

THE DISTANCE BETWEEN THE APPOINTMENT OF DIRECTORS IN JAPANESE JOINT-STOCK COMPANIES IN THE KANTO REGION DURING THE EARLY INDUSTRIAL PERIOD IN JAPAN

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Abstract

This study investigates the industrial concentration trend in Japan from 1897 to 1907, focusing on the geographical distance between the residences of directors and auditors and the locations of their appointments in joint-stock companies that relied increasingly on professional management. Unlike general and limited partnerships characterized by unlimited liability partners, joint-stock companies introduced limited liability to enable large-scale operations, necessitating highly specialized managerial expertise. The expansion of transportation networks allowed, and indeed encouraged, the recruitment of such specialists from distant regions. This research aims to elucidate the spatial extent from which managerial elites were drawn, thereby illuminating patterns of industrial agglomeration. Furthermore, this study addresses an underexplored aspect in the literature on industrial agglomeration. Prior research, such as Fujita, Krugman, and Venables (1999), has predominantly emphasized the phenomenon of clustering without rigorously defining its spatial boundaries. These approaches often center on cost factors—transportation, wages, transactions—which adequately explain the flow of goods and capital but inadequately capture the movement of human agents who operate and sustain industrial processes. Considering the geographical mobility of these individuals offers a more nuanced understanding of agglomeration dynamics.

Key Words: leadership, Succession, Strategy, Japan, Enterprise, Culture, Psychology, Rural, Business Development

JEL Classification: L60, L63, M14

I Literature Review

1. The Distance Matter

Previous studies on industrial agglomeration have focused on industrial clusters, yet they have not addressed the issue of over what spatial range industrial agglomeration should be considered (for example, Fujita, Krugman, and Venables 1999). This is because they are based on assumptions regarding costs such as transportation costs, wages, and transaction costs.

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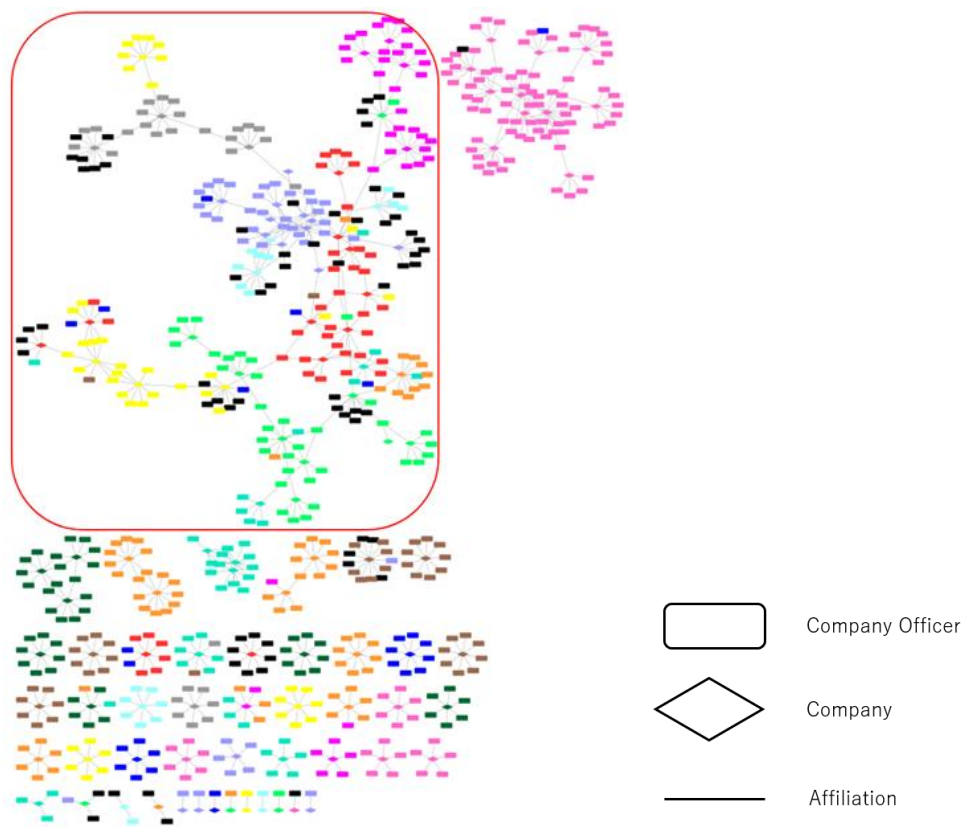
An extension of this idea is seen in studies such as Ivković and Weisbenner (2005), Massa and Simonov (2006), and Quan and Zhang (2021), which clarify the relationship between investors and distance. Kang and Kim (2008) examined geographical factors and corporate investment policies, while Jensen et al. (2015) investigated distance and audit quality. Knyazeva and Knyazeva (2012) focused on the cost of financing, and Kozu (2013) attempted to elucidate urbanization and agglomeration effects through spatial distance.

However, while this allows us to understand the movement of goods and money, I believe that knowing the movements of the people who manage them would bring us closer to reality.

2. *The Network of Dually Employed Executives*

Regarding the network of concurrent board memberships (dually employed executives) during the period under study, Suzuki ed. (2009) and Minami (2017) revealed its existence and showed that these concurrent relationships contributed not only to national projects but also to the development of local industries.

Figure 1: Network of corporate board members with concurrent positions in companies in Gunma Prefecture (1907) (created by the author)



For example, this diagram depicts the network of company directors holding multiple positions in Gunma Prefecture in 1907. The locations of the companies and the residences of the directors have been color-coded by city or county. From this diagram, it can be observed that directors can be divided into those who serve in only a specific company and those who hold multiple positions. Directors holding multiple positions may serve from long distances or may form networks solely within neighboring areas. Although this paper does not discuss it, it was found that there is also a regional characteristic in how these connections are formed. Gulati (1998) states that networking involves (1) the formation of partnerships, (2) the choice of governance structures, (3) the dynamic evolution of partnerships, (4) the outcomes of partnerships, and (5) the impact on the performance of companies participating in partnerships, but it may be necessary to incorporate regional aspects into this framework.

3. Inter-circles

What can be observed from Figure 1 is that, focusing on the largest connected component outlined in red, a specific group is formed. At that time in Japan, similar to Useem (1986)'s study, an interlocking network centered around financial institutions was formed; however, it was not composed of people from specific schools as Useem described. This is because the individuals serving as active executives at the time were mostly around 50 years old, and schools, except in some domains, were not formalized; education was provided through privately run *terakoya* schools or home tutoring. Therefore, it is more likely that inner circles were formed based on local ties or blood relations at that time.

II. Survey Target

1 Target Age Group

The period surveyed in this study coincides with the enactment of Japan's Commercial Code in 1890, which granted joint-stock companies full legal corporate status. Limited liability enterprises, modeled on British and French precedents, had been introduced as early as 1867; however, these earlier forms functioned as voluntary associations without legal personality.

Prior to this period, property was held individually by families, and no system of joint management existed. Even capital-intensive enterprises were financed and operated by household heads acting as individual investors. A rudimentary form of collective financing, known as *Tanomoshiko*, targeted approximately 500 farming households and functioned as a mutual aid mechanism comparable to life insurance (Najita, 2009). In practice, hereditary village leaders administered the fund, allocating loans by lottery to ensure fairness. However, *Tanomoshiko* was confined to small-scale, personal consumption lending and was ill-suited for large-scale investment. For a Japan

whose export industries were, at the time, largely limited to textiles, this institution was inadequate to support significant industrial expansion.

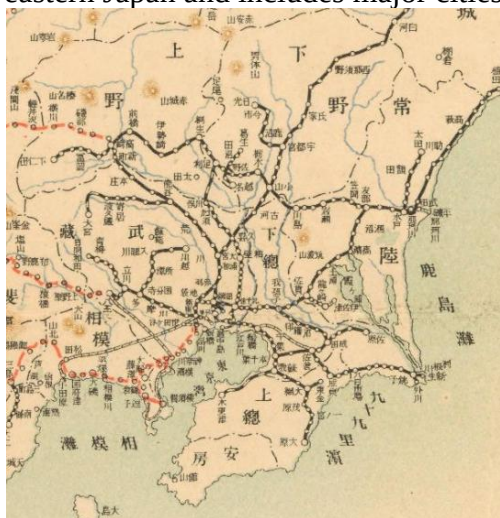
The mass dismissal of the samurai class in 1876 resulted in the issuance of government bonds as severance pay, a policy that contributed to inflation. In an effort to curb this inflation and stimulate industrial development, the government established National Banks across various regions—an initiative widely regarded as the origin of joint-stock enterprise in Japan.

From the 1880s, railway construction expanded rapidly into rural areas, while traditional waterborne transport declined. Everyday travel remained predominantly on foot; horses were largely reserved for agricultural use, and horse-drawn transport was accessible primarily to the relatively affluent.

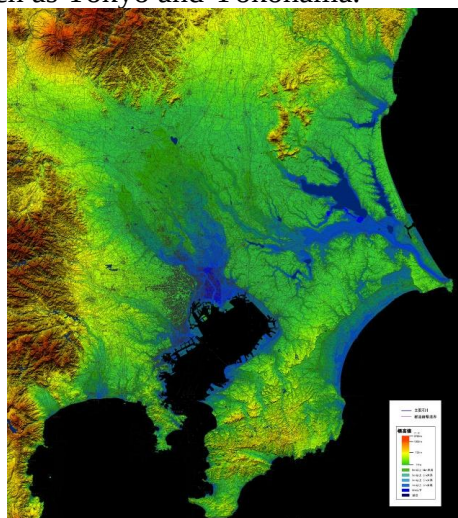
The textile industry continued to dominate domestic production; however, the opening of Yokohama Port in 1859 spurred a decisive shift toward export-oriented manufacturing. This period also marked the transition from household-centered handicrafts to factory-based production, increasingly powered by steam engines and, later, electricity.

2 Area

The area surveyed is the Kanto region. It is located on the Pacific coast of eastern Japan and includes major cities such as Tokyo and Yokohama.



Map 1: Railway lines in 1904
Railway Bureau, 'National
Railway Map,'



Map 2: Elevation differences in the
Kanto region Geographical Survey
Institute

The northern inland area of the region encompasses Gunma and Tochigi Prefectures, while the coastal area comprises Ibaraki Prefecture. Gunma is traversed by the Tone River, which originates in the northern part of the region and is largely responsible for shaping the plains of the Kantō area. Historically,

the Tone River flowed directly into Tokyo Bay; however, its course was redirected at the boundary between Ibaraki and Chiba Prefectures as part of large-scale flood control initiatives. In the northwestern part of Tochigi lies the Ashio Copper Mine, a historically significant site of industrial production. The Watarase and Kinugawa Rivers, both flowing through Tochigi, merge with the Tone River and contribute to the formation of the southern plains. Ibaraki Prefecture features extensive plains in the south and mountainous terrain in the north, the latter historically serving as a source of coal and iron ore. In terms of traditional industries, Gunma was a major producer of silk products, Tochigi specialized in both silk and hemp production, and Ibaraki cultivated tea. These goods were significant export commodities during the period in question.

Saitama, which is classified within the South Kanto region, exhibits a diverse topography with mountainous areas located to the west and expansive plains to the east, a formation attributed to the influence of the Tone River and its tributary, the Arakawa River. Tokyo displays a comparable geographical profile; however, since the seventeenth century, it has served as the capital of Japan and functioned as the central node of the sankin-kōtai system, wherein feudal lords and their vassals from provincial domains were required to reside periodically within the capital. Following the Meiji Restoration in 1867, the abolition of feudal domains and the subsequent establishment of prefectures in 1871, together with the implementation of the Rank and Allowance System in 1876, resulted in the formal dissolution of the samurai class. In order to prevent insurrection, former feudal lords were effectively confined within the capital, and beginning in 1872, vacant properties were settled by members of the aristocracy from Kyoto. Consequently, the environs of Edo Castle in Tokyo became characterized by an unusually high concentration of high-income individuals.

Chiba Prefecture is situated on a peninsula characterized by mountain ranges that extend along its coastline, resulting in limited flat terrain beyond the coastal areas. Consequently, the northern part of the prefecture has developed a prominent soybean cultivation sector, which has progressively evolved into a soy sauce industry. Furthermore, Chiba is internationally recognized for its abundant sardine fisheries; processed sardines were historically transported via river networks to rural districts across various prefectures, where they served as a valuable fertiliser.

Kanagawa Prefecture functioned primarily as a transit corridor between Tokyo and Kyoto until the opening of Yokohama Port in 1859. At that time, Yokohama was a modest fishing village. Although Kanagawa's Pacific-facing location endowed it with several ports, these too largely operated as transit points rather than centers of commercial activity.

III Research and Findings

1 Data Source

As previously noted, the corporate system in Japan was formally established through legislative enactment in 1895. Prior to the promulgation of this legal framework, corporate entities were not subject to statutory regulation, and shares could be freely exchanged as if they represented equity in a formally incorporated company, a practice consistent with those observed in other nations at the time. This regulatory vacuum resulted in a marked increase in fraudulent activities. In response to the need for verifying the legitimacy of corporate entities, private investigative agencies compiled and disseminated the Directory of Directors of Companies in Japan (hereinafter referred to as the “Directory”), which was issued from 1893 to 1939.

This publication is confined to relatively large-scale enterprises, and given that data collection was conducted via postal surveys, it did not yield a complete set of responses. Furthermore, certain small-scale lending institutions catering primarily to individuals were partially excluded from coverage. Although the survey initiative commenced in 1893, the volume of responses during the initial two years remained limited. Moreover, following the transfer of the project to a different company in its third year, only the data collected from 1895 onwards was utilized for analysis.

2 Address identification

The addresses of companies and their respective directors were verified utilizing historical administrative district datasets¹, cross-referenced against the place names documented in the records. The ‘List of Officers’ contained a considerable number of typographical errors and omissions, resulting in certain addresses being unidentifiable as originally recorded. In such instances, addresses exhibiting a Levenshtein distance of one were regarded as corresponding to the same municipality, or alternatively, validation was conducted by referencing the preceding or succeeding year. As the ‘List of Officers’ does not provide street numbers (see Appendix A), address identification was undertaken according to the following hierarchy of priority.

1) Location of the former town hall

In most cases, former village town halls have been repurposed as community centres or public libraries. Accordingly, in instances where no branch office of the town hall exists, the location of the community centre or public library has been employed as a proxy.

2) Post office

Post offices were privatized in 2001; however, at the time under consideration, they operated as public institutions, similar to those in other

¹ Geoshape Repository – Geospatial Data Sharing Site | ROIS-DS Humanities Open Data Joint Utilisation Centre

<https://geoshape.ex.nii.ac.jp/>

countries. For reasons of accessibility, they were generally situated near the centre of the settlement. Furthermore, since post offices were frequently managed as secondary enterprises by local landowners or other prominent individuals, their placement near the settlement centre can be reasonably assumed.

3) Public elementary and junior high schools

The siting of public elementary and junior high schools was based on the premise that pupils would commute on foot. Consequently, such institutions were not established at significant distances from residential areas, but rather in proximity to the settlements they served.

4) Centre of the polygon

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3 Distance measurement

Based on the company and executive addresses outlined above, distances were measured using Google Maps with the walking route setting. In mountainous areas, straight-line measurements are problematic, as road networks do not permit direct travel. Although there are some discrepancies between historical and present-day road systems, the embankments (azemichi) constructed to divide rice fields along elevation differences historically served, and continue to serve, a functional role equivalent to roads. Accordingly, distance measurements were conducted under the assumption that contemporary routes do not differ substantially from those of the past.

With regard to river crossings, most locations where ferries had previously operated are now equipped with bridges. Therefore, the use of present-day maps was judged generally reliable for estimating historical accessibility.

4 Normalisation

Normalisation was applied to the above measurements in order to enable valid comparisons across regions. First, the distances were arranged in ascending order, with the longest distance designated as a value of 1 and all other distances converted to proportional ratios relative to this benchmark. Subsequently, the ranked distances were divided by the total number of individuals in the sample, thereby yielding normalised values for comparative analysis.

IV Results

1. Each prefecture, 1897–1907

It was initially hypothesized that the shape of the distribution curve would change substantially with the development of railway networks. However, the overall form remained largely stable and could be approximated by a fourth-order polynomial function. Although minor regional variations were observed, the majority of cases fell within a 2 km radius, and most were located within a 20 km radius—corresponding to a distance generally considered feasible for a single-day commuting journey on foot.

Tokyo displays an irregular pattern around the 0.95 rank in both 1902 and 1907. This anomaly can be attributed to the involvement of investors from the Kansai region, including Osaka. By contrast, appointments to more distant locations were often linked to descendants of former daimyo families or affluent merchants from Kyushu, many of whom concurrently served as board members.

As illustrated in Graphs 1–7, the majority of cases are concentrated within relatively short distances. Table 1 further indicates that the statistical mode consistently corresponds to the same village. With regard to the median, it also falls within the same village for most prefectures. However, Tokyo and Kanagawa demonstrate a distinctive pattern in which the median distance extends beyond that of adjacent municipalities, reflecting their unique regional dynamics.

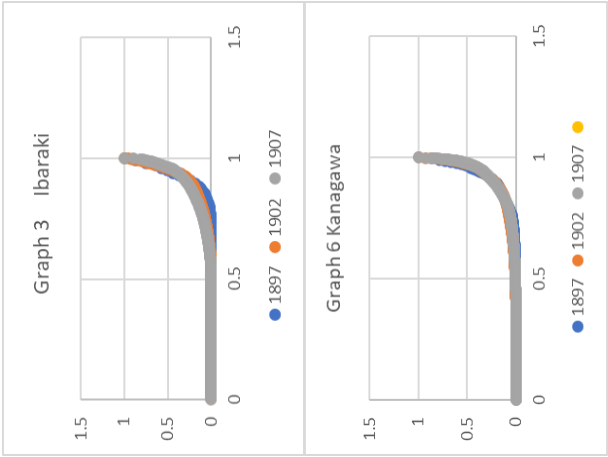
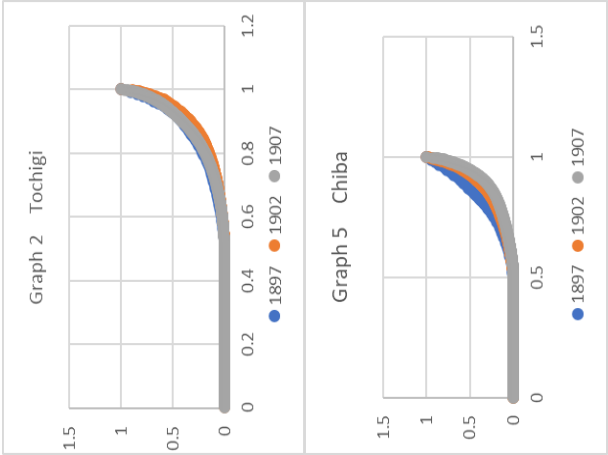
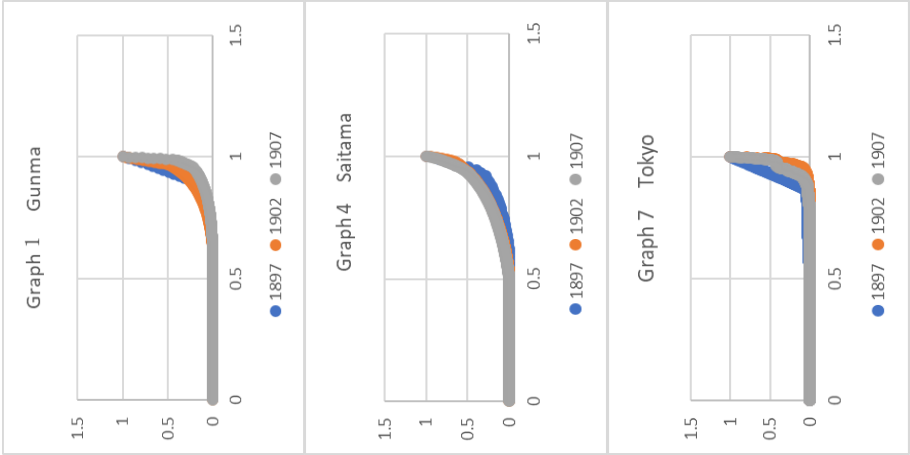


Table 1: Statistics for Northern Kanto

	Gunma			Tochigi			Ibaraki		
	1897	1902	1907	1897	1902	1907	1897	1902	1907
Average	14.42	6.66	30.55	13.28	8.5	8.75	10.92	9.62	8.38
Standard error	2.91	0.84	15.56	2.20	1.17	0.71	2.85	1.19	1.28
Median	0.50	0	0	0	0.26	0.60	0	0	0
Mode	0	0	0	0	0	0	0	0	0
Standard deviation	32.92	18.99	407.48	25.65	25.8	19.16	27.89	25.48	29.54
Variance	1083.87	360.72	6419.31	657.79	665.58	366.94	777.45	649.05	872.74
Kurtosis	5.30	20.68	68.19	11.59	158.93	42.57	8.29	19.2	140.32
Skewness	2.58	4.49	8.17	3.14	10.57	5.20	2.94	4.05	10.41
Number of data points	128	515	685	136	487	721	96	462	530
Maximum value	131	128	744	163	436	245	128	222	468
Minimum value	0	0	0	0	0	0	0	0	0
Confidence level (95.0%)	5.76	1.64	6.01	4.35	2.30	1.40	5.65	2.33	2.52

Table 2: Statistics for Southern Kanto

	Saitama			Chiba			Tokyo			Kanagawa		
	1897	1902	1907	1897	1902	1907	1897	1902	1907	1897	1902	1907
Average	8.71	4.59	5.69	12.97	8.57	8.38	39.57	39.41	44.84	28.54	10.72	14.19
Standard error	2.37	0.5	0.46	1.82	0.65	0.94	3.58	2.7	2.49	5.92	1.51	1.9
Median	0	0	1	3.3	0.65	0	3.5	3.6	4	1	1	0.9
Mode	0	0	0	0	0	0	0	0	0	0	0	0
Standard deviation	22.65	11.57	11.67	17.58	16.98	23.49	129.73	139.13	140.75	86.63	39.77	59.2
Variance	513.08	133.94	136.15	308.95	288.46	551.63	16830.92	19356.93	19810.06	7504.2	1581.77	3504.45
Kurtosis	12.48	43.51	21.29	0.3	14.46	145.87	25.32	39.67	21.05	42.21	81.81	152.78
Skewness	3.58	6.01	4.041	1.23	3.44	9.67	4.63	5.78	4.34	5.72	8.19	10.82
Number of data points	91	543	637	93	687	622	1310	2663	3198	214	694	971
Maximum value	118	118	108	60	133	413	1216	1351	1205	844	508	1089
Minimum value	0	0	0	0	0	0	0	0	0	0	0	0
Confidence level (95.0%)	4.72	0.98	0.91	3.62	1.27	1.85	7.03	5.29	4.88	11.67	2.96	3.73

The individual with the longest distance may vary, as such appointments were sometimes made for purposes of rescue or takeover, followed by relatively short terms in office. As illustrated in Map 1, Chiba and Ibaraki were not connected in 1897, but had established a connection by 1907. This development may account for the observed increase in the number of long-distance appointments. However, the median and mode values do not necessarily reflect a corresponding rise in long-distance placements.

Next, examining Graphs 1–7, it is evident that their overall shapes display strong similarities. When approximation curves are fitted to these data, the results are presented in Table 3 below.

Table 3: Approximate equations for each year

Gunma	1897	$y = 2.9896 \times 10^{\{-5\}} \times e^{\{10.5923x\}}$
		$R^2 = 0.95$
	1902	$y = 9.3591 \times 10^{\{-5\}} \times e^{\{-63.7652x\}}$
		$R^2 = 0.94$
	1907	$y = 2.4364 \times 10^{\{-5\}} \times e^{\{-15.7077x\}}$
		$R^2 = 0.90$
Tochigi	1897	$y = 1.6272 \times 10^{\{-5\}} \times e^{\{10.8094x\}}$
		$R^2 = 0.97$
	1902	$y = 8.9728 \times 10^{\{-24\}} \times e^{\{52.4158x\}}$
		$R^2 = 0.71$
	1907	$y = 1.6415 \times 10^{\{-7\}} \times e^{\{14.7926x\}}$
		$R^2 = 0.86$
Ibaraki	1897	$y = 3.8171 \times 10^{\{-6\}} \times e^{\{12.5514x\}}$
		$R^2 = 0.96$
	1902	$y = 5.4546 \times 10^{\{-9\}} \times e^{\{18.7111x\}}$
		$R^2 = 0.97$
	1907	$y = 9.0546 \times 10^{\{-58\}} \times e^{\{131.1778x\}}$
		$R^2 = 0.78$
Saitama	1897	$y = 1.5773 \times 10^{\{-7\}} \times e^{\{15.7409x\}}$
		$R^2 = 0.98$
	1902	$y = 3.8347 \times 10^{\{-19\}} \times e^{\{42.2811x\}}$
		$R^2 = 0.95$

	1907	$y = 2.1039 \times 10^{\{-7\}} \times e^{\{14.9101x\}}$
		$R^2 = 0.73$
Chiba	1897	$y = 1.0678 \times 10^{\{-2\}} \times e^{\{4.6165x\}}$
		$R^2 = 0.97$
	1902	$y = 5.9330 \times 10^{\{-5\}} \times e^{\{-25.7455x\}}$
		$R^2 = 0.95$
	1907	$y = 1.7929 \times 10^{\{-12\}} \times e^{\{26.0746x\}}$
		$R^2 = 0.73$
Kanagawa	1897	$y = 5.9642 \times 10^{\{-13\}} \times e^{\{27.8345x\}}$
		$R^2 = 0.92$
	1902	$y = 8.1153 \times 10^{\{-30\}} \times e^{\{66.8361x\}}$
		$R^2 = 0.95$
	1907	$y = 3.5299 \times 10^{\{-48\}} \times e^{\{108.9673x\}}$
		$R^2 = 0.73$
Tokyo	1897	$y = 5.8626 \times 10^{\{-11\}} \times e^{\{23.2507x\}}$
		$R^2 = 0.94$
	1902	$y = 1.8033 \times 10^{\{-5\}} \times e^{\{-55.9867x\}}$
		$R^2 = 0.97$
	1907	$y = -3.0459 \times 10^{\{-5\}} \times e^{\{-204.3396x\}}$
		$R^2 = 0.97$

As the data spans 15 years, it cannot be clearly said that it indicates a definite trend, but it is, nevertheless, worthy to point out that, although the initial coefficient of determination was above 0.9, it has decreased in most areas, except for Tokyo.

1.3 Summary

As described above, the distance between the place of residence and the place of appointment of executives in all prefectures within the Kanto region could be approximated by a fourth-order function in each fiscal year. Although the distribution of distances varies across prefectures, a certain regularity in appointment distances is evident. Over time, there is a tendency for the maximum distance between the place of residence and the appointment location to increase, resulting in a steeper gradient.

2. Differences between rural and urban areas

The distinction between urban and rural areas was formally established in 1888 by the ‘Ordinance on Municipal Systems,’ which designated areas with a population exceeding 25,000 as cities. Maebashi City in Gunma Prefecture, Utsunomiya City in Tochigi Prefecture, and Mito City in Ibaraki Prefecture are situated in regions with historical establishment of former feudal domains and have experienced commercial and industrial development since ancient times. In contrast, Saitama Prefecture had a domain in Inuma; however, the prefectural office was relocated to Omiya to diminish the influence of former feudal powers. Chiba Prefecture was created through the merger of Kisarazu and Inba counties, with its prefectural office moved to Chiba—a former post town that maintained town status as of 1907. Kanagawa Prefecture, originally a fishing village, established its prefectural office in Yokohama, which became an international port in 1859. The development of this port triggered rapid population growth, leading to its designation as a city.

Tokyo presented a more complex scenario, where various feudal domains maintained their Edo residences—akin to local government offices—concentrated within the ward areas until 1872. By that time, the population had already surpassed one million. Following the Meiji Restoration, these structures were confiscated by the new government and temporarily repurposed. With the subsequent decision to relocate the capital to Tokyo, the imperial family and their households moved from Kyoto to Tokyo. Furthermore, former feudal lords who had returned to their home domains were encouraged to resettle in the city districts to mitigate the risk of potential rebellions. Consequently, areas proximal to Edo Castle (present-day Imperial Palace) within the city districts became predominantly inhabited by higher-income residents.

These historical and political factors contribute to explaining the observed distinctions between rural areas and the Tokyo Special Wards.

2.1 Differences in Dispersion Between Rural and Urban Areas

Upon examining the following graph, it becomes evident that, in both regions, rural areas exhibit a somewhat greater degree of concentration in adjacent areas. This phenomenon may be attributed to several factors: 1) During that period, urban centers—often the prefectural capitals—served as locations for the National Agricultural Bank, an institution established as part of a national policy to foster industrial development. The bank’s directors were predominantly members of the local landowning class, with many appointees residing at distances greater than 20 km from the prefectural capital. 2) Furthermore, newspapers and major printing houses were situated in the prefectural capitals, typically functioning as branch offices for influential figures within the prefecture. 3) The existence of the prefectural assembly

constitutes an additional factor, as eligibility for election required a minimum annual income tax payment of 30yen. As this tax was primarily assessed on land holdings, landowners initially outnumbered farmers in the assembly, with instances reported in which individuals acquired land assets expressly to qualify as candidates.

Conversely, rural areas were predominantly organized around enterprises engaged in the processing of hemp, silk, and cotton into textiles, alongside banks that furnished credit to agriculturalists. Prior to the establishment of the corporate system, such enterprises mainly operated as individually managed businesses. However, with the introduction of factories powered by steam engines and electricity—technologies necessitating substantial capital investment—these operations were reorganized into formal companies.

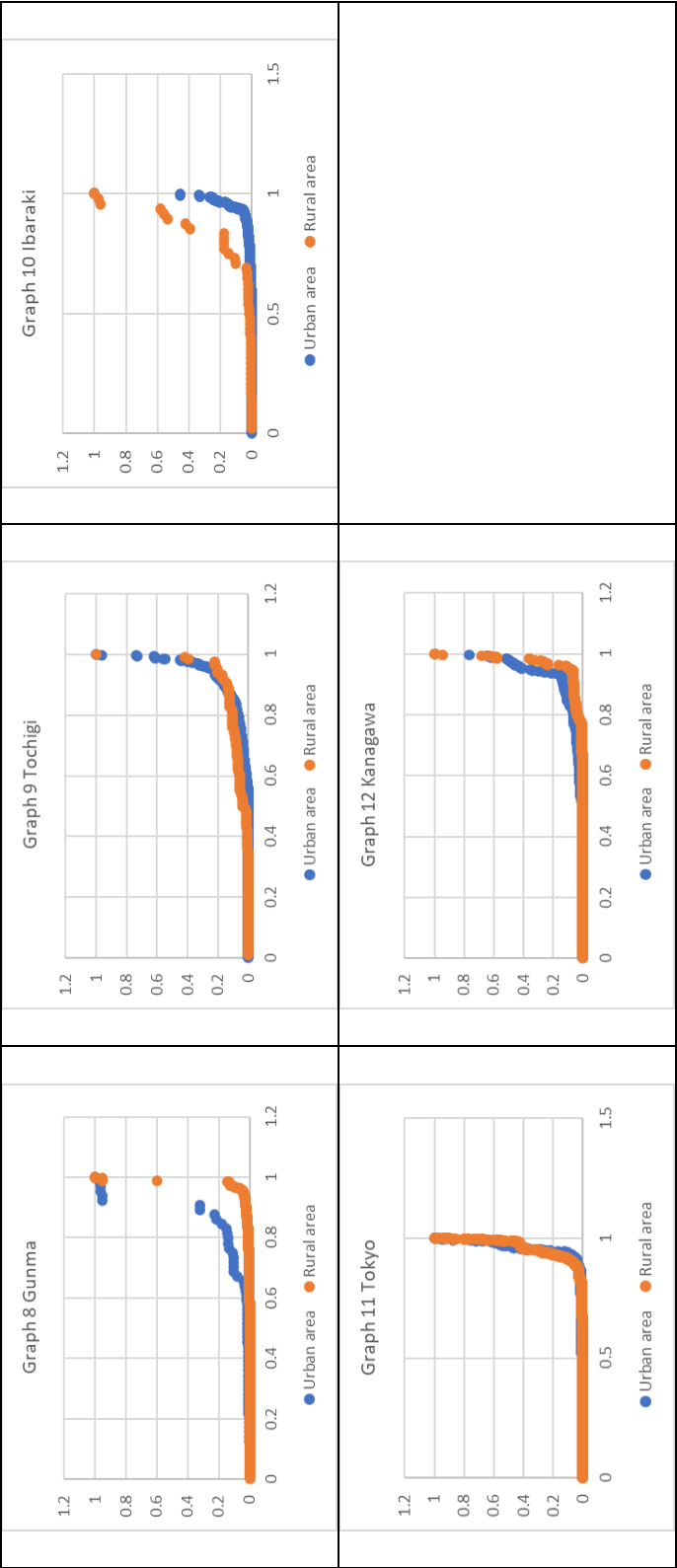


Table 4 Comparison of rural and urban areas in 1907

	Gunma		Tochigi		Ibaraki		Tokyo		Kanagawa	
	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas	Rural areas	Urban areas
Average	15.31	15.33	7.27	16.49	10.38	15.98	37.17	46.37	10.05	17.67
Standard error	3.36	3.88	0.67	2.62	1.64	4.31	5.58	2.77	1.90	3.10
Median	0	1.7	0	9.3	0	1.8	4.2	4	0	1
Mode	0	0	0	0	0	0	0	0	0	0
Standard deviation	83.64	31.01	16.49	28.23	35.01	29.88	129.91	142.74	40.09	71.29
Variance	6995.27	961.87	272.02	796.75	1225.38	892.72	16878.28	20373.44	1606.89	5082.63
Kurtosis	63.28	5.08	23.5	37.83	76.59	4.35	22.17	20.83	263.59	110.58
Skewness	7.93	2.53	4.3	5.19	7.33	2.26	4.63	4.29	14.65	9.15
Number of data points	620	64	605	116	458	48	543	2659	444	527
Maximum value	744	111	136	245	477	112	926	1205	750	1089
Minimum value	0	0	0	0	0	0	0	0	0	0
Confidence level (95.0%)	6.6	7.75	1.32	5.19	3.21	8.68	10.95	5.43	3.74	0

Table 5 Approximate formula for rural and urban areas

Gunma	Rural areas	$y = 1.3544 \times 10^{\{-32\}} \times e^{\{73.5970x\}}$
		$R^2 = 0.90$
	Urban areas	$y = 1.2229 \times 10^{\{-4\}} \times e^{\{9.1950x\}}$
		$R^2 = 0.92$
Tochigi	Rural areas	$y = 4.9693 \times 10^{\{-8\}} \times e^{\{16.4984x\}}$
		$R^2 = 0.92$
	Urban areas	$y = 2.4508 \times 10^{\{-5\}} \times e^{\{9.9347x\}}$
		$R^2 = 0.71$
Ibaraki	Rural areas	$y = 1.2222 \times 10^{\{-15\}} \times e^{\{33.7830x\}}$
		$R^2 = 0.89$
	Urban areas	$y = 3.1225 \times 10^{\{-4\}} \times e^{\{8.1819x\}}$
		$R^2 = 0.98$
Tokyo	Rural areas	$y = 6.2104 \times 10^{\{-13\}} \times e^{\{28.1622x\}}$
		$R^2 = 0.98$
	Urban areas	$y = 2.8888 \times 10^{\{-10\}} \times e^{\{21.7511x\}}$
		$R^2 = 0.97$
Kanagawa	Rural areas	$y = 9.1344 \times 10^{\{-44\}} \times e^{\{98.5184x\}}$
		$R^2 = 0.64$
	Urban areas	$y = 9.1344 \times 10^{\{-44\}} \times e^{\{98.5184x\}}$
		$R^2 = 0.91$

Initially, it was expected that in rural areas, where industries involved in agricultural product processing and the banks for their settlements predominated, the governance would be completed by directors from nearby locations. However, Table 4 shows that this is not necessarily the case. Indeed, in Gunma and Ibaraki, it tended to be the rural corporations that appointed directors from the same village or nearby areas, whereas in Tokyo and Tochigi, both rural and urban areas display almost the same trend. Conversely, in Kanagawa, there is a tendency for urban companies to appoint directors from nearby locations. This is because people from production areas in northern

Kanto have moved near the export port of Yokohama and operate companies there for export purposes. (Watahiki2024).

2.3 Summary

Saitama and Chiba were excluded from this analysis due to their lack of city status at the time. Based on these criteria, the area can be divided into two groups: Group A, comprising Tokyo and Kanagawa, and Group B, encompassing all other regions.

Group A, particularly Tokyo, exhibited an exceptionally high population concentration and a considerable proportion of high-income earners even during this period. Conversely, Kanagawa was an artificially established city with a specialized role focused on import and export functions. Consequently, these urban areas contained a higher density of companies. In Tokyo specifically, the suburban areas were home to headquarters of large-capital industries—such as railways and mining—rather than companies primarily supporting local livelihoods.

Furthermore, regional banks, including institutions like the National Bank, were influenced by the presence of former feudal lords or high-ranking samurai residing in the capital. These individuals often established their headquarters within the city while operating businesses in outlying regions, which appears to be a significant underlying factor.

In Kanagawa's case, its function as an export port for northern Kanto's textile and tea industries prompted companies in Yokohama to establish independent export departments for these sectors. Indeed, instances have been documented where executives simultaneously held positions within both the Yokohama export offices and the parent production companies (Watanabe, 2024).

In Group B, the number of companies was markedly higher in rural areas. Firstly, the population was more widely dispersed than it is today, with the prefectural capitals being the only urban areas comparable to cities. Secondly, the industrial structure at the time was primarily centered on the textile industry, with ancillary sectors such as banks facilitating settlement payments to farmers supplying agricultural products, transportation companies, and warehousing likely exerting significant influence.

Within the urban areas of Group B, industries requiring relatively large capital investments—such as newspapers, printing, light railways, and electricity—were more inclined to establish their headquarters in the county seat cities, where management was more feasible.

However, this does not imply that the mere presence in an urban area equated to the existence of individuals capable of substantial investment. Income during this period largely depended on land rents, and high-income earners were often hereditary landowners. Additionally, there may have been

strategic efforts to attract prominent external figures to serve as board members or investors, thereby facilitating capital acquisition through association with influential personalities from the Meiji Restoration-era new zaibatsu, such as Shibusawa Eiichi and Okura Kihachiro.

As evidenced by the foregoing, companies in the rural districts were fundamentally enterprises of the local residents, by the local residents, and for the local residents.

VI. Conclusion

When examining the distance between the headquarters and the residences of corporate executives, nearly 40% were found to reside within a 2 km radius of the headquarters. However, in major urban centers such as Tokyo and Kanagawa, a substantial number of executives were appointed from locations exceeding 40 km away, with some incumbents serving for over a decade while residing more than 600 km distant. In contrast, in other regions, the proportion of executives appointed from distant locations remained below 5%.

When normalizing the maximum distance to a value of 1, the data could be approximated by a fourth-order function irrespective of the level of transportation infrastructure development, including railways. This approximation held consistently for both urban and rural areas. The subsequent question concerns the appropriate threshold distance for board member appointments. Although this study does not delve further into this issue, approximately half of the cases fall within a 0–10 km range, and around 80% fall within a 20 km range, suggesting that this may constitute a reasonable boundary.

References

Fujita, Masahisa ., Krugman, Paul R. and Venables, Anthony(1999), *The Spatial Economy: Cities, Regions, and International Trade.*, MIT Pres

Ivković, Zoran and Weisbenner, Scott (2005), “Local Does as Local Is: Information Content of the Geography of Individual Investors' Common Stock Investments”, *The Journal of Finance*, Volume60, Issue1, pp. 267-306

Jensen, Kevan., Kim, Jin-Mo. & Yi, Han. (2015) The geography of US auditors: information quality and monitoring costs by local versus non-local auditors. *Rev Quant Finan Acc* 44, 513–549.

Kang, Jun-Koo and Kim,Jin-Mo(2008)“The geography of block acquisitions”., *The journal of Finance.*, Vol.63, No.6, pp. 2817-2858

Knyazeva,Anzhela and Knyazeva,Diana(2012), “Does being your bank’s neighbor matter?”.,*Journal of Banking & Finance.*, Volume 36, Issue 4, April 2012, pp. 1194-1209

Kozu,Hiroyoshi(2013)., *Urban Agglomeration Economies and Spatial Distance.*, Institute of Managerial Research, Aichi University

Krugman, P. (1980): "Scale Economies, Product Differentiation, and the Pattern of Trade," *American Economic Review*, No.70., pp950-959.

https://www.princeton.edu/~pkrugman/scale_econ.pdf

Useem, Michael (1986), *The inner circle*. Oxford University press

Massa, Massimo and Simonov, Andrei(2006) "Hedging, familiarity and portfolio choice", *The Review of Financial Studies*, Volume 19, Issue 2, Summer 2006, Pages 633–685

Minami, Tsutomu(2017) 『近代の青森県における企業家ネットワークの研究: 人間関係の数値化・視覚化の視点から』 Kitanomorisha

Najita, Tetsuo (2009), *Ordinary Economies in Japan: a Historical Perspective, 1750-1950* ., University of California Press

Ranjay Gulati(1998), "Alliances and networks", *Strategic Management Journal*, Volume19, Issue4

Suzuki, Tsuneo., Kobayakawa, Youichi and Wada, Kazuo (2009), 『企業家ネットワークの形成と展開：データベースからみた近代日本の地域経済』 Nagoya University press

Watahiki, Nobumichi (2024) , "Long-distance company directors for companies in Kanagawa Prefecture- 1897-1912 年 -", *Hirosaki Economic Review*, No47, pp.31–47

Quan, Yi and Zhang, Wenlan (2021), "Geographic distance and board monitoring: Evidence from the relocation of independent directors", *Journal of Corporate Finance*, Volume 66, pp.1-20