Why Do Young Adults Co-Reside with Their Parents?

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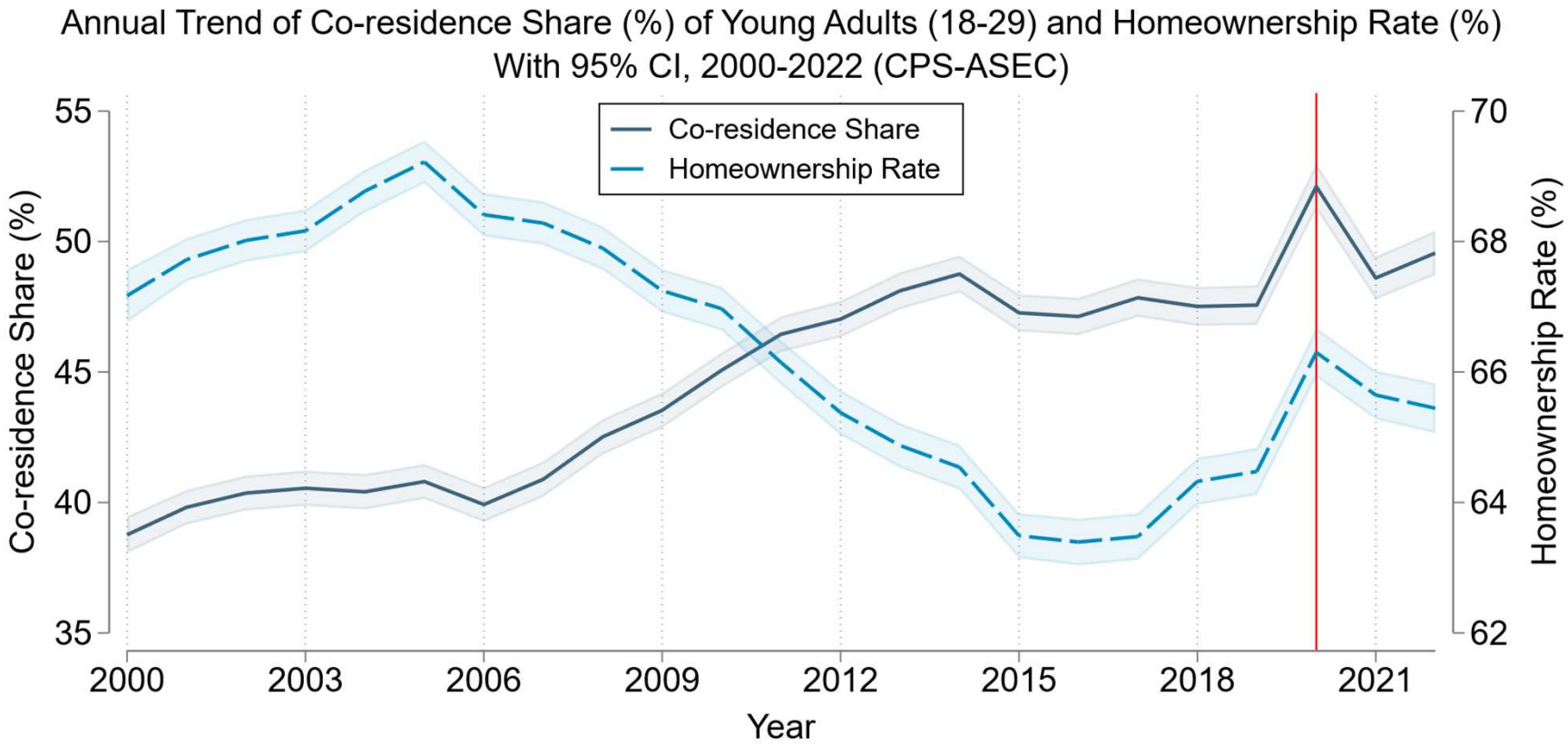
Outline of presentation

- Context: rising young adult co-residence to nearly 50% in 2021
- Contribution:
  - We identify factors correlated to co-residence in the cross-section and allocate the rise from 2000 to 2021, using a Blinder-Oaxaca procedure to decompose change over time.
  - Identify housing affordability, as a new factor that helps to explain higher co-residence across metros and over time.
- Intergenerational wealth transfers and homeownership outcomes; limitations in the data

Annual Co-residence and Homeownership Trends: 2000 – 2022



Co-residence rose through 2013 with unemployment, but did not fall with recovery, rising again in 2020, with the unemployment spike.
Homeownership decreased from 2004 peak, recovering some in 2020 and falling again in 2022.

Literature

- Literature shows co-residence as an outcome of labor market and demographic factors:
  - marital/childbearing, college enrollment, and employment status, and age and educational attainment; market unemployment rate
    - Haurin, Hendershott and Kim 1993; Yu and Myers 2010; Lee and Painter 2013; Choi and Painter 2015; Paciorek 2016
  - Matsudaira (2016): economic conditions and the living arrangements of young adults: 1960 to 2011 using state-wide data
    - Not housing affordability
- We confirm the above factors and establish role for declining housing affordability, using B/O decomposition, in explaining rise in co-residence between 2000 and 2021, together with delayed marriage and childbearing and, cyclically, unemployment.

Model

- A pooled Probit model of co-residence $CO_{it} \in \{0,1\}$ indicating whether an individual i lives with a parent in year t
- $\Pr(CO_{it} = 1|X_{it}) = F(\gamma_0 + \sum_{k=1} X_{itk} \cdot \gamma_k(age_{it}, \ln TotInc_{it}) + v_c + \tau_t),\ t \in T$

  $where\ \gamma_k(age_{it}, \ln TotInc_{it}) = \gamma_{k0} + \gamma_{k1} \cdot age_{it} + \gamma_{k2} \cdot \ln TotInc_{it}$
  - Coefficient γ_k of factor k depends on age and total income
  - X_{itk} includes individual and market variables (incl. affordability factor)
  - year fixed effect τ_t and census division fixed effect v_c
- Use a Heckman selection model to endogenize marriage-childbearing status $MC_i \in \{0,1\}$ ($MC_i = 1$: married or have children)
  - Replace marriage-childbearing status by inverse-Mills ratio λ to adjust for a potentially endogenous response
  - $\lambda(X_i\hat{\pi}|MC_i = 1) = \frac{\phi(X_i\hat{\pi})}{\Phi(X_i\hat{\pi})},\ \lambda(X_i\hat{\pi}|MC_i = 0) = -\frac{\phi(X_i\hat{\pi})}{\Phi(-X_i\hat{\pi})}$
  - $\phi(\cdot)$ and $\Phi(\cdot)$ are probability/cumulative density function of a standard normal; $X_i\hat{\pi}$ is Probit linear prediction of marriage/childbearing model

Data and variables

- Annual Social Economic Supplement of Current Population Survey (ASEC), 2000 – 2021
  - Explained variable: dummy of living with a parent
  - Individual variables: personal income, age, gender, educational attainment, school enrollment status, marital and childbearing status, employment status, race/ethnicity
  - Market variables: affordability factor (rent-income ratio or price-income ratio), unemployment rate, census division
  - Sample years: 2000, 2005, 2010, 2015, 2019, 2020, 2021. Focus on 2000-2019 and 2000-2021
  - Affordability factors: metro median rent (house value) divided by the metro median household income

Decomposition

- Contribution of factor X_k to co-residence change is approximated by the marginal effect β_k^* multiplied by the change of X_k from year t_1 to t_2
- $E_i[CO_{it_2} = 1] - E_i[CO_{it_1} = 1] \sim \underbrace{\sum_k \beta_k^* \cdot [E_i(X_{it_2k}) - E_i(X_{it_1k})]}_{\text{Endowment Effect}} + \underbrace{residual}_{\text{Coefficient Effect}}$
  - Marginal effect $\beta_k^* = \Pr(CO_{it} = 1)/X_k$ is estimated by a pooled model of year t_1 and t_2
  - Almost all co-residence change is associated with the endowment effect
- If rent-income ratio increases from 16 to 18 and co-residence increases from 40 to 50 percentage points in the same period,
  - with a marginal effect of $\beta_k^* = 0.01$, the contribution of rent-income ratio is $(18 - 16) \cdot 0.01 = 0.02$
  - That is, 2 percentage points of the 10-percentage-point co-residence increase is attributed to the increased rent-income ratio

Blinder-Oaxaca Decomposition: Exogenous vs Endogenous Marriage-Childbearing Status 2000-2021

	Model with Rent-Income Ratio	
	Exog. Model	**Heckman Model**
Co-residence share in 2021	.49***	.49***
Co-residence share in 2000	.40***	.40***
Difference	.09***	.09***
Explained (Endowment Effect)	.09***	.08***
Unexplained (Coefficient Effect)	.003	.008
Explained by		
Affordability (rent/income) (##)	.009***	.022***
Unemployment Rate (##)	.020***	.011**
Income (#)	.006***	.006***
Marital and Childbearing (#)	.058***	
Education and Enrollment (#)	-.003***	.005***
Race and Ethnicity (#)	.006***	.005***
Ind. Employment Status (#)	-.0001	-.001***
Other Market Endowments (##)	-.001**	-.001
Other Individual Endowments (#)	-.005***	-.011***
Inverse Mills Ratio (#)		.046***

Note: *p < 0.10, **p < 0.05, ***p < 0.010. (#) and (##) indicate individual and market endowments respectively

- 2000-2021 sees a 9% co-residence share increase from 40% to 49%
- Most co-residence increase is explained by endowment changes
- Housing affordability explains a quarter (24.4%) of increase in co-residence (in model endogenizing marriage/childbearing)
- Price-income model shows similar findings

Drivers of Co-Residence: Marginal Effects of Selected Endowments on Co-residence Probabilities of Young Adults (18-29)

	Exog. Marriage & Childbearing	Heckman Model
Affordability (rent-income ratio) (##)	.005***	.010***
	(0.001)	(0.001)
Income (#)	-.060***	-.032***
	(0.001)	(0.002)
Unemployed (#)	.018***	.044***
	(0.005)	(0.010)
Unemployment Rate (##)	.006***	.005**
	(0.001)	(0.002)
High School (#)	.048***	0.001
	(0.004)	(0.007)
Some College (#)	.058***	.038***
	(0.005)	(0.008)
College (#)	.023***	-0.003
	(0.005)	(0.009)
Graduate Degree (#)	-.073***	-.094***
	(0.016)	(0.016)
Is Female	-.039***	-.100***
	(0.003)	(0.005)
Married (#)	-.332***	
	(0.005)	
Has Child (#)	-.164***	
	(0.005)	
Mills Ratio (#)		-.180***
		(0.003)

Note: *p < 0.10, **p < 0.05, ***p < 0.010. (#) and (##) indicate individual and market endowments respectively.

Heterogeneity among Minorities: Marginal Effects of Selected Endowments on Co-residence Probabilities of Young Adults (18-29)

	Endogenous Model with Rent-Income Ratio			
	White	**Black**	**Hispanic**	**Asian**
Housing Affordability (rent/income) (##)	.007***	.011***	.016***	0.009
	(0.002)	(0.004)	(0.002)	(0.006)
Unemployed (#)	.060***	0.016	0.025	.070*
	(0.014)	(0.024)	(0.018)	(0.042)
Not In Labor Force(#)	-0.005	-.057***	-.031**	-.069***
	(0.009)	(0.019)	(0.014)	(0.026)
Unemployment Rate (%) (##)	-0.001	.014*	-0.001	0.014
	(0.003)	(0.007)	(0.005)	(0.010)
Enrolled in High School or College (#)	.131***	.131***	.166***	.069***
	(0.008)	(0.020)	(0.013)	(0.025)
High School (#)	-.046***	0.031	.080***	-.091**
	(0.011)	(0.022)	(0.012)	(0.044)
Some College (#)	-.018*	.068***	.105***	-0.063
	(0.011)	(0.024)	(0.014)	(0.040)
College (#)	-.060***	0.039	.112***	-.166***
	(0.012)	(0.028)	(0.016)	(0.043)
Graduate Degree (#)	-.117***	0.007	0.029	-.410***
	(0.022)	(0.053)	(0.040)	(0.053)
Inverse Mills Ratio (#)	-.183***	-.166***	-.178***	-.173***
	(0.004)	(0.009)	(0.006)	(0.017)

Note: *p < 0.10, **p < 0.05, ***p < 0.010. (#) and (##) indicate individual and market endowments respectively.

Heterogeneity among Minorities, 2000-2021

	Heckman Model with Rent-Income Ratio			
	White	**Black**	**Hispanic**	**Asian**
Co-residence, 2021	.437***	.540***	.576***	.506***
Co-residence, 2000	.395***	.456***	.352***	.443***
Difference	.042***	.084***	.224***	.063***
Explained	.040***	.087***	.160***	.035
Unexplained	.002	-.003	.063***	.027
Explained by				
Affordability (rent/income)	.010***	.025***	.043***	.017
Unemployment Rate	-0.002	.029**	-0.004	0.036
Ind. Emp. Status	0.0003	-.003**	-.002*	-0.003
Educ and Enroll	-.001	.010**	.052***	-.026***
Enrollment	.005***	.005**	.024***	.006**
High School	.001***	.002	.006***	.005*
Some College	.001	-.00007	.007***	.003
College	-.005***	.003	.014***	-.014***
Graduate	-.002***	.00007	.0004	-.027***
Inverse Mills	.037***	.045***	.067***	.028***

Note: *p < 0.10, **p < 0.05, ***p < 0.010.

- Affordability matters most for Hispanics (4.3 pp) and Black households (2.5 pp)
- Employment channel is mainly through local unemployment rate rather than individual unemployment, with larger effects for Asian and Black
  - Decomposition for 2019-2021 shows the Black's employment contribution is the largest during the Covid pandemic

What does this mean going forward?

- Co-residence is associated with unemployment and lack of affordable housing, consistent with pooling resources for parental assistance and insurance of adult children.
- Co-residence correlates hold across incomes, suggesting an insurance motive; so does co-residence enable future homeownership?
- Choi, Zhu and Goodman 2019 shows that co-residence does not result in higher transition to HO
  - Co-residence might help relative to counterfactual but may be insufficient to overcome overall constraints
  - We show that co-residence is a correlate of these constraints.
- Data limitations
  - We do not identify housing affordability using the preferred Linneman/Wachter constraint model. We lack wealth data.

Thank you!