

Association between Educational Attainment and Access to Service Class over Career in Japan: Decomposing into Professional and Managerial Jobs

Ryota MUGIYAMA, Kohei TOYONAGA* (The University of Tokyo)

Introduction and Background

Changes of association between education and destination over the life-course

- Measuring class attainment as career trajectories (Barone and Schizzerotto 2011).
- How does the influence of educational attainment on class destination change? (Blau and Duncan 1967; Warren et al. 2002; Barone et al. 2011; Wolbers et al. 2011, Manzoni et al 2014).

Theoretical prediction

- Sorting / Signaling theory** (Arrow 1973; Spence 1973) : The influence of education would weaken in the course of the career.
- Human capital / Credentialism theory** (Becker 1964; Collins 1979) : The influence of education would be stable.

Heterogeneity within service class

- We disaggregate service class into professional and managerial jobs because the applicability of each theory would vary by type of work (Goldthorpe 2014).

Criterion	Professionals	Managers
What kind of skills required?	Occupation-specific skills	Non-cognitive characteristics / Firm specific skills
How much formal educational qualification required?	More	Less

Note: These discussion is suggested by Jackson et al.(2005), Jackson(2007), Klein (2011), and Bukodi and Goldthorpe (2011).

Purpose: We investigate the applicability of theory on the relationship between education and career trajectories by **examining how the influence of education change over career** with a special focus on **the difference between professional and managerial jobs** in Japan.

Methods

Data: Social Stratification and Mobility (SSM) survey, 2005 and 2015.

Sample: Person-years of men and women who were born in 1936-75 (age: 25-49). We excluded the non-employed in each person-years. The sample size is 4,721 / 104,278 for men, 4,942 / 76,132 for women (N of individuals / N of person-years)

Dependent Variable: Class destination at each age, measured by EGP class schema (Erikson and Goldthorpe 1992).

Service class or not	Professional / managerial	Detailed class
Class I + II	Professional	Class I professional
		Class II professional
	Managerial	Class I managerial
		Class II managerial
Class III – VII		

Independent variables:

Educational attainment

	Men	Women
Middle school: 1abc	16.0	17.2
High school: 2bc	55.9	60.6
Junior college / vocational school: 3a*	1.2	11.1
University or more: 3b*	26.9	11.1
N of persons	4,721	4,942

Note: We merged 3a and 3b for men.

Statistical method:

Linear probability model with random-intercept (Rabe-Hesketh and Skrondal 2012)

• **Model 1** | educational attainment, age, age-squared, social origin, social origin×age, social origin×age-squared, birth cohort and survey years.

• **Model 2** | M1 + educational attainment×age

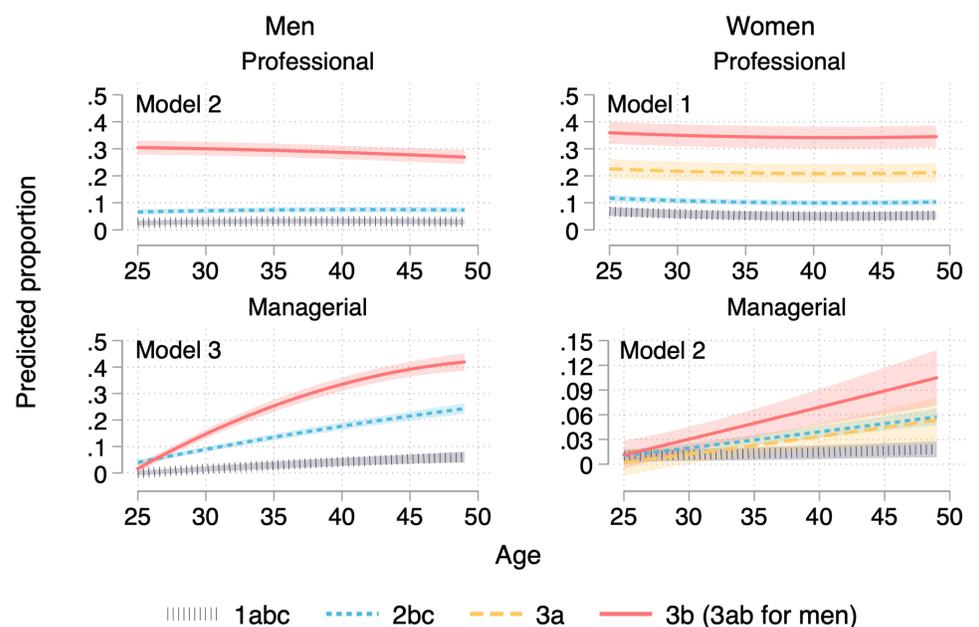
• **Model 3** | M2 + educational attainment×age-squared

Mobility table from t-1 to t

Men t-1 → t	(1)	(2)	(3)	(4)	(5)
(1) Class I professional	98.55	0.21	0.59	0.33	0.07
(2) Class II professional	0.23	98.29	0.25	0.17	0.06
(3) Class I managerial	0.04	0.04	89.16	0.18	0.03
(4) Class II managerial	0.20	0.30	6.62	91.91	0.25
(5) Class III-VII	0.98	1.16	3.37	7.42	99.60
N of person-years	7,055	5,327	3,202	12,539	71,434
Women t-1 → t	(1)	(2)	(3)	(4)	(5)
(1) Class I professional	97.94	0.02		0.04	0.03
(2) Class II professional	0.72	98.36	0.27	0.48	0.28
(3) Class I managerial			93.15	0.04	0.00
(4) Class II managerial		0.02	1.92	92.68	0.09
(5) Class III-VII	1.34	1.60	4.66	6.75	99.59
N of person-years	1,116	9,256	365	2,280	58,173

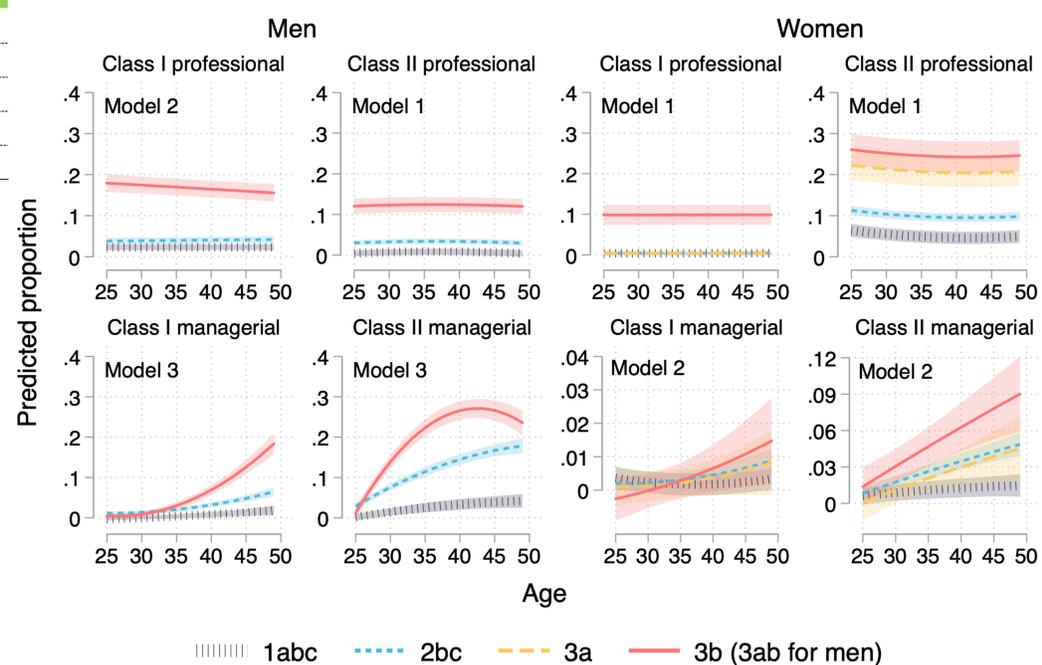
Note: Row percent and N of person-years. Blank cells indicate there are no events.

Predicted proportions of professional and managerial jobs by education over the life-course

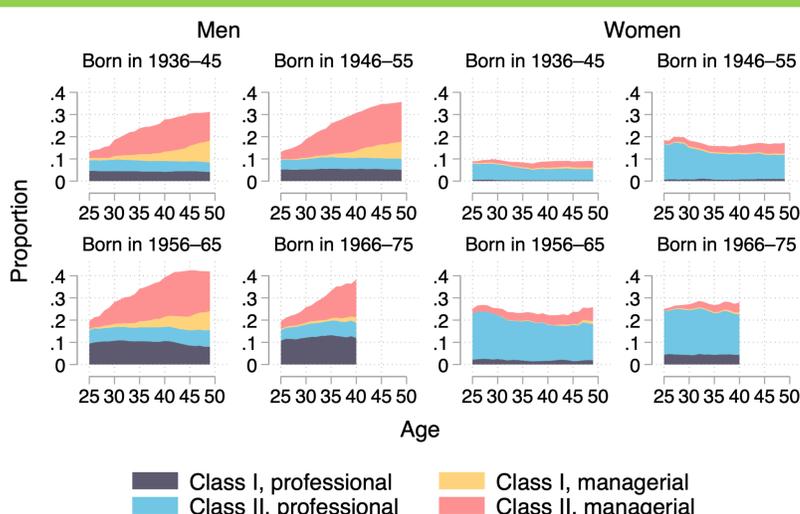


Note: Predicted probabilities and their 95% confidence intervals obtained from the accepted model (shown in the upper-left side sides).

Decomposing into Class I and II



Distribution of service class attainment over age



Conclusion

- In professional jobs, the influence of education is highly stable. That is, human capital or credentialism theory seems to be applicable for the access to professional jobs.
- In managerial jobs, educational gradient is small at first but grows in the course of career. This is probably explained by tracking within firm.

Life-course perspective and class decomposition enable to reveal the mechanisms of how and where the association between education and destination emerges.