Early Labor Market Conditions and Midlife Cognitive Function: Evidence from the 1997 Asian Financial Crisis

Xian Zhang[a]

a. Department of Public Health Sciences, University of Rochester Medical Center

Abstract

Employment and economic conditions are widely viewed as important determinants of cognitive aging and dementia-related risk. However, identifying their causal impact is challenging due to reverse causality and dynamic selection: cognitive ability shapes labor market success, while adverse labor market experiences may in turn influence cognitive trajectories. Although prior research links economic downturns to later-life health and cognition, much of the evidence relies on observational variation in economic conditions, making causal interpretation difficult.

The timing of the 1997 Asian Financial Crisis provides a plausibly exogenous shock to labor market entry conditions. Individuals graduating within three years before and after 1997 are compared and followed longitudinally from 2010 to 2022 using nationally representative panel data from the China Family Panel Studies. The analysis estimates the effects of adverse entry conditions on subsequent employment and midlife cognitive function measured by crystallized intelligence (standardized mathematics- and language-based test scores).

The results show persistent labor market scarring: individuals graduating during the crisis are significantly less likely to be employed in 2010 (ORs=0.73; 95%CI: 0.63–0.84). Cognitive gaps are also evident. Mathematics-based cognitive function was already lower in 2010 among crisis graduates (−0.27 SD; 95% CI: −0.43 to −0.10), and the gap persists through 2022 with no evidence of convergence. Language-based cognitive differences widen over time, with substantially larger gaps observed by 2018. In contrast, long-run income differences are modest and statistically imprecise. However, long-run income differences are modest and statistically imprecise.

These findings indicate that adverse labor market conditions at career entry can generate persistent divergence in cognitive function. By leveraging exogenous variation in entry conditions, the analysis underscores the importance of early labor market experiences in the formation of cognitive inequality later in life.

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