

Migration and career formation among young male workers from rural areas: evidence from physical examination for conscription

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I Introduction

How did migration from rural areas lead to the development of occupational careers among individual workers in prewar Japan? What kinds of jobs were available to young male workers fresh from agricultural villages, and how did they form the initial stages of their occupational careers? How did this change over the course of Japanese industrialization? This paper addresses these issues, by looking into data from the physical examinations of potential conscripts, with special reference to the case of Sekishiba village in Yama county, Fukushima prefecture.

Under the conscription system in the prewar period, all men were in principle required to undergo a physical examination at their *honseki-chi* (place of registration), which was identical with their birthplace in most instances, when reaching adulthood. Data used here can be therefore regarded as high-quality 100 per cent surveys of 20-year-old males who were born at Sekishiba village.

In the case of Sekishiba village, two kinds of data series are available. Data series A¹ are the formal documents on the individuals who had a physical examination between 1911 and 1943, and include such information as follows:

- a. information concerning an examinee
honseki-chi (place of registration); *kiryu-chi* (place to which one has moved; blank in most instances); family relationship with the head; academic attainments; occupation; body dimensions (height, weight, chest, etc.)
- b. information concerning family household (*ie*) an examinee belongs to
whether the head owning a house or not; national tax imposed on the head; living conditions

Data series B are the notification forms presented by the name of head, when a male family member reaching adulthood. The village authorities were warning that one should be punished by the army criminal law in case a notification form was not given before the person concerned having a physical examination. Data series B cover the period between 1938 and 1942, and include significant information concerning an examinee not available in data series A, such as present address, present occupation and the year when first employed, and former occupation and the year when first employed. Data also include that concerning family household, such as occupation, living conditions, and damage on living conditions in case the person concerned were conscripted.

In this paper, I will first look into migration and occupational careers among young male workers from Sekishiba village in detail, by using data series B. It is well known that the late 1930s and the early 1940s data cover is the period when the Japanese economy was experiencing a rapid expansion of the heavy and chemical industries. At that time, a majority of the examinees were those who had left Sekishiba village, and were engaged in occupation in the modern sector, such as factory worker and white-collar employee. The paper clarifies that there was a significant difference between those engaged in blue-collar trades in the modern sector and those engaged in

¹ For the details, see Tomoko Hashino, Osamu Saito, and Shinji Sugayama, *Occupations, academic achievements, body dimensions, and family of young males from an agrarian village in the first half of the twentieth century Japan: evidence from physical examinations for conscription* (in Japanese) Discussion paper series A No.370, the Institute of economic research, Hitotsubashi University, 1999.

non-agricultural trades in the traditional sector, such as artisan and shop-boy, with respect to age when first employed, academic achievements, and social backgrounds. I will then explore the trends in occupational mobility over a longer period of time by using data series A, and demonstrate the magnitudes of changes that were taking place in the late 1930s and the early 1940s. The conclusion summarises the above arguments, and considers why an expansion of heavy and chemical industry had a great impact on migration among young male workers from agrarian villages.

II Formation of the initial stages of occupational careers

Table 1 shows present addresses of the 262 young males studied here, who were born presumably at Sekishiba village between 1918 and 1923, and who had a physical examination for conscription between 1938 and 1943.² The number of valid samples is 197 persons, and those whose addresses were not identical with the place of registration comprised 54% of the total. That means more than half had left their birthplace before coming to the age of 20. The ratio was 52% for 1938-1940 cohorts (those born between 1918 and 1920), and it rose to 58% for 1941-1943 cohorts (those born between 1921 and 1923).

Regarding the place they had moved to, Fukushima prefecture was at the top place in number of persons with 27 out of 99 (table 2). The breakdown is Yama count with 12 persons, Kitakata town with 7 persons, Wakamatsu city with 5 persons, Koriyama city with 2 persons, and the others with 1 person. Kitakata town had, it seems, no great power to attract population from the neighbouring villages. At the second place was Tokyo prefecture with 26 persons, and at the fourth was Kanagawa prefecture adjacent to Tokyo prefecture with 8 persons. In other words, one-third of the population had moved up to the metropolitan area. In addition, 18 persons were at the overseas, such as Manchuria and Brazil.

What kinds of occupations were they engaged in? How did they form the initial stages of their occupational careers? Table 3 indicates former occupation as well as present occupation, classified as agriculture or non-agricultural trade (or student). The valid number of the samples is 262 persons, with no missing case. Seven career patterns (abbreviated as CP hereafter) are discernable from this table. Those engaged in agriculture with no prior working experience (CP1) were the largest in number, comprising 47% of the total, while those engaged in agriculture with prior employment records (CP2) were very few. On the other hand, out of those engaged in non-agricultural trades, that is, CP3, CP4, and CP5, summing up to 47% of the total, almost half had prior working experiences in agriculture (CP3) or in non-agricultural trades (CP5).

Table 3 also shows changing structure of career patterns according to the year when one having an examination. CP1 as well as CP3 dropped its percentage between 1938-1940 cohorts and 1941-1943 cohorts by 10 per cent and 7 per cent respectively. On the contrary, the percentage of CP4 rose sharply from 17% for 1938-1940 cohorts to 33% for 1941-1943 cohorts by 16 per cent, and that of CP5 was on the increase as well. Those who started their occupational careers in non-agricultural trades were increasing considerably over these years, and most of them left their birthplace, as is shown in table 4. On the other hand, most of those engaging in agriculture were still remaining at the place of registration, but some were living abroad such as Manchuria and Brazil.

Let us look into the occupations more closely (table 5). Here, I have divided them largely into two

² Information about the 1943 examinees is taken from data series A. That contains former occupation as well as present occupation, but neither the year when employed nor present address.

groups, that is, the traditional sector and the modern sector. The “traditional” sector includes those being self-employed and those employed (often as a live-in apprentice) by small business with conventional working customs in the traditional industry. It is sub-divided between agriculture and non-agricultural trades, such as artisan, shop-boy, and working hands engaging in various kinds of casual work. The “modern” sector, on the other hand, includes those employed by companies with more or less developed organisational structures in the modern industry, as well as by the public institutions and various kinds of corporate bodies. It is sub-divided between blue-collar trades such as factory worker, railway worker, driver, miner, and crew and white-collar trades such as white-collar employee (including both engineer and clerical worker), soldier, and teacher. Few cases are difficult to classify as belonging whether to the traditional sector or to the modern sector, but most cases are not. Dichotomy of occupations as the above matters, as is discussed below.

Table 6 shows occupational structure by the year when one having an examination. The table clearly reveals the growing significance of occupations in the modern sector. Look at the column of total first. Those employed in the modern sector comprised 36% of the total, and the percentage was almost three times as much as that of non-agricultural trades in the traditional sector. In other words, out of those engaging in non-agricultural occupations, two-thirds were employed in the modern sector. Furthermore, the percentage of the modern sector was increasing considerably between 1938-1940 cohorts and 1941-1943 cohorts. That rose from 28% for 1938-1940 cohorts to 43% for 1941-1943 cohorts by 15 per cents. On the contrary, the traditional sector’s percentage was decreasing considerably in non-agricultural trades as well as in agriculture. Those employed in non-agricultural trades comprised only 10% of all the examinees between 1941 and 1943. In other words, out of those engaging in non-agricultural occupations, more than 80% was employed in the modern sector, as far as 1941-1943 cohorts were concerned.

Table 7 indicates the relationship between occupation and present address. Samples are small, but the tendency is apparent. Most of those engaging in non-agricultural trades in the traditional sector, such as artisan and shop-boy, were working in Fukushima prefecture, especially at Kitakata town and Wakamatsu city. Most factory workers were, on the other hand working in Tokyo prefecture and Kanagawa prefecture, which constituted one of the largest industrial areas in prewar Japan.

Interestingly enough, there was a significant difference between non-agricultural trades in the traditional sector and blue-collar trades in the modern sector with respect to age when first employed as well. Look at table 8. As is described above, data series B include information on date of birth, former occupation and the year when employed, and present occupation and the year when employed. Hence, I have calculated age when entering the “initial” occupation, identified with former occupation or present occupation in case one having no prior working records. At that time, there were very few that did not complete compulsory education, and almost all graduated from lower-level primary school at the age of twelve. Most of them further proceeded either to upper-level primary school or to semi-secondary and secondary education, as will be shown in table 10 (presented later). The standard age when completing upper-level primary schooling was fourteen.

According to table 8, artisans were all employed at the age of fifteen and under, and most shop-boys were at the age around fifteen. Factory workers, on the other hand consisted of two groups, that is, those employed at the age around fifteen, as was the case with shop-boy, and those employed at the age around eighteen. It is most likely that blue-collar trades in the modern industry were available to high-teenagers and to twenty years and older, whereas among artisans and shop-boys, it was a common practice for low-teenager or middle-teenager to be employed as live-in apprentice. Previous work has pointed out that workers from rural areas in Tohoku district constituted a major source of workforce among middle and large factories in the Keihin industrial area in the 1930s and 1940s. In fact, Kawasaki Work of Nihon steel Co. was employing a considerable number of workers fresh from agrarian villages over these years. Most workers were

in their twenties when joining the company and only a small number of teenagers was included³.

Such a conjecture is also supported by looking into occupational careers of those who have changed jobs (CP5). As is shown in table 9, most of their present occupations fall into the category of the modern sector. Also, those switching to factory worker were at the age of 18 or 19 when employed, in spite that most of them had no working experience at a factory, as far as available data were concerned.

III Social backgrounds and occupational careers

Let us move to the examinees' social backgrounds, and their relationship with occupational career. Table 10 shows living conditions of family household an examinee belonging to, ranked into three groups; upper-level, middle-level, and lower-level. Much information about respective household being shared in the village community, it is highly probable that these ranks reflect its economic and social position to such a considerable degree as to be worth analysing, although the grading criteria is not clear. Two interesting points can be brought to light. First, among those engaging in farming, and still remaining at the place of registration, 17% were from household ranked as upper-level, and 28% were from that ranked as middle-level. To add them together makes 45%, and the percentage was much higher than that among those engaging in the other occupations, except for those employed as white-collar employee. Previous work has pointed out that those from household ranked as lower-level were most likely to migrate from agricultural villages in the prewar Japan⁴. The above fact also supports this established view.

Second, and more interestingly, blue-collar workers in the modern sector were mostly from household ranked relatively at a higher level, as compared with those engaged in non-agricultural trades in the traditional sector. The table reveals that among factory workers, those from household ranked as upper-level and middle-level comprised 35% of the total, around 15 per cent higher than the percentage among artisans and shop-boys.

Table 11 shows an examinee's relationship with the head of household. Since the rule of primogeniture was prevailing in the prewar Japan, the eldest son was expected to succeed his father or the position of head, serving as a manager everlasting '*ie*'.⁵ A son was often adopted from elsewhere, in case there were none within household. Taking these 'stylized' facts into consideration, I have identified the eldest sons and adopted sons as a 'successors', which comprised 19% of the total.

According to table 12, the ratio of successor differed considerably by occupational categories. The percentage among those engaging in farming and living at the place of registration amounted to 32%, much higher than the overall rate. That means the successors were mostly remaining at Sekisiba village, to become the next head as was expected. On the other hand, those employed in the modern sector, most of whom had left their birthplace, were constituted chiefly by younger sons, relatives, and grandsons. Successors comprised 13% of the total among those employed as

³ Shinji Sugayama, "Occupational careers and the labour market of Japanese large factory workers on the eve of rapid economic growth" (in Japanese) SSJA Data Archive Research Paper Series 43, Information Center for Social Science Research on Japan Institute of Social Science, University of Tokyo, 2009.

⁴ Shigeo Nojiri, *An empirical research on migration from agricultural villages in Japan* (in Japanese), Iwanami Shoten, 1942.

⁵ As is pointed out by previous work, *ie* was likely to be regarded as the entities that were to be passed on from the ancestors to the offspring over the generations.

factory workers. However, the situation was completely different among those employed in the traditional sector. The ratio was 21% among artisans and 24% among shop-boys. That implies their households were less likely to be regarded as “*ie*”, with sufficient assets and cultivation rights, worth being handed to a successor.

Table 13 shows academic attainments by occupational category. Since household strategy on children’s education depends on its economic and social conditions, it is not surprising that academic attainments differed considerably among the various occupational groups. At the highest level, were white-collar employees with 55% going to semi-secondary level and secondary-level school after completing primary education. At the second highest, were those engaging in farming (and remaining at the place of registration) with 83% having continuation education and 5% going to secondary-level school after completing primary education.⁶ Factory workers were at the third place, with 66% having continuation education and 4% going to semi-secondary level and secondary-level school. The added percentage amounts to 71%, almost doubling that among artisans at the fourth place. It is apparent that there existed a gap in academic attainments between blue-collar trades in the modern sector and non-agricultural trades in the traditional sector. The findings are completely consistent with the above arguments.

IV Trends in occupational mobility over the first half of the twentieth century

This section explores the trends in occupational mobility among young male workers from Sekishiba village over the first half of the twentieth century, through analysis of data series A. Table 14 shows changes in occupational structure among those who had a physical examination for conscription between 1911 and 1943. Three major points deserve attention.

First, among 1911-1919 cohorts, who were born between 1891 and 1899, those engaging in agriculture constituted an overwhelming majority, comprising 77% of the total. In other words, only a small number of people migrated in the teens, and found employment elsewhere. Specifically, those employed as blue-collar trades in the modern sector were very few, comprising only 4% of the total.

Second, among 1920-1929 cohorts and 1930-1937 cohorts, who were born between 1900 and 1917, those engaging in agriculture comprised 60%-63% of the total, and the percentage was around 15 per cent lower than that among 1911-1919 cohorts. Those employed as non-agricultural trades in the traditional sector were, on the other hand increasing, and the percentage they comprised of the total amounted to around 20%, almost doubling that among 1911-1919 cohorts. Although those employed as blue-collar trades in the modern sector were increasing as well, they were still in a minority, comprising 8%-9% of the total.

Third, among 1938-1943 cohorts, who were born between 1918 and 1923, those engaging in agriculture were decreasing continuously at a higher pace than ever, and the percentage they comprised dropped to as much as 50%. Those who had left their birthplace in the teens were not in a minority any longer. Interestingly enough, the majority of these young emigrants were those employed as blue-collar trades in the modern sector. They comprised 27% of the total, and the percentage was 2.8 times as much as that among those employed in the traditional sector.

⁶ At that time, there were a middle school and a commercial school at Kitakata town, a commutable area from Sekishiba village.

As is discussed in section three, those employed as factory worker were relatively at a higher level in academic attainments than those employed as artisan and shop-boy among 1938-1943 cohorts. Was that the case with the elder cohorts or not? The answer is no. As is demonstrated by table 15, table 16, and table 17, there was no difference in academic attainments between factory worker and artisan/shop-boy among 1911-1919 cohorts, 1920-1929 cohorts, and 1930-1937 cohorts respectively. That is consistent with data about living conditions of family household (table 18). There was also no difference in this respect between factory worker and artisan/shop-boy among 1920-1929 cohorts and 1930-1937 cohorts respectively.

V Conclusion

In this paper, I have explored migration and career formation among young male workers from rural areas, with special reference to Sekishiba village in Yama county, Fukushima prefecture. Evidence from physical examination for conscription shows that migration among young male workers was small in scale, and most emigrants were employed (often as a live-in apprentice) in the traditional sector in the early part of the twentieth century. Except for some employed by the public sector, there were very few employed in the modern sector. Migration showed a tendency to increase in the interwar years, yet the pace of changes was relatively slow, as compared with the later years. Also, the increasing number of young leavers found employment chiefly in the traditional sector.

However, the number of young leavers increased suddenly in the late 1930s and the early 1940s when the Japanese economy experienced a rapid expansion of heavy and chemical industry. Specifically, those employed as blue-collar worker in the modern sector showed a sharp increase, and this tendency was intensified as the years went by. On the contrary, those employed in the traditional sector decreased considerably over these years. Those employed in the modern sector comprised 43% of the total among 1941-1943 cohorts.

What brought about such a great change? Since migration had been relatively small in scale and mostly among those from social and economically disadvantaged backgrounds by that time, it is highly probable that there were a large number of younger sons still remaining at home for three to five years after graduation from upper-level primary school. While enrolled in continuation education, they were engaged in various jobs in accordance with family household strategies involving income diversification and pluriactivity. Nevertheless, most of them were expected to move out of the household in due course, and find employment elsewhere.

As is discussed in section two, those employed as factory worker among 1938-1943 cohorts included a considerable number of high-teenagers. Blue-collar trades in the modern industry were available to the elder people, as compared with occupations in the indigenous industry where it was a common practice for low-teenager or middle-teenager to be recruited as live-in apprentice. The tradition of craft apprenticeships had, however collapsed among factory workers in the modern sector by the end of the nineteenth century. In Japan, since this apprenticeship system was not founded as the social base of skilled workers, the distinction between skilled workers and workers with experience was obscure, and the category of unskilled meant almost the same thing as inexperienced⁷. Even an odd-job labourer could obtain a position as an experienced worker, once he

⁷ Mikio Sumiya, "On the theory of Labour" (in Japanese) *Keizai-gaku ronshu*, vol. 23-14, 1954; Tsutomu Hyodo, *The evolution of labour-management relations in Japan* (in Japanese), University of Tokyo Press, 1971; Shinji Sugayama, "Business education, training, and the emergence of the "Japanese employment system"", Nobuo Kawabe and Eisuke Dito, eds., *Education and training in*

had mastered certain simple operations by observing and imitating skilled workers. A rapid expansion of heavy and chemical industry is, therefore considered as having provided the younger sons remaining within the household with the good opportunities to get a job with future prospects, and thereby establish their own branch units.

Table 1 Present address

present adress	year when having examination		total
	1938_1940	1941-1943	
Sekishiba village (place of registration)	48%	42%	46%
not Sekishiba village	52%	58%	54%
total	100%	100%	100%
number of valid samples ;persons	130	67	197
total number : persons	132	130	262

Table2 Present address (except Sekishiba village)

present address	number ;persons	per cent
Fukushima prefecture	27	27%
Yama county (the number included)	12	—
Kitakata town(the number included)	7	—
Koriyama city (the number included)	2	—

the development of modern corporations, University of Tokyo Press, 1993.

Wakamatsu city (the number included)	5	–
the other counties (the number included)	1	–
Tokyo prefecture	26	26%
Kanagawa prefecture	8	8%
Manchuria	10	10%
Brazil	4	4%
others	24	24%
total	99	100%

Table 3 Career pattern

career pattern			year when having examination		total
– –	former occupation	present occupation	1938-1940	1941-1943	
1	none	agriculture	52%	42%	47%
2	non-agricultural occupation	agriculture	2%	3%	2%
3	agriculture	non-agricultural occupation	15%	8%	11%
4	none	non-agricultural occupation	17%	33%	25%
5	non-agricultural occupation	non-agricultural occupation	10%	12%	11%
6	none	student	5%	2%	3%
7	none	none	0%	1%	0%
total			100%	100%	100%
number of valid samples ;persons			132	130	262

Table 4 Present address by career pattern

present address	career pattern
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	1	2	3	4	5
Sekishiba village	81%	100%	11%	8%	5%
not Sekishiba village	19%	20%	89%	93%	95%
total	100%	80%	100%	100%	100%
number of valid samples ;persons	97	5	27	40	20

Table 5 Occupation

occupational category		occupation	number :persons
traditional sector	agriculture	farming	119
		charcoal maker	9
	non-agricultural trades	artisan	11
		shop-boy	16
		working hands	4
		others	2
modern sector	blue-collar trades	factory worker	44
		railway worker	11
		driver	4
		miner	2
		crew	2
	white-collar trades	white-collar employee	20
		soldier	5
		teacher	1
Number of valid samples :persons			250

Table 6 Occupation by year when having examination

occupational category		year when having examination		total
		1938 -1940	1941-1943	
traditional sector	total	72%	57%	64%
	agriculture	56%	46%	51%
	non-agricultural trades	16%	10%	13%
modern sector	total	28%	43%	36%
	blue-collar trades	22%	29%	25%
	white-collar trades	6%	14%	10%
total		100%	100%	100%

Table 7 Occupation and present address :persons

present address	artisan	shop-boy	factory worker	white-collar employee
Fukushima prefecture	7	8	3	2
Sekishiba village (the number included)	1	1	1	2
Yama county (the number included)	—	3	—	—
Kitakata city (the number included)	2	3	1	—
Wakamatsu city (the number included)	4	—	—	—
Koriyama city (the number included)	—	1	1	—
Tokyo prefecture	2	3	9	2
Kanagawa prefecture	—	—	7	1

others	1	3	7	2
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Table 8 Age when entering initial occupation ;persons

initial occupation	age when entering						
	12_13	14	15	16	17	18	19
artisan	2	–	2	–	–	–	–
shop-boy	2	3	6	3	3	–	–
factory worker	–	3	5	2	2	4	3
railway worker	–	–	–	2	–	2	1
white-collar employee	–	–	–	1	–	2	4

Table 9 Occupational career (CP5)

No	former occupation			present occupation		
	year when employed	age when employed	occupational category	year when employed	age when employed	occupational category
1	1933	15	shop-boy	1935	17	shop-boy
2	–	–	shop-boy	–	–	shop-boy
3	–	–	white-collar employee	–	–	shop-boy
4	–	–	working hands	1938	19	working hands
5	1934	15	factory worker	1938	19	others (traditional sector)
6	1934	15	factory worker	1937	18	factory worker
7	–	–	shop-boy	–	–	factory worker
8	1934	14	factory worker	1939	19	factory worker
9	1934	14	shop-boy	1939	19	factory worker
10	1937	17	shop-boy	1939	19	factory worker
No	former occupation			present occupation		
	year when employed	age when employed	occupational category	year when employed	age when employed	occupational category
11	1936	16	shop-boy	1939	19	factory worker
12	–	–	shop-boy	–	–	factory worker

13	–	–	artisan	–	–	factory worker
14	–	–	impossible to read	–	–	factory worker
15	–	–	white-collar employee	–	–	factory worker
16	–	–	factory worker	–	–	factory worker
17	–	–	factory worker	–	–	factory worker
18	–	–	impossible to read	–	–	factory worker
19	–	–	impossible to read	–	–	factory worker
20	–	–	working hands	–	–	factory worker
21	–	–	artisan	–	–	factory worker
22	1936	17	shop-boy	1937	18	railway worker
23	–	–	shop-boy	–	–	railway worker
24	1933	15	shop-boy	1936	18	driver
25	1939	19	white-collar employee	1939	19	white-collar employee
26	–	–	white-collar employee	–	–	white-collar employee
27	–	–	white-collar employee	–	–	white-collar employee
28	–	–	white-collar employee	–	–	white-collar employee
29	1935	14	factory worker	1939	18	out of work

Table 10 Living conditions of family household

examinee's occupation	living conditions of household			number of valid samples :persons
	upper-level	middle-level	lower-level	
farming (living at Sekishiba village)	17%	28%	55%	83
farming (not living at Sekishiba village)	6%	18%	76%	17
artisan	0%	18%	80%	11
shop-boy	0%	13%	87%	16
factory worker	5%	30%	65%	44
white-collar employee	15%	45%	40%	20

Table 11 Family relationship with head of household (*ie*) ;person

the eldest son	adopted son	younger son	relative (nephew/ brother/ others)	grandson	head himself	total	ratio of succesor ;%
A	B	–	–	–	–	C	_A+B_/C
43	3	72	36	33	6	193	19%

Table 12 Ratio of succesor

occupation	ratio of succesor	number of valid samples ;persons
farming (living at Sekishiba)	32%	81
farming (lliving not at Sekishiba)	12%	17
artisan	21%	11
shop-boy	24%	16

factory worker	13%	27
railway worker	0%	9
white-collar employee	0%	9
student	23%	10

Table 13 Academic attainments

Academic attainments	occupation				
	farming (living at Sekishiba)	artisan	shop-boy	factory worker	white-collar employee
level1	7%	9%	13%	5%	–
level2	1%	36%	19%	7%	–
level3	4%	18%	44%	18%	15%
level4	14%	36%	13%	34%	20%
level5	52%	–	6%	25%	10%
level6	17%	–	–	7%	–
level7	–	–	6%	2%	20%
level8	5%	–	–	2%	35%
number of valid samples :persons	83	11	16	44	20

notes:

level1 =non-completion and completion of lower-level primary school (compulsory education)

level2 =non-completion of upper-level primary school

level3 =completion of upper-level primary school

level 4=completion of upper-level primary school plus continuation education (non-completion of basic class)

level5 =completion of upper-level primary school plus continuation education (completion of basic class)

level6 =completion of upper-level primary school plus continuation education (advanced class)

level7 =completion of lower-level vocational school and miscellaneous school (semi-secondary educational level)

level8 = going to upper-level vocational school , middle school, and higher educational institution

Table 14 Changes in occupational structure

occupation		year when having examination			
		1911-19	1920-29	1930-37	1938-43
traditional sector	agriculture	77%	63%	60%	50%
	non-agricultural trades	11%	16%	23%	11%
modern sector	blue-collar trades	4%	7%	8%	27%
	white-collar trades	8%	13%	9%	12%
number of valid samples ;preson		300	267	320	277

table 15 Academic attainments, 1911-1919

academic attainments	agriculture	artisan	shop-boy	factory worker
level 1	4%	—	—	—
level 2	27%	59%	33%	50%
level 3	14%	18%	11%	0%
level 4	54%	24%	56%	50%
level 5	1%	0%	0%	0%
total	100%	100%	100%	100%
number of valid samples ;person	230	17	9	6

notes;

level 1 =none and non-completion of lower-level primary school

level 2 =completion of lower-level primary school

level 3 =non-completion of upper-level primary school

level 4 =completion of upper-level primary school

level 5 =going to middle school and higher educational institution

table 16 Academic attainments, 1920-1929

academic attainments	agriculture	artisan	shop-boy	factory worker
level 1	2%	10%	7%	—

level 2	21%	48%	40%	56%
level 3	9%	10%	13%	0%
level 4	51%	24%	40%	44%
level 5	2%	0%	0%	0%
level 6	9%	10%	0%	0%
level 7	5%	0%	0%	0%
total	100%	100%	100%	100%
number of valid samples ;person	169	21	15	9

notes;

level 1 =none and non-completion of lower-level primary school

level 2 =completion of primary school

level 3 = non-completion of upper-level primary school

level 4 = completion of upper-level primary school

level 5 = completion of upper-level primary school plus continuation education (non-completion of basic class)

level 6 = completion of upper-level primary school plus continuation education (completion of basic class)

level 7 =going to middle school and heigher educational institution

Table 17 Academic attainments, 1930-1937

academic attainments	agriculture	artisan	shop-boy	factory worker
level 1	13%	39%	9%	33%
level 2	5%	5%	9%	11%
level 3	34%	50%	70%	39%
level 4	44%	0%	9%	6%
level 5	4%	5%	4%	11%
total	100%	100%	100%	100%
number of valid samples ;person	187	38	23	18

notes;

level 1 = non-completion and completion of lower-level primary school

level 2 = non-completion of upper-level primary school

level 3 = completion of upper-level primary school

level 4 = completion of upper-level primary school plus continuation education (non-completion and completion of basic class)

level 5 =going to middle school and heigher educational institution

Table 18 Living conditions of family household (1920-1943)

1920_1929

occupation	upper-level	middle-level	lower-level	total	number of valid samples ;person
agriculture	31%	29%	40%	100%	148
artisan	0%	33%	67%	100%	18
shop-boy	8%	0%	92%	100%	13
factory worker	11%	22%	67%	100%	9

1930-1937

occupation	upper-level	middle-level	lower-level	total	number of valid samples ;person
agriculture	27%	31%	41%	100%	191
artisan	8%	11%	82%	100%	38
shop-boy	8%	25%	67%	100%	24

factory worker	6%	28%	67%	100%	18
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1938-1943

occupation	upper-level	middle-level	lower-level	total	number of valid samples ;person
agriculture	15%	27%	58%	100%	131
artisan	0%	20%	80%	100%	10
shop-boy	0%	18%	82%	100%	11
factory worker	4%	26%	70%	100%	53