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)

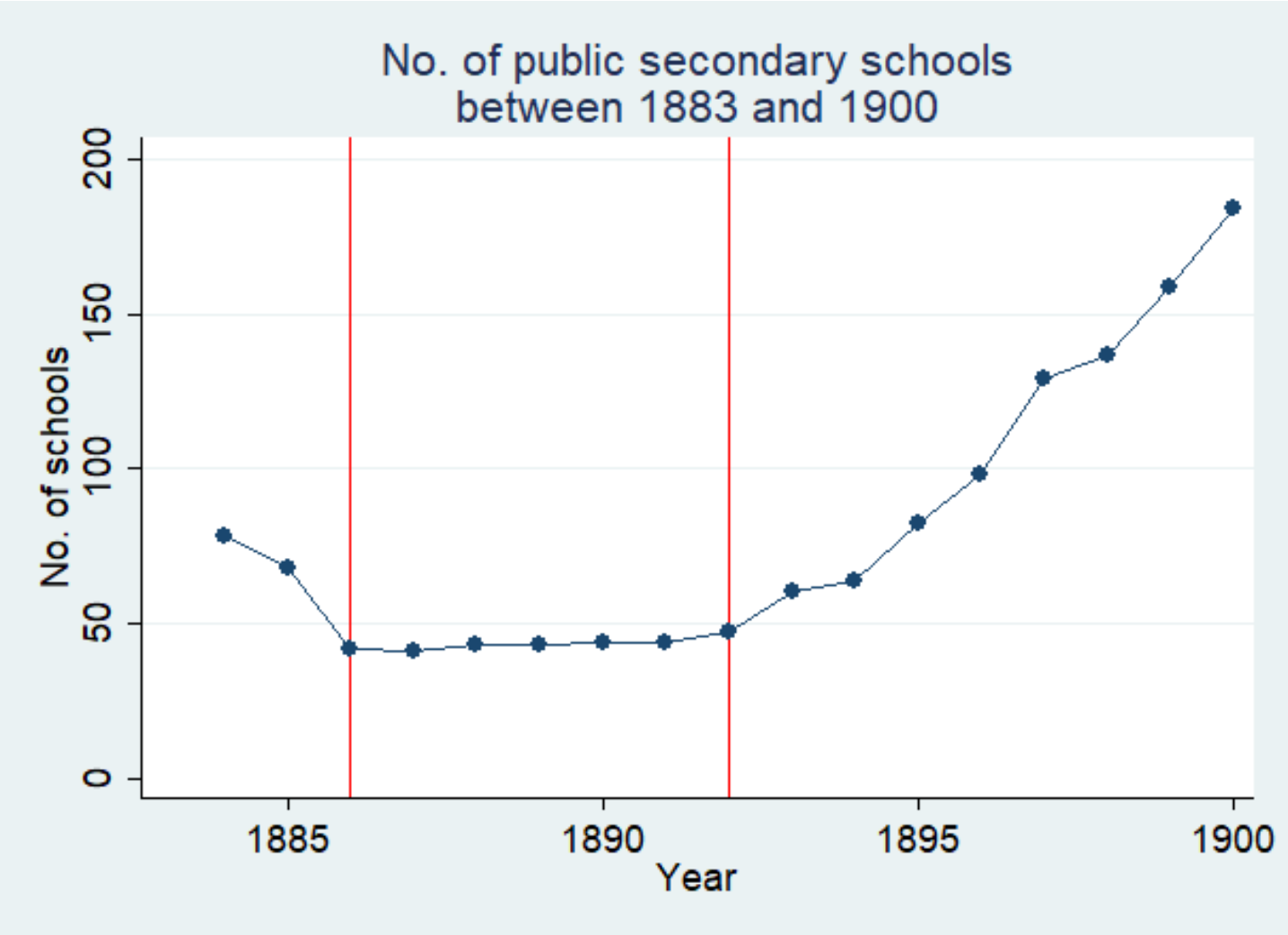
Education system and secondary schools in Meiji period

- 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

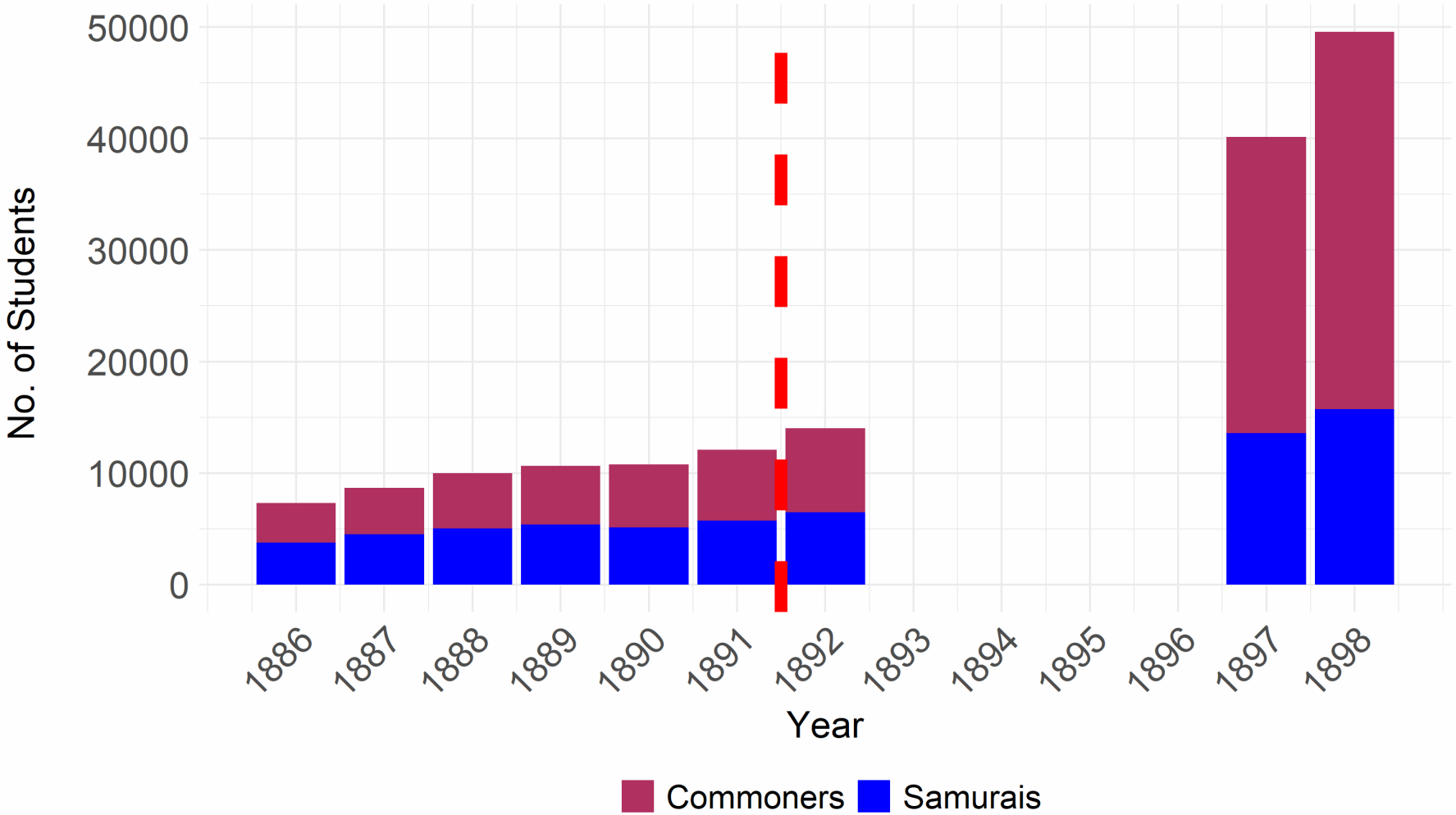
  Challenges in meeting government standards.
  - e.g. Shortage of qualified teachers: 70% of schools had only one.
- **Standardization**: Closure of 630 private schools, leaving 188 approved secondary schools.
- **Concentration of resource**: Secondary School Order (1886) limited publicly-funded secondary 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) $\sim$ 2% (1898) of incoming male cohorts.
- Tuition:
  - 7.2 yen/year ($\sim$ 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).

Detail

Data for long-run outcomes

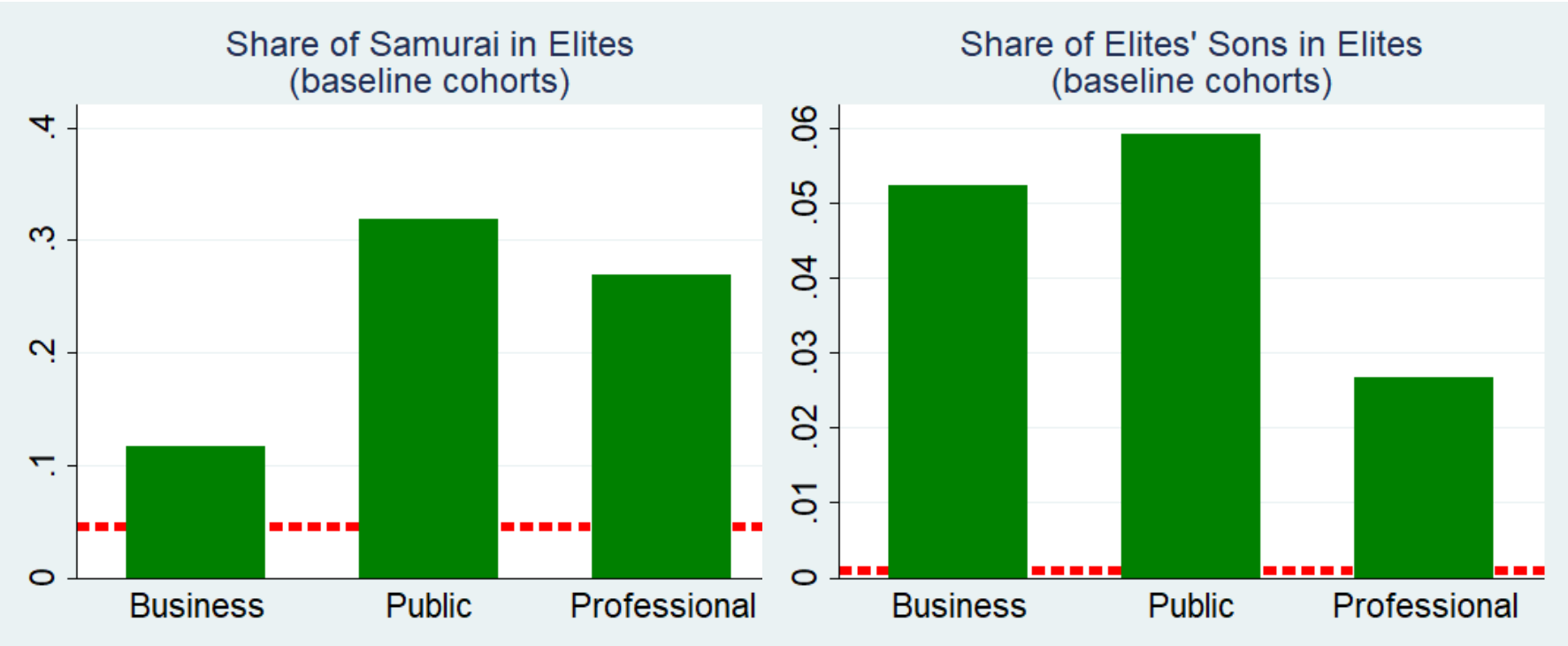
We digitized Japanese Personnel Inquiry Records (**PIR**) in 1903, 1915, 1928, 1934, and 1939.

- 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.

PIR

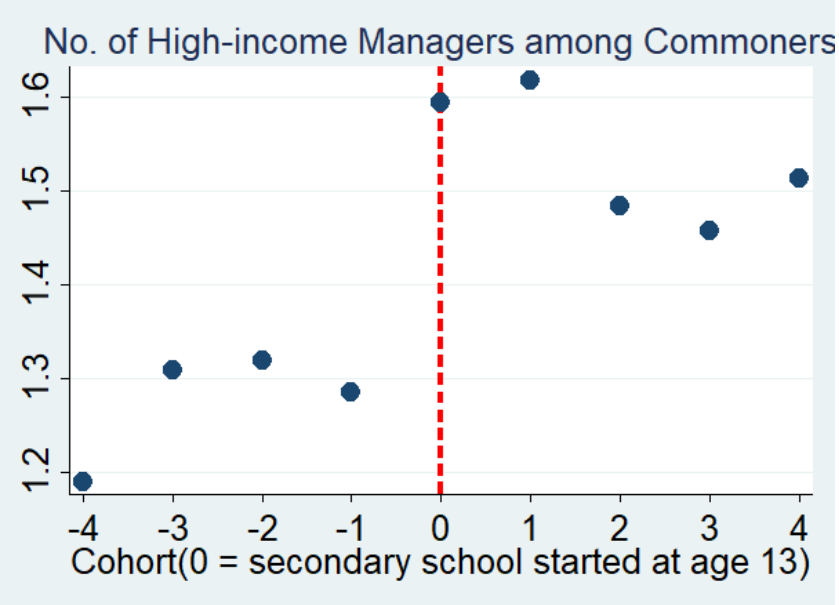
Over-representation of samurai and sons of elites

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

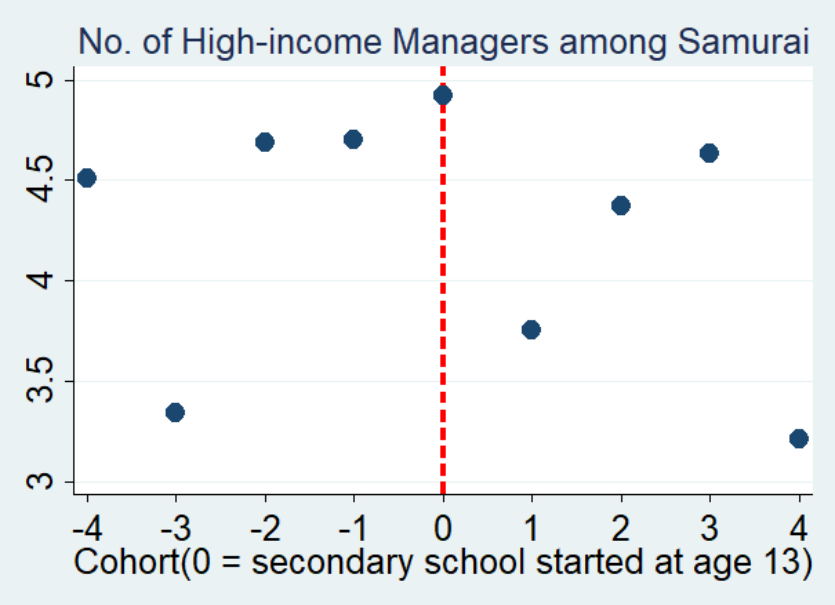


No. of elite managers per 1000 persons

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



(a) Commoners

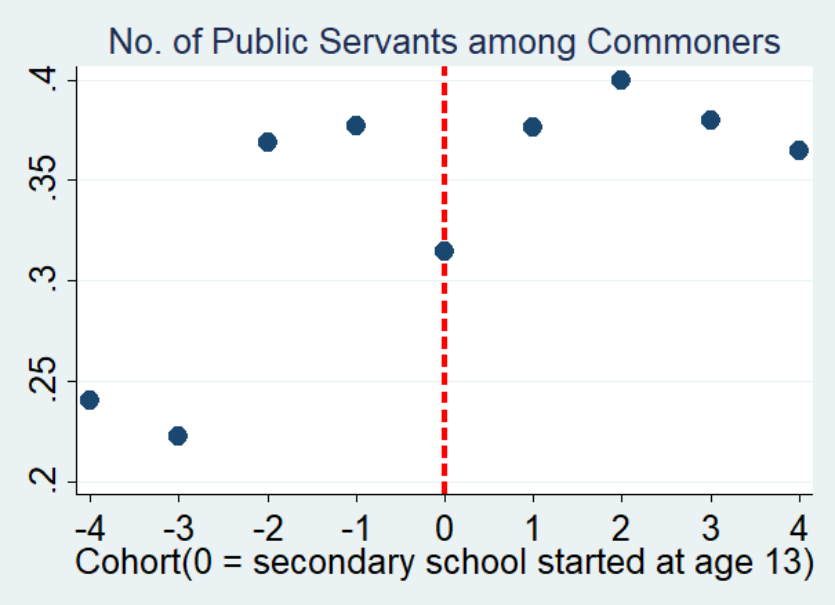


(b) Samurai

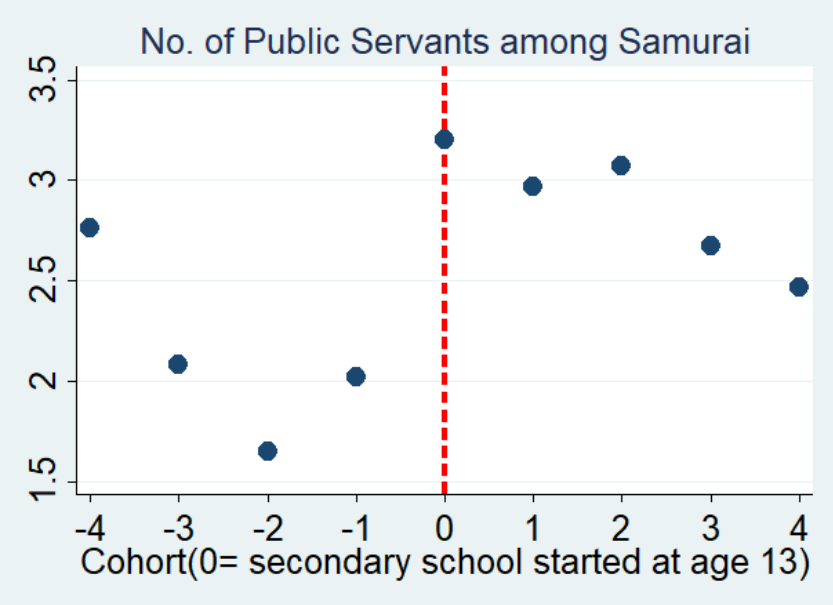
Note: The cohort in the figure is defined by ”the year when the cohort turned age 13 - the year when the 2nd secondary school was established in the prefecture” prof. public servant

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

$$\frac{N_{j,c}^{k,n}}{pop_j^n} = \beta^{k,n} After_{j,c} + Trend_c^{k,n} + \delta_j^{k,n} + u_{j,c}^{k,n},$$

- Variables
  - prefecture j ; cohort c; occupation k; social group (e.g. nobility) n.
  - $\frac{N_{j,c}^{k,n}}{pop_j^n}$ is no. of elites per 1000 male birth population in prefecture j cohort c.
  - $After_{j,c}$ 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

age effect

Impacts by samurai & commoners

	All occupational Elites (1)	High-income Managers (2)	Public Servants (3)	Professional Elites (4)
Panel A: Samurai				
After	2.12	0.34	1.68**	0.75
	(1.50)	(0.87)	(0.63)	(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
Panel B: Commoners				
After	0.36***	0.31***	-0.05	0.16*
	(0.13)	(0.10)	(0.08)	(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	High-income Managers	Public Servants	Professional Elites	All Occupational Elites	High-income Managers	Public Servants	Professional Elites
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel A: Samurai								
After	48.75	65.39	-11.55	2.72	1.76	-0.02	1.65***	0.70
	(55.64)	(45.16)	(30.27)	(22.07)	(1.38)	(0.81)	(0.60)	(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
Panel B: Commoners								
After	6.95	4.08	9.32	-1.27	0.34***	0.30***	-0.06	0.15*
	(31.86)	(25.19)	(13.66)	(14.31)	(0.12)	(0.09)	(0.07)	(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	Public Servants	Professional Elites	High-income Managres	Public Servants	Professional Elites
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Samurai						
After	0.74	1.71***	1.19	0.30	0.06	-0.41
	(0.62)	(0.51)	(0.74)	(0.58)	(0.17)	(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
Panel B: Commoners						
After	0.02	-0.00	0.11**	0.23***	-0.02	0.05*
	(0.04)	(0.05)	(0.05)	(0.08)	(0.03)	(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
  - Schools with higher teacher/student ratio: + professional 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).

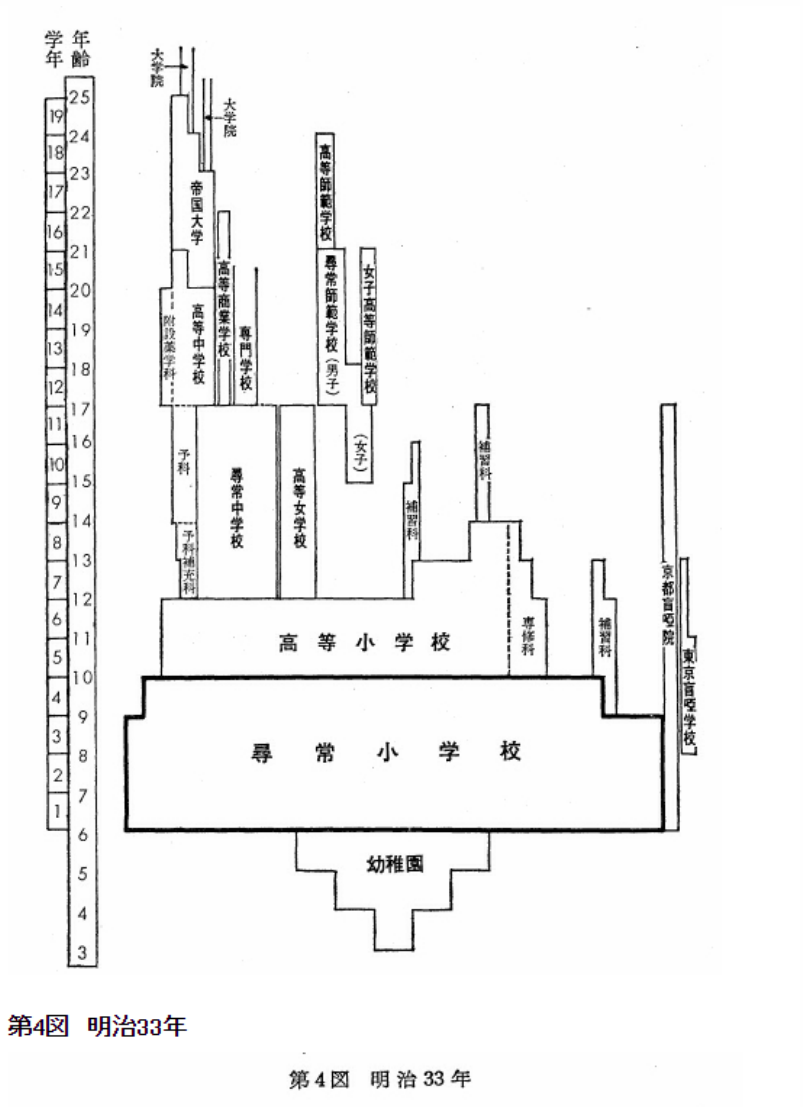
	High-income Managers					Public Servants	Professional Elites
	All	Modern Business Managers	Modern& Traditional Business Managers	Traditional Business Managers	Executives	All	All
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A: Eldest sons (commoners)							
After	0.36**	0.23*	0.24**	-0.11**	0.33**	-0.04	0.33**
	(0.15)	(0.12)	(0.09)	(0.04)	(0.13)	(0.07)	(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
Panel B: Younger sons (commoners)							
After	0.26**	0.16	0.05	0.06	0.13	-0.05	0.01
	(0.11)	(0.09)	(0.07)	(0.05)	(0.11)	(0.10)	(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

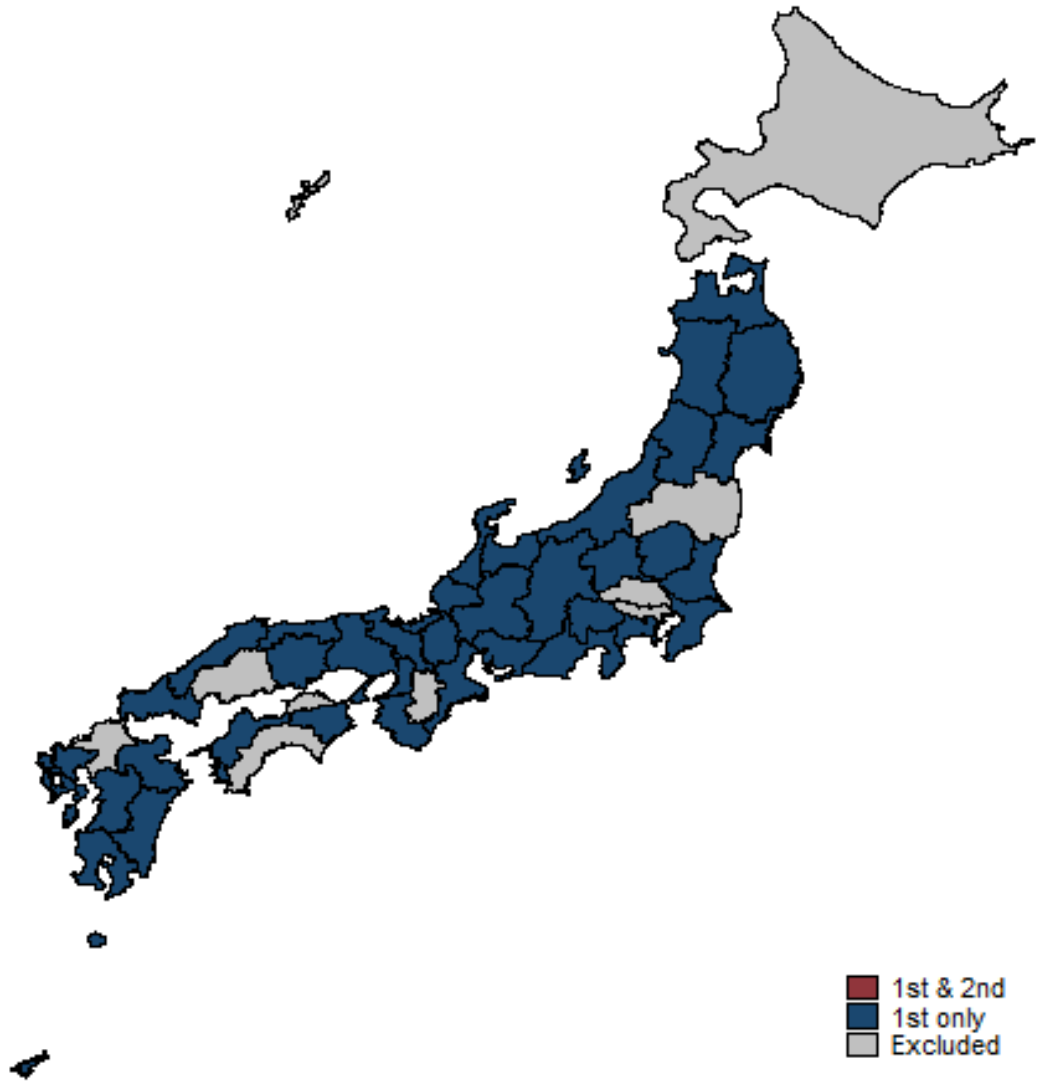


Figure: 1892

No. of secondary schools in 1893

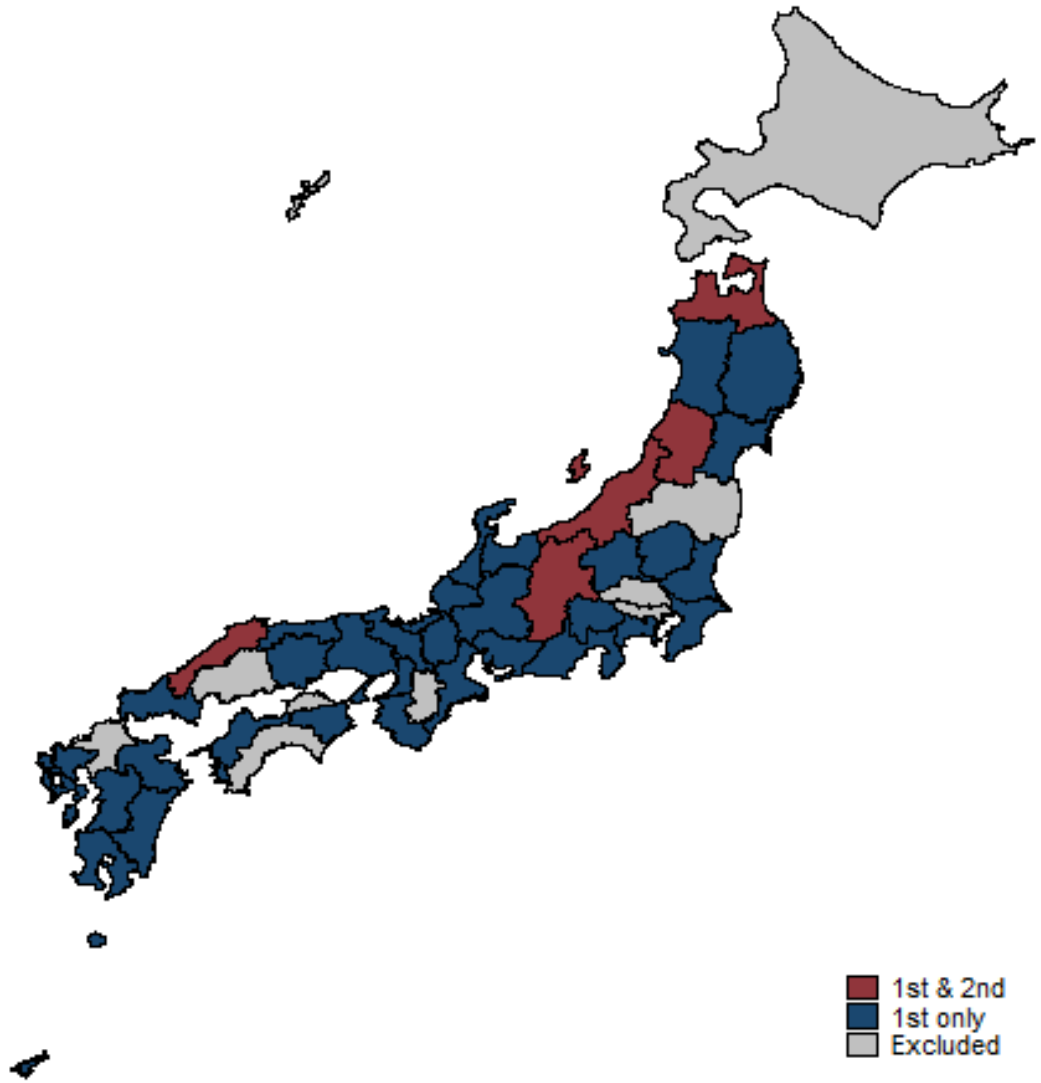


Figure: 1893

No. of secondary schools in 1895

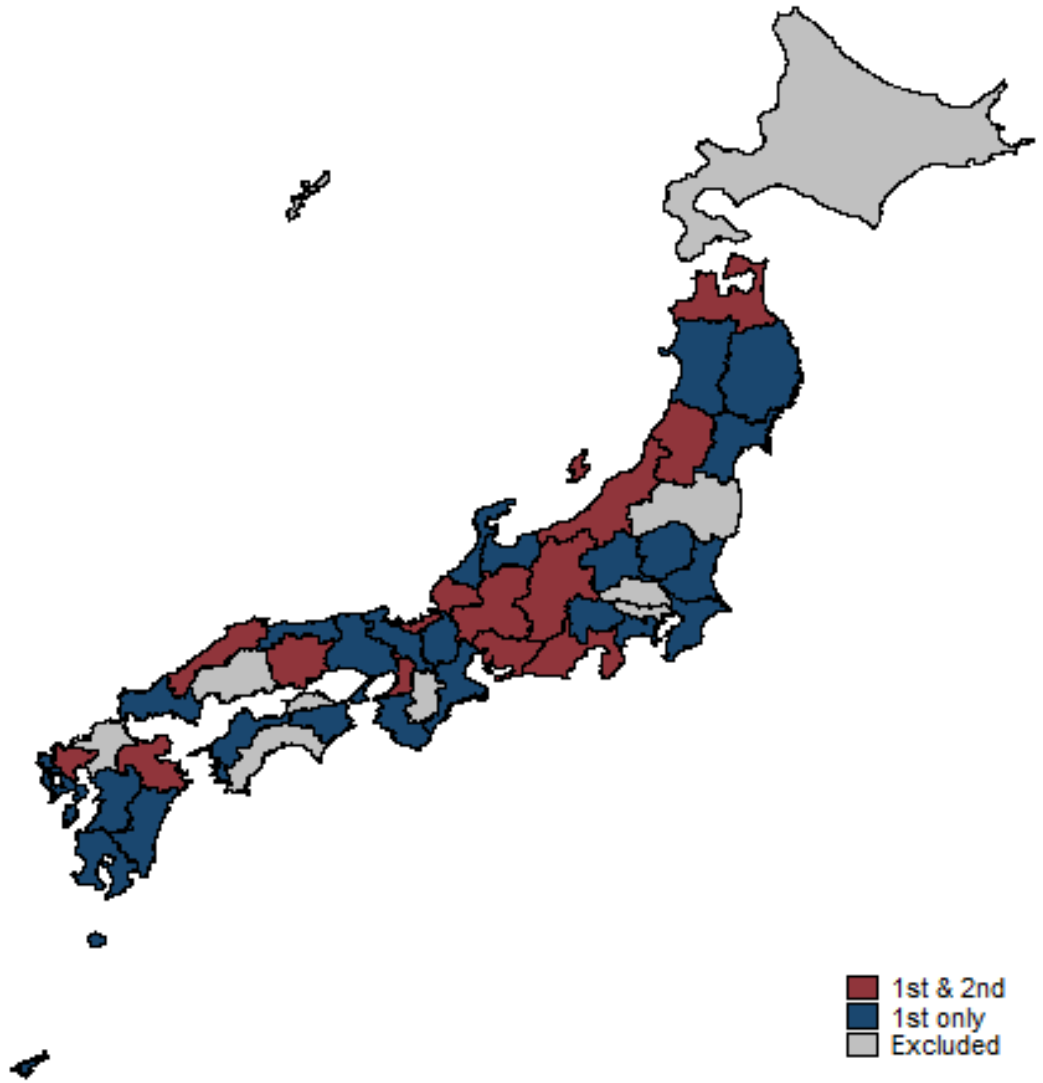


Figure: 1895

No. of secondary schools in 1897

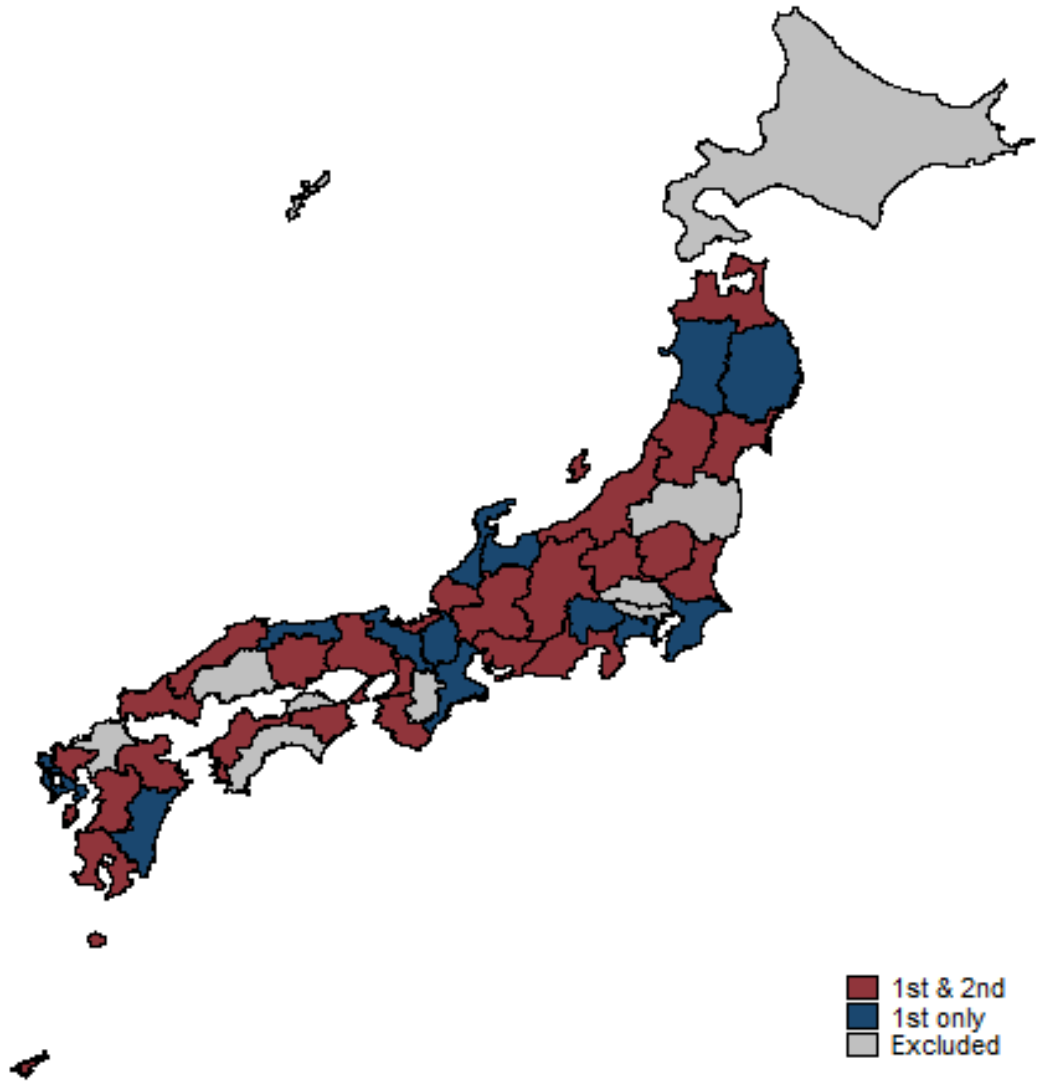


Figure: 1897

No. of secondary schools in 1899

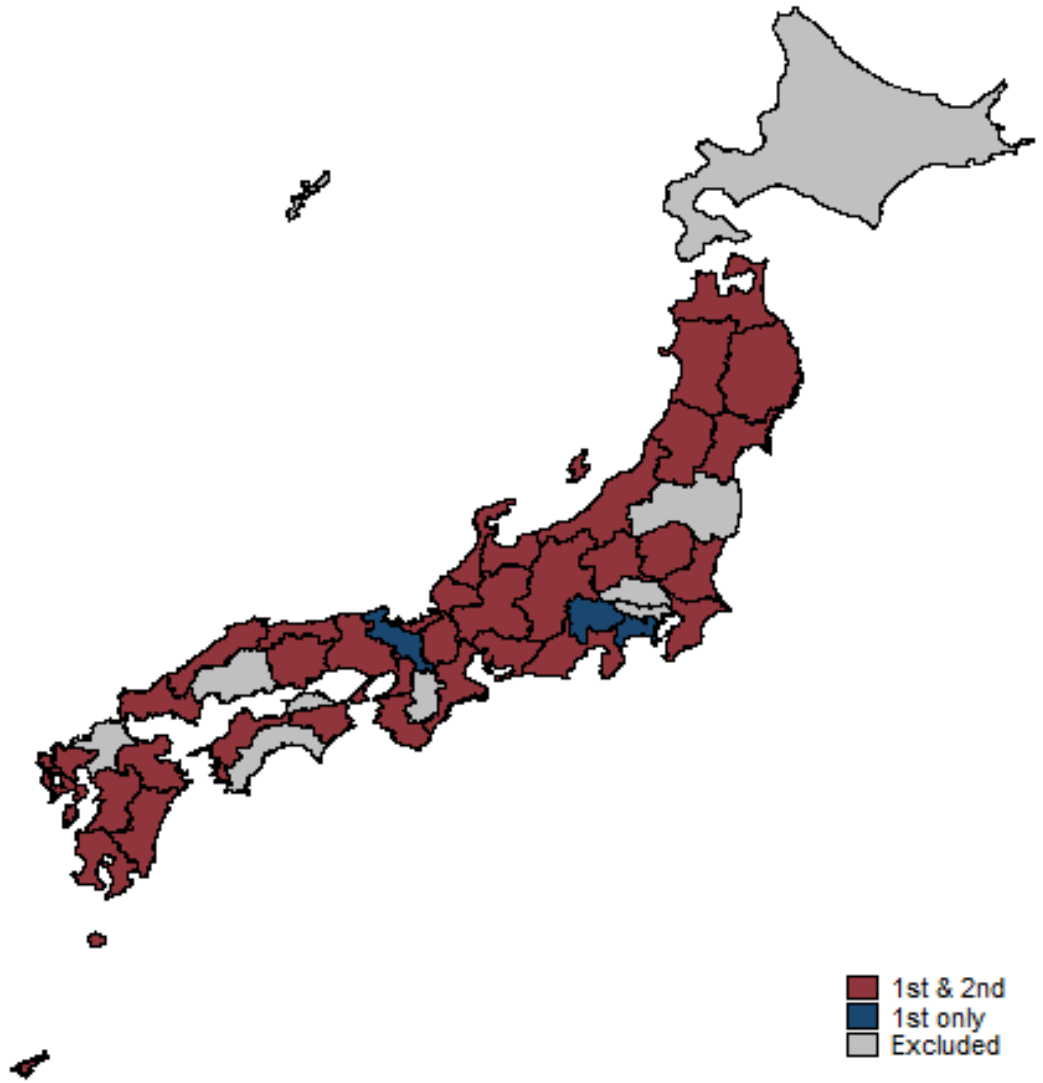


Figure: 1899

No. of secondary schools in 1901

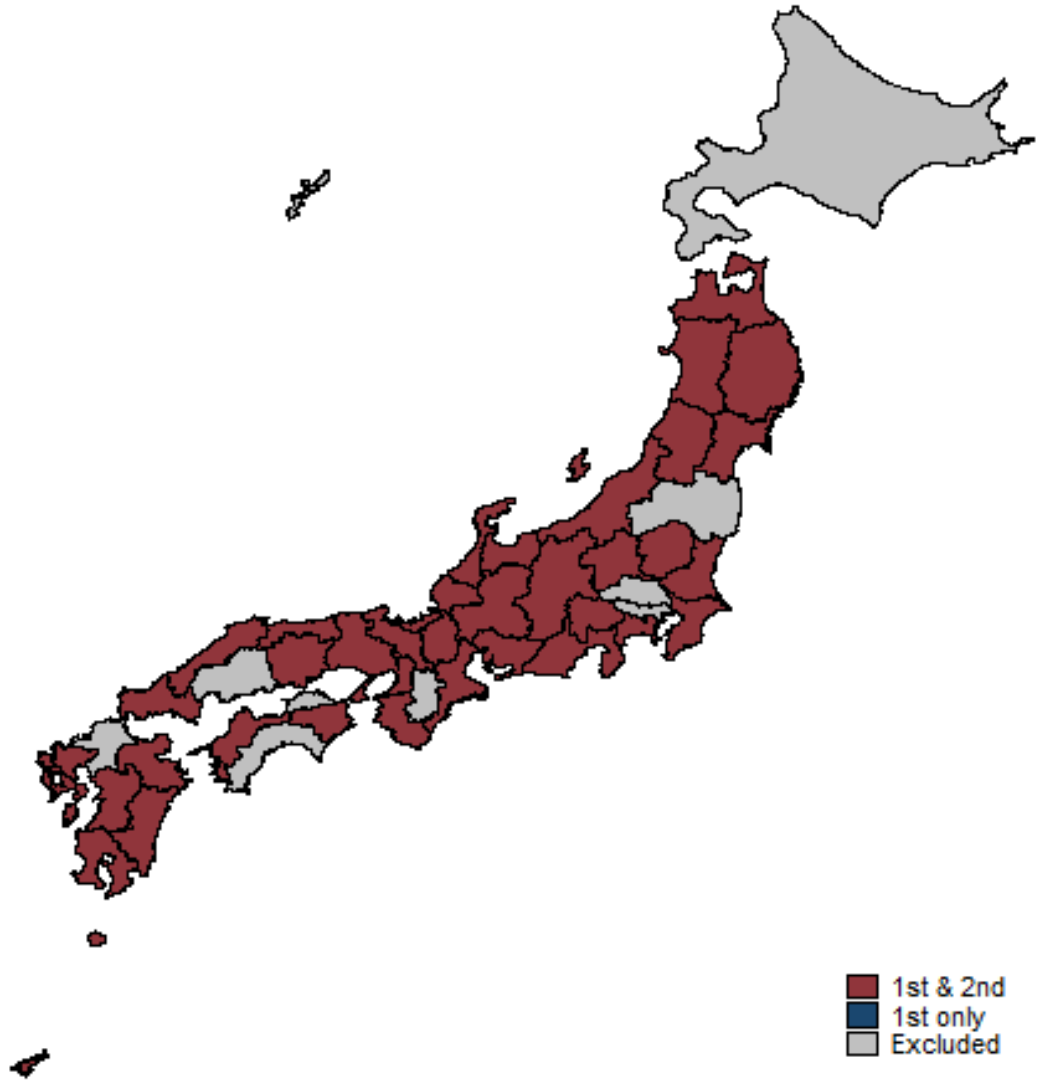
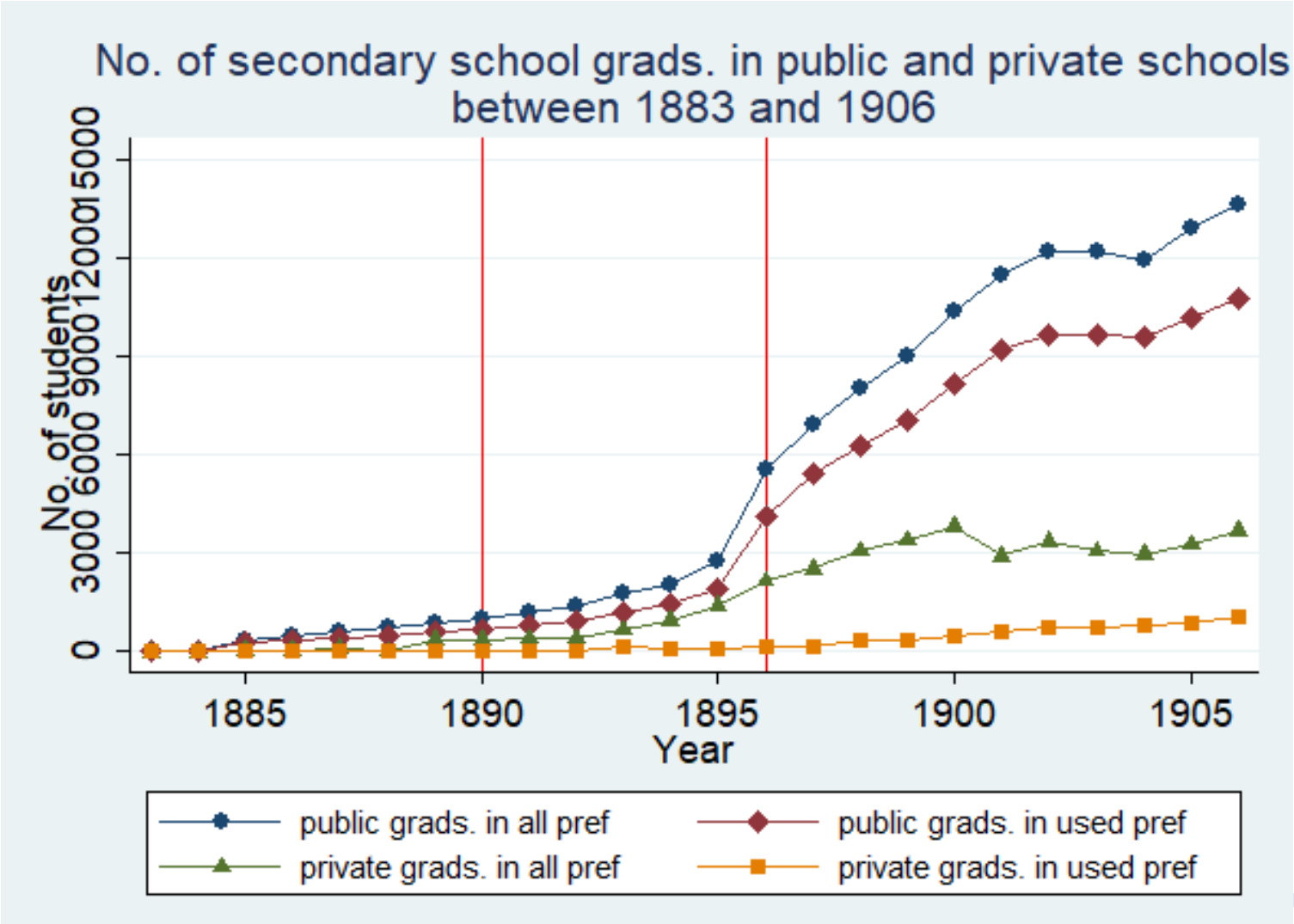


Figure: 1901

Relaxation of One School One Prefecture Rule in 1891

1891 Revision of the 1886 Secondary School Order

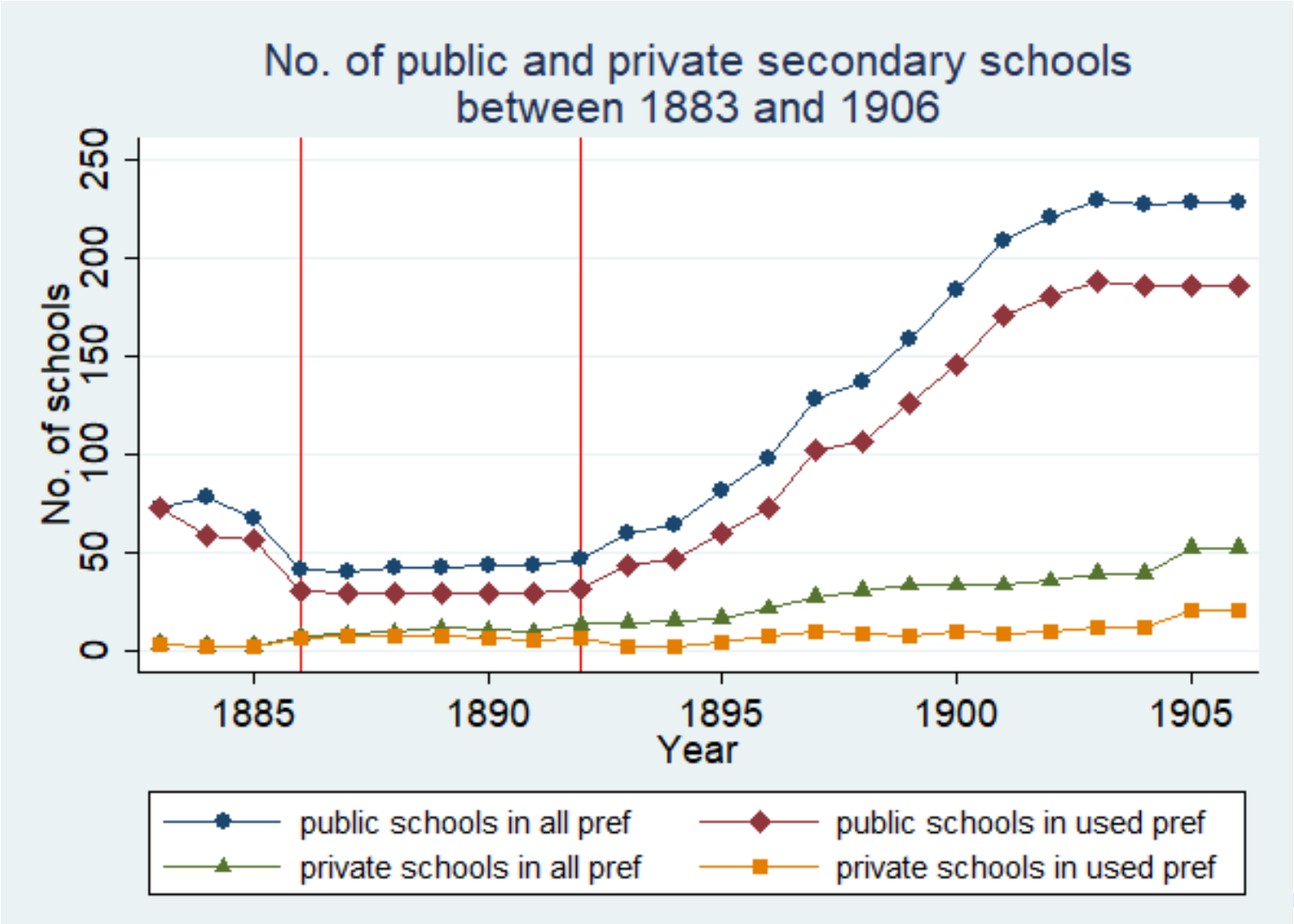
- Permitted each prefecture to establish more than one public secondary school.



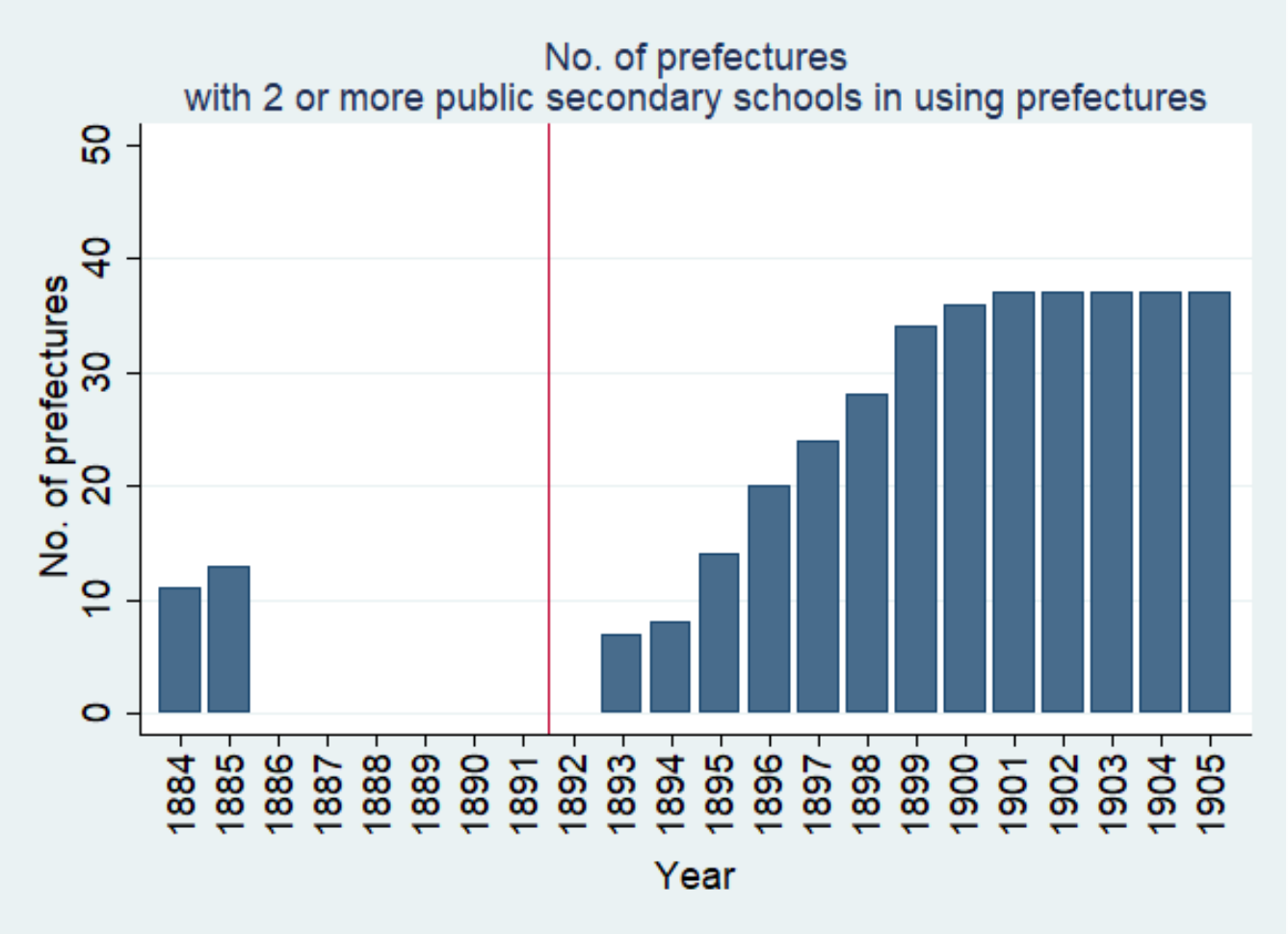
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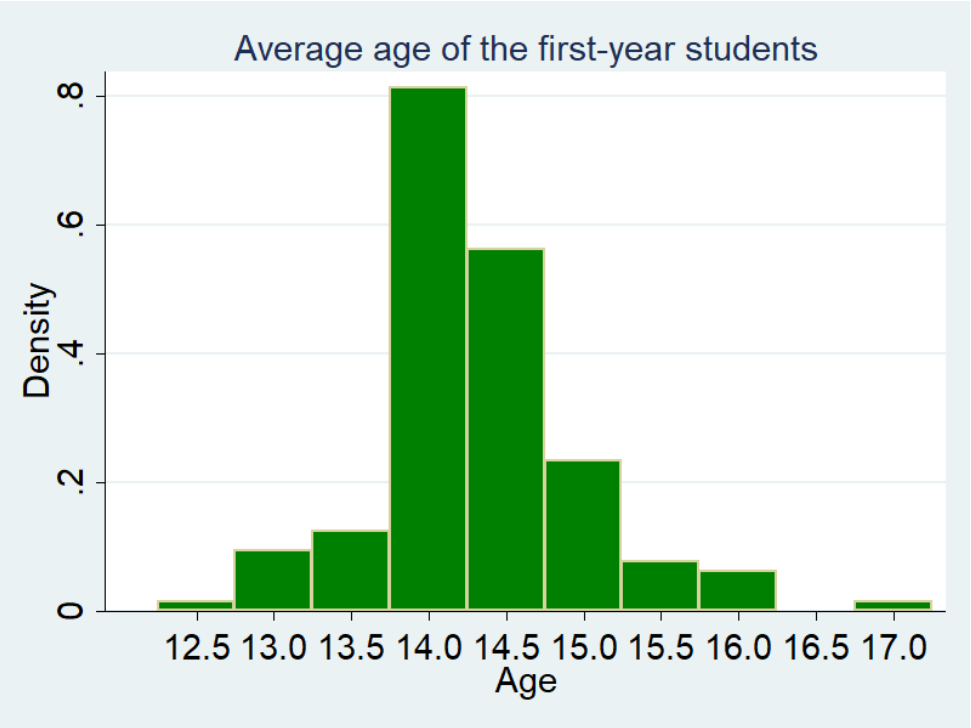
No. of prefectures with 2 or more schools



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.



Back

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%

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Stats among JPIR listed individuals

	Noble	Commoner	Total	Commoner Share
1903				
All Managers	278	888	1166	0.24
Professionals	267	412	679	0.39
Public Servants	150	117	267	0.56
All Elites	1666	1648	3314	0.50
1915				
All Managers	1961	8119	10080	0.19
Professionals	746	785	1531	0.49
Public Servants	253	202	455	0.56
All Elites	4126	9790	13916	0.30
1928				
All Managers	2825	16341	19166	0.15
Professionals	1031	1826	2857	0.36
Public Servants	344	684	1028	0.33
All Elites	5221	19993	25214	0.21
1934				
All Managers	2133	9864	11997	0.18
Professionals	1048	2564	3612	0.29
Public Servants	259	706	965	0.27
All Elites	4820	21365	26185	0.18
1939				
All Managers	3535	28123	31658	0.11
Professionals	1179	5618	6797	0.17
Public Servants	265	1809	2074	0.13
All Elites	6547	49233	55780	0.12

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

Back

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

Back

PIR

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

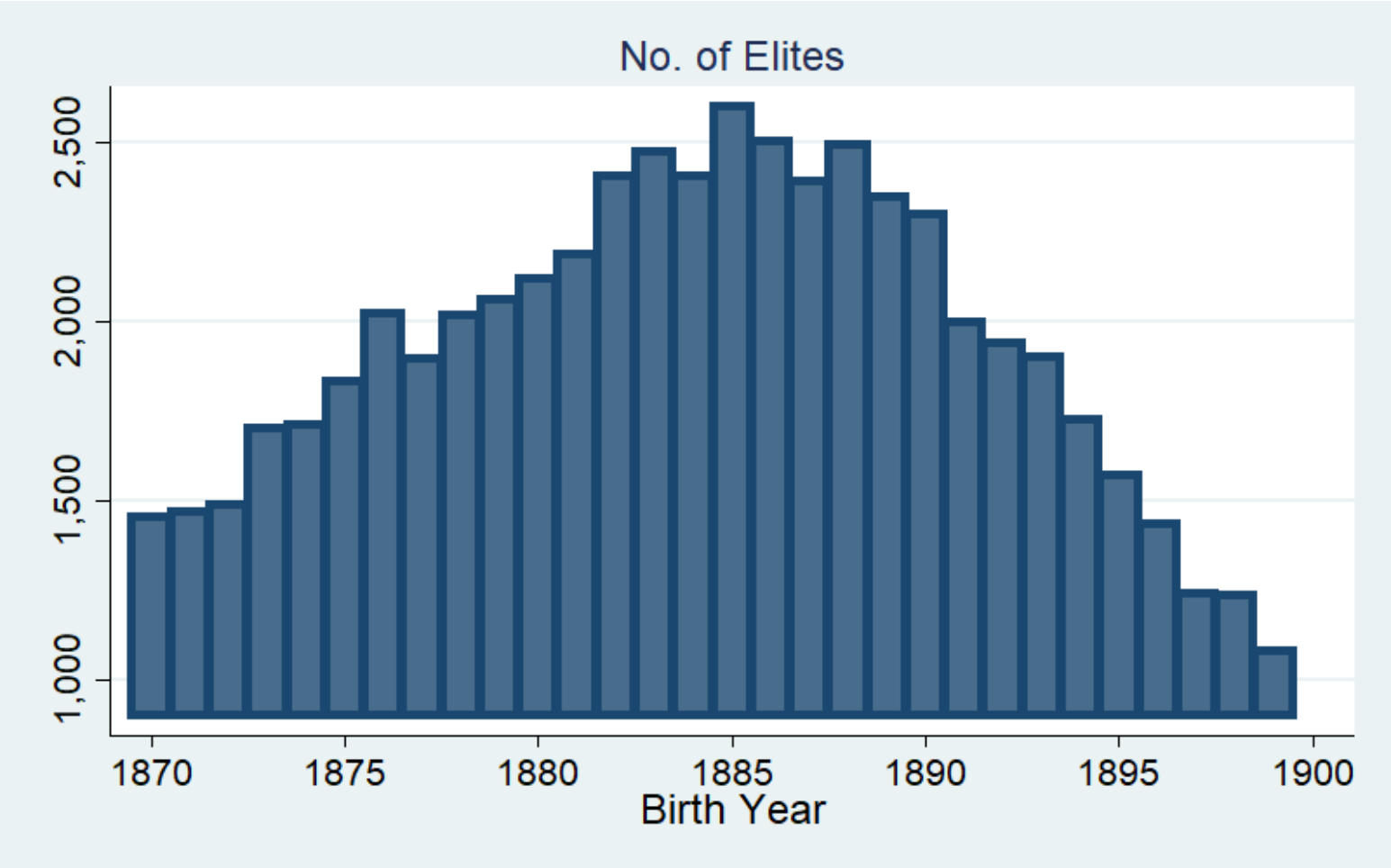
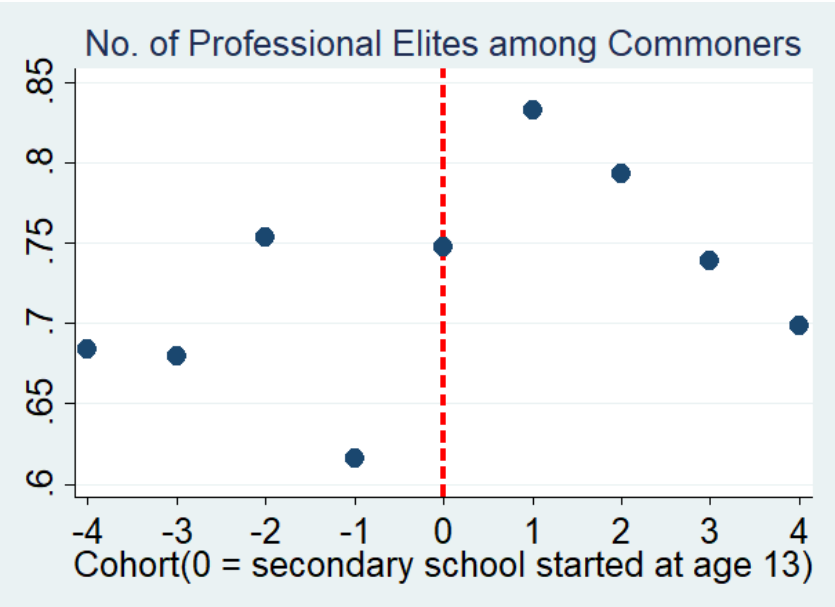


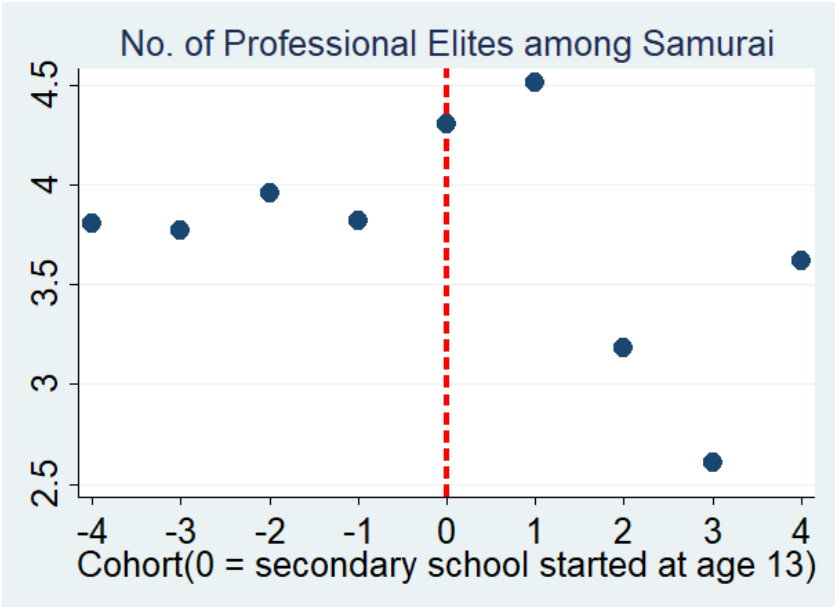
Figure: Cohorts used in PIR

No. of professional elites per 1000 persons

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



(a) Commoners

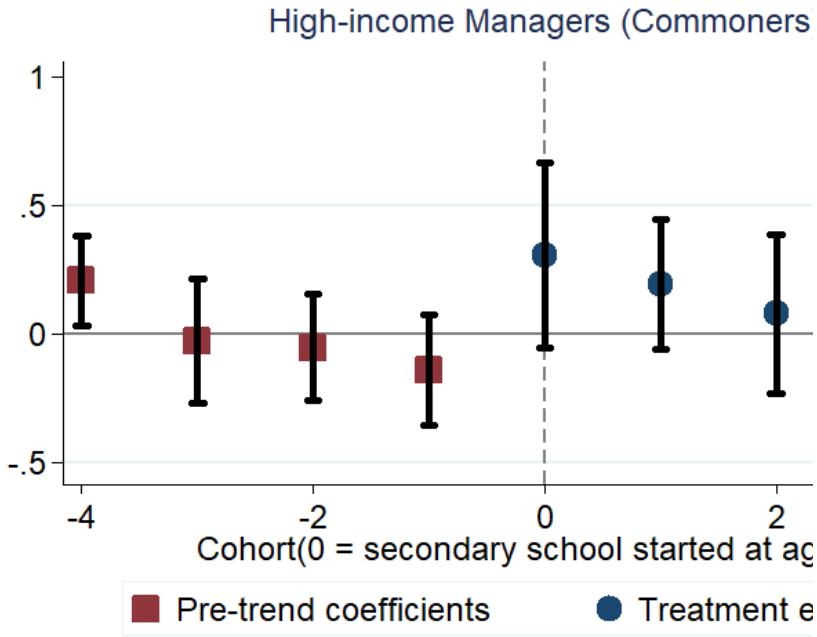


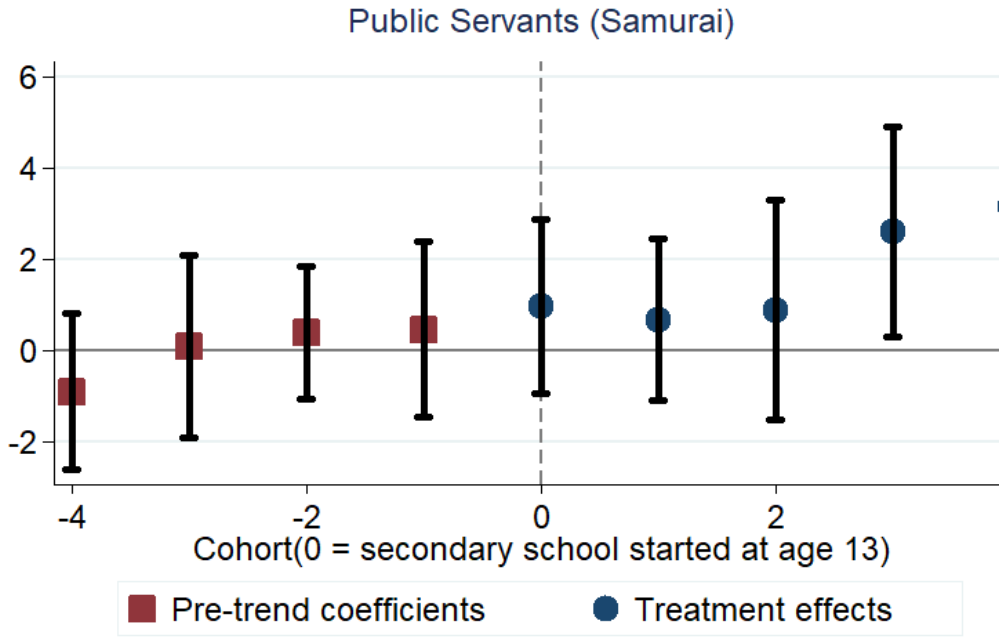
(b) Samurai

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



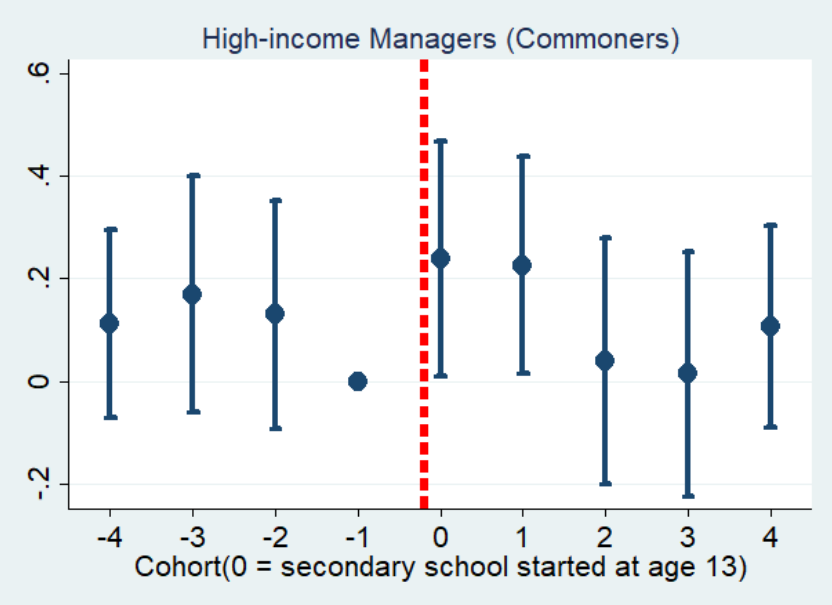


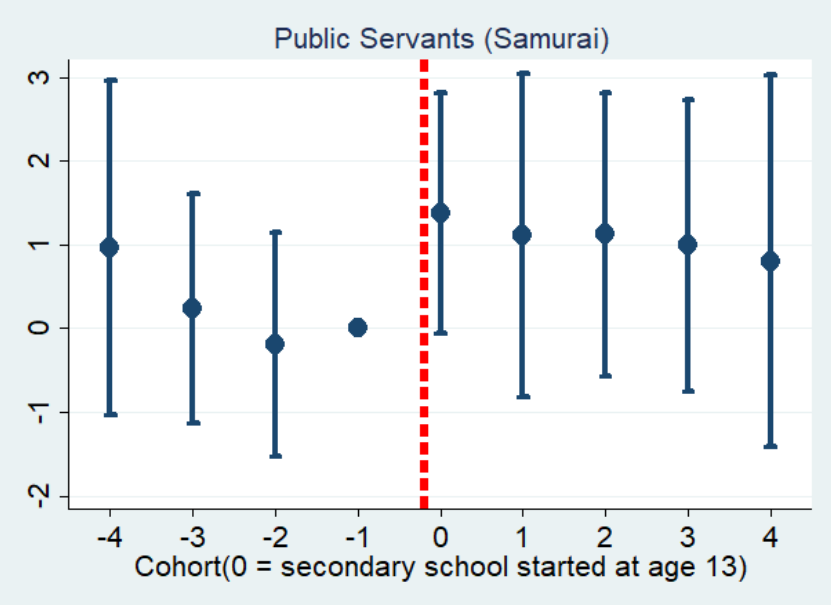
Note: Staggered DiD based on Callaway and Sant'Anna (2021) method (Stata csdid command). We use only not-yet-treated units as comparisons.

	χ^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

Event Study(birth year fe)

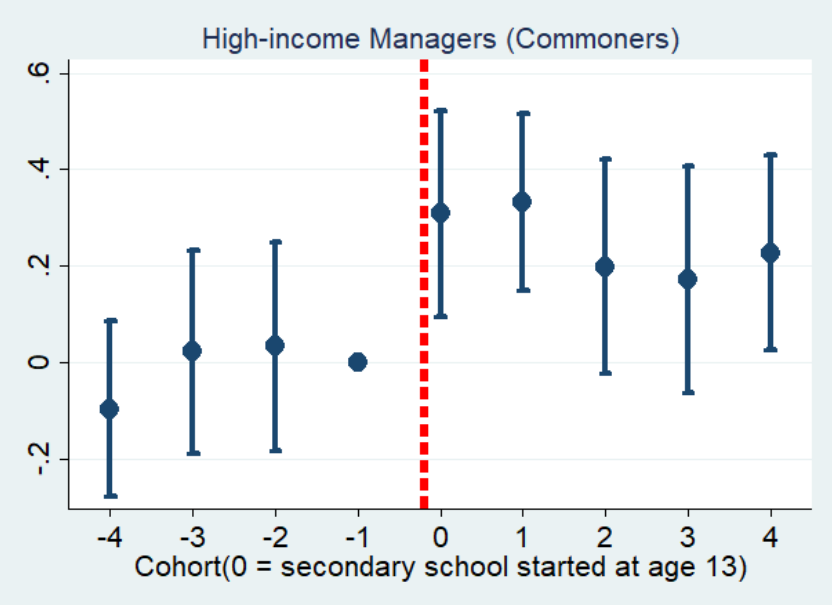


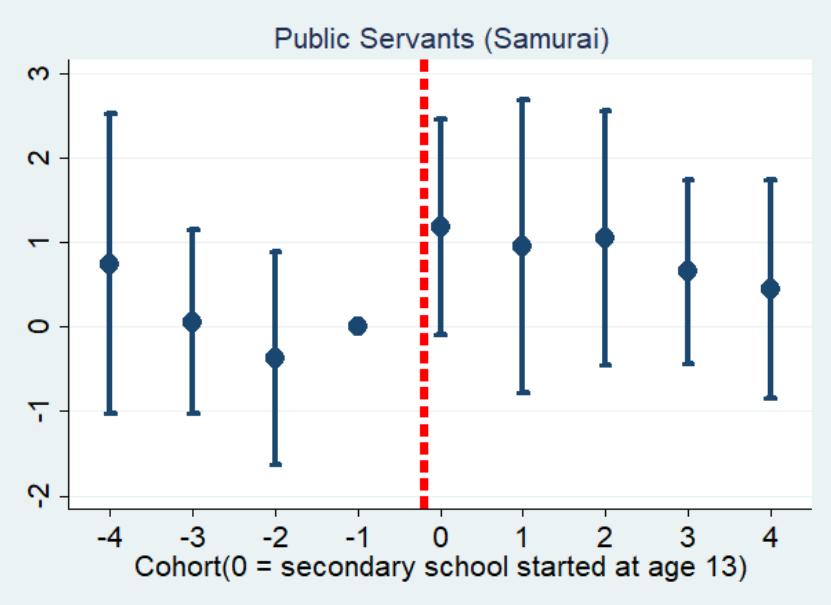


Note: Event study method. We include cohort fixed effect and prefecture fixed effect.

Back

Event Study (cohort linear trend controlled)





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

Back

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***	-0.16*	4.31***	0.07	4.75***	-0.06*
	(0.22)	(0.09)	(1.14)	(0.15)	(1.63)	(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

Back

Managers

	High-income managers				
	All	Modern Business Managers	Modern& Traditional Business Managers	Traditional Business Managers	Executive Managers
	(1)	(2)	(3)	(4)	(5)
Panel A: Samurai					
After	0.34	0.20	0.16	-0.02	0.84
	(0.87)	(0.76)	(0.30)	(0.10)	(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
Panel B: Commoners					
After	0.31***	0.19**	0.15**	-0.03	0.22**
	(0.10)	(0.08)	(0.06)	(0.03)	(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.

Back

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)
Panel A: Samurai								
After	1.68**	-0.06	1.48***	0.60*	0.55	0.53**	0.45	0.42**
	(0.63)	(0.10)	(0.54)	(0.30)	(0.56)	(0.22)	(0.53)	(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
Panel B: Commoners								
After	-0.05	0.02**	-0.05	-0.01	-0.00	0.00	-0.01	0.00
	(0.08)	(0.01)	(0.06)	(0.02)	(0.07)	(0.02)	(0.07)	(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)
Panel A: Samurai				
After	0.75	0.57	0.27	-0.11
	(1.11)	(0.88)	(0.54)	(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
Panel B: Commoners				
After	0.16*	0.06	0.09**	-0.03
	(0.08)	(0.06)	(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	Top 0.1%	Top 0.05%	Top 0.01%	Top 0.005%
	(1)	(2)	(3)	(4)	(5)
Panel A: Samurai					
After	0.29	-0.13	0.10	0.46	0.32
	(1.43)	(0.88)	(0.77)	(0.31)	(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
Panel B: Commoners					
After	0.31***	0.15*	0.12	-0.00	0.02
	(0.10)	(0.08)	(0.08)	(0.04)	(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	Top 0.1%	Top 0.05%	Top 0.01%	Top 0.005%
	(1)	(2)	(3)	(4)	(5)
Panel A: Samurai					
After	0.34	0.55	0.53	0.45	0.32
	(0.87)	(0.78)	(0.56)	(0.28)	(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
Panel B: Commoners					
After	0.31***	0.18**	0.11	-0.01	0.02
	(0.10)	(0.08)	(0.07)	(0.04)	(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)
Panel A: Samurai			
After	2.68***	-0.53	-0.02
	(0.95)	(0.68)	(0.64)
No. Obs.	333	333	333
Mean Dep. Before	4.30	2.41	2.25
Percent Effect(%)	62	-22	-1
Panel B: Commoners			
After	0.06	0.05	0.25***
	(0.09)	(0.06)	(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)
Panel A: Samurai				
After	1.77	0.07	1.75**	0.58
	(1.59)	(0.88)	(0.70)	(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
Panel B: Commoners				
After	0.30**	0.27**	-0.08	0.14*
	(0.13)	(0.10)	(0.07)	(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)
Panel A: Samurai				
After	1.91	0.09	1.73**	0.55
	(1.47)	(0.99)	(0.68)	(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
Panel B: Commoners				
After	0.22*	0.23**	-0.09	0.13
	(0.12)	(0.10)	(0.08)	(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)
Panel A: Samurai				
After	2.00	0.20	1.19	1.30
	(2.21)	(1.32)	(0.93)	(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
Panel B: Commoners				
After	0.37*	0.39**	-0.10	0.13
	(0.19)	(0.15)	(0.09)	(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)
Panel A: Samurai				
After	1.70	0.03	1.49**	0.65
	(1.46)	(0.84)	(0.58)	(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
Panel B: Commoners				
After	0.36***	0.31***	-0.05	0.16*
	(0.13)	(0.10)	(0.08)	(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)
Panel A: Samurai				
After	2.99*	0.98	1.92***	1.10
	(1.74)	(1.29)	(0.70)	(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
Panel B: Commoners				
After	0.36**	0.34**	-0.01	0.11
	(0.16)	(0.14)	(0.08)	(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)
Panel A: Samurai				
After	1.96	0.70	1.76**	0.31
	(1.50)	(0.93)	(0.67)	(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
Panel B: Commoners				
After	0.27*	0.26**	-0.07	0.12
	(0.15)	(0.11)	(0.08)	(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)
Panel A: Samurai				
After	3.33*	1.46	1.83**	0.93
	(1.71)	(1.14)	(0.69)	(1.15)
2 or more schools × After	-2.36	-2.19*	-0.30	-0.35
	(1.71)	(1.14)	(0.64)	(0.91)
No. Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
Panel B: Commoners				
After	0.24	0.31**	-0.08	0.04
	(0.16)	(0.13)	(0.08)	(0.11)
2 or more schools × After	0.22	0.00	0.06	0.22**
	(0.15)	(0.12)	(0.05)	(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)
Panel A: Samurai				
After	3.19*	0.85	2.38***	1.09
	(1.73)	(1.06)	(0.69)	(1.11)
Post × After	-2.32	-1.10	-1.53**	-0.73
	(1.71)	(1.21)	(0.58)	(0.92)
No. of Obs.	333	333	333	333
Mean Dep. Before	8.97	4.31	2.13	3.84
Panel B: Commoners				
After	0.52***	0.39***	-0.01	0.25**
	(0.16)	(0.12)	(0.08)	(0.09)
Post × After	-0.37***	-0.17	-0.09*	-0.20**
	(0.13)	(0.12)	(0.05)	(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)
Panel A: Samurai			
After	0.34	-0.22	0.56
	(0.87)	(0.16)	(0.84)
No. Obs.	333	333	333
Mean Dep. Before	4.31	0.39	3.93
Percent Effect(%)	8	-57	14
Panel B: Commoners			
After	0.31***	0.00	0.31***
	(0.10)	(0.02)	(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)
Panel A: Samurai				
After	-0.18	-1.09	1.41	-1.11
	(2.09)	(1.42)	(1.21)	(1.45)
$\frac{\text{No. of Teachers}}{\text{No. of Graduates}} \times$ After	7.01	3.94	1.01	5.93**
	(5.22)	(3.96)	(2.81)	(2.48)
No. Obs.	297	297	297	297
Mean Dep. Before	8.70	4.33	2.01	3.63
Panel B: Commoners				
After	0.35	0.37**	0.08	0.05
	(0.25)	(0.16)	(0.13)	(0.15)
$\frac{\text{No. of Teachers}}{\text{No. of Graduates}} \times$ After	0.07	-0.09	-0.38	0.28
	(0.55)	(0.35)	(0.24)	(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)
Panel A: Samurai				
Samurai Town × After	2.317	0.406	2.213**	0.365
	(1.931)	(1.054)	(0.850)	(1.217)
Merchant Town × After	1.972	0.291	1.274**	1.052
	(1.578)	(1.040)	(0.538)	(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
Panel B: Commoners				
Samurai Town × After	0.413**	0.299**	-0.047	0.241**
	(0.156)	(0.134)	(0.073)	(0.102)
Merchant Town × After	0.312**	0.319***	-0.052	0.092
	(0.141)	(0.104)	(0.083)	(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

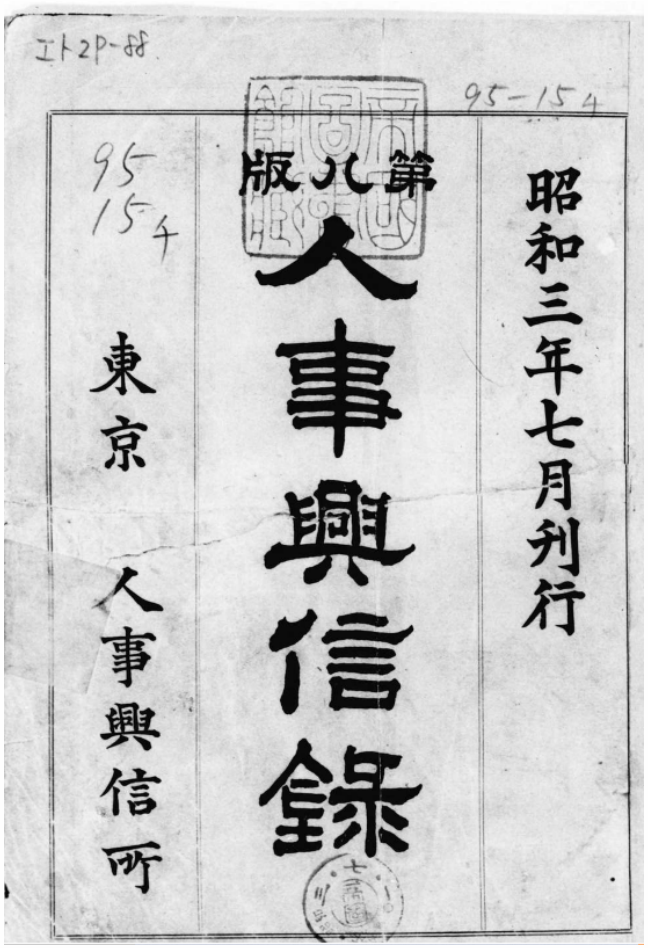
Note: We control for linear cohort trend, and prefecture fixed effect. back

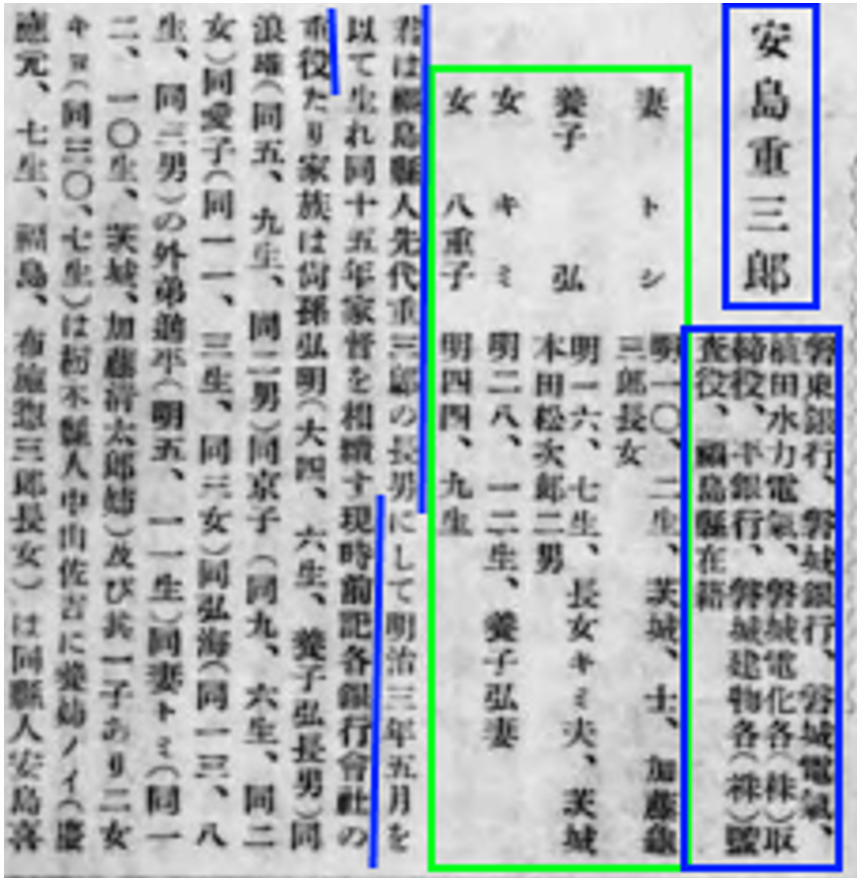
Classmates network with individuals who have elite business fathers

- 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	Modern Business Managers	Modern & Traditional Business Managers	Traditional Business Managers	Executives
	(1)	(2)	(3)	(4)	(5)
Panel A: Commoners					
After	0.23	0.28**	0.01	-0.05	0.19*
	(0.15)	(0.12)	(0.07)	(0.03)	(0.11)
No. of Business Elites × After	0.16	-0.14	0.29**	0.01	0.07
	(0.26)	(0.20)	(0.13)	(0.06)	(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

弊東銀行、弊城銀行、弊城電氣、
前田水力電氣、弊城電化各(株)取
締役、本銀行、弊城建物各(株)監
査役、福島縣在籍

妻　トシ　明一〇、二生、茨城、士、加藤徹三郎長女
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

君は福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續す現時前記各銀行會社の重役たり家族は尚孫弘明(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(同一三、八生、同二男)の外弟鈴平(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)は前本縣人中山佐吉に養姉ノイ(慶應元、七生、福島、布施勘三郎長女)は同縣人安島喜

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