Diverging Career Pathways? A Reconsideration of Educational Gradient in Women's Employment Around First Childbirth in Japan

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Background

In most societies, highly educated women are more likely to continue to work after childbirth than less educated. The relationship has become stronger in the US and European countries.

Japan is known for the weak relationship between education and employment for women with children (Brinton 1993; Brinton and Lee 2001; Raymo and Lim 2011).
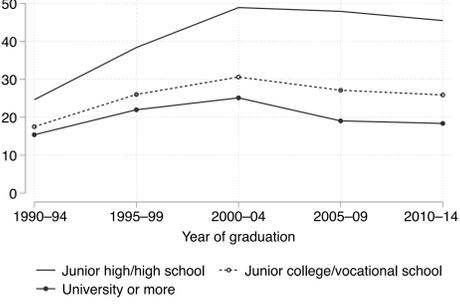
But a recent institutional and labor market change might shift the weak relationship (see Fig 1 and 2).

Fig 1: Increase in women who continue to work with parental leave
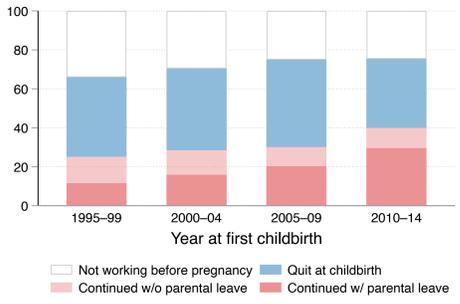
Source: Japanese National Fertility Surveys (National Institute of Population and Social Security)

Fig 2: Increase in female graduates employed in non-regular employment

Source: Employment Status Survey (Statistics Bureau, Ministry of Internal Affairs and Communications)

Research question

How did the educational gradient in women's employment around the first childbirth change in recent Japan?

We look at three outcomes in relation to employment:

1. **Whether employed or not-employed**

2. **Employment status** (not-employed, regular employment, non-regular employment, and self-employed/family worker)

3. **Employment exit** (transition from employed to nonemployed)

Data

Two merged survey data: Japanese Panel Survey of Consumers, 1993–2015 and Social Stratification and Mobility survey, 2015.

Comparison between two cohorts: Those who gave birth to their first child in **1995–2004** and in **2005–2014**.

Observation period: two years before to three years after first childbirth (referred to as -2, -1, 0, 1, 2, 3).

Results

Table 1: Descriptive statistics

	First-childbirth cohort	
	1995–2004	2005–2014
Educational attainment		
High school/Junior high school	0.428	0.305
Junior college/Vocational school	0.415	0.411
University or more	0.157	0.284
Age at first childbirth	27.282	28.792
N of individuals	1256	999

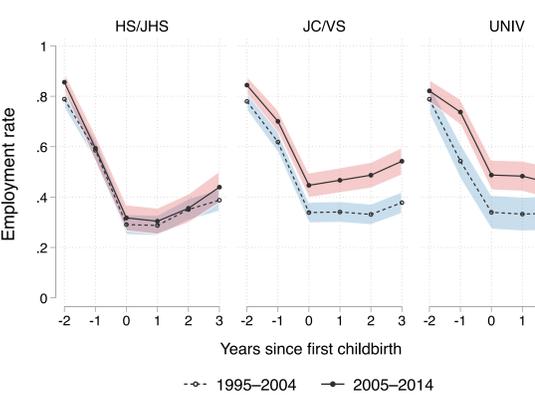**Fig 3: Employment rate by education, comparing two childbirth cohorts**

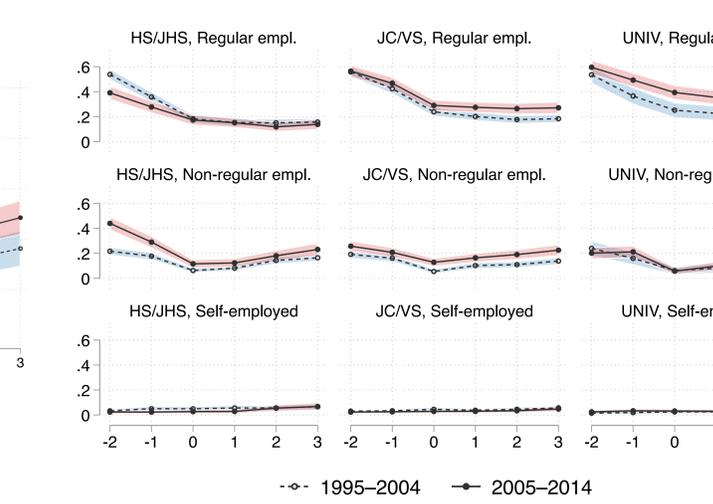**Fig 4: Separated in employment status**

Table 2: Discrete-time hazard model predicting exit from employment

	Model 1		Model 2	
Year since first childbirth (ref: T - 2)				
T - 1	0.839 ***	(0.077)	0.894 ***	(0.080)
T	-0.695 ***	(0.117)	-0.595 ***	(0.121)
T + 1	-1.260 ***	(0.139)	-1.291 ***	(0.142)
T + 2	-1.614 ***	(0.157)	-1.706 ***	(0.159)
Childbirth cohort (ref: 1995–2004)				
2005–2014	0.051	(0.118)	-0.156	(0.120)
Educational attainment (ref: HS/JHS)				
JC/VC	-0.044	(0.105)	-0.009	(0.104)
UNIV	-0.024	(0.153)	-0.036	(0.148)
2005–2014 * JC/VC	-0.387 *	(0.163)	-0.260	(0.164)
2005–2014 * UNIV	-0.537 **	(0.204)	-0.306	(0.201)
Age at first childbirth	-0.049 ***	(0.009)	-0.040 ***	(0.009)
Employment status (ref: regular)				
Non-regular employee			0.961 ***	(0.074)
Self-employed/Family worker			-0.700 ***	(0.204)
Intercept	0.490	(0.231)	-0.063	(0.239)
Log likelihood	-2545.808		-2447.240	

Note: *** p < 0.001, ** p < 0.01, * p < 0.05. Cluster-robust standard errors in parentheses. Hazard model is defined as follows; $\log\left[\Pr(Y_{i,t+1} = NE \mid Y_{it} = E) / \Pr(Y_{i,t+1} = E \mid Y_{it} = E)\right] = \mathbf{D}_{it}\alpha + \mathbf{X}_{it}\beta + \mathbf{Z}_{i}\gamma$.

Figure 5: Marginal effects of education by cohort on exit rate
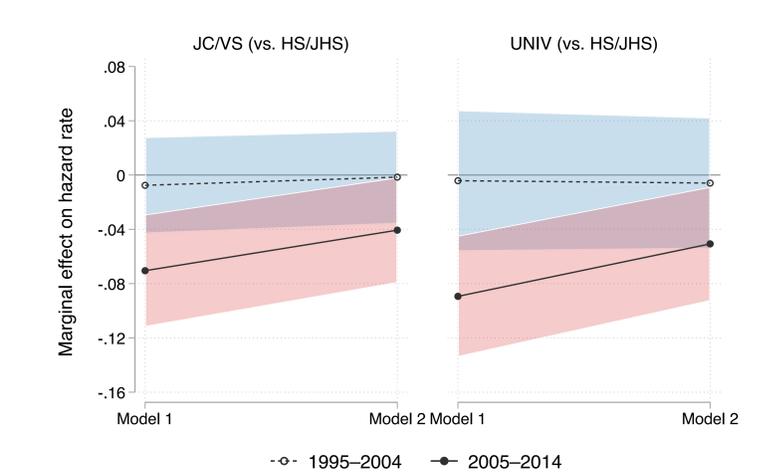
Increase in educational differentials in exit rate is partly moderated by the employment status (comparing Model 1 and 2).

Findings

1. **Employment rate increased only for middle- and highly-educated.**

2. **Non-regular employment rate increased among low- and middle-educated.**

3. **Exit rate decreased for middle- and highly-educated.**

4. The compositional shift in employment status partly explains the changing educational gradient in exit rate, but not all.

Conclusion

We provide first evidence on the emerging positive relationship between education and employment for women around first childbirth in Japan.

In line with the change in educational gradient in couple formation (Fukuda et al. 2019), employment behavior has also been changing - consistent with "diverging destinies?" (McLanahan 2004)

Labor market polarization might contribute to the trend (Possible reason: Eligibility of parental leave is not fully provided for non-regular employees) .