The Long-Term Effects of Labor Market Entry in a Recession: Evidence from the Asian Financial Crisis

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Introduction

Research Question

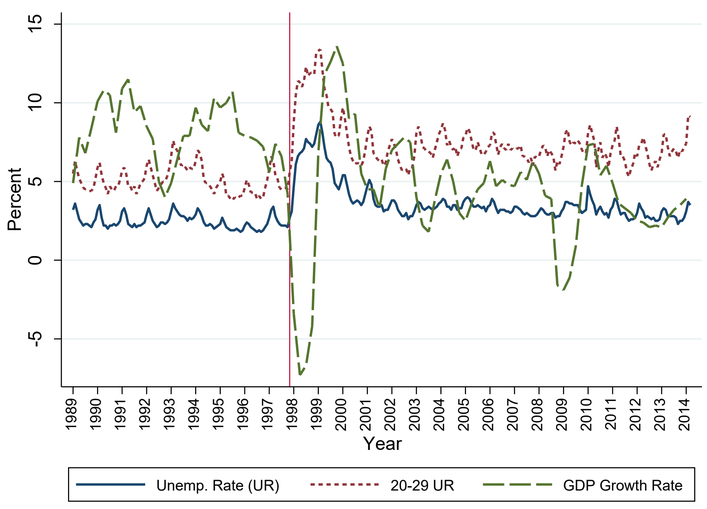
Investigate the long-term effects of initial labor market conditions by studying college graduates in South Korea who entered the labor force before, during, and after the 1997–98 Asian financial crisis

Contribution

- First study to exploit the occurrence of the Asian financial crisis as a source of identifying variation in this context
- Examine outcomes beyond labor market status, including family formation, asset building, and living arrangement
- Focus on variation from a sharp and deep economic downturn instead of using modest variation from regular business cycles

Background and Data

1997-98 Asian Financial Crisis



- The Asian financial crisis induced a sharp and deep recession in South Korea starting from November 1997
- The crisis was unexpected in South Korea due to sound macroeconomic indicators until 1997 Q3
- GDP growth rate precipitated from 5.8% to -5.7%, and unemployment rate soared from 2.6% to 7.0%
- The recovery took about 3 years until the early 2000s
- Compared to the Great Recession in the US, similar magnitude but faster recovery

Data and Analysis Sample

Korean Labor and Income Panel Study (KLIPS)

- Yearly longitudinal data on 5,000 households (and individuals therein)
- 1st–20th waves spanning 1998–2017
- Analysis sample: individuals graduating from college at age 20–32 in 1989–2010
- Sample size: 2,474 men and 2,320 women
  (person-year observations: 22,856 for men and 20,795 for women)

National and regional unemployment rates

- Yearly rates in 1989–2010, reported by Statistics Korea

Empirical Strategy

Regression Models

For labor market and financial outcomes

$$y_{it} = \alpha + \beta_e UR_c + \boldsymbol{X}_i'\boldsymbol{\gamma} + f(c) + \delta_r + \phi_t + \tau_e + \varepsilon_{it}$$

- y_{it}: time-varying outcome of person i (who graduated from college in year c and region r) in calendar year t
- UR_c: unemployment rate in college graduation year c
- $\boldsymbol{X}_i$: person i's baseline characteristics
- $f(c)$: cubic function of college graduation year (cohort) c
- δ_r: fixed effects for region r of college graduation
- ϕ_t: fixed effects for calendar year t
- τ_e: fixed effects for potential labor market experience e ($\equiv t - c$)
- β_e: change in experience profile of y_{it} associated with a 1 pp increase in UR_c

For family formation outcomes

$$y_i = \alpha + \beta UR_c + \boldsymbol{X}_i'\boldsymbol{\gamma} + f(c) + \delta_r + \tau_e + \varepsilon_i$$

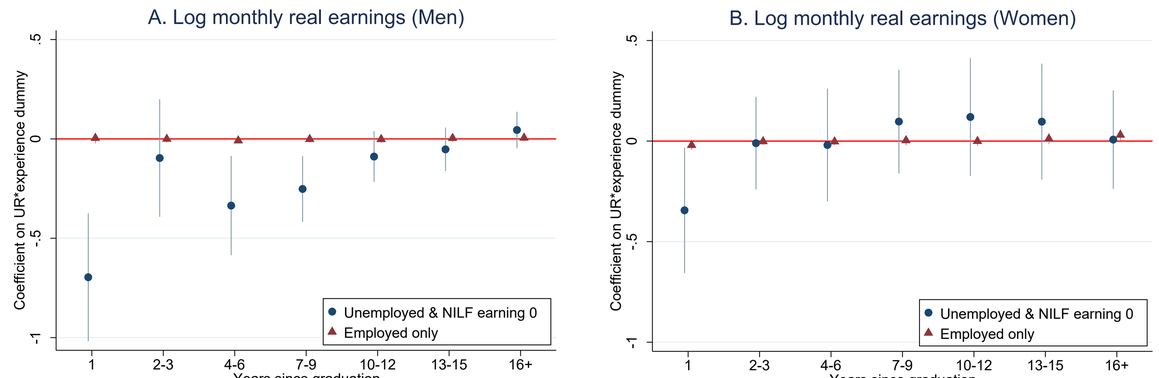
- y_i: family formation outcome of person i (who graduated from college in year c and region r) as of the most recent survey year t
- β: effect on y_i of a 1 pp increase in UR_c

Balance Checks

	Male				Female			
A. Individual balance test:	**Coeff. on *UR***	**SE**	**Mean**	**N**	**Coeff. on *UR***	**SE**	**Mean**	**N**
Attended 4-yr college	0.009	(0.010)	0.656	2,474	0.027***	(0.010)	0.546	2,320
Father's yrs of education	0.091	(0.071)	10.32	2,426	0.012	(0.085)	11.11	2,292
Mother's yrs of education	0.090	(0.097)	8.52	1,988	0.069	(0.091)	9.41	1,994
Parents' job status at age 14								
Regular wage worker	0.016	(0.012)	0.410	2,401	−0.010	(0.011)	0.446	2,262
Irregular wage worker	−0.004	(0.005)	0.072	2,401	0.003	(0.005)	0.069	2,262
Business owner (hiring employees)	−0.002	(0.008)	0.125	2,401	0.006	(0.008)	0.145	2,262
Business owner (no employees)	−0.007	(0.010)	0.376	2,401	0.000	(0.011)	0.326	2,262
SES at age 14								
Above average	−0.010	(0.011)	0.156	1,863	0.008	(0.013)	0.176	1,836
About average	0.018	(0.013)	0.582	1,863	−0.008	(0.015)	0.620	1,836
Below average	−0.009	(0.014)	0.262	1,863	−0.000	(0.013)	0.203	1,836
B. Joint balance test:	**χ^2-statistic**	***p*-value**			**χ^2-statistic**	***p*-value**		
	8.033	[0.531]			13.902	[0.126]		

Results

Effects on Earnings



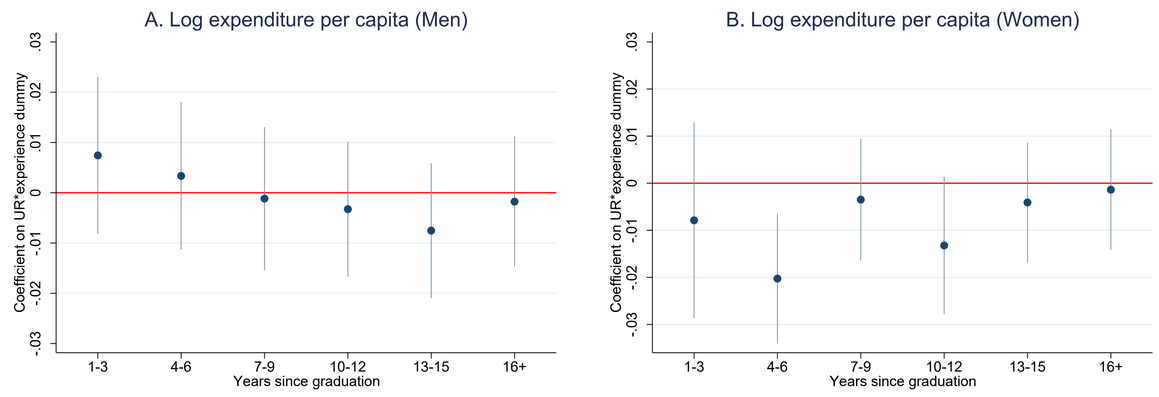
- Men: (–) effect on employment and earnings persistent for 9+ years
  Earnings penalty mainly from the extensive margin
- Women: (–) effect on employment and earnings disappears in 2 years
  Less likely to have a standard employment arrangement in experience years 4–6

Effects on Marriage and Fertility

	Ever married (1)	Any children (2)	Any children (married) (3)	N of children (4)	N of children (married) (5)
A. Men					
UR	−0.022**	−0.017*	−0.003	−0.028	−0.016
	(0.011)	(0.010)	(0.013)	(0.019)	(0.027)
Adj. R^2	0.271	0.278	0.084	0.287	0.142
Obs.	2,474	2,474	1,796	2,474	1,796
Mean of Y	0.726	0.639	0.880	1.126	1.551
B. Women					
UR	−0.011	0.009	0.030***	0.046**	0.097***
	(0.011)	(0.010)	(0.010)	(0.018)	(0.021)
Adj. R^2	0.339	0.348	0.128	0.344	0.183
Obs.	2,320	2,320	1,656	2,320	1,656
Mean of Y	0.714	0.625	0.876	1.096	1.535

- Men: (–) effect on marriage and childbearing
- Women: no significant effect on marriage, (+) effect on fertility

Effects on Consumption and Asset Holdings



- Men: no effect on expenditures trajectory
- Women: small temporary drop in expenditures in experience years 4–6

- Men: (–) effect on financial assets for up to 9 years since graduation
  Small (–) effect on home ownership in experience years 13+
  Increased co-residence with parents
- Women: insignificant (−) effect on financial assets for up to 9 years since graduation
  No effect on home ownership, debt, or co-residence with parents

Conclusion

- A deep economic downturn at labor market entry has long-term consequences on multiple dimensions of life well beyond labor market outcomes
- Different effects on men and women who face different constraints and choice sets in work and life
- Compared to previous studies, our estimates are generally larger in magnitude likely due to:
  - A sharp and deep recession with substantial job losses even for high skilled labor
  - Rigid labor market institutions
  - Gender-based specialization within household

Paper available at https://ssrn.com/abstract=3431443