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Debt, Jobs, or Housing: What's Keeping Millennials at Home?

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This paper represents the authors' views, and not necessarily those of the Federal Reserve System.

Young Americans increasingly coreside with their parents

- Various sources suggest a steep upward trend
 - CPS, Pew Research Center, Sallie Mae annual surveys
- FRBNY Consumer Credit Panel: 5% U.S., fine geographic detail, individual- & household-level
 - Document this trend using a large & recent administrative data source
 - Investigate relationships among residence choices & local economic conditions 1999-2013
- Address drivers of Millennials' homeward trend:
 - Jobs? - local U & youth U
 - Housing? - local HPI
 - Debt? - student debt reliance of recent grads

- National Association of Realtors: drop from steady-state 40% to 30% share of existing home purchases by first time buyers
- NAR 2014: NAR President Steve Brown cites student loans as primary factor holding back first-time buyers.
- CFPB 2013 - hypothesizes links between student debt, delayed household formation, and delayed homeownership.

- Duca (2013): Close co-movement of 30 year time series on (i) 18-64yo coresidence w/ parents, (ii) poverty rate, & (iii) inequality.
- Detting & Hsu (2014): Delinquency of debt and the move home
- Paciorek (2014), Agarwal, Hu, & Huang (2013), Dyrda, Kaplan, & Rios-Rull (2012)

FRBNY Consumer Credit Panel (CCP)

5% random sample of all Equifax credit reports – Lee & van der Klaauw (2010)

- Balances, payments, limits, delinquency, & default on all standard consumer debts
- Foreclosure, bankruptcy, liens, collections, court actions
- Geographic location to the Census block
- Age, FICO-equivalent risk score
- Individual- & household-level
- Missing: gender, race/ethnicity, ...

Aggregates consistent with Flow of Funds, G.19, ACS, SCF*

Measurement of living with parents

- CCP: Sharing an address (down to apt #) with an individual 15-45 years older
- 10+ household members = living independently
- CPS: Household head + up to 15 household members
- Relationship of all 15 to household head
- ~70% of CPS 25yos living with elder 15-45 years older measurably living with parent
- Example of unmeasured living w parent: 25yo living with mother & her new spouse/partner
- 2-3% of CPS 25yos living with elder 15-45 years older measurably married or partnered with the elder

Corelogic zip code-level HPI:

- Tracks changes in home prices using repeat transaction sales, Jan 2000 = 100
- 6739 zip codes, SD 80.1

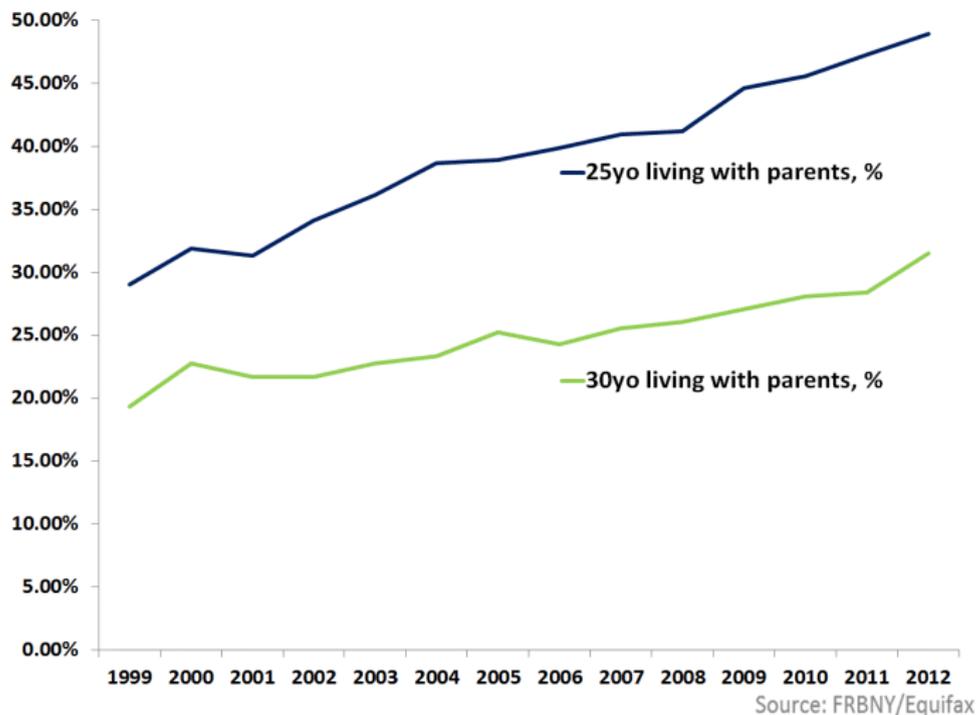
State-level youth (18-30yo) unemployment:

- Authors' calculations using the CPS
- Mean 9.9%, range 1.8% CT to 22.1% WV

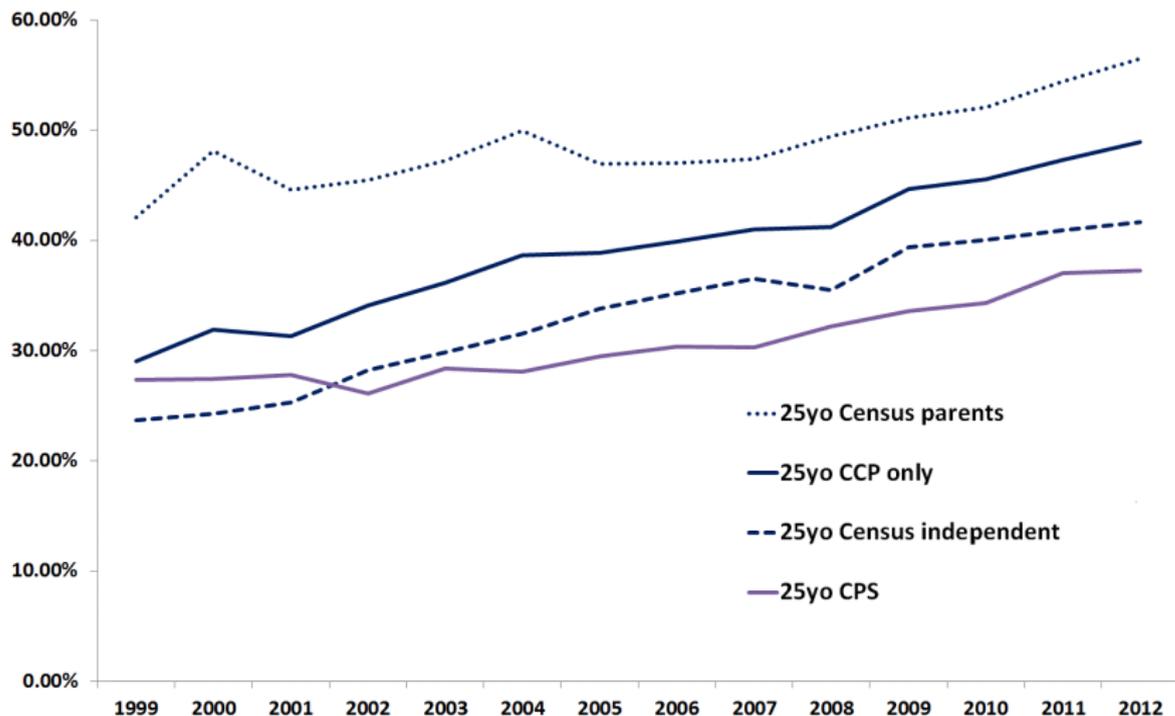
BLS county-level unemployment data:

- BLS Local Area Unemployment Statistics (LAUS)
- 3218 counties containing 32,038 zip codes, SD 3.7ppt

Coresidence with parents in the CCP

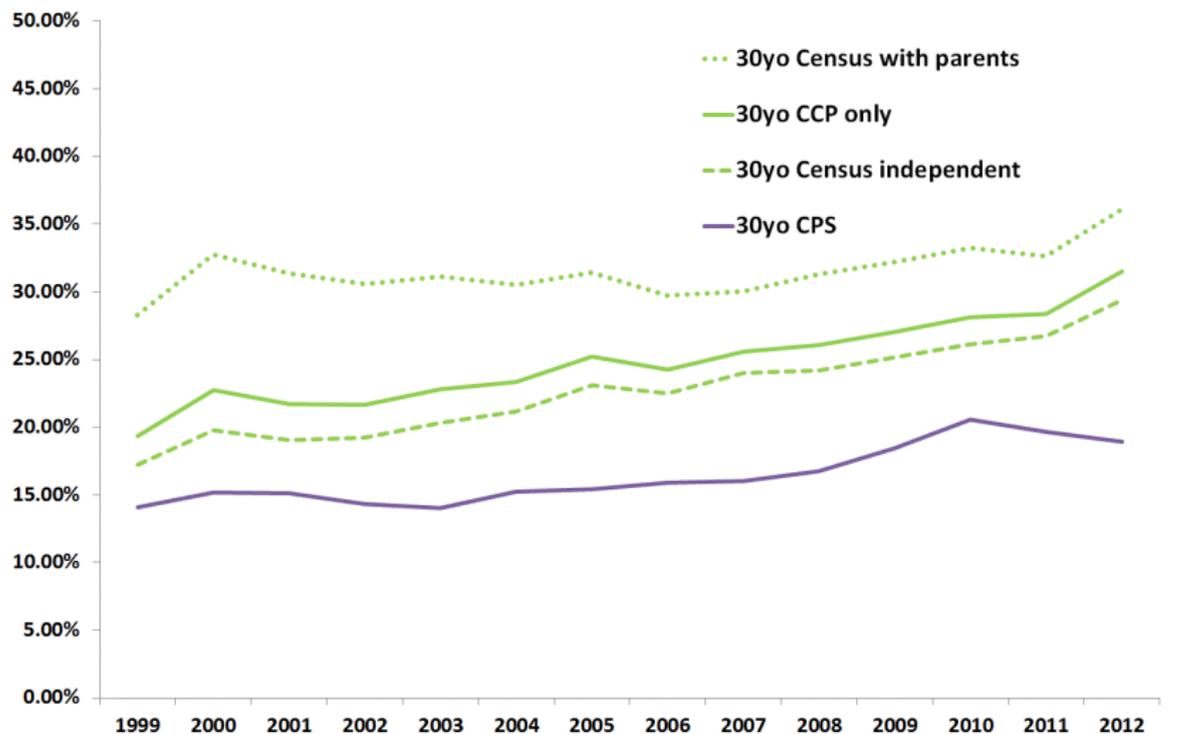


Measurement of coresidence with parents



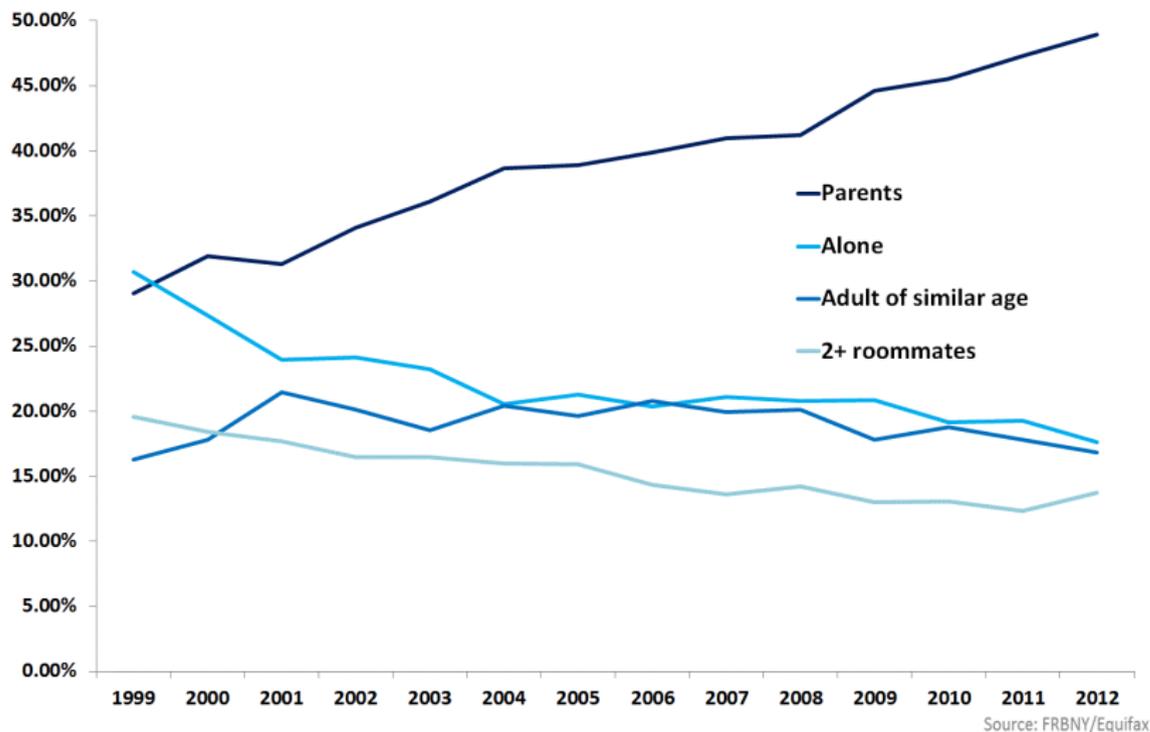
Source: FRBNY/Equifax

Measurement of coresidence with parents

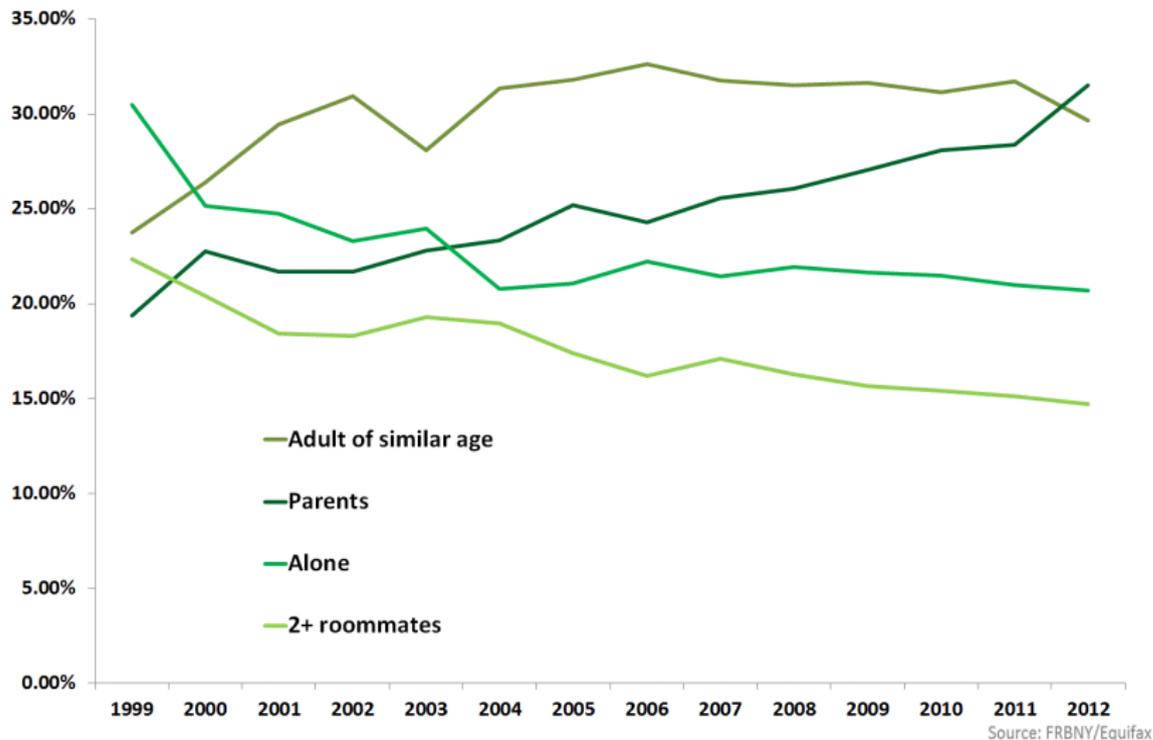


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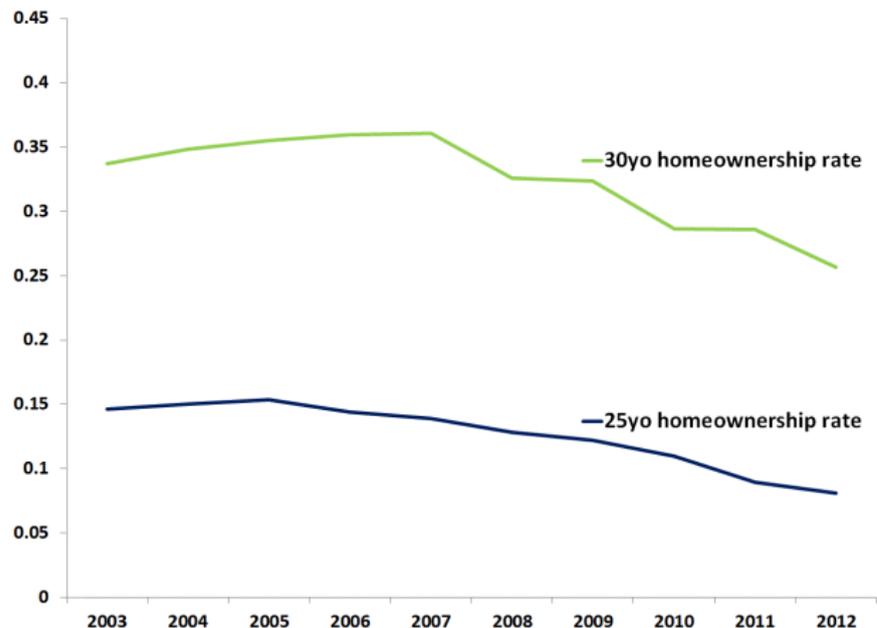
Trends in other 25yo residence choices in the CCP



Trends in other 30yo residence choices in the CCP

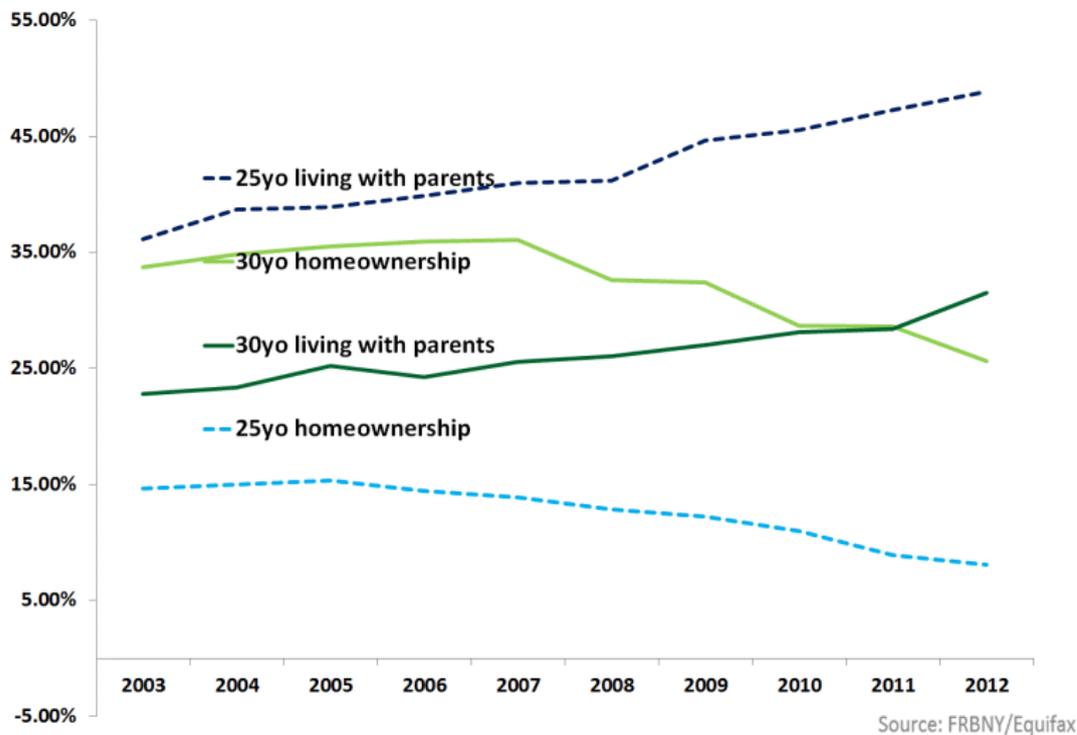


Homeownership in the CCP, inferred from home-secured debt

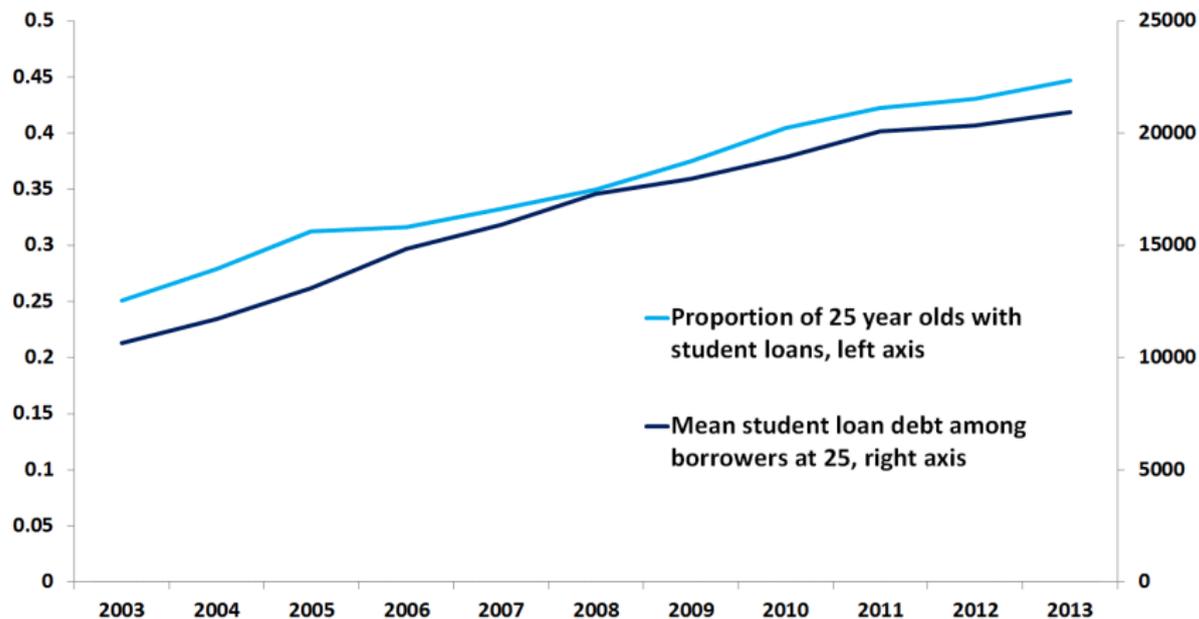


Source: FRBNY/Equifax

Homeownership & coresidence w/ parents in the CCP

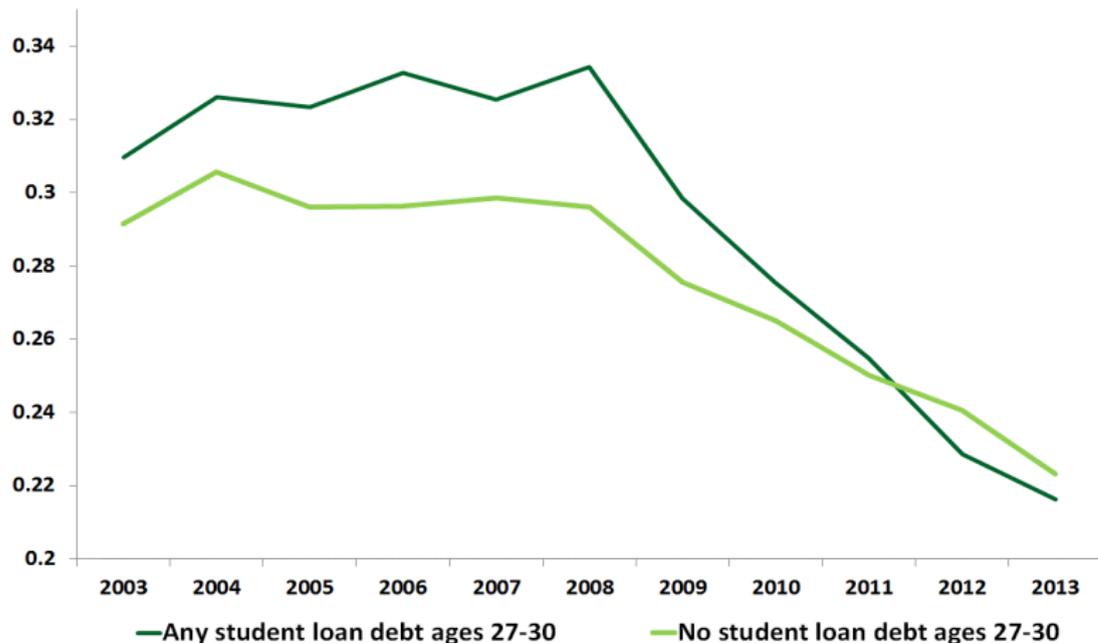


Escalation of student borrowing, 2003-2013



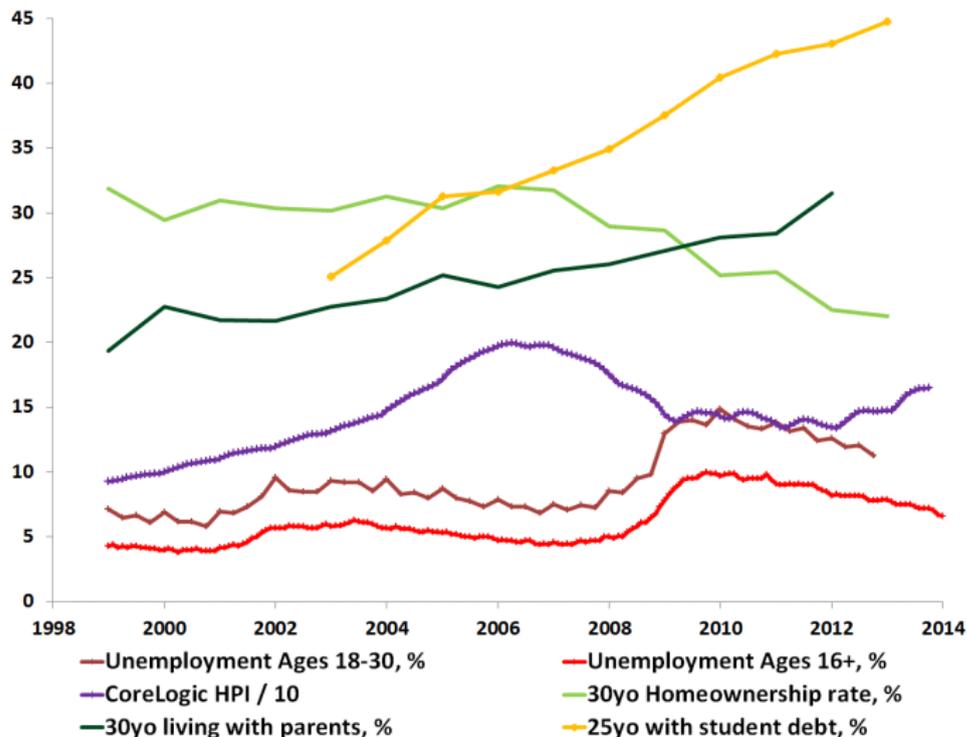
Source: FRBNY/Equifax

Young student borrowers retreat from housing market



Source: FRBNY/Equifax

Economic conditions and housing choices, 1999-2013



Source: FRBNY/Equifax

Flow home to parents from independent living

$$\Pr(Y_{ilt+1} = 1 | Y_{ilt} = 0, X_{ilt}^H, X_{ilt+1}^H, Z_{ilt}^H) = (X_{ilt+1}^H - X_{ilt}^H)\beta^H + Z_{ilt}^H\gamma^H + \varepsilon_{ilt}^H,$$

Y_{ilt} = indicator for residence with parents for individual i in *independent* location l at time t

X_{ilt}^H = county-level BLS unemployment, state-level youth unemployment, zip code-level CoreLogic HPI, & state-level student debt reliance of college grads in l at t

Z_{ilt}^H = risk score of individual i in location l at time t

Flow away to independent living from parents

$$\Pr(Y_{ilt+1} = 0 | Y_{ilt} = 1, X_{ilt}^A, X_{ilt+1}^A, Z_{ilt}^A) = (X_{ilt+1}^A - X_{ilt}^A)\beta^A + Z_{ilt}^A\gamma^A + \varepsilon_{ilt}^A,$$

Y_{ilt} = indicator for residence with parents for individual i in *parent* location l at time t

X_{ilt}^A = county-level BLS unemployment, state-level youth unemployment, zip code-level CoreLogic HPI, & state-level student debt reliance of college grads in l at t

Z_{ilt}^A = risk score of individual i in location l at time t

Table 1: Linear probability model of moving in with parents, conditional on living away from parents

| Independent variable | Dependent variable: I(moved in with parents) | | | | | |
|--|--|-----------|-----------|-----------|-----------|-----------|
| Total unemployment, county | -0.120* | -0.086 | -0.071 | -0.120* | -0.086 | -0.071 |
| | (0.067) | (0.067) | (0.067) | (0.067) | (0.067) | (0.067) |
| Youth unemployment, state | 0.237*** | 0.068 | 0.034 | 0.237*** | 0.068 | 0.034 |
| | (0.054) | (0.062) | (0.062) | (0.054) | (0.062) | (0.062) |
| CoreLogic HPI | 0.028*** | 0.025*** | 0.023*** | 0.028*** | 0.025*** | 0.023*** |
| | (0.007) | (0.007) | (0.007) | (0.007) | (0.007) | (0.007) |
| Equifax risk score | | | | 0.000 | 0.000 | 0.000 |
| | | | | (0.001) | (0.001) | (0.001) |
| Student loan debt per grad, current 24yos, state | | 0.079*** | 0.053** | | 0.079*** | 0.053** |
| | | (0.026) | (0.026) | | (0.026) | (0.026) |
| Graduation rate | | | -0.069*** | | | -0.069*** |
| | | | (0.017) | | | (0.017) |
| Constant | 23.584*** | 19.861*** | 21.921*** | 23.584*** | 19.860*** | 21.920*** |
| | (0.588) | (0.745) | (0.895) | (0.588) | (0.745) | (0.895) |
| F statistic | 114*** | 96.2*** | 88.4*** | 99.5*** | 86.6*** | 80.3*** |
| R-squared | 0.013 | 0.015 | 0.015 | 0.013 | 0.015 | 0.015 |
| N | 61,821 | 61,821 | 61,821 | 61,821 | 61,821 | 61,821 |

* indicates significance at the 10%, ** the 5%, and *** the 1% level.

Source: FRBNY/Equifax

Table 1: Linear probability model of moving in with parents, conditional on living away from parents

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Source: FRBNY/Equifax

Table 2: Linear probability model of moving away from parents, conditional on living with parents

| Independent variable | Dependent variable: I(moved away from parents) | | | | | |
|--|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Total unemployment, county | -0.884*** (0.122) | -0.670*** (0.122) | -0.683*** (0.122) | -0.885*** (0.122) | -0.671*** (0.122) | -0.684*** (0.122) |
| Youth unemployment, state | 1.461*** (0.094) | 0.583*** (0.106) | 0.616*** (0.107) | 1.461*** (0.094) | 0.584*** (0.106) | 0.616*** (0.107) |
| CoreLogic HPI | 0.055*** (0.010) | 0.007 (0.010) | 0.008 (0.010) | 0.055*** (0.010) | 0.006 (0.010) | 0.008 (0.010) |
| Equifax risk score | | | | 0.003 (0.002) | 0.003 (0.002) | 0.003 (0.002) |
| Student loan debt per grad, current 24yos, state | | -0.317*** (0.043) | -0.293*** (0.044) | | -0.317*** (0.043) | -0.292*** (0.044) |
| Graduation rate | | | 0.059** (0.028) | | | 0.059** (0.028) |
| Constant | 50.401*** (1.013) | 46.148*** (1.266) | 44.380*** (1.517) | 50.407*** (1.013) | 46.151*** (1.266) | 44.370*** (1.517) |
| F statistic | 88.8*** | 103*** | 93.7*** | 77.9*** | 93.3*** | 85.3*** |
| R-squared | 0.017 | 0.026 | 0.026 | 0.017 | 0.026 | 0.026 |
| N | 35,672 | 35,672 | 35,672 | 35,672 | 35,672 | 35,672 |

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Source: FRBNY/Equifax

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Conclusions

- From 1999-2013, Consumer Credit Panel youth show a persistent upward trend in living with parents, accompanied by downward trends in homeownership, living alone, and living with groups of roommates.
- Student borrowers, in particular, retreated from housing markets in the wake of the Great Recession.
- Failure of residence choices to reflect to the recent labor and housing market recoveries remains a puzzle.

Conclusions

- Transition analysis reveals that moves out and home are most responsive to youth labor market conditions.
- Strengthening local economies where parents live drive youth out; strengthening local economies where youth live drive them home to parents.
- High local student debt costs of college are associated with substantially lower rates of moving out and higher rates of moving home.