

A Rise of New Elites? The Role of Secondary Schools in Early Development

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This paper

- Individuals holding top positions in companies and governments (i.e. elites) greatly influence society and economy.
- How does improving access to **education** affect the **rise of elites from different social backgrounds**?

E.g.

- ▶ Children of non-elite families → elites? (**upward mobility**)
 - ▶ Children of public servants → business elites? (**occupational mobility**)
 - ▶ Children of business families → government elites? (**occupational mobility**)
- We examine the role of **secondary education** in mobilizing the elite formation during an **early development stage** in Japan (1890s-).
 - ▶ Enrollment rate at secondary education ~ 2%.

Literature

- Role of **education** on **elite formation & intergenerational mobility**
 - **Elites**: Zimmerman (2019); Michelman, Price, and Zimmerman (2022); Barrios Fernández, Neilson, and Zimmerman (2023); Doxey, Karger, and Nencka (2022)
 - **Intergenerational mobility**: Chetty, Hendren, Kline, and Saez (2014); Acciari, Polo, and Violante (2019); Fairbrother and Mahadevan (2016)
 - ▶ **Contribution: Causal impact of secondary education** in a developing economy & exploring **occupational mobility** aspect
- Impacts of **secondary education**
 - Angrist, Bettinger, and Kremer (2006); Blimpo, Gajigo, and Pugatch (2019); Brandt and Mkenda (2020); Spohr (2003); Ozier (2015); Duflo, Dupas, and Kremer (2021); Sakai and Masuda (2020); Masuda and Shigeoka (2023)
 - ▶ **Contribution: Impact on long-run career outcomes** and **intergenerational mobility**
- **History/sociology**, education and elites in Japan
 - Sonoda, Hamana, and Hirota (1995); Aso (1978); Takane (1976); Takeuchi (1981); Matsumoto and Okazaki (2023); Clark and Ishii (2012); Clark (2015)
 - ▶ **Contribution: Quantifying causal impacts of schools** on elite formation

From Tokugawa Period to Meiji Period

- In Tokugawa period (1603-1868), the Tokugawa family and local lords (大名) ruled Japan.
- **Hereditary status system** that strictly separated social classes and occupations.
 - ▶ Public sector: **samurai** (武士)
 - ▶ Private sector: **commoners**
= { merchants (商), artisans (工), farmers (農) }
- The new Meiji government was established in 1868 (Meiji Restoration).
- **Depriving privileges of samurai**
 - ▶ Return of the land and people to the Emperor (版籍奉還) (1869)
 - ▶ Conscription Law (徴兵令) (1873)
 - ▶ Abolition Measure of Hereditary Stipend (秩禄処分) (1875)

Education system and secondary schools in Meiji period

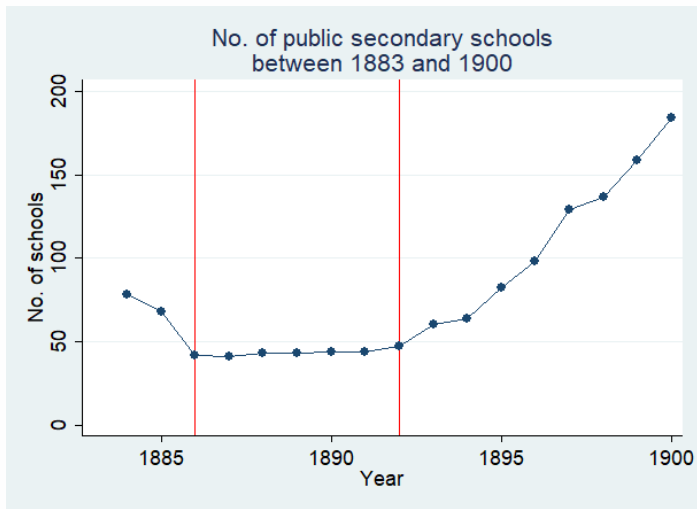
- Education System Order (1872, 学制) set the blueprint for educational institutions.
 - ▶ Elementary, secondary, and universities.
- Before 1879, around 800 secondary schools existed.
 - ▶ Former fief schools (藩校) and European-style institutions

Challenges in meeting government standards.

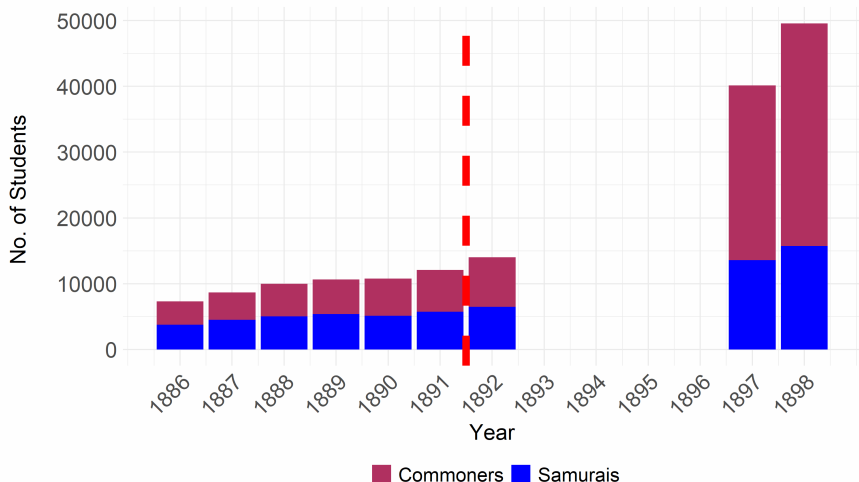
- ▶ e.g. Shortage of qualified teachers: 70% of schools had only one.
- **Standardization**: Closure of 630 private schools, leaving 188 approved secondary schools.
- **Concentration of resource**: Secondary School Order (1886) limited publicly-funded secondary schools (尋常中学校) to **one per prefecture**.

Relaxation of One School One Prefecture Rule in 1891

In 1891, the government permitted each prefecture to establish **more than one** public secondary school.



Number of secondary school students by nobility



Institutional backgrounds of secondary schools

- Enrollment rate
 - ▶ Not compulsory.
 - ▶ 0.4% (1886) ~ 2% (1898) of incoming male cohorts.
- Tuition:
 - ▶ 7.2 yen/year (~ 20% of average income per capita in 1980)
- Eligibility:
 - ▶ Male, at least 12 years old.
 - ▶ Finishing a primary school (ordinary 4-years course)
 - ★ + advanced primary education (2-4 years).
- Age at entrance
 - ▶ Statistics about average age of first-year students suggest age at entry was about 13. [Average age distribution](#)
 - ▶ Use 13 as the threshold for baseline empirical RDD specification (+ robustness checks).

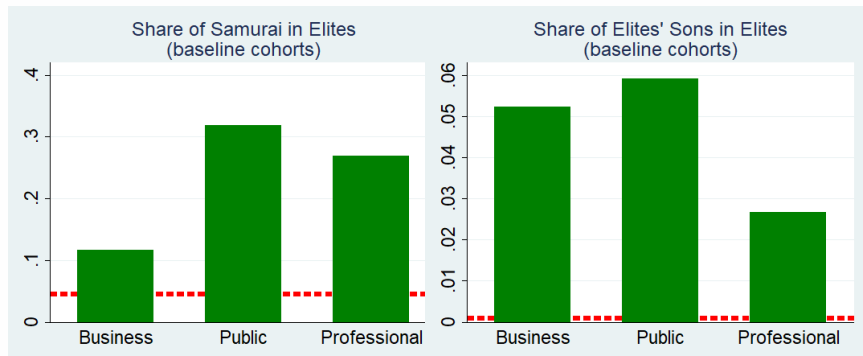
Data for long-run outcomes

We digitized Japanese Personnel Inquiry Records (**PIR**) in 1903, 1915, 1928, 1934, and 1939.

- Who's Who.
- A selective list of socially distinguished individuals encompassing economic, political, and cultural elites.
 - ▶ 77,478 unique individuals, representing about **0.1%** of population.
- Biographical information for each person listed
 - ▶ Birth year, birthplace, nobility (samurai/commoner), final education institution, career history, etc.
- By birth year, birth prefecture, and nobility, we count the number def(en)
 - ▶ High-income business managers
 - ▶ Public servants (central gov. bureaucrats and politicians)
 - ▶ Professionals elites (physicians, lawyers, scholars)
- We link sons and fathers among elites: identifying 6,869 pairs where both an elite and his father are listed in the PIRs.

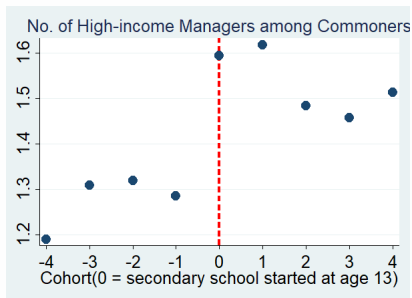
Over-representation of samurai and sons of elites

- Samurai (5% of pop.) represented 12–32% of occupational elites.
- Individuals from elite families (0.1% of pop.) represented 3–6% of occupational elites.

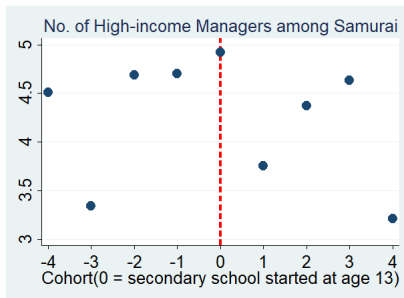


No. of elite managers per 1000 persons

No. of elites per 1000 male birth population in the prefecture.



(a) Commoners

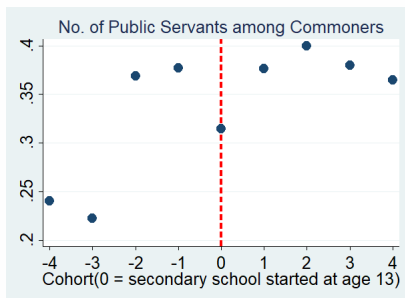


(b) Samurai

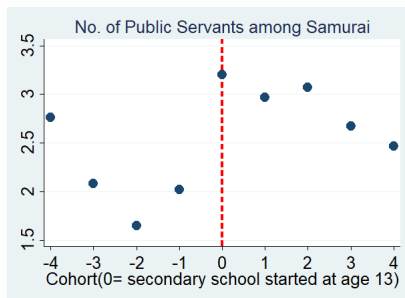
Note: The cohort in the figure is defined by "the year when the cohort turned age 13 - the year when the 2nd secondary school was established in the prefecture" prof. public servant

No. of elite public servants per 1000 persons

No. of elites per 1000 male birth population in the prefecture.



(a) Commoners



(b) Samurai

Note: The cohort in the figure is defined by "the year when the cohort turned age 13 - the year when the 2nd secondary school was established in the prefecture" [Back](#)

Empirical specification: RD approach

$$\frac{N_{j,c}^{k,n}}{\text{pop}_j^n} = \beta^{k,n} \text{After}_{j,c} + \text{Trend}_c^{k,n} + \delta_j^{k,n} + u_{j,c}^{k,n},$$

• Variables

- ▶ prefecture j ; cohort c ; occupation k ; social group (e.g. nobility) n .
- ▶ $\frac{N_{j,c}^{k,n}}{\text{pop}_j^n}$ is no. of elites per 1000 male birth population in prefecture j cohort c .
- ▶ $\text{After}_{j,c}$ takes 1 if cohort c was age 13 or younger at the time the 2nd secondary school was established in prefecture j

• Sample

- ▶ We focus on 37 prefectures where 2nd school was established in early period (1892–1901).
- ▶ For each prefecture, we include **9 cohorts** around the establishment of 2nd school.
 - 4 cohorts before + 5 cohorts after

Impacts by samurai & commoners

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	2.12 (1.50)	0.34 (0.87)	1.68** (0.63)	0.75 (1.11)
No. Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
Percent Effect(%)	24	8	79	20
<i>Panel B: Commoners</i>				
After	0.36*** (0.13)	0.31*** (0.10)	-0.05 (0.08)	0.16* (0.08)
No. Obs.	333	333	333	333
Mean Dep. Before	2.08	1.28	0.30	0.68
Percent Effect(%)	17	24	-17	23

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level.

Impacts by elite status of fathers

	Individuals from elite families				Individuals from non-elite families			
	All Occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)	All Occupational Elites (5)	High-income Managers (6)	Public Servants (7)	Professional Elites (8)
<i>Panel A: Samurai</i>								
After	48.75 (55.64)	65.39 (45.16)	-11.55 (30.27)	2.72 (22.07)	1.76 (1.38)	-0.02 (0.81)	1.65*** (0.60)	0.70 (1.07)
No. Obs.	333	333	333	333	333	333	333	333
Mean Dep. Before	74.70	37.07	25.44	20.69	8.52	4.09	1.98	3.72
Percent Effect(%)	65	176	-45	13	21	-1	84	19
<i>Panel B: Commoners</i>								
After	6.95 (31.86)	4.08 (25.19)	9.32 (13.66)	-1.27 (14.31)	0.34*** (0.12)	0.30*** (0.09)	-0.06 (0.07)	0.15* (0.09)
No. Obs.	333	333	333	333	333	333	333	333
Mean Dep. Before	93.24	69.21	14.71	24.42	1.97	1.19	0.29	0.66
Percent Effect(%)	7	6	63	-5	17	25	-21	23

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level.

Robustness checks

Results are robust to various other specifications.

- Staggered DiD: `staggered did`
- Event study: `event study`
- Squared cohort trend: `squared trend`
- Cohort fixed effects: `cohort fe`
- Focusing on 2 years before and after: `2 years`
- Excluding Kazoku (華族) from samurai `no kazoku`
- Excluding cohort -1 `result`
- Excluding cohort +1 `result`

Heterogeneity Effect

- Early vs. Later: `early vs later`
- Two more secondary schools: `Result`

Possible channels

We explore the following three channels

- Human capital accumulation: Important for professional and gov. elites, but less for business elites
 - ▶ Schools with higher teacher/student ratio: + professional elites teacher
 - ▶ Progression to Imperial Univ.: professional and gov. elites
- Peer effects: Some influence
 - ▶ Schools built on former fief schools or castles: + samurai gov. elites & commoner professional elites.
 - ▶ Having sons of business elites in the cohort-location: + commoner business elites.
- Family's expectation and endowments (among commoners)
 - ▶ Eldest sons are expected to succeed the family business.
 - ▶ Younger sons are mostly free from such pressures but have shared family endowments (knowledge, networks, norms/aspirations).

Human capital accumulation: progression to higher education

	Imperial University			No Higher Education		
	High-income Managres (1)	Public Servants (2)	Professional Elites (3)	High-income Managres (4)	Public Servants (5)	Professional Elites (6)
<i>Panel A: Samurai</i>						
After	0.74 (0.62)	1.71*** (0.51)	1.19 (0.74)	0.30 (0.58)	0.06 (0.17)	-0.41 (0.25)
No. Obs.	333	333	333	333	333	333
Mean Dep. Before	1.34	1.46	2.21	1.55	0.24	0.67
Percent Effect(%)	55	117	54	20	23	-62
<i>Panel B: Commoners</i>						
After	0.02 (0.04)	-0.00 (0.05)	0.11** (0.05)	0.23*** (0.08)	-0.02 (0.03)	0.05* (0.03)
No. Obs.	333	333	333	333	333	333
Mean Dep. Before	0.17	0.16	0.33	0.86	0.07	0.14
Percent Effect(%)	14	-1	33	26	-27	37

Note: we divide our sample by final education institutions.

Possible channels

- Human capital accumulation: Important for professional and gov. elites, but less for business elites
 - ▶ Schools with higher teacher/student ratio: + professional elites
 - ▶ Progression to Imperial Univ.: professional and gov. elites
- Peer effects: Some influence
 - ▶ Schools built on former fief schools or castles: + samurai gov. elites & commoner professional elites. town
 - ▶ Having sons of business elites in the cohort-location: + commoner business elites. classmate
- Family's expectation and endowments (among commoners)
 - ▶ Eldest sons are expected to succeed the family business.
 - ▶ Younger sons are mostly free from such pressures but have shared family endowments (knowledge, networks, norms/aspirations).

Possible channels

- Human capital accumulation: Important for professional and gov. elites, but less for business elites
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- Family's expectation and endowments (among commoners)
 - ▶ Eldest sons are expected to succeed the family business.
 - ▶ Younger sons are mostly free from such pressures but have shared family endowments (knowledge, networks, norms/aspirations).

Family's expectation and endowments

- Eldest sons upgraded traditional firms they inherited to modern firms?
- Even younger sons became business elites instead of gov. elites (suggesting importance of family endowments).

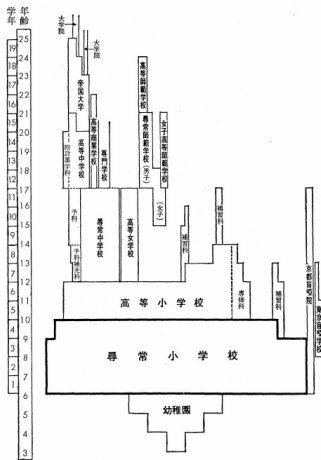
	High-income Managers					Public Servants	Professional Elites
	All (1)	Modern Business Managers (2)	Modern& Traditional Business Managers (3)	Traditional Business Managers (4)	Executives (5)	All (6)	All (7)
<i>Panel A: Eldest sons (commoners)</i>							
After	0.36** (0.15)	0.23* (0.12)	0.24** (0.09)	-0.11** (0.04)	0.33** (0.13)	-0.04 (0.07)	0.33** (0.12)
No. Obs.	333	333	333	333	333	333	333
Mean Dep. Before	1.43	0.67	0.51	0.24	0.97	0.30	0.67
Percent Effect(%)	25	35	47	-46	34	-14	49
<i>Panel B: Younger sons (commoners)</i>							
After	0.26** (0.11)	0.16 (0.09)	0.05 (0.07)	0.06 (0.05)	0.13 (0.11)	-0.05 (0.10)	0.01 (0.10)
No. Obs.	333	333	333	333	333	333	333
Mean Dep. Before	1.05	0.57	0.33	0.14	0.72	0.27	0.65
Percent Effect(%)	25	27	14	41	18	-20	2

Conclusion

- We examine the role of secondary education in the elite formation during an early development stage in Japan.
- Secondary school expansion helped **both samurai and commoners** to become elites.
- The new elites mostly came from **non-elite families** (upward mobility).
- They became elites in **occupations in which they historically had comparative advantages** (possibly due to family endowments transferred over generations).

Appendix

Educational Ladder



第4図 明治33年

第4図 明治33年

- Educational ladder in 1900
 - ▶ Elementary school: 4 years (6–10 y/o)
 - ▶ Advanced elementary school: 2–4 years (10–14 y/o)
 - ▶ Secondary school: 5 years (12–17 y/o)
- After graduating from secondary school, students could take the entrance exam for higher educational institutions

Source: Ministry of Education

No. of secondary schools in 1892

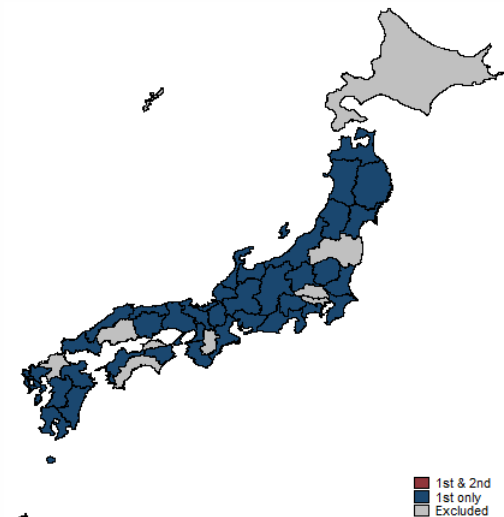


Figure: 1892

No. of secondary schools in 1893

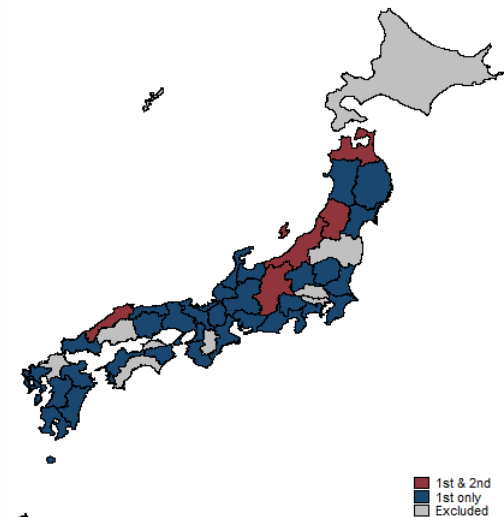


Figure: 1893

No. of secondary schools in 1895

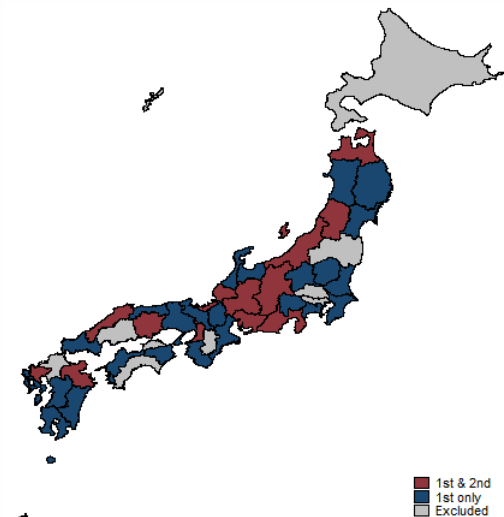


Figure: 1895

No. of secondary schools in 1897

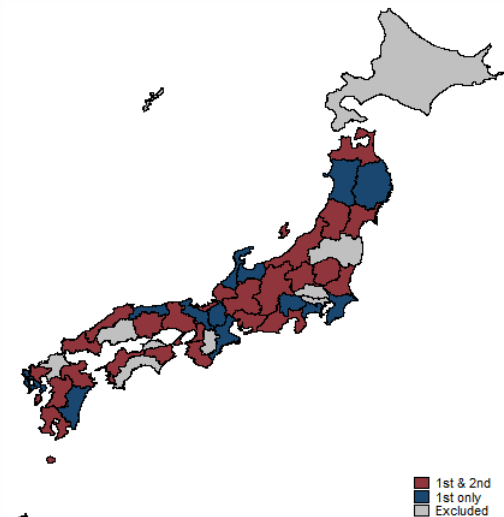


Figure: 1897

No. of secondary schools in 1899

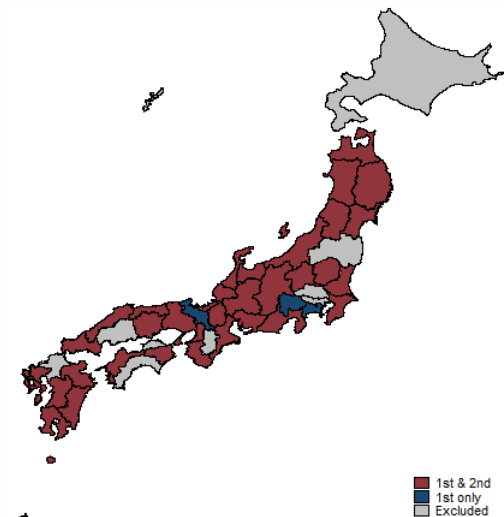


Figure: 1899

No. of secondary schools in 1901

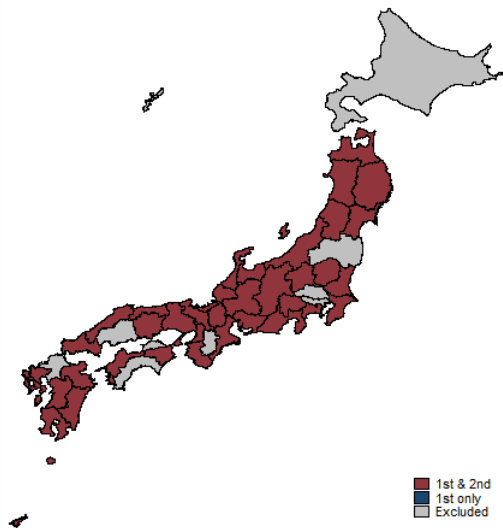
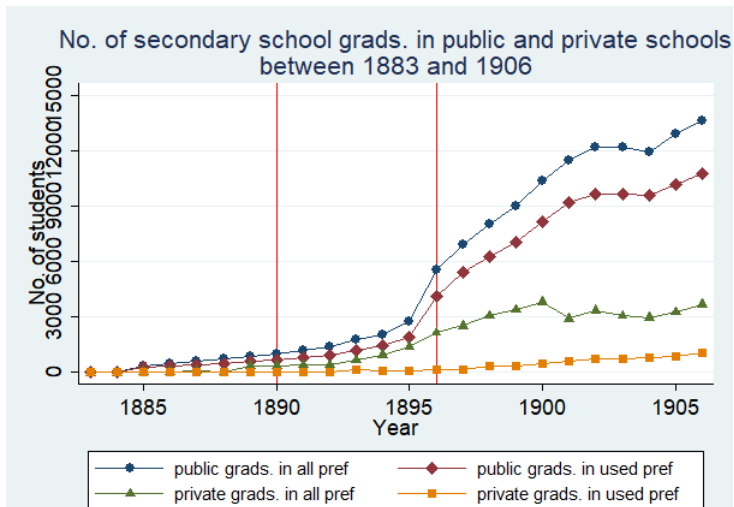


Figure: 1901

Relaxation of One School One Prefecture Rule in 1891

1891 Revision of the 1886 Secondary School Order

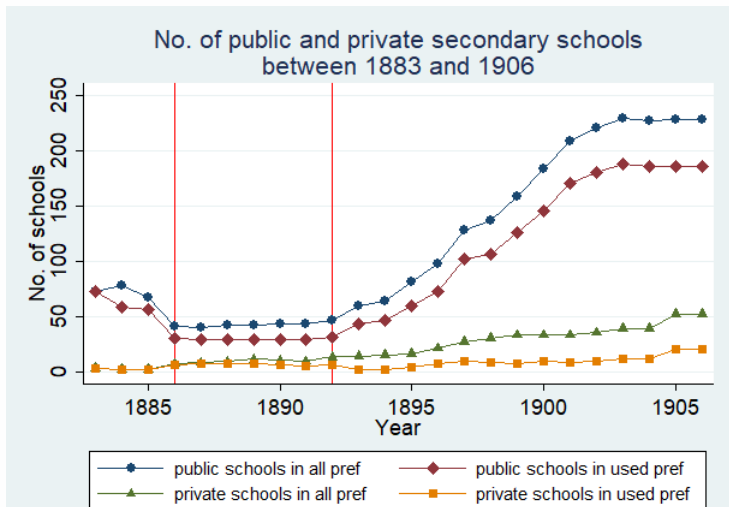
- Permitted each prefecture to establish more than one public secondary school.



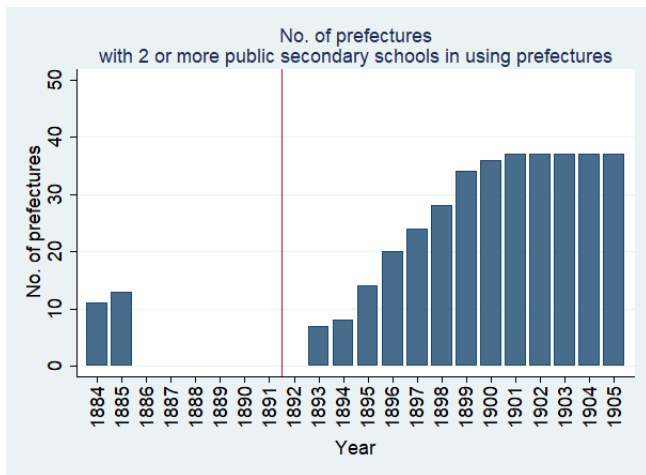
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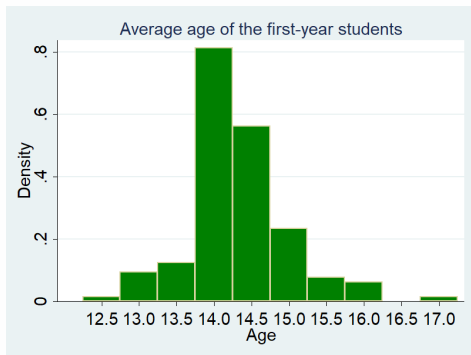
No. of prefectures with 2 or more schools



Back

Average ages of first-year students by secondary schools

- The average age of first-year students in each secondary school is observed in Public Secondary School Statistics (1898).
- Statistics are measured several months after entrance.



More institutional backgrounds of secondary schools

- Education contents (hours/week)
 - ▶ Japanese (7), Foreign Language (7), History (3), Geography (3), Math (3)
- Qualification for teachers standardized
 - ▶ Grads. from Imperial U, teacher schools, or passing national qualification exam
- Admission: educational background and exam.
- Entrants/applicants
 - ▶ 0.5 for schools established before 1891, 0.75 for schools established after 1892.
- Fraction of commoners: Around 70%

Back

Stats among JPIR listed individuals

	Samurai	Commoners	All	Share of Samurai
<i>Panel A: 1903</i>				
All Occupational Elites	909.00	703.00	1612.00	0.56
High-income managers	60.00	42.00	102.00	0.59
Professional Elites	336.00	333.00	669.00	0.50
Public Servants	690.00	418.00	1108.00	0.62
<i>Panel B: 1915</i>				
All Occupational Elites	1895.00	2596.00	4491.00	0.42
High-income managers	372.00	1204.00	1576.00	0.24
Professional Elites	919.00	941.00	1860.00	0.49
Public Servants	1006.00	854.00	1860.00	0.54
<i>Panel C: 1928</i>				
All Occupational Elites	3028.00	8430.00	11458.00	0.26
High-income managers	1162.00	5618.00	6780.00	0.17
Professional Elites	1306.00	2238.00	3544.00	0.37
Public Servants	1216.00	1655.00	2871.00	0.42
<i>Panel D: 1934</i>				
All Occupational Elites	3560.00	14165.00	17725.00	0.20
High-income managers	1665.00	10138.00	11803.00	0.14
Professional Elites	1449.00	3338.00	4787.00	0.30
Public Servants	1196.00	2152.00	3348.00	0.36
<i>Panel E: 1939</i>				
All Occupational Elites	4525.00	27413.00	31938.00	0.14
High-income managers	2291.00	18750.00	21041.00	0.11
Professional Elites	1752.00	7040.00	8792.00	0.20
Public Servants	1251.00	3608.00	4859.00	0.26

source: JPIR(1903, 1915, 1928, 1934, 1939)

Define and count elites by type

For each occupation category, we count the number of persons who appear in at least one of three years of JPIRs as a person satisfying the following criteria.

- High-income managers, who are either
 - ▶ (Modern) business managers, holding formal titles as top business managers
 - ▶ (Pre-modern type) family business managers, identified by family-business type firm names, excluding above business managers
 - ▶ *Note:* both of the above are limited to ones who pay tax, implying that their incomes were high enough to be above the threshold to start paying the tax (1000 yen/year = 3-4 times of GDP per capita.)
- Professional elites
 - ▶ Judges/Lawyer, doctor, scholar
- High-ranking public officers
 - ▶ Central government officers, politicians, prefectural governors
- Above elites by education groups
 - ▶ Imperial university grads, vocational and military school grads, no higher education

JPIR Elite definitions (Japanese)

● Manager

- ▶ business manager: 取締役, 監査役, 社長, 会長, 頭取, 理事, 企業家, 店長, 支配人, 乗務, 部長, 次長, 課長
- ▶ family business manager: 商, 店, 業, 屋

● Professionals

- ▶ lawyer: 弁護士, 判事, 検事, 裁判官
- ▶ doctor: 医, 院長
- ▶ scholar: 教師, 講師, 研究員, 研究家, 博士, 学校長, 学長

● Public Officer

- ▶ 長官, 次官, 局長, 局理事, 大使, 公使, 領事, 総監, 総督, 参事官, 参興館, 書記官, 秘書官, 法務官, 事務官, 理事官, 知事, 省, 庁, 局, 会計検査員, 大使館, 領事館, 議員, 議長, 大臣, 内閣
- ▶ 郵便局, 放送局, 電気局, 水道局, 土木局, 印刷局, 薬局, 新聞, 新報, 放送, 軍を除く

PIR

We aggregate the no. of all elites (1903–1939) by cohort level.

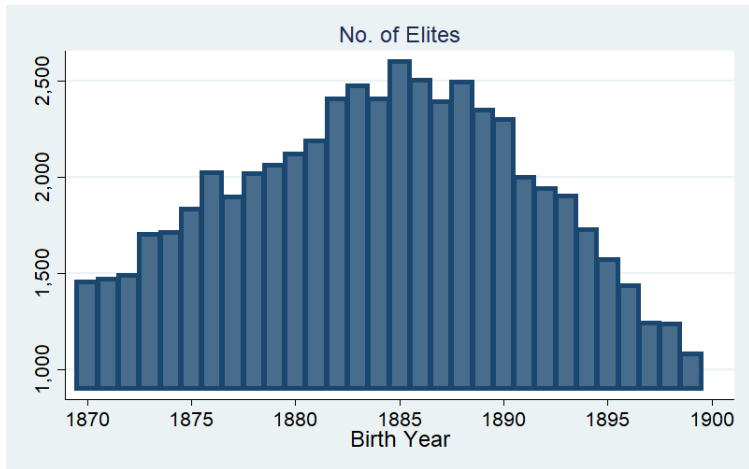
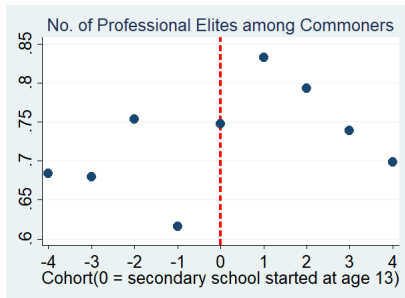


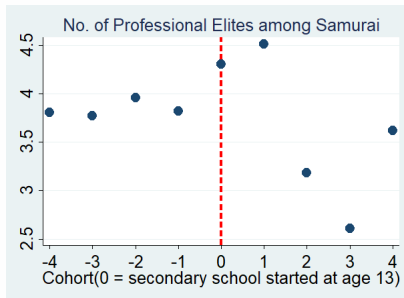
Figure: Cohorts used in PIR

No. of professional elites per 1000 persons

No. of elites per 1000 male birth population in the prefecture.



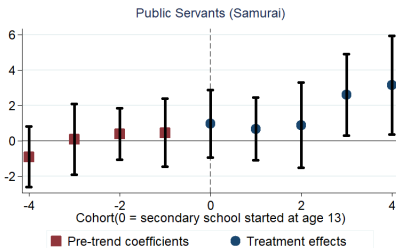
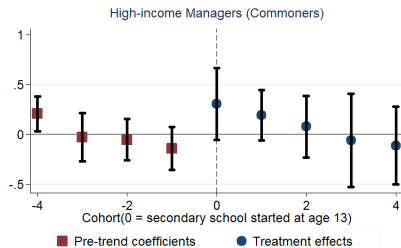
(a) Commoners



(b) Samurai

Note: The cohort in the figure is defined by "the year when the cohort turned age 13 - the year when the 2nd secondary school was established in the prefecture" [Back](#)

Staggered DiD

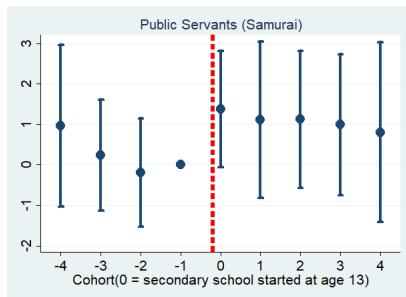
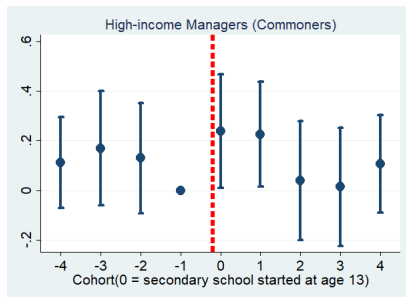


Note: Staggered DiD based on Callaway and Sant'Anna (2021) method (Stata csdid command). We use only not-yet-treated units as comparisons.

	$\chi^2(df)$		
	High-income Managers	Professional Elites	Public Servants
All	3183.39(32)	697.93(32)	12262.40(32)
Samurai	184.37(32)	788.51(32)	472.83(32)
Commoners	1184.40(32)	2498.18(32)	4825.10(32)

Note: We test the hypothesis H_0 : pre-treatment within window(from -4 to -1) are equal to 0. $\chi^2(df)$ are reported in each cell. [Back](#)

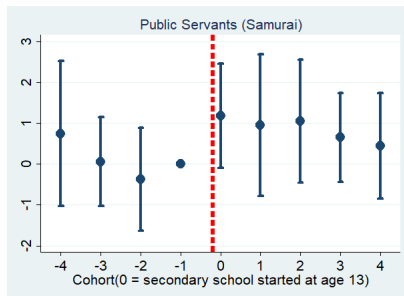
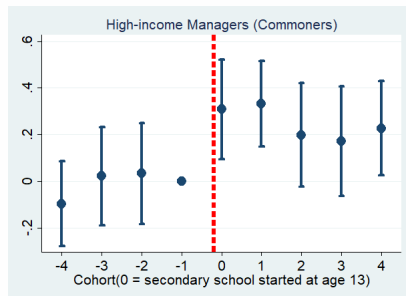
Event Study(birth year fe)



Note: Event study method. We include cohort fixed effect and prefecture fixed effect.

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Event Study (cohort linear trend controlled)



Note: Event study method. We include cohort trend term and prefecture fixed effect.

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Impact on no. of secondary schools, grads, and teachers

(a) Secondary School

	No. of Middle Schools		No. of Middle School Grads		No. of Teacher	
	(1) Public	(2) Private	(3) Public	(4) Private	(5) No.	(6) per Graduates
After	1.64*** (0.22)	-0.16* (0.09)	4.31*** (1.14)	0.07 (0.15)	4.75*** (1.63)	-0.06* (0.03)
No. Obs.	333	333	333	333	297	297
Mean Dep. Before	0.96	0.20	4.63	0.12	16.44	0.45
Percent Effect(%)	170	-77	93	57	29	-14

Source: Ministry of Education Yearbook 1892–1901

Managers

	High-income managers				
	All (1)	Modern Business Managers (2)	Modern& Traditional Business Managers (3)	Traditional Business Managers (4)	Executive Managers (5)
<i>Panel A: Samurai</i>					
After	0.34 (0.87)	0.20 (0.76)	0.16 (0.30)	-0.02 (0.10)	0.84 (0.79)
No. Obs.	333	333	333	333	333
Mean Dep. Before	4.31	3.14	0.97	0.21	2.99
Percent Effect(%)	8	6	16	-10	28
<i>Panel B: Commoners</i>					
After	0.31*** (0.10)	0.19** (0.08)	0.15** (0.06)	-0.03 (0.03)	0.22** (0.09)
No. Obs.	333	333	333	333	333
Mean Dep. Before	1.28	0.64	0.43	0.21	0.85
Percent Effect(%)	24	29	35	-12	26

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level.

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Public servants

	Central public servants				Local public servants			
	All	Prefecture Governors	Bureaucrats	Politicians	All	Mayors	Administrative Officers	Politicians
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<i>Panel A: Samurai</i>								
After	1.68** (0.63)	-0.06 (0.10)	1.48*** (0.54)	0.60* (0.30)	0.55 (0.56)	0.53** (0.22)	0.45 (0.53)	0.42** (0.19)
No. Obs.	333	333	333	333	333	333	333	333
Mean Dep. Before	2.13	0.13	1.68	0.57	1.69	0.19	1.58	0.18
Percent Effect(%)	79	-45	88	105	32	283	29	241
<i>Panel B: Commoners</i>								
After	-0.05 (0.08)	0.02** (0.01)	-0.05 (0.06)	-0.01 (0.02)	-0.00 (0.07)	0.00 (0.02)	-0.01 (0.07)	0.00 (0.05)
No. Obs.	333	333	333	333	333	333	333	333
Mean Dep. Before	0.30	0.01	0.22	0.10	0.36	0.09	0.32	0.11
Percent Effect(%)	-17	473	-23	-14	-0	1	-3	3

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Professional elites

	Professional Elites (1)	Scholars (2)	Judges & Lawyers (3)	Physicians (4)
<i>Panel A: Samurai</i>				
After	0.75 (1.11)	0.57 (0.88)	0.27 (0.54)	-0.11 (0.42)
No. Obs.	333	333	333	333
Mean Dep. Before	3.84	2.56	1.04	0.88
Percent Effect(%)	20	22	26	-13
<i>Panel B: Commoners</i>				
After	0.16* (0.08)	0.06 (0.06)	0.09** (0.03)	-0.03 (0.05)
No. Obs.	333	333	333	333
Mean Dep. Before	0.68	0.43	0.15	0.28
Percent Effect(%)	23	13	61	-11

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Top income earners

	High-income earners				
	All (1)	Top 0.1% (2)	Top 0.05% (3)	Top 0.01% (4)	Top 0.005% (5)
<i>Panel A: Samurai</i>					
After	0.29 (1.43)	-0.13 (0.88)	0.10 (0.77)	0.46 (0.31)	0.32 (0.21)
No. Obs.	333	333	333	333	333
Mean Dep. Before	6.94	4.19	2.09	0.51	0.19
Percent Effect(%)	4	-3	5	91	169
<i>Panel B: Commoners</i>					
After	0.31*** (0.10)	0.15* (0.08)	0.12 (0.08)	-0.00 (0.04)	0.02 (0.03)
No. Obs.	333	333	333	333	333
Mean Dep. Before	1.78	1.06	0.61	0.19	0.09
Percent Effect(%)	17	14	20	-2	17

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

High-income managers

	High-income managers				
	All (1)	Top 0.1% (2)	Top 0.05% (3)	Top 0.01% (4)	Top 0.005% (5)
<i>Panel A: Samurai</i>					
After	0.34 (0.87)	0.55 (0.78)	0.53 (0.56)	0.45 (0.28)	0.32 (0.21)
No. Obs.	333	333	333	333	333
Mean Dep. Before	4.31	2.82	1.60	0.46	0.19
Percent Effect(%)	8	19	33	99	169
<i>Panel B: Commoners</i>					
After	0.31*** (0.10)	0.18** (0.08)	0.11 (0.07)	-0.01 (0.04)	0.02 (0.03)
No. Obs.	333	333	333	333	333
Mean Dep. Before	1.28	0.85	0.54	0.18	0.09
Percent Effect(%)	24	21	19	-4	23

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Impact on no. of elites by education

	Imperial Univ. (1)	Other Higher Education (2)	No Higher Education (3)
<i>Panel A: Samurai</i>			
After	2.68*** (0.95)	-0.53 (0.68)	-0.02 (0.64)
No. Obs.	333	333	333
Mean Dep. Before	4.30	2.41	2.25
Percent Effect(%)	62	-22	-1
<i>Panel B: Commoners</i>			
After	0.06 (0.09)	0.05 (0.06)	0.25*** (0.08)
No. Obs.	333	333	333
Mean Dep. Before	0.56	0.49	1.03
Percent Effect(%)	11	10	24

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Robustness Check: Squared Trend Term

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	1.77 (1.59)	0.07 (0.88)	1.75** (0.70)	0.58 (1.16)
No. Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
Percent Effect(%)	20	2	82	15
<i>Panel B: Commoners</i>				
After	0.30** (0.13)	0.27** (0.10)	-0.08 (0.07)	0.14* (0.08)
No. Obs.	333	333	333	333
Mean Dep. Before	2.08	1.28	0.30	0.68
Percent Effect(%)	14	21	-27	21

Note: We control for linear cohort trend, quadratic cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Robustness Check: Cohort Fixed Effect

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	1.91 (1.47)	0.09 (0.99)	1.73** (0.68)	0.55 (1.13)
No. Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
Percent Effect(%)	21	2	81	14
<i>Panel B: Commoners</i>				
After	0.22* (0.12)	0.23** (0.10)	-0.09 (0.08)	0.13 (0.09)
No. Obs.	333	333	333	333
Mean Dep. Before	2.08	1.28	0.30	0.68
Percent Effect(%)	11	18	-29	18

Note: We control for cohort and prefecture fixed effects. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Robustness Check: 2 years Before After

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	2.00 (2.21)	0.20 (1.32)	1.19 (0.93)	1.30 (1.59)
No. Obs.	185	185	185	185
Mean Dep. Before	9.09	4.70	1.83	3.89
Percent Effect(%)	22	4	65	34
<i>Panel B: Commoners</i>				
After	0.37* (0.19)	0.39** (0.15)	-0.10 (0.09)	0.13 (0.14)
No. Obs.	185	185	185	185
Mean Dep. Before	2.15	1.30	0.37	0.68
Percent Effect(%)	17	30	-26	19

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Robustness Check: Kazoku Excluded

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	1.70 (1.46)	0.03 (0.84)	1.49** (0.58)	0.65 (1.10)
No. Obs.	333	333	333	333
Mean Dep. Before	8.84	4.30	2.01	3.82
Percent Effect(%)	19	1	74	17
<i>Panel B: Commoners</i>				
After	0.36*** (0.13)	0.31*** (0.10)	-0.05 (0.08)	0.16* (0.08)
No. Obs.	333	333	333	333
Mean Dep. Before	2.08	1.28	0.30	0.68
Percent Effect(%)	17	24	-17	23

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Robustness Check: Cohort –1 Excluded

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	2.99* (1.74)	0.98 (1.29)	1.92*** (0.70)	1.10 (1.17)
No. Obs.	296	296	296	296
Mean Dep. Before	8.91	4.18	2.16	3.85
Percent Effect(%)	34	24	89	29
<i>Panel B: Commoners</i>				
After	0.36** (0.16)	0.34** (0.14)	-0.01 (0.08)	0.11 (0.11)
No. Obs.	296	296	296	296
Mean Dep. Before	2.07	1.27	0.28	0.71
Percent Effect(%)	17	27	-3	15

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Robustness Check: Cohort +1 Excluded

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	1.96 (1.50)	0.70 (0.93)	1.76** (0.67)	0.31 (1.18)
No. Obs.	296	296	296	296
Mean Dep. Before	8.97	4.31	2.13	3.84
Percent Effect(%)	22	16	83	8
<i>Panel B: Commoners</i>				
After	0.27* (0.15)	0.26** (0.11)	-0.07 (0.08)	0.12 (0.09)
No. Obs.	296	296	296	296
Mean Dep. Before	2.08	1.28	0.30	0.68
Percent Effect(%)	13	20	-24	18

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Two or more schools built with 2nd school

	All Occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	3.33* (1.71)	1.46 (1.14)	1.83** (0.69)	0.93 (1.15)
2 or more schools × After	-2.36 (1.71)	-2.19* (1.14)	-0.30 (0.64)	-0.35 (0.91)
No. Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
<i>Panel B: Commoners</i>				
After	0.24 (0.16)	0.31** (0.13)	-0.08 (0.08)	0.04 (0.11)
2 or more schools × After	0.22 (0.15)	0.00 (0.12)	0.06 (0.05)	0.22** (0.10)
No. Obs.	333	333	333	333
Mean Dep. Before	2.08	1.28	0.30	0.68

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Robustness Check: Post Dummy Interaction

	All Occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	3.19* (1.73)	0.85 (1.06)	2.38*** (0.69)	1.09 (1.11)
Post × After	-2.32 (1.71)	-1.10 (1.21)	-1.53** (0.58)	-0.73 (0.92)
No. of Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
<i>Panel B: Commoners</i>				
After	0.52*** (0.16)	0.39*** (0.12)	-0.01 (0.08)	0.25** (0.09)
Post × After	-0.37*** (0.13)	-0.17 (0.12)	-0.09* (0.05)	-0.20** (0.10)
No. Obs.	333	333	333	333
Mean Dep. Before	2.08	1.28	0.30	0.68

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Military & Non-Military Managers

	High-income managers		
	All	Military	Non-military
	(1)	(2)	(3)
<i>Panel A: Samurai</i>			
After	0.34 (0.87)	-0.22 (0.16)	0.56 (0.84)
No. Obs.	333	333	333
Mean Dep. Before	4.31	0.39	3.93
Percent Effect(%)	8	-57	14
<i>Panel B: Commoners</i>			
After	0.31*** (0.10)	0.00 (0.02)	0.31*** (0.10)
No. Obs.	333	333	333
Mean Dep. Before	1.28	0.05	1.22
Percent Effect(%)	24	4	25

Note: We control for linear cohort trend, and prefecture fixed effect. Standard errors reported in parentheses are clustered at the prefecture level. [Back](#)

Possible channels

- Human capital accumulation: Important for professional and gov. elites, but not for business elites
 - ▶ Schools with higher teacher/student ratio: + professional elites teacher
 - ▶ Progression to Imperial Univ.: professional and gov. elites school
- Peer effects: Some influence
 - ▶ Schools built on former fief schools or castles: + samurai gov. elites & commoner professional elites. town
 - ▶ Having sons of business elites in the cohort-location: + commoner business elites. classmate
- Family's expectation and endowments (among commoners) birth order
 - ▶ Eldest sons upgrade the traditional firms they inherited to modern firms.
 - ▶ Even 2nd/higher-order sons became business elites instead of gov. elites.
 - ★ suggesting influence of family endowments shared within family members (e.g. knowledge, networks, and norms forming aspirations).

Human capital accumulation: no. of teachers

	All Occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
After	-0.18 (2.09)	-1.09 (1.42)	1.41 (1.21)	-1.11 (1.45)
$\frac{\text{No. of Teachers}}{\text{No. of Graduates}} \times \text{After}$	7.01 (5.22)	3.94 (3.96)	1.01 (2.81)	5.93** (2.48)
No. Obs.	297	297	297	297
Mean Dep. Before	8.70	4.33	2.01	3.63
<i>Panel B: Commoners</i>				
After	0.35 (0.25)	0.37** (0.16)	0.08 (0.13)	0.05 (0.15)
$\frac{\text{No. of Teachers}}{\text{No. of Graduates}} \times \text{After}$	0.07 (0.55)	-0.09 (0.35)	-0.38 (0.24)	0.28 (0.37)
No. Obs.	297	297	297	297
Mean Dep. Before	2.13	1.33	0.30	0.69

Note: we include the ratio of secondary school teachers to graduates (measured for each prefecture and year) and its interaction term with “After”. [back](#)

Schools in Samurai Town vs Merchant Town

	All Occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
<i>Panel A: Samurai</i>				
Samurai Town × After	2.317 (1.931)	0.406 (1.054)	2.213** (0.850)	0.365 (1.217)
Merchant Town × After	1.972 (1.578)	0.291 (1.040)	1.274** (0.538)	1.052 (1.173)
No. Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
p-value (Samurai Town × After = Merchant Town × After)	0.848	0.923	0.149	0.455
<i>Panel B: Commoners</i>				
Samurai Town × After	0.413** (0.156)	0.299** (0.134)	-0.047 (0.073)	0.241** (0.102)
Merchant Town × After	0.312** (0.141)	0.319*** (0.104)	-0.052 (0.083)	0.092 (0.093)
No. Obs.	333	333	333	333
Mean Dep. Before	2.08	1.28	0.30	0.68
p-value (Samurai Town × After = Merchant Town × After)	0.489	0.868	0.925	0.155

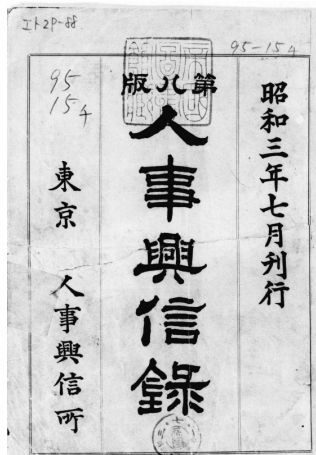
Note: We control for linear cohort trend, and prefecture fixed effect. [back](#)

Classmates network with individuals who have elite business fathers

- Sons of business elites in classmates may help upgrade the traditional business style to modern firms or find new job prospects.

	High-income managers				
	All (1)	Modern Business Managers (2)	Modern & Traditional Business Managers (3)	Traditional Business Managers (4)	Executives (5)
<i>Panel A: Commoners</i>					
After	0.23 (0.15)	0.28** (0.12)	0.01 (0.07)	-0.05 (0.03)	0.19* (0.11)
No. of Business Elites × After	0.16 (0.26)	-0.14 (0.20)	0.29** (0.13)	0.01 (0.06)	0.07 (0.17)
No. Obs.	333	333	333	333	333
Mean Dep. Before	1.19	0.60	0.39	0.20	0.78

Note: We control for linear cohort trend, and prefecture fixed effect. [back](#)



安島重三郎	
妻	トシ 明一〇、二生、茨城、士、加藤龜三郎長女
養子	弘 明一六、七生、長女キミ夫、茨城本田松次郎二男
女	キミ 明二八、一二生、養子弘妻
女	八重子 明四四、九生

君は縣島縣人先代重三郎の長男にして明治三年五月を以て生れ同十五年家督を相続す現時前記各銀行會社の重役たり家族は尙孫弘明(大四、六生、養子弘長男)同浪雄(同五、九生、同二男)同京子(同九、六生、同二女)同愛子(同一一、三生、同三女)同弘海(同一一、八生、同二男)の外弟道平(明五、一一生)同妻トミ(同一二、一〇生、茨城、加藤清太郎姉)及び其一子あり二女キヨ(同三〇、七生)は栃木縣人中由佐吉に養姉ノイ(慶應元、七生、福島、布庭惣三郎長女)は同縣人安島喜

警東銀行、警城銀行、警城電氣、積田水力電氣、警城電化各株)取
締校、平銀行、警城建物各(株)監
査役、福島縣在籍

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