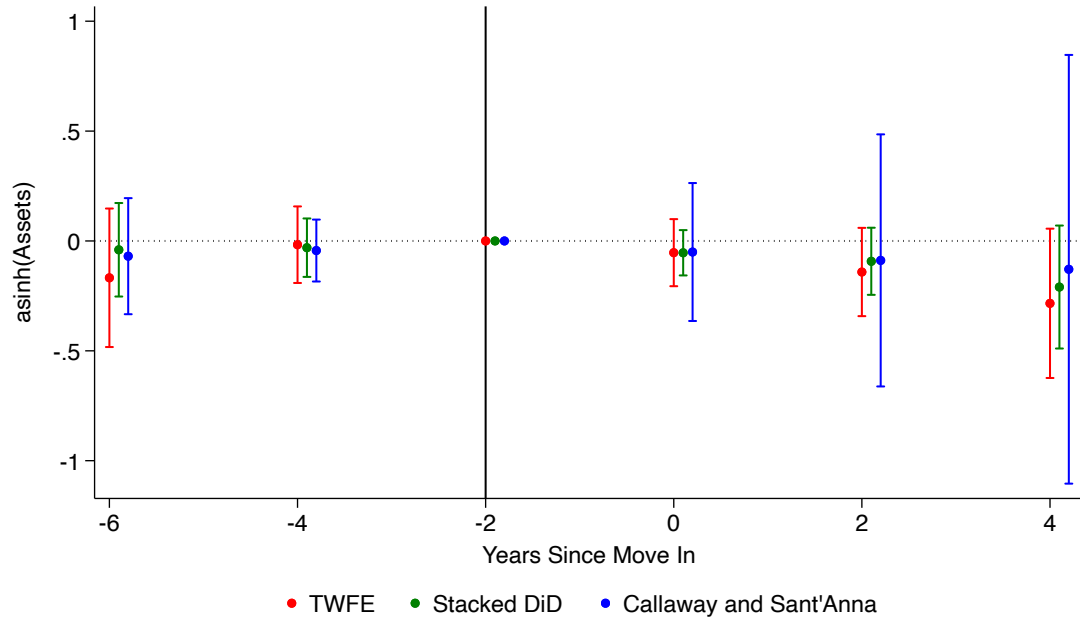
(a) Move In
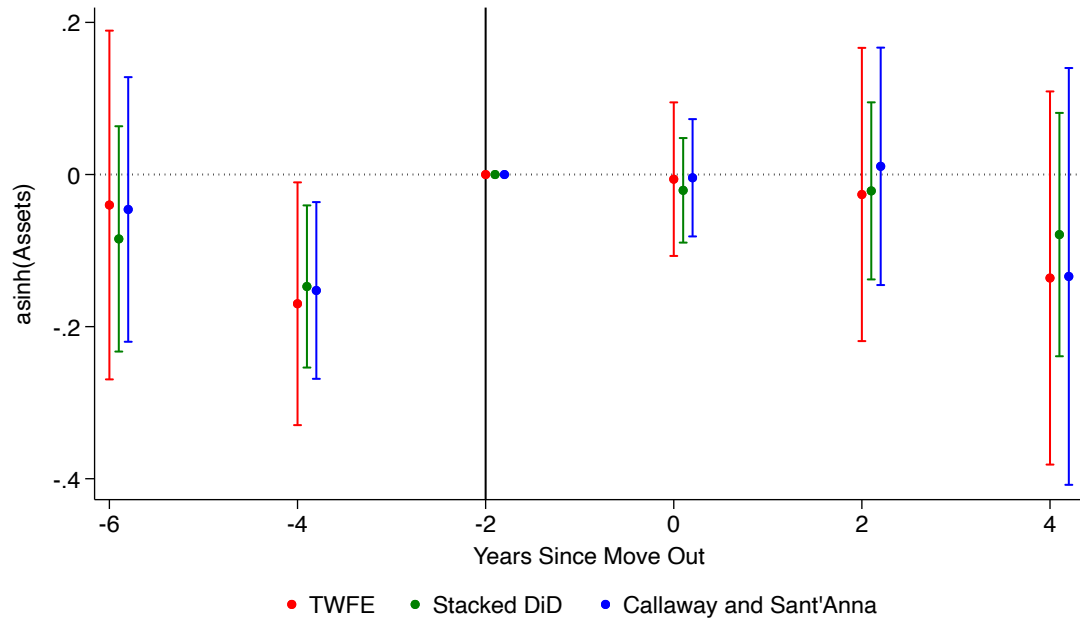
(b) Move Out

Note: Estimates are presented for the inverse hyperbolic sine of total assets in thousands of dollars. Total asset values are winsorized each year at the 99th percentile. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure A.2: Debt Event Studies
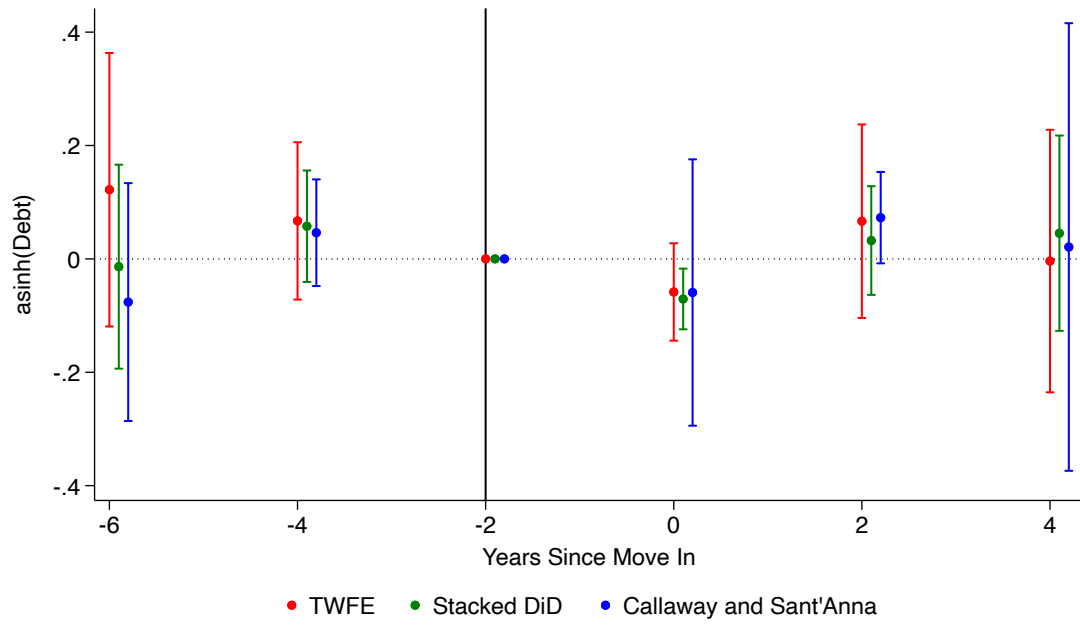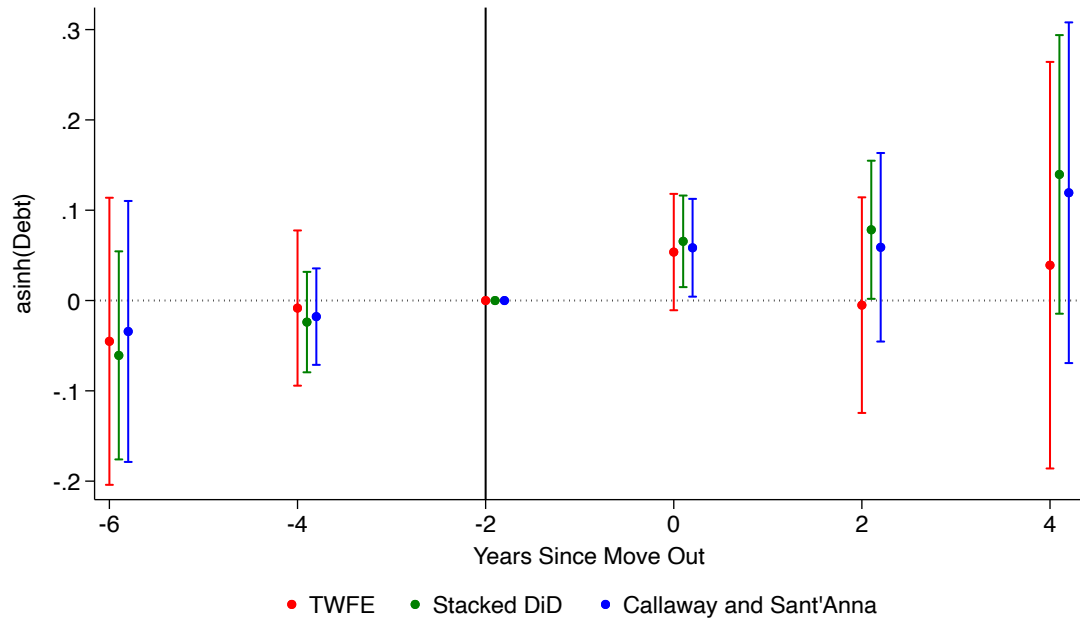
(a) Move In

(b) Move Out

Note: Estimates are presented for the inverse hyperbolic sine of total debt in thousands of dollars. Total debt values are winsorized each year at the 99th percentile. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

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Figure A.3: Debt Event Studies, Including Student Loans
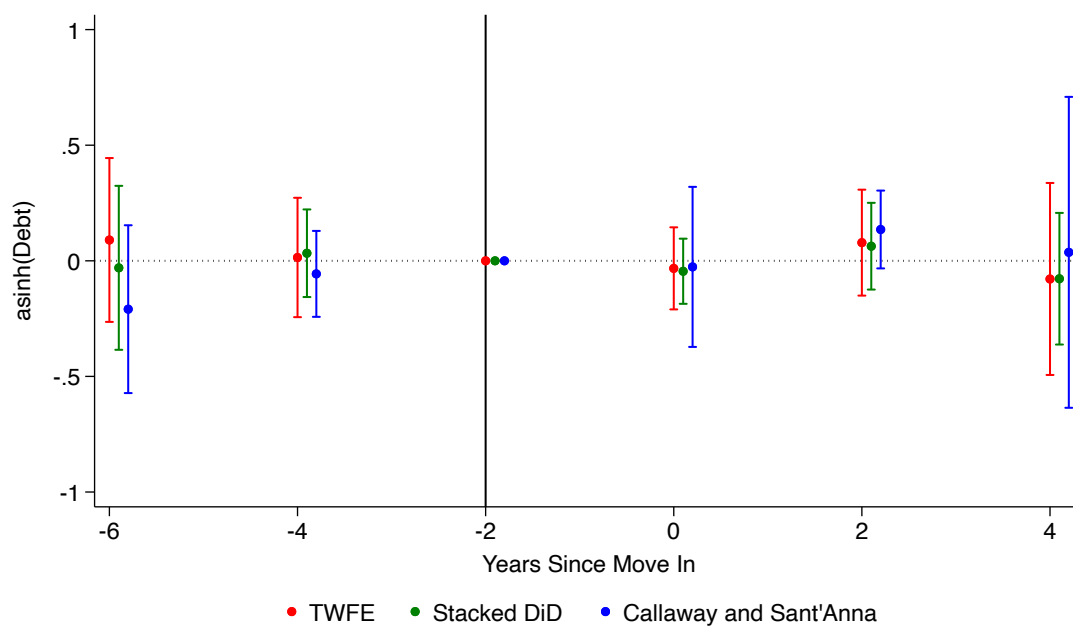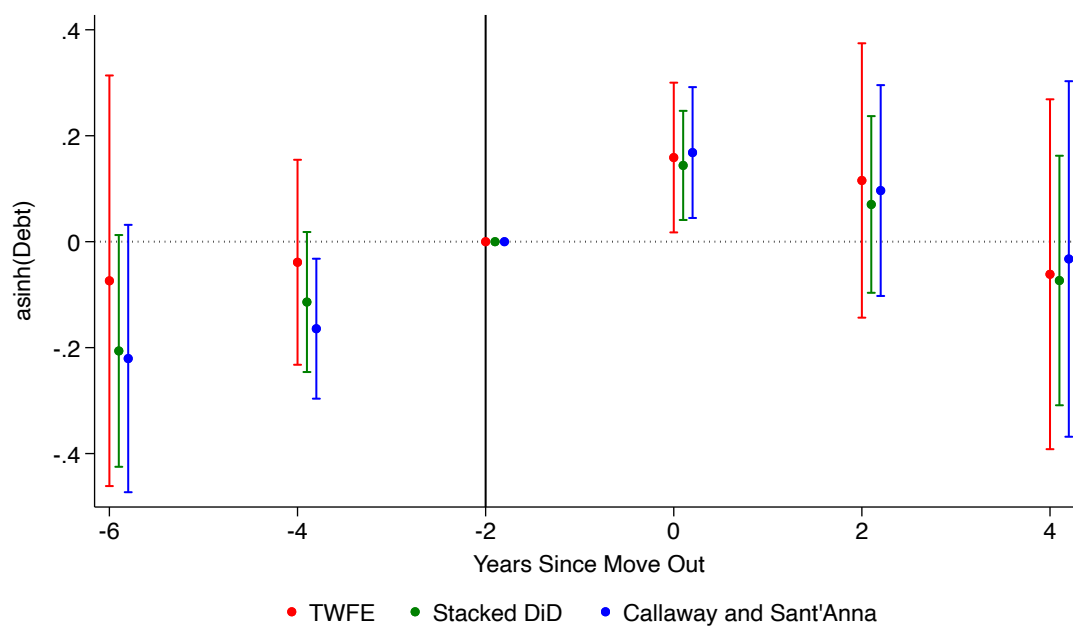
(a) Move In

(b) Move Out

Note: Estimates are presented for the inverse hyperbolic sine of total debt in thousands of dollars. Total debt values, including any student debt, are winsorized each year at the 99th percentile. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

**Figure A.4:** Net Worth Event Studies, Including Student Loans
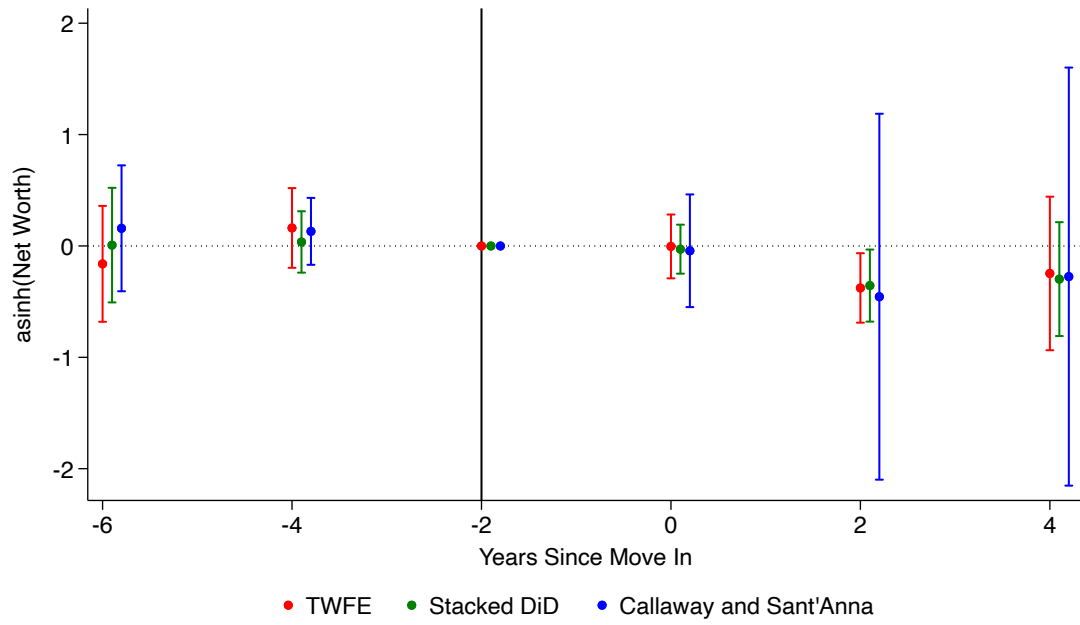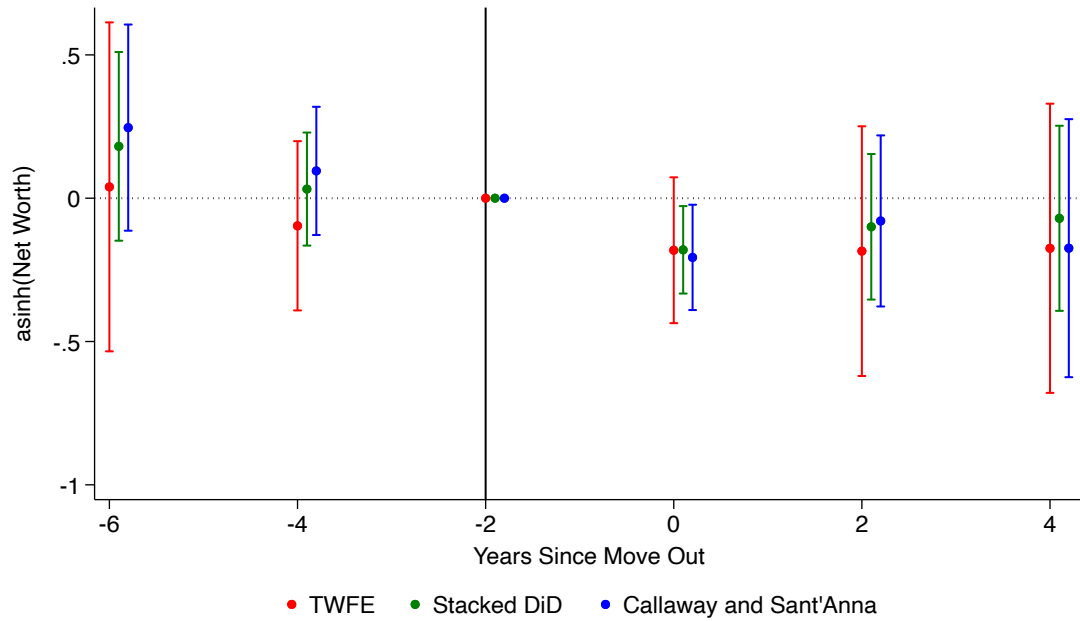
(a) Move In

(b) Move Out

Note: Estimates are presented for the inverse hyperbolic sine of net worth in thousands of dollars. Any student debt reported is included in the calculation of net worth. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure A.5: Untransformed Net Worth Event Studies
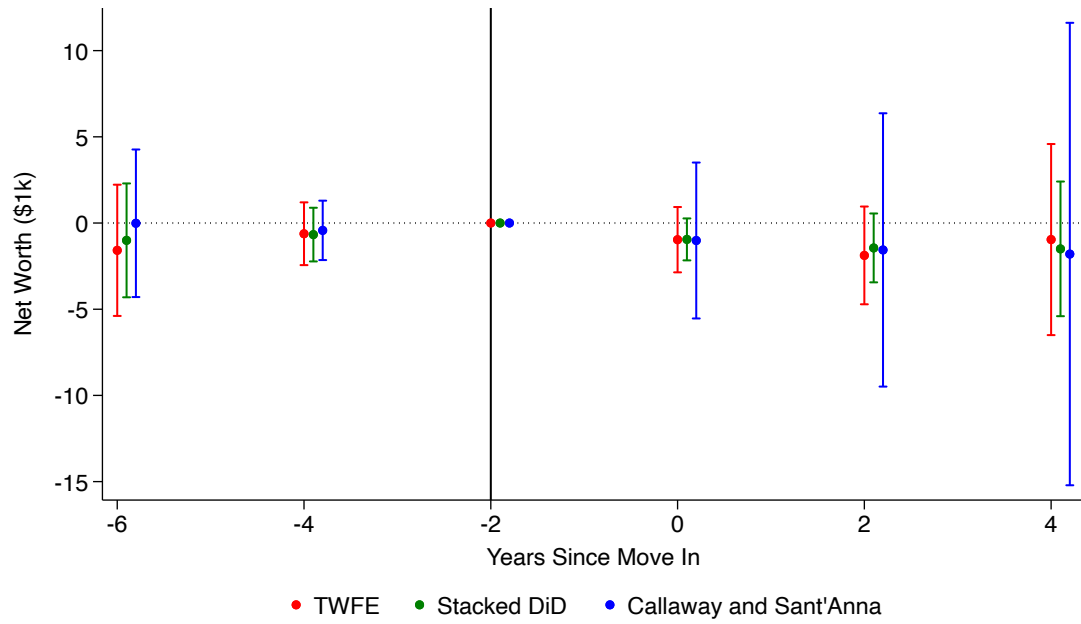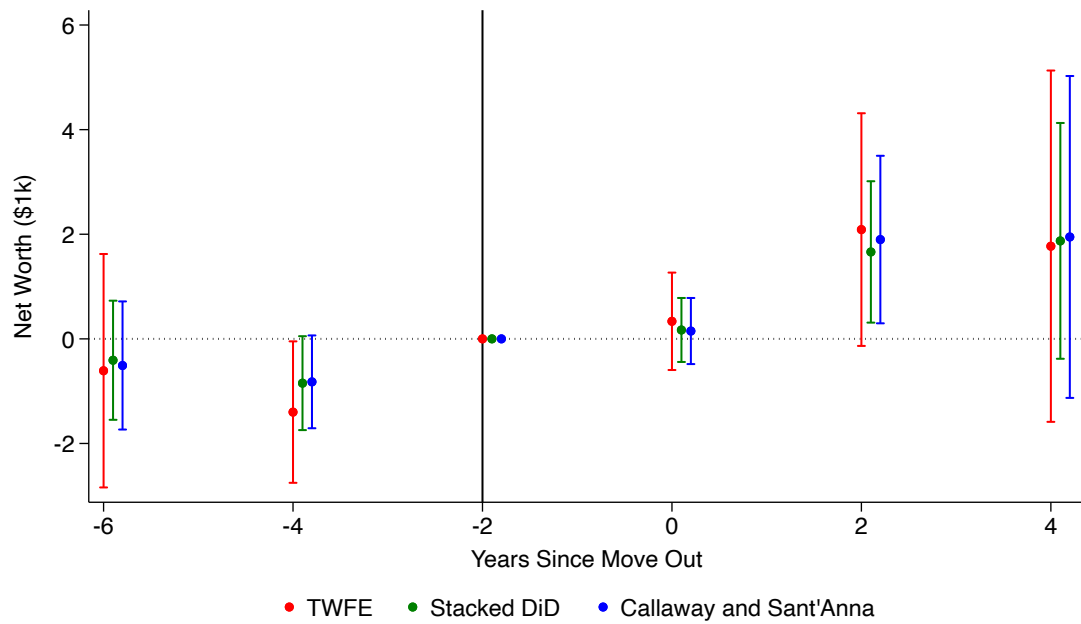
(a) Move In

(b) Move Out

Note: Net worth is in thousands of dollars. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure A.6: Untransformed Net Worth Event Studies, Including Student Loans
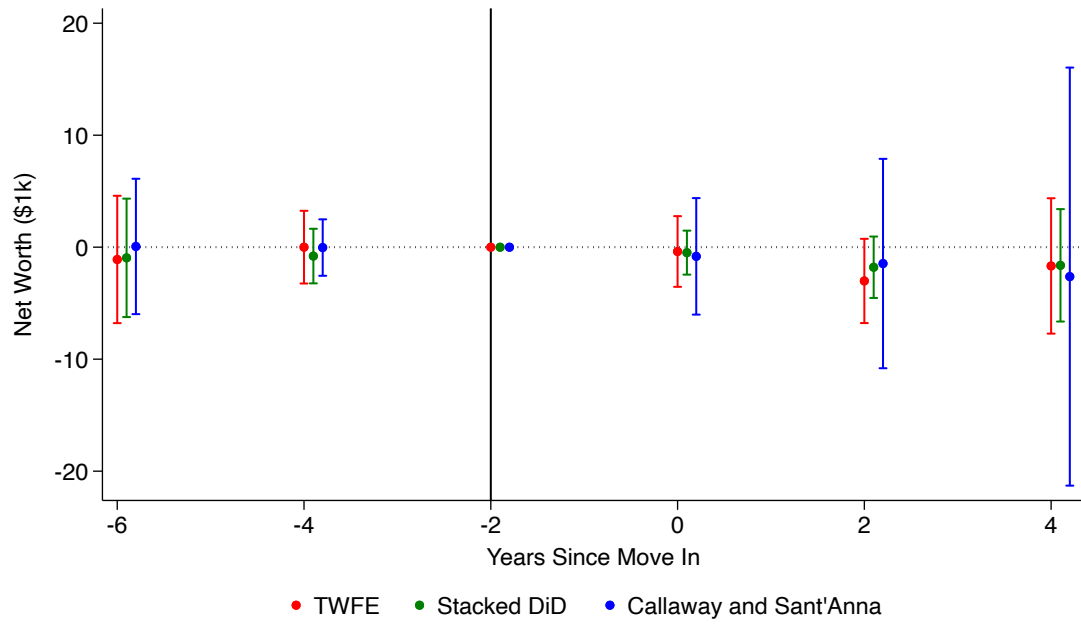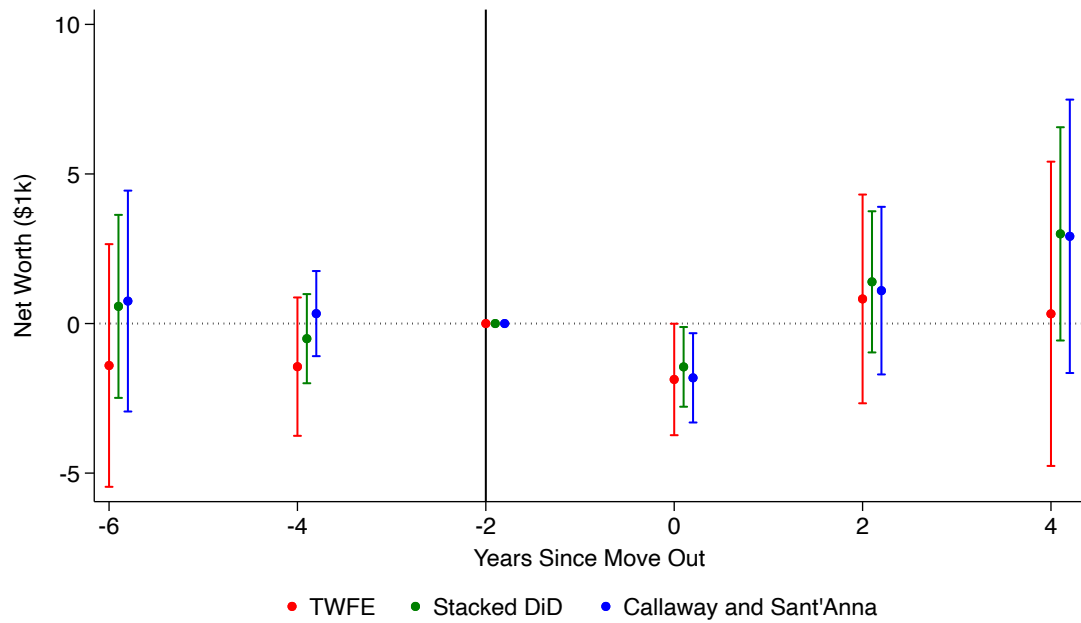
(a) Move In

(b) Move Out

Note: Net worth is in thousands of dollars and includes any student debt reported. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure A.7: Untransformed Debt Event Studies
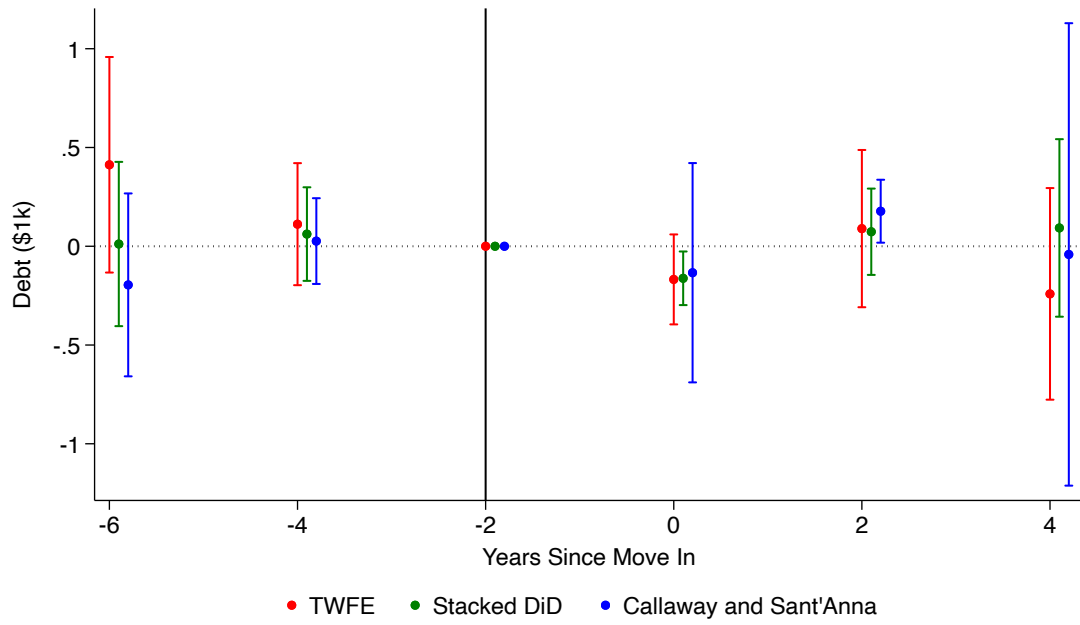
(a) Move In
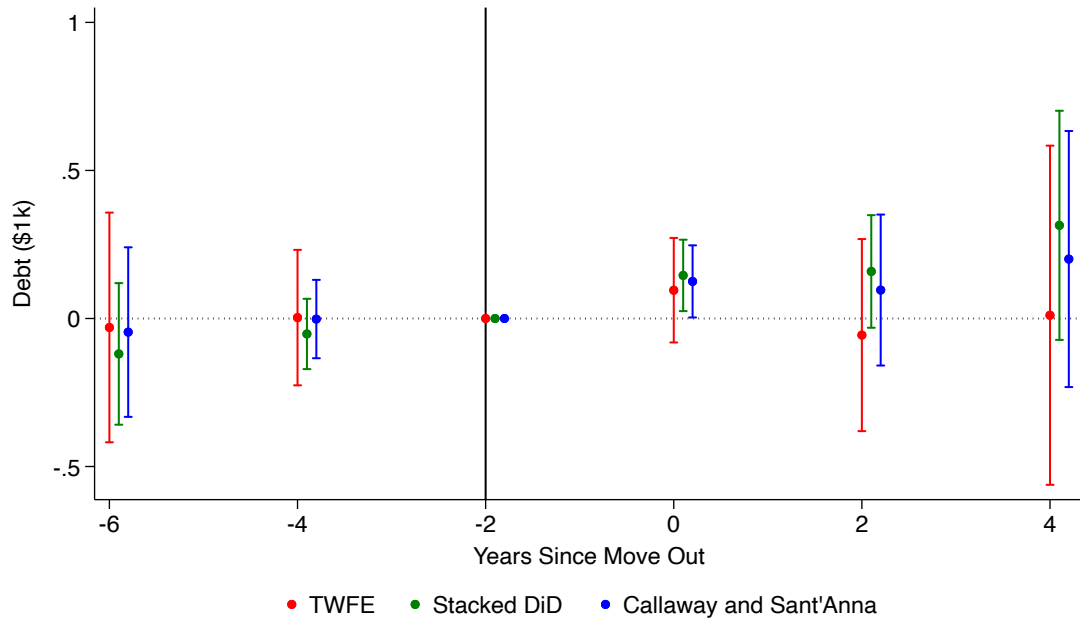
(b) Move Out

Note: Total debt values are in thousands of dollars and winsorized each year at the 99th percentile. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

**Figure A.8:** Untransformed Debt Event Studies, Including Student Loans
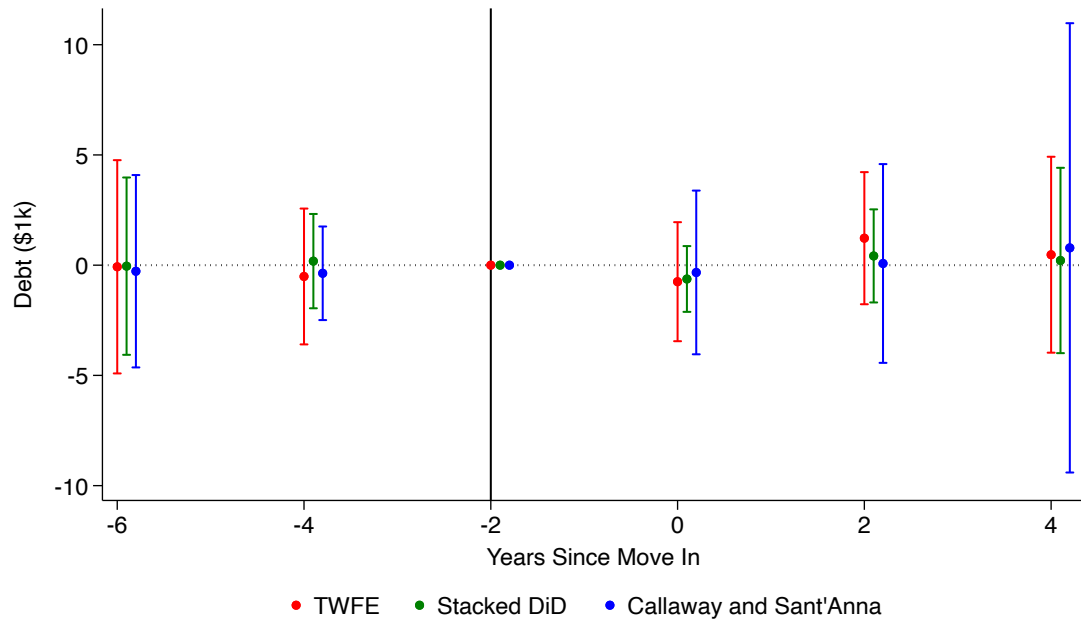
(a) Move In
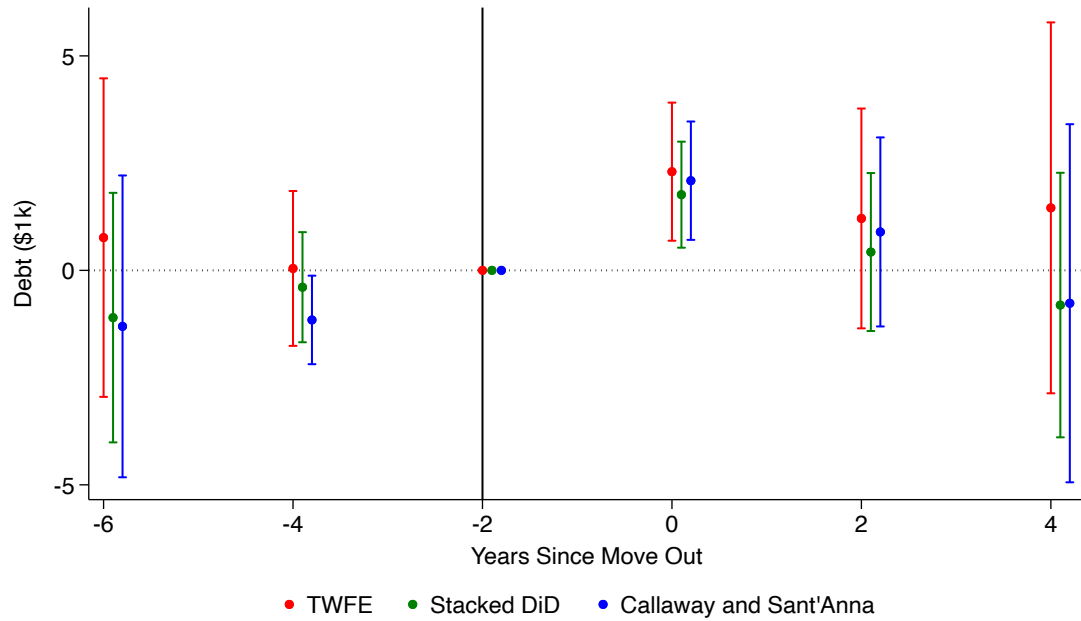
(b) Move Out

Note: Total debt is in thousands of dollars and winsorized each year at the 99th percentile. Any student debt reported is included in the calculation. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure A.9: Untransformed Assets Event Studies
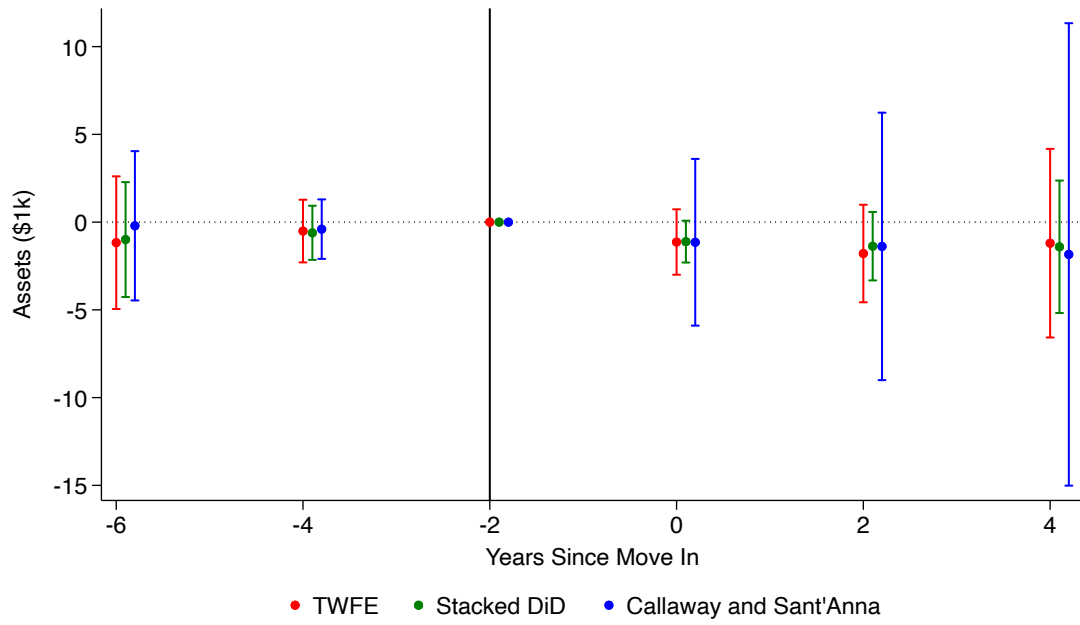
(a) Move In
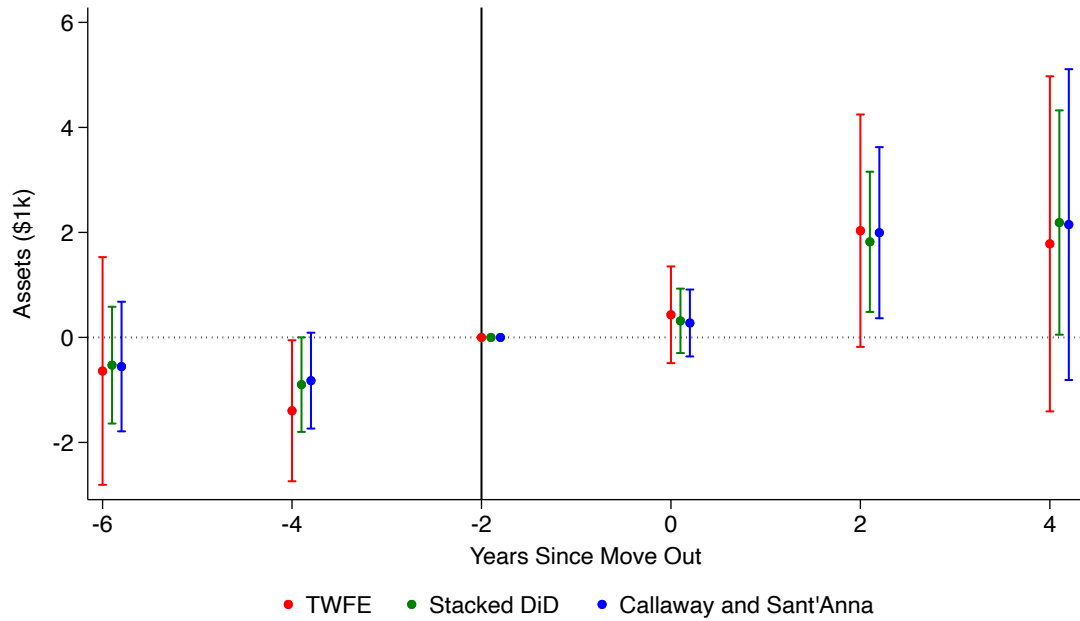
(b) Move Out

Note: Estimates are presented for total assets in thousands of dollars, which are winsorized each year at the 99th percentile. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure A.10: Divorce/Separation Event Studies
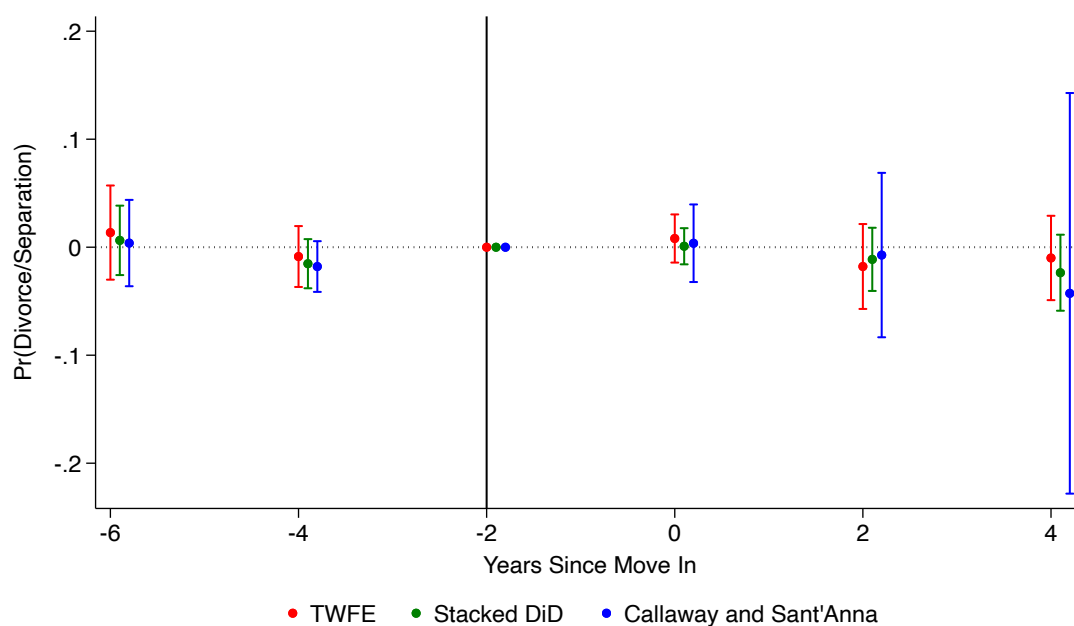
(a) Move In
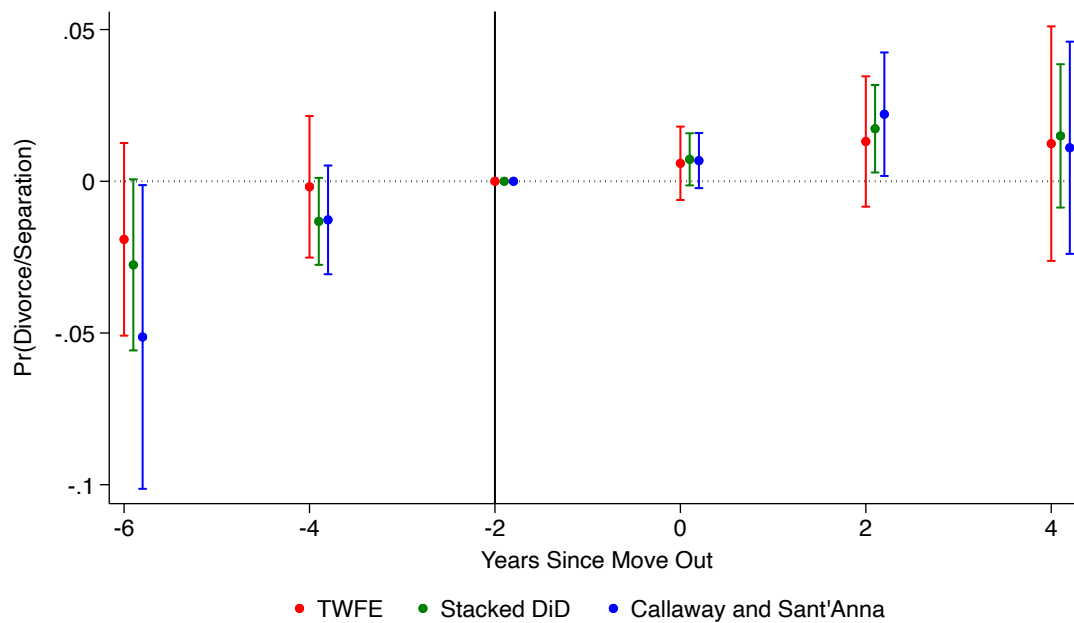
(b) Move Out

Note: Divorce/Separation is a dummy variable where 1 indicates that the YA is divorced or separated and 0 otherwise. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

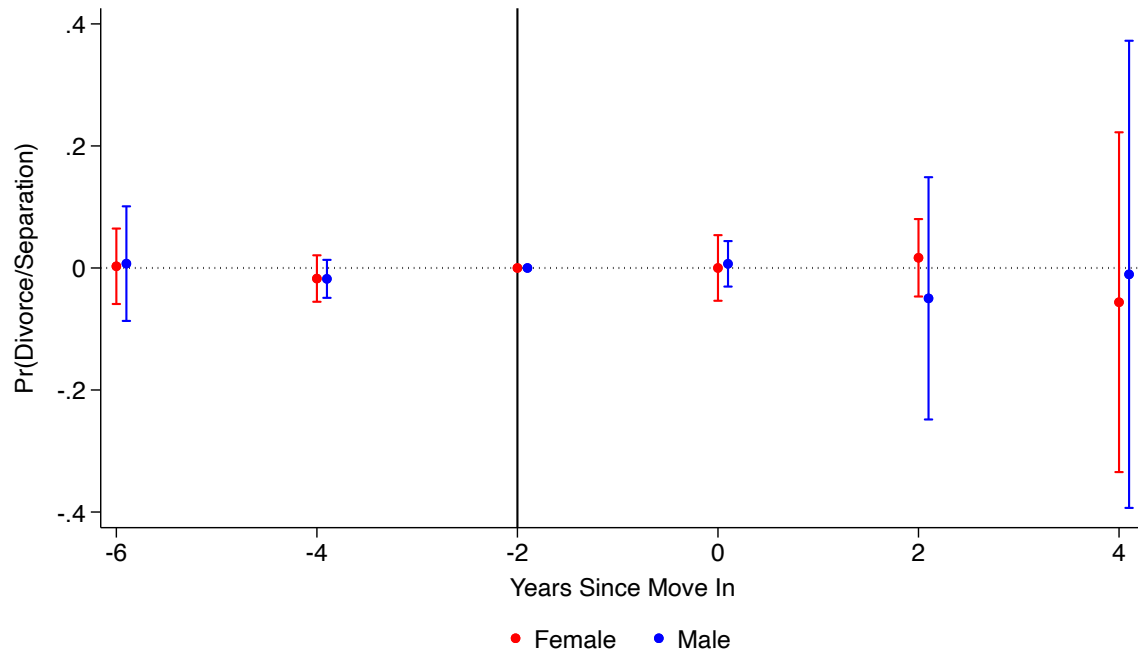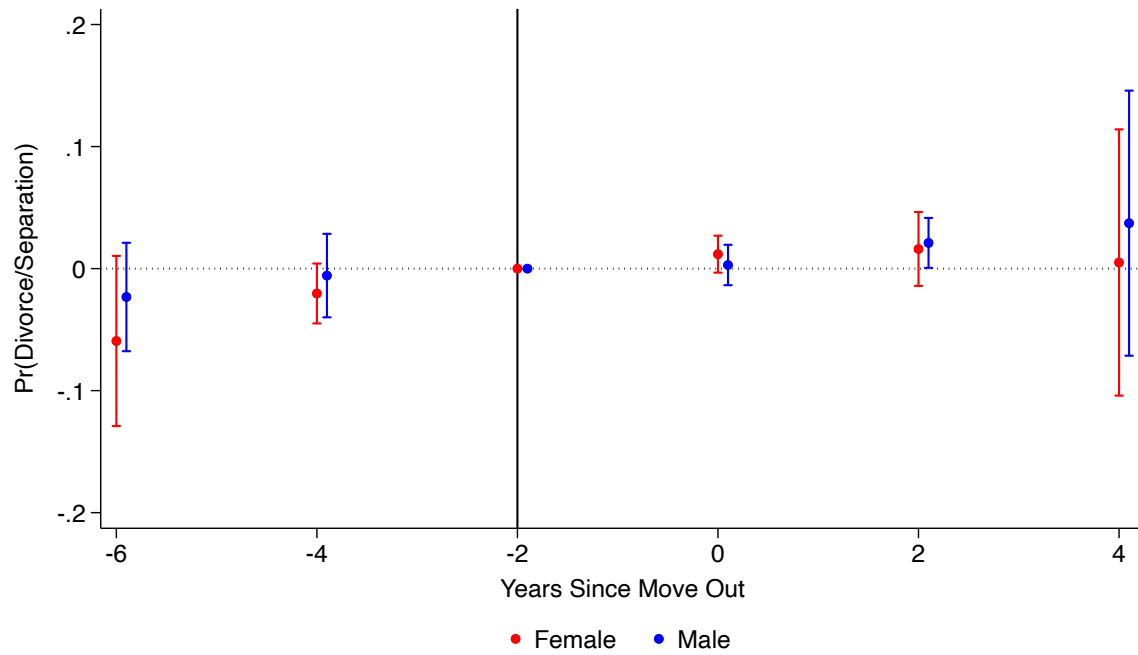**Figure A.11:** Marriage Event Studies by Gender
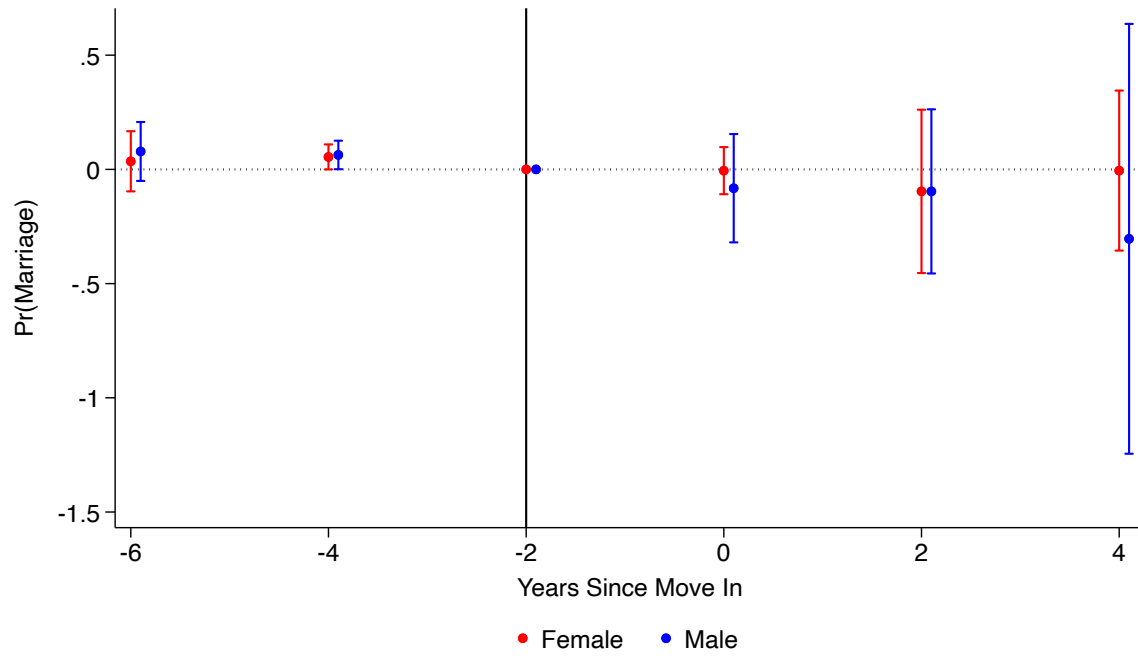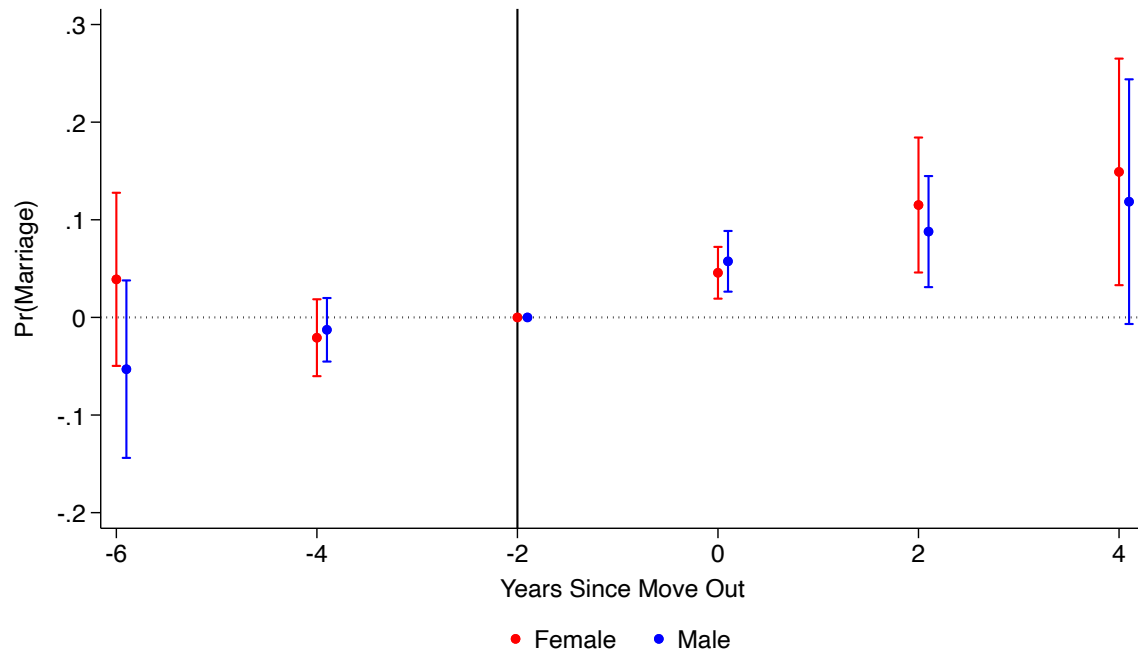
(a) Move In

(b) Move Out

Note: Marriage is a dummy variable with 1 indicating that the YA is married and 0 otherwise. The Callaway and Sant'Anna method is used for estimation. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

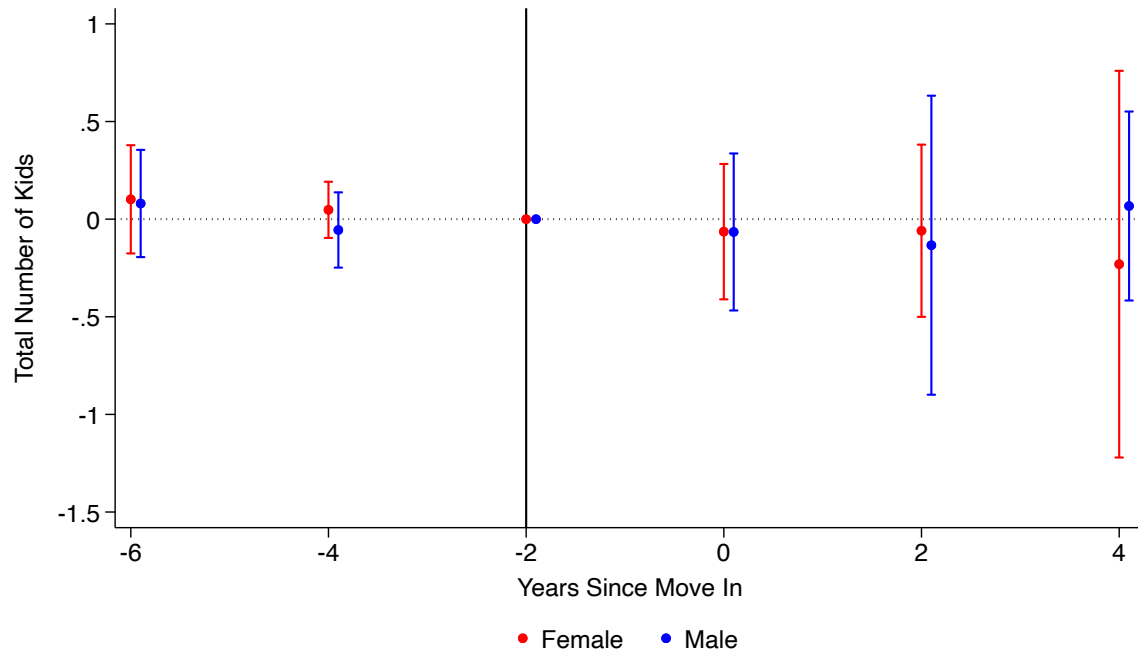**Figure A.12:** Divorce/Separation Event Studies by Gender
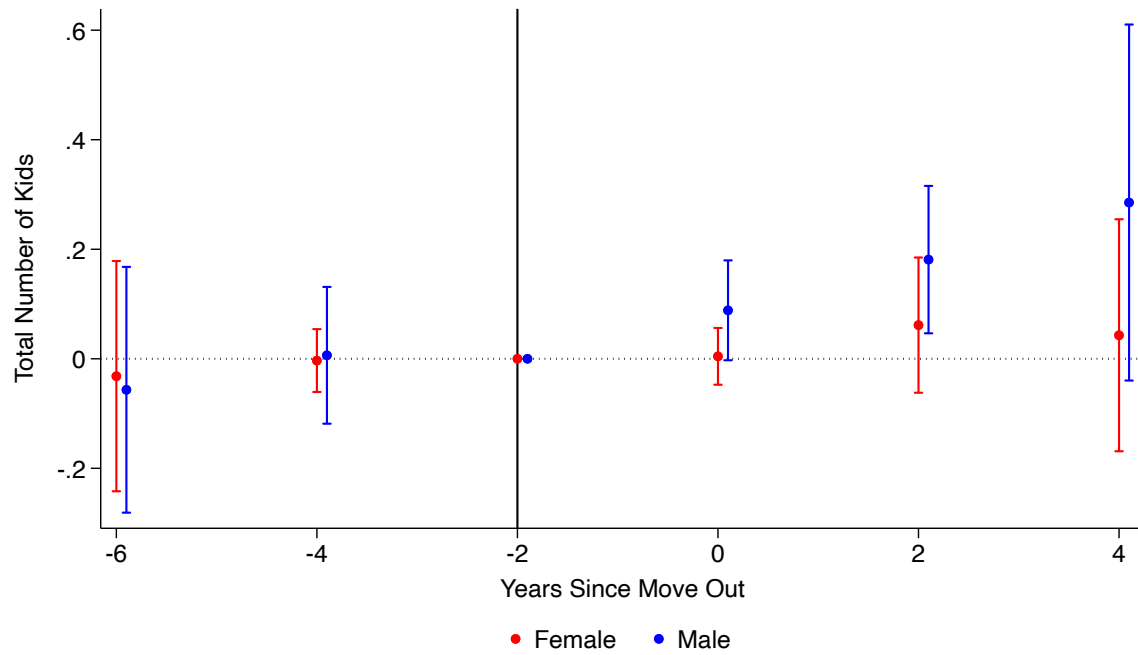

(a) Move In

(b) Move Out

Note: Divorce/Separation is a dummy variable with 1 indicating that the YA is divorced or separated and 0 otherwise. The Callaway and Sant'Anna method is used for estimation. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

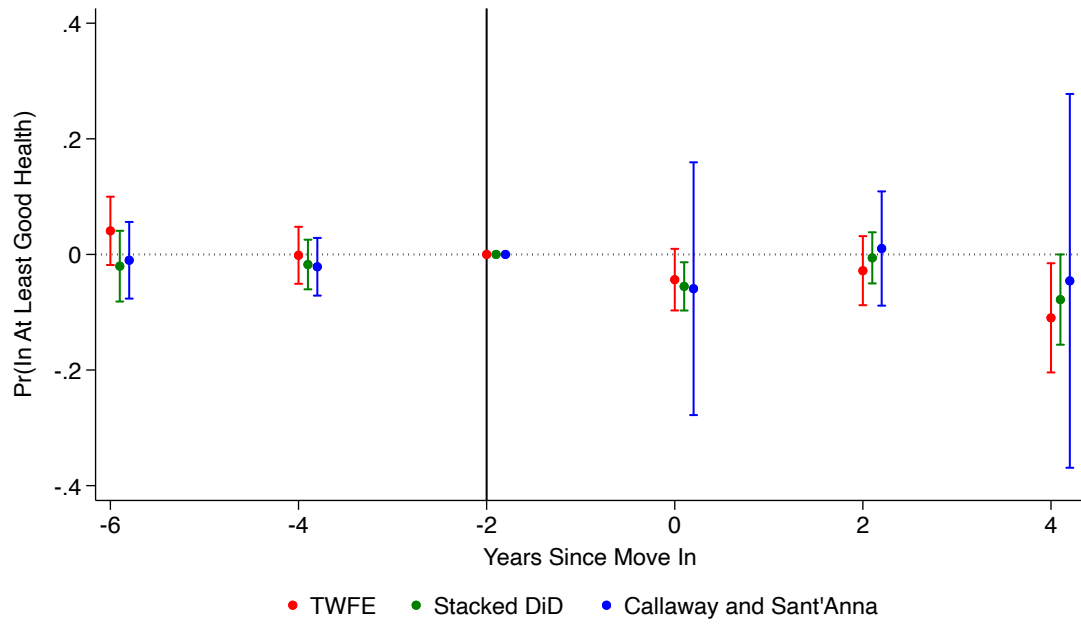**Figure A.13:** Total Number of Kids Event Studies by Gender
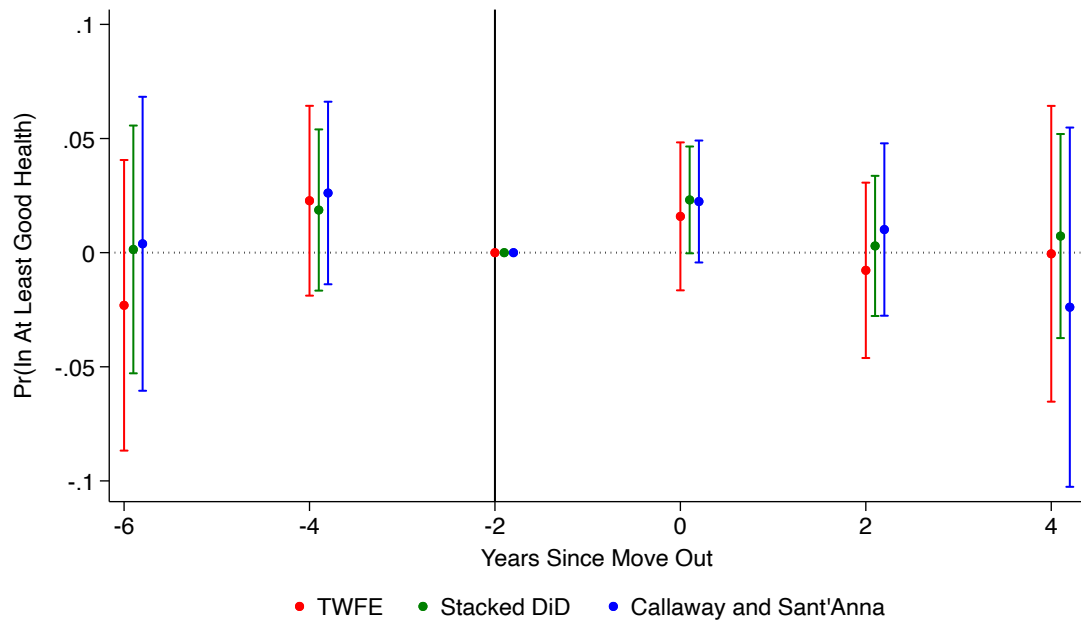

(a) Move In

(b) Move Out

Note: The Callaway and Sant'Anna method is used for estimation. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Figure A.14: Health Event Studies

(a) Move In

(b) Move Out

Note: Health is collapsed to a dummy where 1 indicates that the YA is in at least good health and 0 if they are in fair or poor health. Source: PSID Transition to Adulthood Supplement (2007 - 2019).

Table A.3: Regressions for Assets and Debt

	Co-Residence	asinh(Assets)			asinh(Debt)			asinh(Debt+Student Loans)		
	FS	OLS	RF	IV	OLS	RF	IV	OLS	RF	IV
Unaffordability	-2.366		-11.182			-9.261*			-7.736	
	(3.797)		(8.388)			(5.192)			(9.939)	
Co-Residence		0.060		4.726	-0.052		3.914	-0.190***		3.270
		(0.045)		(8.758)	(0.032)		(7.240)	(0.067)		(7.174)
Mean of Dep. Var. ($1k)		5.183	5.183	5.183	0.428	0.428	0.428	8.157	8.157	8.157
Mean of Dep. Var. (asinh)		1.355	1.355	1.355	0.237	0.237	0.237	1.298	1.298	1.298
F	0.388		1.777			3.182			0.606	
N	4967	4967	4967	4967	4967	4967	4967	4967	4967	4967

Note: Values of the outcome variables are in thousands of dollars and transformed to the inverse hyperbolic sine. Standard errors are in parentheses and adjusted for sample design. Reported F-statistic tests for the significance of the unaffordability instrument. All regressions include individual, state, and year fixed effects. Sources: PSID Transition to Adulthood Supplement (2005 - 2015). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$