

Does Educational Expansion Weaken the Equalizing Power of College?

Trends in Social Origin Differentials in Occupational Destination in Japan

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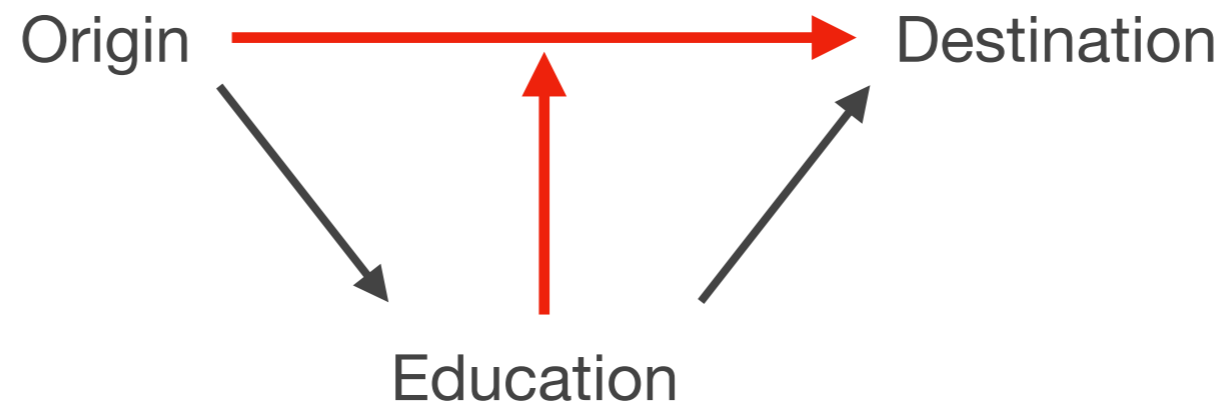
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Introduction

OED triangle and equalizing power of college



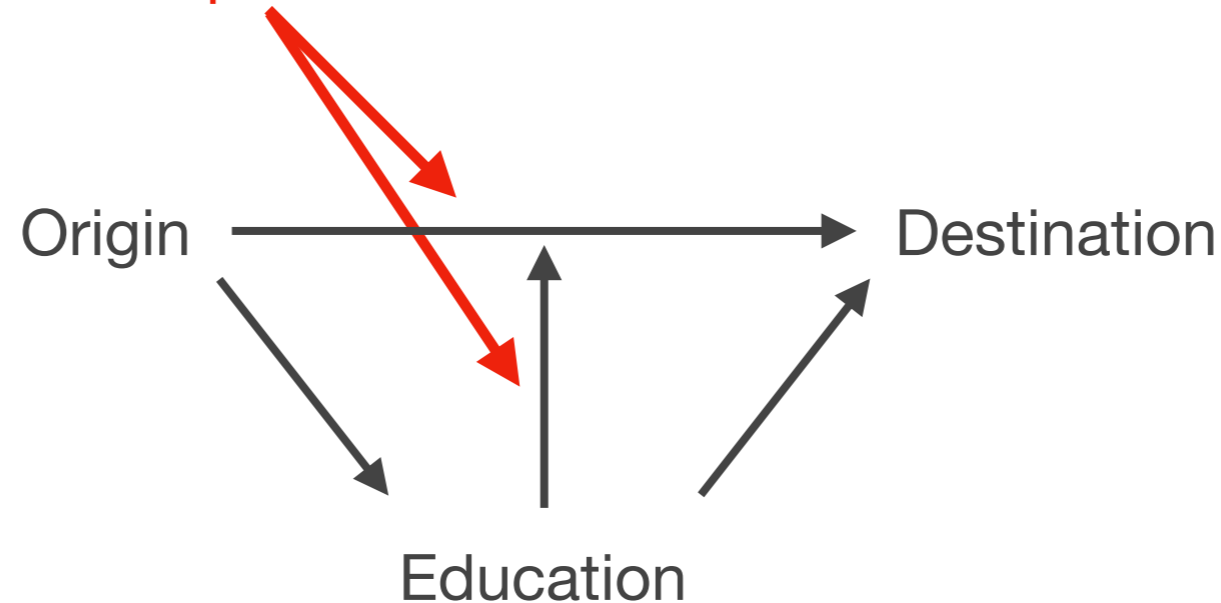
Two versions of the “Great equalizer” thesis:

1. Null OD association among college graduates (Hout 1984, 1988; Torche 2011)
2. Weaker OD association among college graduates than non-college graduates
(Bernardi and Gil-Hernández 2021; Bessudnov 2016; Blank, Bar-Haim, and Shavit 2016; Breen and Jonsson 2007; Breen and Luijkx 2007; Breen, Luijkx, and Berkers 2020; Falcon and Bataille 2018; Gil-Hernández, Marqués-Perales, and Fachelli 2017; Pfeffer and Hertel 2015; Vallet 2004)

In any case educational expansion increase intergenerational fluidity, **if the weaker OD association among college graduates is constant over time.**

Is equalizing power of college constant?

Educational expansion



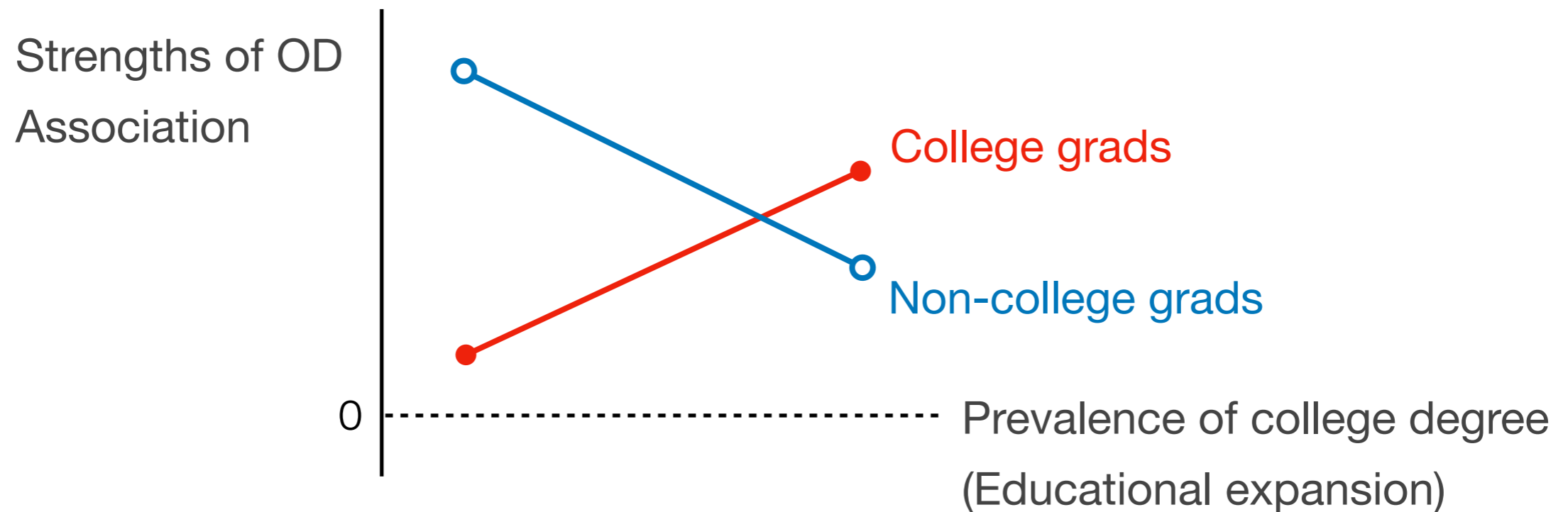
Some theories suggest that OD association depends on the supply of college graduates.

- It may **strengthen** OD association **among college graduates** (Jackson et al., 2005)
- It may **weaken** OD association **among non-college graduates** (Solga, 2002; 2008)

Research question

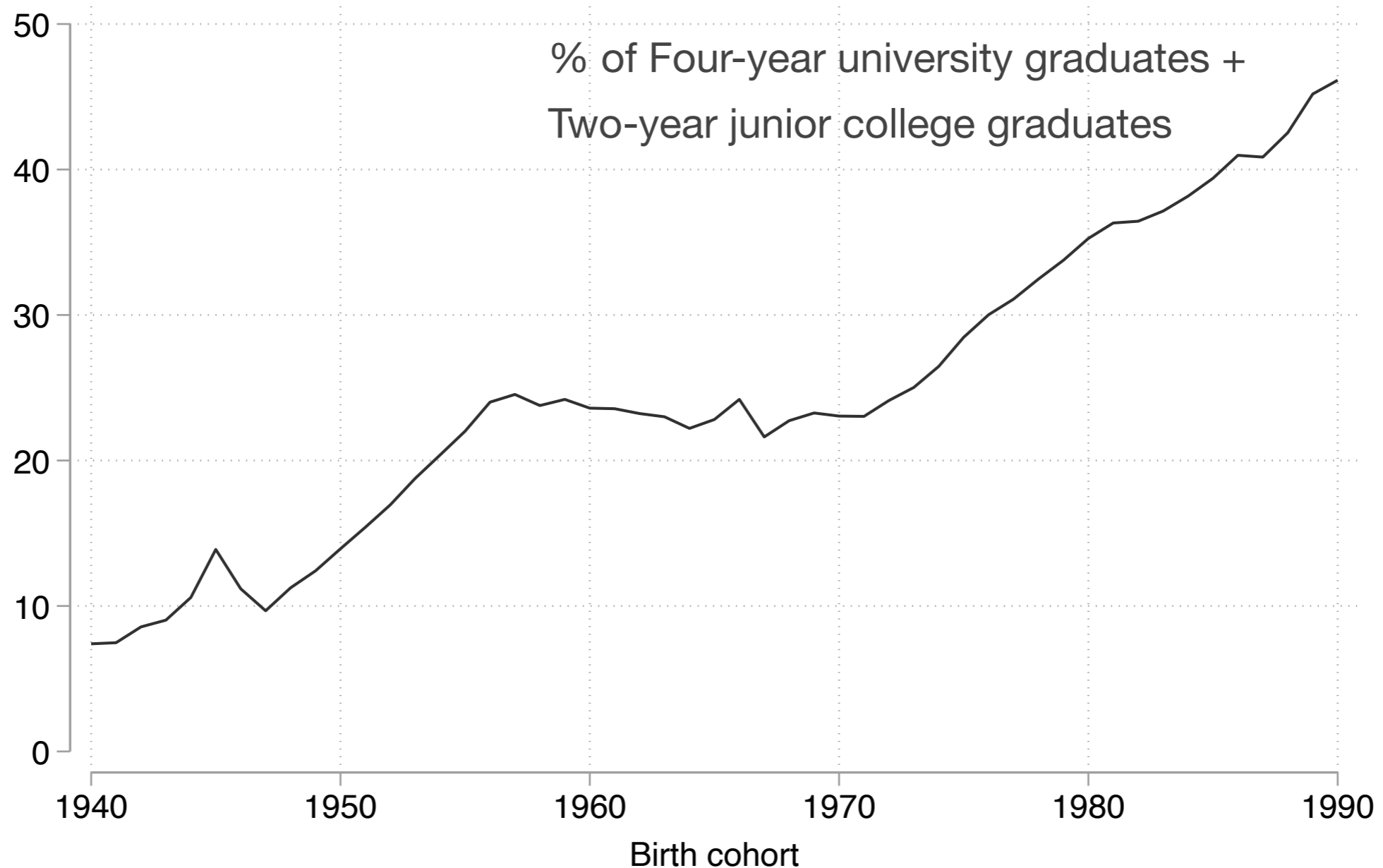
How educational expansion across cohorts influences the association between social origin and occupational destination among college and non-college graduates?

We test this question by using the data from Japan.



Japanese context: Educational expansion

Rapid educational expansion throughout the late 20th century in Japan provides the rich cross-cohort variation.



Source: School Basic Survey (Ministry of Education, Culture, Sports, Science and Technology-Japan)

Explanation: Causation and selection

“Causation” explanation

- Those from lower class backgrounds may gain more human capital by going to college (Goldthorpe and Jackson 2008; Hout 2012; Brand and Xie 2010).
- College graduates will be recruited into meritocratic labor market segments (Hout 1988; Breen and Jonsson, 2007; Torche, 2011)

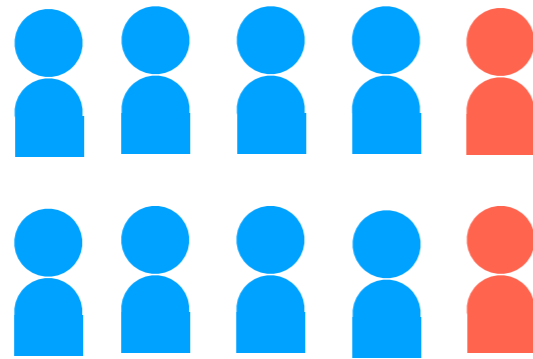
“Selection” explanation

- College graduates from lower class background have higher “abilities” to compensate for initial disadvantages (Mare 1980; Karlson 2019; Zhou 2019; Fiel 2020), which leads to weaker OD association among college graduates.

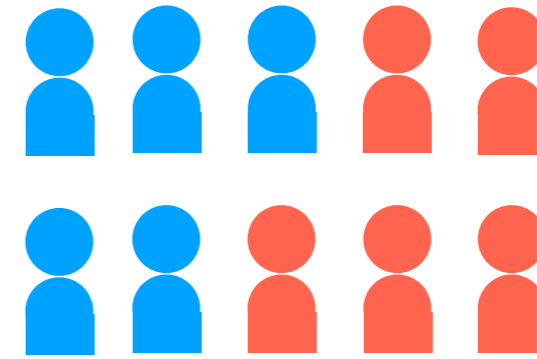
The share of college graduates

Non-college grads

College grads



(1) Small share of college grads



(2) Moderate share of college grads

In time (1), employers will use additional signals for hiring non-college graduates, but college is enough credentials.

In time (2), employers will rely on additional signals for college grads (Jackson et al., 2005), but they will heavily rely on (lack of) degree for non-college graduates (Solga, 2008).

These mechanisms will depend on **the share of college graduates in a cohort.**

Hypotheses

An increasing share of college graduates in the cohort will shrink the gap in the origin effect between college and non-college graduates through:

H1. A higher cohort college graduation rate strengthens the OD association among college graduates.

H2. A higher cohort college graduation rate weakens the OD association among non-college graduates.

Following previous studies in Japan, we measure destination at first job and current job (Sato & Arita 2016; Fujihara & Ishida, 2021).

Methods

Data and sample

Data

- Japan General Social Survey, 2000–2015.
- Japan Social Stratification and Mobility survey, 1995, 2005, and 2015.
- Japanese Life-Course Panel Survey, 2007 and 2011.

First job sample: Aged 25–64, born in 1945–84, and those who have ever worked, separated by college/non-college graduates.

Current job sample: Those who worked at the survey.

	First job sample	Current job sample
College graduates	N = 20,202	N = 16,020
Non-college graduates	N = 11,910	N = 9,694

Variables

Japanese Socio-Economic Index (JSEI): Weighted average of occupational income and occupational education (Fujihara, 2020)

Social origin: Father's JSEI score when the respondent was aged 15. If they did not have father at 15, mother's score was used (Torche, 2011).

Education: Junior high, high school, vocational school (non-college graduates), junior college, university, and graduate school (college graduates)

Birth cohort: 1945–54, 1955–64, 1965–74, 1975–84.

Cohort college graduation rate (0–1) : Number of college graduates in a cohort divided by the number of people in the cohort at age 15 (Mugiyama & Toyonaga, 2022).

Other controls: Gender, age, age-squared, and survey dummies.

Statistical models: linear regression

Model 1: Trends in OD association among college and non-college graduates

$$Y_i = \alpha + X_i\beta + O_i\gamma + C_i\eta + O_iC_i\theta + E_i\lambda + E_iC_i\delta + \varepsilon_i$$

for college and non-college graduates.

Y : Respondent's JSEI, X : Control variables, O : Father's JSEI, C : Cohort, E : Education, ε : Residuals.

Model 2: Replacing cohort dummies by cohort college graduation rate R

$$Y_i = \alpha + X_i\beta + O_i\gamma + R_i\eta + O_iR_i\theta + E_i\lambda + E_iR_i\delta + \varepsilon_i$$

for college and non-college graduates.

Results

College grads' OD association at first job did not change

	College graduates		Non-college graduates	
	Model 1	Model 2	Model 1	Model 2
Parent JSEI	0.059*** (0.016)	0.055 (0.033)		
Birth cohort (ref: 1945–54)				
1955–64	0.440 (1.106)			
1965–74	-0.232 (1.053)			
1975–84	-2.162 (1.178)			
Parent JSEI × Birth cohort				
Parent JSEI × 1955–64	-0.008 (0.021)			
Parent JSEI × 1965–74	0.003 (0.020)			
Parent JSEI × 1975–84	0.010 (0.022)			
Cohort college graduation rate		-7.442 (5.024)		
Parent JSEI × college graduation rate		0.013 (0.095)		
N	11910	11910		
R ²	0.112	0.106		

* p < .05, ** p < .01, *** p < .001 (two-tailed tests). Standard errors in parentheses.

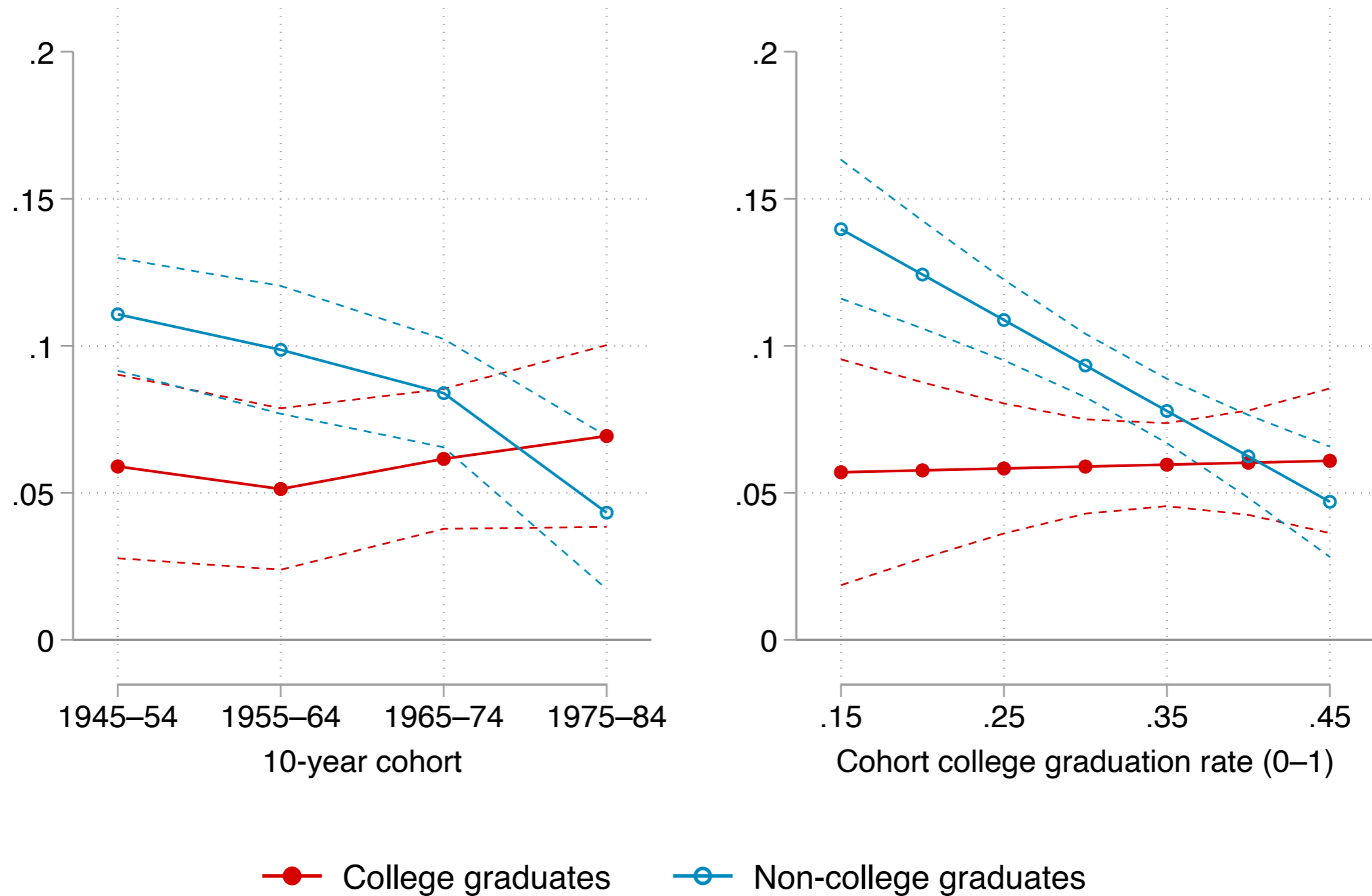
Non-college grads' OD association *did* change

	College graduates		Non-college graduates	
	Model 1	Model 2	Model 1	Model 2
Parent JSEI	0.059*** (0.016)	0.055 (0.033)	0.111*** (0.010)	0.186*** (0.021)
Birth cohort (ref: 1945–54)				
1955–64	0.440 (1.106)		0.963 (0.695)	
1965–74	-0.232 (1.053)		1.885** (0.654)	
1975–84	-2.162 (1.178)		2.940*** (0.823)	
Parent JSEI × Birth cohort				
Parent JSEI × 1955–64	-0.008 (0.021)		-0.012 (0.015)	
Parent JSEI × 1965–74	0.003 (0.020)		-0.027* (0.014)	
Parent JSEI × 1975–84	0.010 (0.022)		-0.067*** (0.016)	
Cohort college graduation rate		-7.442 (5.024)		15.370*** (2.904)
Parent JSEI × college graduation rate		0.013 (0.095)		-0.309*** (0.063)
N	11910	11910	20202	20202
R ²	0.112	0.106	0.141	0.133

* p < .05, ** p < .01, *** p < .001 (two-tailed tests). Standard errors in parentheses.

Change in OD association by education

Fig. Average marginal effect of social origin on occupational destination at first job



No change in OD association at current job

	College graduates		Non-college graduates	
	Model 1	Model 2	Model 1	Model 2
Parent JSEI	0.084*** (0.020)	0.134** (0.041)		
Birth cohort (ref: 1945–54)				
1955–64	-1.684 (1.379)			
1965–74	-0.250 (1.420)			
1975–84	1.211 (1.665)			
Parent JSEI × Birth cohort				
Parent JSEI × 1955–64	0.028 (0.026)			
Parent JSEI × 1965–74	0.011 (0.024)			
Parent JSEI × 1975–84	-0.011 (0.027)			
Cohort college graduation rate		4.419 (6.631)		
Parent JSEI × college graduation rate		-0.119 (0.117)		
N	9694	9694		
R ²	0.155	0.154		

* p < .05, ** p < .01, *** p < .001 (two-tailed tests). Standard errors in parentheses.

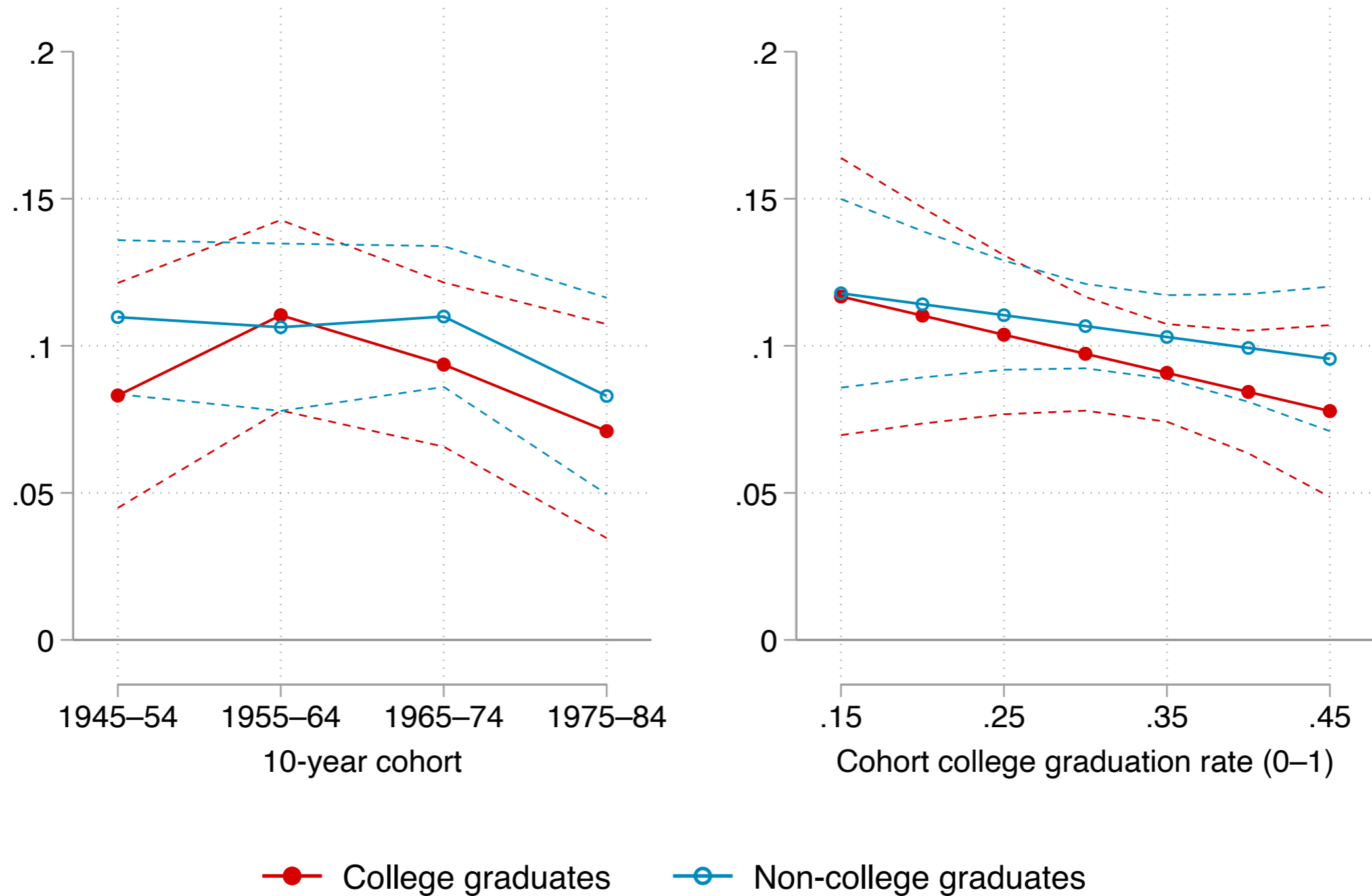
No change in OD association at current job

	College graduates		Non-college graduates	
	Model 1	Model 2	Model 1	Model 2
Parent JSEI	0.084 ^{***} (0.020)	0.134 ^{**} (0.041)	0.109 ^{***} (0.013)	0.130 ^{***} (0.029)
Birth cohort (ref: 1945–54)				
1955–64	-1.684 (1.379)		0.612 (0.936)	
1965–74	-0.250 (1.420)		1.036 (0.949)	
1975–84	1.211 (1.665)		2.474* (1.230)	
Parent JSEI × Birth cohort				
Parent JSEI × 1955–64	0.028 (0.026)		-0.006 (0.020)	
Parent JSEI × 1965–74	0.011 (0.024)		0.002 (0.018)	
Parent JSEI × 1975–84	-0.011 (0.027)		-0.027 (0.022)	
Cohort college graduation rate		4.419 (6.631)		5.141 (4.100)
Parent JSEI × college graduation rate		-0.119 (0.117)		-0.077 (0.085)
N	9694	9694	16020	16020
R ²	0.155	0.154	0.099	0.099

* p < .05, ** p < .01, *** p < .001 (two-tailed tests). Standard errors in parentheses.

Change in OD association by education

Fig. Average marginal effect of social origin on occupational destination at current job



Conclusion

Summary

First job destination:

OD association **for college graduates did not change** across cohorts/the share of college graduates.

The association **for non-college graduates become weaker** in the recent cohorts/when the share of college degree is higher.

Current job destination:

No significant changes in the OD associations are found both for college and non-college graduates.

Discussion and Limitation

Applicability of the “great equalizer” thesis depends on the societal context—prevalence of college degree.

- The gap in OD association among college and non-college graduates shrinks with educational expansion.
- We should care whether the OD association remains constant across cohort.

Future tasks

- to examine differences by gender
- to explain why the results differ for first job and current job (and confirm if the difference between first and current job is robust)

Acknowledgments

The Japanese General Social Surveys (JGSS) are designed and carried out by the JGSS Research Center at Osaka University of Commerce (Joint Usage / Research Center for Japanese General Social Surveys accredited by Minister of Education, Culture, Sports, Science and Technology), with support by the Osaka University of Commerce. JGSS-2000-2012 was conducted in collaboration with the Institute of Social Science at the University of Tokyo. JGSS-2000-2008 was financially assisted by the Gakujutsu Frontier Grant and JGSS-2010/2012 were supported by the Program for Promotion of Distinctive Joint Research Centers by the Minister of Education, Culture, Sports, Science and Technology. JGSS-2015 received funding from Japan Society for the Promotion of Science (JSPS) KAKENHI Grant Numbers JP26245060, JP15H03485, JP24243057, the Institute of Amusement Industry Studies at Osaka University of Commerce, Japan Center for Economic Research 2014 (Noriko Iwai), and Research Grant on Labor Issues 2015 (PI: Hachiro Iwai). The Permission to use SSM survey data was granted by the 2015 SSM Survey Management Committee. The research support in conducting Japan Life-course Panel Survey (JLPS) was obtained from the Institute of Social Science, University of Tokyo, and The Outsourcing, Inc. The permission to use the data is obtained from the Management Committee of the Japanese Life Course Panel Surveys. The previous version of this paper was presented at the Mobility Regime Workshop and the Japanese Association of Mathematical Sociology 71th meeting on September 2021. We are grateful to the participants and Fumiya Uchikoshi for helpful comments. This research was supported by KAKENHI Grant-in-Aid for Specially Promoted Research (Grant Numbers JP25000001 and JP18H05204), Scientific Research (S) (Grant Numbers JP18103003 and JP22223005), and Grant-in-Aid for Young Scientists (Grant Numbers 21K13439) from the Japan Society for the Promotion of Science. Direct correspondence to Ryota Mugiyama, Department of Political Studies, Gakushuin University, 1-5-1 Mejiro, Toshima-ku, Tokyo 171-8588, Japan. E-mail: ryota.mugiyama@gakushuin.ac.jp.

Compositional changes in educational qualifications

