A NOTE ON THE WORKING CONDITIONS OF SUBCONTRACTING ESTABLISHMENTS IN IRON AND STEEL INDUSTRY

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I. Introduction

The reduction of working hours in Japan since 1960 has been remarkable. While in 1960 total monthly working hours per worker in manufacturing industries were 207.0 hours, in 1975 they were reduced to 167.8 hours. After 1975, in contrast to the preceding period, hours of work began to be prolonged.¹ Fig. 1 shows that shortening of hours of work in iron and steel industry was far more impressive than that of manufacturing industries as a



FIG. 1. TOTAL MONTHLY WORKING HOURS

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¹ Ministry of Labour, Monthly Labour Survey.



Source and Scope: Same as FIG. 1.

whole.² At the same time we must take note of the fact that this reduction of working hours in iron and steel industry was accompanied by the acute fluctuations. Although these fluctuations were mainly caused by the changes of the market conditions, they were adjusted by the changes of overtimes, as is shown in FIG. 2. It is one of the obstacles to the reduction of working hours in Japan that the overtimes were not exceptional to the normal limits of hours of work but overtimes were rather everyday occurances and became to constitute "virtual normal hours".³

It goes without saying that hours of work are one of the most important facets of the field of labour. Firstly, the level of working hours is, along with the wage level, one of the main conditions of contract of employment. Secondly, time spent at work is an important factor determining "the kind of life a worker may enjoy outside his employment and the amount of time he can devote to his family, to other pursuits in which he may be interested, to leisure and to rest".⁴ Thirdly, the length of hours of work is considered as one of the significant factors determining the volume of the output and the standard to living of the nation, if the level of technology and the other factors of production are given to the economy.

Yet, the study of the working hours has been least investigated and the accumulation of economic literatures on hours of work has been scarce, compared with those concerning

² There are differences in the length of working hours according to industries and scales of enterprises. It is frequently pointed out that the reductions of hours 'have applied to a much greater extent in the larger industrial and commercial concerns than in the smaller undertakings'. (Evans, Archibald A., *Hours of Work in Industrialized Countries*, ILO, 1975, p. 31.)

³ K. Yamamoto, 'Economic Background to the issues of shorter working hours', in Labour Economics and Labour Movement, Tokyo, 1966, p. 94.

⁴ Evans, A. A., op. cit., p. 1.

the wage issues.

This paper has the intention to contribute to the study of working hours by reporting our survey research of the actual condition of working hours of the workers employed by the subcontracting companies.⁵ The framework of our survey research was as follows:

(1) We selected five iron-and-steel Plants from each of the Big Five iron and steel corporations; Kimitsu Plant of Nippon Steel Corporation, Keihin Plant of Nippon Kokan, Kashima Plant of Sumitomo Metal Industry, Chiba Plant of Kawasaki Steel and Kakogawa Plant of Kobe Steel. Those five Plants will be termed in the followings 'Parent Companies' or 'Plants'.

(2) In the site of each 'Plant' many establishments are undertaking subcontracted works. We asked each 'Parent Company' to list up about 60 establishments being in subcontracting relation, and we made up a list of 289 establishments.

(3) Methods of survey we adopted were to send questionnaires to 'Parent Companies' and subcontracting establishments, and to ask them to complete and return the questionnaires. Questionnaires for the 'Parent Companies' and those for the subcontracting establishments were similar in essence but were differently constructed in details to each other. We sent questionnaires to 289 subcontracting establishments and to five 'Parent Companies'.

(4) All five 'Parent Companies' returned the questionnaires to us, and 166 subcontracting establishments returned the questionnaires to us. These 166 subcontracting establishments will be termed in the following 'Sample Establishments' or 'Samples'.

(5) Collected data concerning 'Sample Establishments' were processed by the use of computer of Hitotsubashi University.

(6) Although the main purpose of our survey research was to explore the actual conditions of working hours of the workers and to find out the obstacles to the shortening of working hours, it is necessary to collect and analyse the data concerning general conditions of work except those of working hours. As a result, our survey research was not confined to the study of hours of work.

II. Overall View on Sample Establishments

Let us consider the historical background of the issues of subcontracting works and subcontracting workers.

One of the methods to economize the labour expenses was to reduce the volume of the regular employees and to hire the temporary workers. Before 1960 iron and steel industry was one of the industries widely utilizing the temporary workers. But after 1960 absolute number and the relative weight of the temporary workers were gradually reduced, as shown in TABLE 1. Instead of the temporary workers iron and steel industry began to use the sub-contracting workers.

The receding of the temporary workers was resulted from three reasons. First was the great changes of the labour market caused by the rapid economic growth. As the volume

1980]

⁵ This survey research was executed in 1979, to complete the study consigned by Labour Standards Bureau, Ministry of Labour. Members of the research group are Prof. Asao Mizuno of Chuo University, Prof. Kiyoyuki Kanekiyo of Asia University and I. I must express my gratitude to Prof. Asao Mizuno, chief of our research group, and Prof. Kiyoyuki Kanekiyo for their frank and intensive discussions.

Year	Regular employees (A)	Temporary workers (B)	Total (C)	(B)/(C) (%)
1960	151, 291	14, 206	165, 497	8. 58
61	171, 242	14, 221	185, 463	7.67
62	181, 454	7, 681	189, 135	4.06
63	181, 995	6,095	188, 090	3.24
64	182, 566	6, 173	188, 739	3.27
65	189, 520	4, 454	193, 974	2.30
66	190, 273	5,044	195, 317	2.58
67	202, 049	4,602	206, 651	2.23
68	210,003	3, 707	213, 710	1.73
69	215, 071	3, 581	218, 652	1.64
70	225, 995	3, 237	229, 232	1. 41
71	246, 309	2, 307	248, 616	0.93
72	239, 787	2, 173	241,960	0,90
73	235, 247	1,998	237, 245	0.84
74	238, 575	1, 817	240, 392	0.76
75	241, 815	1, 391	243, 206	0.57
76	237, 369	1, 141	238, 510	0.48
77	233, 960	1,019	234, 979	0. 43

 TABLE 1. PERSONS ENGAGED IN BIG SIX IRON AND STEEL CORPORATIONS

Source: Japanese Federation of Iron and Steel Workers' Unions, Handbook of Labour in Iron and Steel Industry, 1978, 1979, pp. 8-9.

of employment increased, Japanese economy as a whole experienced the shortage of manpower and it became difficult to employ the temporary workers who were obliged to be in an inferior labour conditions. Secondly, the difficulty of the labour management of the temporary workers led to forsake the utilization of the temporary workers. It was necessary to promote the temporary workers to the regular employees from the view-point to keep up the morale of the temporary workers. But, if the number of the temporary workers being promoted to the regular employees were limited, the stimulus to the temporary workers were not powerful and if greater part of the temporary workers were promoted to the regular employees, the merits of using the temporary workers would be diminished. Thirdly, trade unions of both regular employees and temporary workers claimed to abolish the discrimination between regular and temporary workers. For these reasons the employment of the temporary workers was rapidly diminished of its importance.

On the contrary to the trends of employment of temporary workers, the utilization of the subcontracting workers gradually increased of importance from 1960 onwards.

As mentioned in the previous paragraph, our survey research deals with the subcontracting workers assigned their tasks in the sites of 'Parent Companies'. They are employed not by the 'Parent Companies' but by the companies in subcontracting relation with the 'Parent Companies'. It is necessary to mention briefly the characteristics of the subcontracting companies themselves.

Our 'Sample Establishments' can be divided into two groups; on the one hand, thereare companies having more than two establishments, one of which executes subcontracted tasks, on the other hand, there are companies having only one establishment which gets. subcontracts with the 'Parent Companies'.

As TABLE 2 shows, the distribution of 'Subcontracting Companies' by scale of capital:

Size of capital (Millions of yen)	Number of companies
Less than 5	24 (14.5)
5-10	10 (6.0)
10-50	63 (38.0)
50-100	10 (6.0)
100-1,000	41 (24.7)
1,000 and over	16 (9.6)
No answer	2 (1.2)
Total	166 (100.0)

TABLE 2	SUBCONTRACTING	COMPANIES BY SIZE OF	CADITAL
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TABLE 3. PERSO	NS ENGAGED BY	SIZE OF COMPANY
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(as of May, 1979)

Size of company	Subcontracting companies						
Size of company	Number of companies	Male	Female	Total			
Less than 30	31 (18.7)	556	46	602			
30-49	14 (8.4)	479	61	540			
50-99	25 (15.0)	1, 580	206	1,786			
100-299	31 (18.7)	4, 621	882	5, 503			
300-499	16 (9.6)	5, 240	725	5,965			
500-999	21 (12.7)	13,601	2,034	15,635			
1,000-4,999	23 (13.9)	48, 261	4,647	52,908			
5,000 and over	4 (2.4)	29,030	3, 447	32, 477			
No answer	1 (0.6)						
Total	166 (100.0)	103, 368	12,048	115, 416			

is widely scattered. New and/or main plants of Big Five iron and steel corporations have established the high capacity blast furnaces, introduced continuous casting and production control systems, and they have greatly improved the efficiency by the speed-up of the processes. These plants may have the implicit policies which deeply affect the subcontracting companies. First is the policy to minimize the number of workers employed by the plants as small as possible and to utilize the subcontracting companies in many fields of works such as the preparatory and accessory processes, the transport of raw materials and products. The second policy is to select the companies to be in subcontracting relationship with the 'Parent Companies,' and to support the growth of the selected companies and thus strengthen the relation of cooperation. The 'Parent Companies' may be said to have the intention to select and make subcontracts with one company in one field of subcontracting works. Thus, the number of the companies having the subcontracting relationship with the 'Plants' were limited, and the subcontracting companies are not confined to the companies of smaller size.

Number of persons engaged in the subcontracting companies are shown in TABLE 3. It is noteworthy that the percentage of the companies with less than 300 persons engaged are 60.8%, and we recognize that larger part of the subconstracting companies are still of smaller size. At the same time we must remind of the fact that the subcontracting companies with more than 1,000 persons engaged consist about 14% of all subcontracting companies. The subcontracting companies are not confined to the smaller size of companies.

It is one of the characteristics of the iron and steel industry that the ratio of male to all persons engaged is very high, and according to the *Basic Survey of Wage Structure* 91.0% of all persons engaged in iron and steel industry are male workers.⁶ Our survey shows that about 89.6% of persons engaged in the subcontracting companies are male workers and we get similar results to the *Basic Survey of Wage Structure*.

Let us turn our attention from the subcontracting companies to the 'Sample Establishments'. TABLE 4 shows the number of persons engaged in the 'Sample Establishments.' The distribution of Sample Establishments by size of persons engaged indicates that the size of establishments are smaller as compared with the size of subcontracting companies. Percentage of the establishments with less than 50 persons engaged to all 'Sample Establishments' count up 45.8%.

Although 'Sample Establishments' are undertaking the subcontracted tasks in the sites of the 'Parent Companies', it does not always mean that all of the workers employed in the subcontracting establishments are exclusively involved in the subcontracted tasks. TABLE 5 shows how many percentages of workers of the establishment are normally involved in the subcontracted tasks at the site of 'Parent Company'. Greater part of the establishments (72.3%) are allocating more than 80% of their workers to the subcontracted tasks.

Size of persons	Sample Establishments						
engaged	Number of Establishments	Male	Female	Total			
Less than 30	55 (33.1)	842	92	934			
30-49	21 (12.7)	716	75	791			
50-99	41 (24.7)	2, 578	327	2,905			
100-299	27 (16.3)	4,064	642	4, 706			
300-499	12 (7.2)	4,005	224	4, 229			
500-999	8 (4.8)	5,676	374	6,050			
1,000 and over	2 (1.2)	2, 711	150	2, 861			
Total	166 (100.0)	20, 592	1, 884	22, 476			

TABLE 4. PERSONS ENGAGED BY SIZE OF SAMPLE ESTABLISHMENT	•
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(as of May, 1979)

TABLE 5. ALLOCATION OF WORKERS

Ratio of workers involved in subcontracted tasks (%)	Number of Establishments		
Less than 20	9 (5.4)		
20-39	5 (3.0)		
40-59	10 (6.0)		
60-79	21 (12.7)		
80-100	120 (72.3)		
No answer	1 (0.6)		
Total	166 (100.0)		

⁶ Ministry of Labour, Basic Survey of Wage Structure, 1977, Vol. 2, pp. 102-113.

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III. Relationship between 'Parent Company' and 'Sample Establishment'

Generally speaking, there are two types of subcontracting relationships between the 'Plants' and the 'Sample Establishments': One is direct subcontracting relationship between the Plant and the Establishment, the other is indirect one. The latter case has no direct relationship between the Plant and the Establishment, but the Establishment makes the subcontract with the Establishment which has direct relation with the Plant. This indirect relationship between the Plant and the Establishment will be termed in the followings as 'primary-subcontract relationship'. In some cases, the Establishments. We call the subcontract of this kind 'secondary-subcontract'. In this way, the chain of the subcontracting relationships constitutes something like the steps of hierarchy. It goes without saying that as we go down the steps of hierarchy, the scale of the establishments becomes smaller and the working conditions of the workers change for the worse.

Regardless of whether the relationships with the Plants were direct or indirect, we call the establishments undertaking the subcontracted tasks 'Subcontracting Establishments'. The Subcontracting Establishments will be classified into five types according to the relationships between the Plants and the Establishments. First type of the Subcontracting Establishments are those having a direct subcontracting relation with the Plant, and we call these Establishments as 'T-1'. Second type of the Establishments consists of the Establishments with 'primary-subcontracting' relationships, and we call these Establishments as 'T-2'. Third type of the Subcontracting Establishments is in 'secondary-subcontracting' relationship, and we call these Establishments as 'T-3'. Fourth type includes the Establishments. This type contains both characters of 'T-1' type and 'T-2' type, and we call these Establishments as 'T-4'. The last type of the Establishments are those having both the 'primary-subcontracting' and 'secondary-subcontracting' relationships, and we call those as 'T-5'.

The distribution of the Establishments by types of subcontracts are shown in TABLE 6. This Table tells us that 'T-1' and 'T-2' types of Establishments form 94% of the 'Sample Establishments', and other types of the Establishments are quite small in number. But we must pay attention that this distribution of the Establishments does not represent the reality of the Japanese iron and steel industry as a whole, because our survey research had confined the sampling of the establishments to the 'T-1' and 'T-2' types. From our framework of survey research, 'T-3' type of Establishments are rather exceptional. We condiser that to seize the whole image of the hierarchy of subcontracting relationships requires another survey research.

TABLE 6 also tells us an important fact that Establishments of 'T-1' type are relatively large and Establishments of 'T-2' type are relatively small in their capital size. We can confirm that the hierarchy of the subcontracting relation is coped with that of capital size.

Next important point concerning the relation between the Establishments and the Plants is to what extent the management of the Subcontracting Establishments depend on the Plants. Collected data on the percentage of sales to the Plants to the total sales of the Establishments are shown in TABLE 7. The number of the Establishments having the sales dependency to

Size of capital	Type of subcontract					Total
(Millions of yen)	T-1	T-2	T-3	T-4	T-5	Totai
Less than 5	1	22	0	0	1	24
5 to 10	1	8	1	0	0	10
10 to 50	40	18	3	2	0	63
50 to 100	9	1	0	0	0	10
100 to 1,000	25	13	2	1	0	41
1,000 and over	14	2	0	0	0	16
No answer	—	2	—			2
Total	90	66	6	3	1	166

TABLE 6. SAMPLE ESTABLISHMENTS BY TYPE OF SUBCONTRACT, SIZE OF CAPITAL

TABLE 7. SAMPLE ESTABLISHMENTS BY SALES DEPENDENCY TO THE PLANT

Sales dependency	Type of subcontract					Total
to the Plant (%)	T-1	T-2	T-3	T-4	T-5	- 10tai
Less than 20	3	3	1	0	0	7 (4.2)
20-39	4	4	0	0	0	8 (4.8)
40-59	5	3	0	0	1	9 (5.4)
60-79	11	7	1	1	0	20 (12.1)
80-99	51	29	2	2	0	84 (50.6)
100	13	18	2	0	0	33 (19.9)
No answer	3	2	0	0	0	5 (3.0)
Total	90	66	6	3	1	166 (100.0)

the Plants more than 80% count up to 117, thus these Establishments occupy 70.5% of all Subcontracting Establishments. Among Establishments of 'T-1' type, which contain 90 Establishments, 64 Establishments have their sales dependency to the Plants more than 80%, and 47 out of 66 Establishments classified as 'T-2' type depend more than 80% of their sales to the Plants. Regardless of their types of establishments as to the levels of subcontracting hierarchy, Subcontracting Establishments are having deep sales dependency on the Plants.

It is generally said that 'Parent Companies' have the policy to subcontract the following works: The acceptance and the transport of raw materials, the treatments of ash, slag and oil waste, the repairs on the furnaces, the maintenance of machine equipments, the transport and shipping of products, and other accessory processes.⁷ We have devided the contents of subcontracts between the Plants and the Subcontracting Establishments into four categories. First category are the subcontracts to take partial charge of the production processes, and these subcontracts will be termed as 'operation-subcontracts.' Second category are the subcontracts for transport, and we term these as 'transport-subcontracts.' Third category are the subcontracts for the maintenances of machines and equipments, and these subcontracts will be named as 'maintenance-subcontracts.' Fourth category are the subcontracts for constructions, and we call them 'construction-subcontracts.'

Each Establishment is in subcontracting relation with the Plant for at least one category of the subcontracts. There are Establishments whose subcontracts extend to more than

⁷ Tatsuo Itozono, Nippon no Shagaiko Seido, 1978, pp. 115-117.

Number of Establishments	Operation- subcontracts	Transport- subcontracts	Maintenance- subcontracts	Construction- subcontracts
61	*			
13		*		
19			*	
23				*
5	*		*	
9	*			*
10	*	*		
1		*	*	
7			*	*
1	*	*	*	
7	*		*	*
4	*	*	*	*
6	()	No answer)

TABLE 8. COMBINATION OF SUBCONTRACTS

Notes: * means to be in subcontracting relation.

two categories. TABLE 8 shows the combinations of categories of subcontracts. There are variety of the combinations of subcontracts, but we can classify the Establishments into six groups according to their contents of subcontracts. First group are the Establishments with 'operation-subcontracts' only, and we call these Establishments as 'S-1'. Second group are the Establishments getting 'transport-subcontracts' only, and we term these Establishments as 'S-2'. Third group are the Establishments having 'maintenance-subcontracts' only, and these Establishments are termed as 'S-3'. Fourth group are consisted of the Establishments with 'construction-subcontracts' only, and these are termed as 'S-4'. Fifth group are the Establishments undertaking at least more than two categories of subcontracts, and we call them 'S-5'. The Establishments without answering the contents of their subcontracts are classified as 'S-6'.

Distribution of the Establishments and persons engaged by categories of subcontracts are shown in TABLE 9. About a quarter of the Establishments are getting subcontracts for more than two categories. Excluding these 'S-5' Establishments, 'S-1' Establishments occupy the highest percentages, and the number of persons engaged in 'S-1' Establishments are largest.

TABLE 9.	ESTABLISHMENTS AND PERSONS ENGAGED BY
	CATEGORY OF SUBCONTRACT

Categories	Number of			
	Establishments	Male	Female	Total
S-1	61 (36.8)	5, 897	828	6,725
S-2	13 (7.8)	1,672	102	1,774
S-3	19 (11.4)	1, 049	69	1, 118
S-4	23 (13.9)	1,085	84	1, 169
S-5	44 (26.5)	9,738	691	11, 429
S-6	6 (3.6)	1, 151	110	1, 261
Total	166 (100.0)	20, 592	1,884	22, 476

IV. Working Conditions of Sample Establishments

In this paragraph we see the changes of the number of workers, the distribution of workers by age groups, the duration of service, the retirement age and the wages.

TABLE 10 shows the recent change of the number of person engaged in the Sample Establishments.⁸ We must take note of two important facts from TABLE 10. Firstly, Sample

				(as	of May)
Persons engaged	1975	1976	1977	1978	1979
Regular workers	17, 561	21, 240	22, 583	22, 294	21, 511
Temporary workers	716	931	930	825	857
Total	18, 277	22, 171	23, 513	23, 119	22, 368
No. of Establishments replied	142	156	160	164	166
Average persons per establishment	128.7	142. 1	147. 0	141. 0	134.7

 TABLE 10.
 CHANGE IN NUMBER OF PERSONS ENGAGED (Sample Establishments)

Establishments are employing rather small number of temporary workers, and larger part of the persons employed are occupied by regular workers. This employment trend is similar to the already mentioned tendency of the Big Six iron and steel corporations. Although the temporary workers have relatively light weight to the Sample Establishments, there are slight differences of weight according to the types of subcontracting relations of the Samples. TABLE 11 shows that while the ratio of the temporary workers to the regular workers in 'T-1' Establishments are 3.75%, the ratio of 'T-3' Establishments are 6.98%. As we go down the steps of hierarchy of subcontracting relations from 'T-1' to 'T-3', the percentage of the tem-

Divisions	Number of	Persons engaged				
	Establishments	Regular (A)	Temporary (B)	Ratio B/A (%)		
T-1	90	17, 337	650	3.75		
T-2	66	3, 594	186 •	5.18		
T-3	6	258	18	6. 98		
T-4	3	297	3	1.01		
T-5	1	25	0	0.00		
S-1	61	6, 492	193	2.79		
S-2	13	1, 792	2	0.11		
S-3	19	1, 113	3	0. 27		
S-4	23	1, 101	54	4.90		
S-5	44	9, 760	516	5.29		
S-6	6	1, 253	89	7.10		
Total	166	21, 511	857	3.99		

 TABLE 11.
 PERSONS ENGAGED BY TYPE OF ESTABLISHMENT (1979)

⁸ The number of persons engaged as of May, 1979, shown in Table 10, differs from that of Table 3. This difference of figures between two Tables is coming from the defect that we could not make our questionnaires fully understood.

Year	Persons engaged	Index (1977=100.00)
1973	30, 848	91.02
1974	31, 628	93. 33
1975	33, 396	98. 54
1976	33, 656	99.31
1977	33, 890	100.00
1978	32, 991	97.35
1979	32, 412	95. 64

TABLE 12.	CHANGE IN NUMBER OF PERSONS ENGAGED
	(Parent Companies)

porary workers to the regular workers are gradually increasing, in spite of the fact that the absolute number of the temporary workers are greatly involved in 'T-1' Establishments.

Secondly, although the number of Establishments having replied to the question of the change of number of persons engaged are fluctuating from year to year, it may be said that the average number of persons engaged per Establishment began to decrease since 1977. The similar trends of decrease in number of persons engaged can be seen in cases of the 'Parent Companies,' as shown in TABLE 12. The Japanese economy has been in persistent recessions since the energy crisis in 1973, and many enterprises have adjusted the volume of employment to the economic circumstances.⁹ It is necessary for us to find out the ways the establishments attempted to cope with this economic circumstances. We have questioned in the Questionnaires the recent situation of employment control of the Sample Establishments. TABLE 13 shows the results of responses from the Samples concerning the employment controls. TABLE 13 tells us that many Establishments have been obliged to enforce the employment controls. Although the Establishments having enforced the discharge are small in number, the Establishments having planned but could not enforce the discharge and those

Items		Enforced	Planned but not enforced	In dispute	Total
Discharge of temporary work	ers	23	0	9	32
Readjustment of overtime	regular	42	8	26	76
- 1	casual	8	0	8	16
Non-recruit to the natural	regular	55	10	19	84
retirement	casual	10	2	7	19
Stoppage of adoption	regular	44	9	18	71
	casual	13	2	8	23
Change of retirement age		11	2	20	33
Reassignment		61	0	9	70
Detachment		11	1	8	20
Lay-off		5	0	7	12
Retirement of applicant		18	1	7	26
Discharge of nominees		9	1	10	20
Others		0	1	5	6

TABLE 13. EMPLOYMENT CONTROL (1977–19	(79)	77-19	(1977	CONTROL	Employment	TABLE 13.
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[•] The Tsuneta Yano Memorial Society ed., Nippon, A Charted Survey of Japan 1979/80, Kokusei-sha, 1978, p. 9; Ministry of Labour, White Paper on Labour, 1977, pp. 2–10.

(as of May)

(Number of Establishments)

Distingtion			A	ge	Groups			Total
Distinction		under 20	2029	30-39	40-49	50-59	60 and over	Total
Blue-collar	Male	611	3,777	4, 700	5, 163	2,674	251	17, 176
workers	Female	6	49	141	426	365	53	1,040
	Total	617	3, 826	4, 841	5, 589	3, 039	304	18, 216
Clerical	Male	17	675	914	662	527	88	2, 883
workers and	Female	71	429	92	107	59	12	770
managerial personnels	Total	88	1,004	1,006	769	586	100	3, 653
Total	Male	628	4,452	5,614	5, 825	3, 201	339	20, 059
	Female	77	478	233	533	424	65	1,810
	Total	705	4,930	5, 847	6, 358	3, 625	404	21, 869

TABLE 14. REGULAR WORKERS BY AGE GROUP

(as	of	May,	1979)
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having been in dispute with the enforcement of the discharge are clearly intending to decrease the volume of employment. This control of employment might be resulted in the compression of the numbers of workers in the Sample Establishments, as shown in TABLE 10.

TABLE 14 shows the age distribution of the regular workers employed by the Sample Establishments. Among the age groups of all regular workers, the age group having the greatest number of workers is that of 40 to 49 years old, and the age group of 60 years old and over is the smallest. Owing to the retirement age, which will be mentioned in the following, workers of 60 years age and over are quite small in number. FIG. 3 shows the comparison of the constitution of regular workers by age groups between Sample Establishments and Parent Companies. Parent Companies are employing no workers of 60 years age and over, since the retirement age is 55. As is shown in FIG. 3, the constitution of workers of





Duration (Veran)	Sam	ple Establish	ments	Pa	ies —	
Duration (Years)	Male	Female	Total	Male	Female	Total
Less than 1	5. 19	8.72	5.49	0.43	2.90	0. 53
1	5.85	10.10	6.21	0.97	10. 58	1.33
2	8.03	12.09	8.37	1.84	15.01	2.35
3-4	16.95	24.50	17.58	7.22	32.44	8.20
5-9	41.15	33.77	40. 52	18.86	25.77	19.12
10-14	14.05	9.27	13.65	16. 30	5.38	15.87
15-19	6. 16	1.27	5.76	26.21	2.54	25.29
20 years and over	2.62	0.28	2.42	28.17	5.38	27.31
Total	100.00	100.00	100. 00	100.00	100.00	100.00

TABLE 15. DURATION OF SERVICE

Sample Establishments is relatively aged compared with that of Parent Companies. It is one of the urgent policies to increase the volume of employment for the elders, since Japan has been experiencing a quite rapid ageing process. From this point of view, it is required for the enterprises to employ more of elder persons, and it may be said that the prolongation of the retirement age is the needs of the time.

TABLE 15 shows the distribution of the duration of service by sex. In cases of Sample Establishments, greater part of workers have been continuing their services from 5 to 9 years. Workers with more-than-20-year duration of service are occupying rather small portions. It is generally stated that the enterprises of large scale have adopted the system of life-long employment.¹⁰ In cases of Parent Companies, percentage of the workers whose duration of service extends more than 20 years account 27.3% of all workers. Thus, the duration of service of the Parent Companies is longer than that of Sample Establishments.

Table 16.	DURATION OF SERVICE BY	TYPE OF	ESTABLISHMENT	(MALE	Workers)
					(%)

Densities (Verse)		Types of Establishme	nt
Duration (Years)	T-1	T-2	T-3
Less than 1	4. 59	7.06	18.60
1	5.14	8.61	13.64
2	7. 59	9.35	14.05
3-4	15.80	21.80	23.14
5-9	43.15	33. 43	25.61
10-14	14. 54	12.60	4.13
15-19	6.41	5.27	0.83
20 years and over	2. 78	1.88	0.00
Total	100.00	100. 00	100.00

It is necessary to deal with the difference of the duration of service between the steps of subcontracting hierarchy. TABLE 16 shows the number of workers by duration of service and types of Establishments. This Table tells us that there are differences of the duration of service between the types of Establishments. As we go down the steps of the hierarchy

(%)

¹⁰ OECD, The Development of Industrial Relations Systems, Some Implications of Japanese Experience, 1977, p. 15.

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of subcontracting relations, the duration of service of male workers are gradually reduced. For example, in the cases of 'T-1' Establishments, the percentage of male workers having the duration of service less than one year are 4.59%, in the cases of the Establishments classified as 'T-3', the percentage increase to 18.9%. Conversely, the percentage of workers having the duration of service more than 10 years fell from 23.73% ('T-1' type) to 4.96% ('T-3' type). These facts tell us that the mobility of labour indicates striking contrast between upper and lower steps of the hierarchy. On the other hand, the duration of service of female workers is shorter than that of male workers in both cases of Sample Establishments and Parent Companies.

			(%)
Arrangements		Sample Establishments	Parent Companies
Non-shift		49.30	40. 14
Two-shift	two-crew	9. 11	3.85
	three-crew	0. 12	0.00
	others	0. 43	0.00
Three-shift	three-crew	32.75	5.98
	four-crew	5. 17	49.30
	others	0.45	0.00
24-hour shift		1.48	0.66
Others		1. 18	0.06
Total		100. 00	100.00

TABLE 17. WORKERS BY WORKING TIME ARRANGEMENT (MALE)

Iron and steel industry is characterized by its high percentage of Establishments in which shift systems are used. Our research reveals a wide variety of shift systems operated in both Sample Establishments and Parent Companies. TABLE 17 shows the percentage of male workers according to the working time arrangements. In Sample Establishments about a half of the male workers are in shift works, and greater part of shift workers are employed under a three-shift with three-crew system. Workers employed under two-shift with twocrew system are occupying only about 10% of male workers. In Parent Companies, about 60% of male workers are shift workers and although larger portion of shift workers are working under a three-shift system, workers under three-shift with three-crew are quite small and most three-shift workers are under four-crew system. Shift-workers employed by Sample Establishments may be said to be in an inferior shift system as compared with those of Parent Companies, and there is much room for improvement.

As was mentioned in the above, life-long employment is normal practice in almost all big enterprises. This system implies that the employee expects to stay with the enterprise until his retirement. It is necessary for the enterprise to set retirement age and to retire a person on reaching retirement age. This system of retirement age is practically functionning to rejuvenate the age composition of employees, to avoid the increase of labour costs which resulted from the seniority wage, and to evade the delay of advancement of employees in rank and wage. The retirement age system has another feature. The employee on reaching retirement age will be discharged compulsively regardless of his will to work and his proficiency. In practice, this system is not so rigid, and in some cases the employee can continue to work beyond the retirement age. But the relaxation of the system is subject to

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the discretion of the enterprise. So long as retirement age is set, we must deal with the age in itself.

With the background of the lengthening of life expectancy in Japan, an opinion began to prevail that the age limit should be raised to compete with the needs of the time. Many enterprises are attempting to extend the age limit.

Our survey research shows that three Plants are setting uniform retirement age for both sexes, and the retirement age is set at 55 years old in two Plants and at 56 years old in one Plant. Another two Plants are setting retirement age for male at 55 and for female at 50 years old.

Scale of capital (Millions of yen)	Not yet set	Set	Not reported	Total
Less than 5	12	12	0	24
5 to 9	1	9	0	10
10 to 49	6	56	1	63
50 to 99	0	10	0	10
100 to 999	1	40	0	41
1,000 and over	0	16	0	16
Not reported	0	2	0	2
Total	20	145	1	166

TABLE 18. RETIREMENT AGE

On the other hand, in the cases of Sample Establishments, there exists a wide variety of retirement age systems. TABLE 18 shows the number of Sample Establishments setting a retirement age and not setting it. Out of 165 Establishments reported, 145 Establishments

TABLE 19.	UNIFORM	RETIREMENT	Age
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		lishments)				
	Age					Total
	55	56	57	59	60	- 10tai
Number of Establishments	40	7	16	0	39	108

Retirement age	Number of Establishments
Male Female	rumber of Establishments
5550	12
5648	1
5650	1
57—50	1
57——52	3
5755	1
58—55	1
60——50	2
6055	12
6555	1
Total	35

TABLE 20.	COMBINATION	OF AGE
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(No. of Establishments)

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are setting retirement age and the Establishments not yet setting retirement age count to 20. In cases of Sample Companies, all the companies having capital scale of 5,000 millions yen and over, with one exception, are setting retirement age, and about a half of the companies having less than five millions yen of capital are setting retirement age. The distribution of the Establishments not yet setting retirement age is as follows; 2 Establishments of T-1, 16 Establishments of T-2, and 2 Establishments of T-3.

108 Establishments are setting uniform retirement age for both sexes and TABLE 19 shows the distribution of ages of retirement. According to TABLE 19, greater part of Establishments are setting uniform retirement age at 55 or 60 years old. The number of Establishments setting distinctive retirement age for both sexes are 25, and the combination of limiting ages for male and female is shown in TABLE 20. Although the age for male diffuses from 55 years old to 65, only one Establishment sets 65 years old as retirement age, and it may be said that the age of retirement are somewhere between 55 and 60 for male workers. On the othre hand, upper limit of retirement age for female is 55 years old. As a whole, the retirement age of Sample Establishments is slightly prolonged compared with that of Parent Companies. It is required for the Parent Companies to improve the age of retirement.

As for the wage issues of the Establishments, the number of establishments not reported to our questions are quite large, and to our regret we are obliged to resign the analysis of the wage issues of Subcontracting Establishments.

V. Working Hours in Sample Establishments

We have mentioned in the Introduction of this paper that the reduction of working hours in iron and steel industry since 1960 has been remarkable, and in 1975 total working hours reached at the shortest level of 163.4. TABLE 21 shows the difference of total monthly working hours of regular workers in iron and steel industry according to the size of enterprise. This Table tells us that the larger the scale of enterprise is, to become the shorter the total monthly hours of work. The difference of scale of enterprise is reflected reversely in the difference of the length of working hours, and since 1975 the difference of working hours between larger enterprise and smaller one was expanding.

The answers to the questions on working time were aggregated in the following Tables. TABLE 22 shows that total monthly working hours are broadly diffused from Establishment to Establishment, but generally speaking hours of work of Sample Establishments are quite long. The Establishments employing their workers under more than 220 hours did not fall below 20% of all Establishments reported, and more than half of the Establishments have their total monthly working hours between 180 to 220. At the same time, from 1975 to 1978, some improvement can be seen. The number of Establishments with extremely long working hours are slightly decreased in proportion. But, the percentage of Establishment with less than 180 hours are constant during our period, and the shortening of working hours of the Sample Establishments is generally stagnating.

Needless to say that total monthly hours of work are the aggregated hours of normal monthly hours and overtime. As for the normal monthly hours of manual workers in Sample Establishments are concerned, about 15% of establishments are fixing their normal monthly hours longer than 200 hours. On the other hand, in 1975 the Establishments fixing

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Vear	Size of regular workers engaged					
I çai	500 and more persons	100-499 persons	30-99 persons	5-29 persons		
1960	209.1 (100.00)	217.8 (104.16)	213.8 (102.25)	217.2 (103.87)		
61	207.4 (100.00)	209.8 (101.16)	209.6 (101.06)	211.6 (102.03)		
62	196.0 (100.00)	203.2 (103.67)	201.8 (102.96)	207.8 (106.02)		
63	195.3 (100.00)	205.1 (105.02)	202.6 (103.74)	206. 5 (105. 73)		
64	196.6 (100.00)	203.1 (103.31)	202.4 (102.95)	202. 7 (103. 10)		
65	192.3 (100.00)	196.8 (102.34)	198.2 (103.07)	198.9 (103.43)		
66	192.3 (100.00)	198.5 (103.22)	202.2 (105.15)	200. 5 (104. 26)		
67	198.0 (100.00)	206.8 (104.44)	206.0 (104.04)	201.3 (101.67)		
68	197.0 (100.00)	204.8 (103.96)	206.2 (104.67)	200. 5 (101. 78)		
69	193.3 (100.00)	202.9 (104.97)	202.8 (104.91)	203.6 (105.33)		
70	188.3 (100.00)	199.9 (106.16)	201.0 (106.74)	199.8 (106.11)		
71	180.5 (100.00)	192.6 (106.70)	196.4 (108.81)	194.4 (107.70)		
72	177.2 (100.00)	191.4 (108.01)	197.1 (111.23)	194.9 (109.99)		
73	180.2 (100.00)	190.9 (105.94)	193.8 (107.55)	193.4 (107.33)		
74	176.0 (100.00)	180.9 (102.78)	180.3 (102.44)	181.4 (103.07)		
75	163.0 (100.00)	164.5 (100.92)	163.8 (100.49)	169.3 (103.87)		
76	164.0 (100.00)	170.8 (104.15)	179.1 (109.21)	184.8 (112.68)		
77	164.9 (100.00)	170.1 (103.15)	184.0 (111.58)	186.7 (113.22)		
78	163.7 (100.00)	171.6 (104.84)	185.2 (113.12)	186.8 (114.13)		

TABLE 21. TOTAL MONTHLY WORKING HOURS OF IRON AND STEEL INDUSTRY (REGULAR WORKERS)

Source: Ministry of Labour, Monthly Labour Survey.

TABLE 22.	TOTAL MONTHLY	WORKING HOURS (REGULAR	Workers)
			(Establishments)

Hours	Year (as of May)				
Hours	1975	1976	1977	1978	
Less than 140	1 (1.0)	1 (0.8)	2 (1, 5)	0 (0.0)	
140	3 (2,9)	3 (2.3)	4 (3.0)	2(1.5)	
160-179	18 (17.1)	23 (18.0)	25 (18.7)	27 (19.7)	
180—199	29 (27.5)	29 (22.6)	34 (25,3)	36 (26.3)	
200-219	28 (26.7)	40 (31.2)	39 (29.1)	44 (32,1)	
220-239	19 (18, 1)	24 (18.8)	21 (15,7)	18 (13,1)	
240-259	6 (5.7)	6 (4.7)	9 (6.7)	10 (7.3)	
260279	1 (1.0)	1 (0.8)	0 (0,0)	0 (0,0)	
280 and over	0 (0,0)	1 (0.8)	0 (0.0)	0 (0.0)	
Total	105 (100.0)	128 (100.0)	134 (100.0)	137 (100.0)	
Not reported	61	38	32	29	

manual workers' normal monthly hours to be shorter than 170 were 36 in number (33.3% of all Establishments reported), those Establishments increased to 54 in 1978 (37.8% of all Establishments reported), and there is a slight improvement in normal hours. But, if we compare the normal hours of Sample Establishments with those of Parent Companies, normal hours of Samples are quite long as a whole. Normal hours of the Parent Companies are fixed between the longest hours of 172.2 and the shortest of 143.3 hours. The percentage

(Hours)

(Establishments)

	Year (as of May)				
Hours	1975	1976	1977	1978	
Less than 140	1 (0.9)	1 (0.8)	3 (2.1)	2 (1.4)	
140149	6 (5.6)	4 (3.0)	4 (2,9)	6 (4.2)	
150	14 (12.0)	11 (8.3)	20 (14.3)	13 (9.1)	
160-169	15 (13.9)	30 (22.7)	29 (20.7)	33 (23.0)	
170-179	25 (23.3)	32 (24.2)	33 (23.6)	31 (21.7)	
180	21 (19.4)	19 (14.4)	20 (14.3)	28 (19.6)	
190—199	9 (8.3)	8 (6.1)	8 (5.7)	8 (5.6)	
200209	16 (14.8)	22 (16.7)	18 (12.9)	19 (13.3)	
210 and over	1 (0.9)	5 (3.8)	5 (3.6)	3 (2.1)	
Total	108 (100.0)	132 (100.0)	140 (100.0)	143 (100.0)	
Not reported	58	34	26	23	

 TABLE 23. NORMAL MONTHLY HOURS (REGULAR MANUAL WORKERS)

Table 24.	MONTHLY OVERTIME	(Regular Manual	WORKERS)

(Establishments	È	S
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	Year (as of May)				
Hours	1975	1976	1977	1978	
Less than 10	9 (8.8)	17 (13.7)	11 (8.5)	14 (10.4)	
1019	23 (22.6)	22 (17.7)	32 (24.6)	26 (19.3)	
2029	23 (22.6)	27 (21.7)	22 (16.9)	32 (23.7)	
30	18 (17.7)	17 (13.7)	26 (20.0)	24 (17.7)	
4049	10 (9.8)	9 (7.3)	12 (9.2)	21 (15.6)	
50	6 (5.9)	13 (10.5)	8 (6.2)	4 (3.0)	
6069	5 (4.9)	7 (5.7)	7 (5.4)	5 (3.7)	
70—79	6 (5.9)	9 (7.3)	6 (4.6)	2 (1.5)	
8089	1 (0.9)	1 (0.8)	3 (2.3)	6 (4.4)	
90—99	1 (0.9)	2 (1.6)	3 (2.3)	1 (0.7)	
Total	102 (100.0)	124 (100.0)	130 (100.0)	135	
Not reported	64	42	36	31	

of Samples setting normal hours equally to the Parent Companies are quite small.

Further issue concerning hours of work is the long overtime. As mentioned at the beginning, overtime is not exceptional event and is quite popular matters. TABLE 24 shows monthly overtime of manual workers employed in Samples. This Table shows that the Establishments with more than 60 hours of monthly overtime are sharing between 10 and 15% during our period. It must be remarked that there are some Establishments employing manual workers being overworked more than 80 hours monthly. On the other hand, the percentage of Sample with its monthly overtime being shorter than 20 hours remain around 30%.

Generally speaking, the working hours of Sample Establishments are considerably long and it seems to us that the shortening of working hours is an urgent matter. But, the result of our survey research fails to come up with our supposition. Most of Samples (142 establishments) are having no plan to shorter working hours, and only 20 Samples have the shortening plans. We have questioned the reasons for not planning to shorten the working

WORKING CONDITIONS OF SUBCONTRACTING ESTABLISHMENTS

Dava of rost	All enterprises	Enterprises with employees		
Days of lest		over 1,000	100999	30—99
1 day a week	52.4	10.1	37.6	59.9
1 1/2 days a week	3.9	1.5	3.5	4.1
2 days a week	5.2	31.4	10.4	2.2
2 days 3 times a week	2.7	11.5	4.6	1.7
2 days every other week	8.6	13.6	11.4	7.3
2 days twice a week	12.6	17.2	17.5	10.5
2 days once a week	14.5	14.7	15.0	14.2
Others	0.1		_	1.0

TABLE 25. WEEKLY REST SYSTEMS OF JAPAN (1977) PERCENTAGE OF ENTERPRISES

Source: Ministry of Labour, General Survey of Wage and Hours Worked Systems, 1977, 1978.

Dava of root	All Samples	Samples with capital (Millions of yen)		
Days of rest		over 100	10-100	Less than 10
1 day a week	53 (33.8)	13	27	13
1 1/2 days a week	4 (2.5)	2	2	0
2 days a week	14 (8.9)	7	6	1
2 days 3 times a week	8 (5.1)	6	2	0
2 days every other week	21 (13.4)	9	6	6
2 days twice a week	16 (10.2)	8	8	0
2 days once a week	12 (7.6)	2	8	2
Other 2 days	18 (11.5)	9	7	2
Others	11 (7.0)	2	3	6
Total	157 (100.0)	58	69	30

TABLE 26. WEEKLY RESTS SYTEM OF SAMPLES

hours. 102 Establishments out of 142 having no shortening plans pointed out that the present working hours have no special problems. 32 Samples indicate the resulting wage increases prevent them to shorten the working hours. Other reasons pointed out by Samples are as follows: the anxiety for the increase of employment, the difficulty to shorten hours owing to the shift system, workers are making no demand to shorten their hours. The strong and major reason to have no plan for shorter hours is that the Establishments are encountering no problems concerning the present working hours.

Next issue to be considered is weekly rest. TABLE 25 shows the variety of weekly rest systems in Japan. In 1970 enterprises introducing five-day week existed only 4.4% of all enterprises, by 1977, the practice of five-day week were introduced in 43.6% of all enterprises, and the spread of five-day week is remarkable. But this spread of five-day week was greatly attributed to large scale enterprises, and smaller undertakings were left behind in the introduction of five-day week.

The similar tendency can be confirmed from our survey research. TABLE 26 shows the weekly rest systems of Sample Establishments. The Establishments already introduced five-day week are 89 and 56.8% of all Samples reported. Percentage of Sample Establishments introducing five-day week according to capital size are as follows; 67.2% for enterprises with capital of more than 100 millions yen, 53.6% for those with capital size from

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10 to 100 millions yen, and 36.7% of those with their capital less than 10 millions yen. Introduction of five-day week are spreading widely in larger Establishments, but in smaller Establishments spread of five-day week is rather prevented.

Of the Establishments not yet introduced five-day week, none of them have any plan to introduce five-day week. Major reason for preventing the introduction of five-day week is that the introduction will put the pressure on the management. Another reason pointed out is that there exists no strong demand of workers for the introduction of five-day week. Thus Establishments not yet introduced five-day week feel no need of its introduction. One of the bottleneck to shorten the working hours and to introduce five-day week may be found in the side of workers.

As shown in TABLE 26, the Establishments having introduced five-day week are 89. Responses of these Establishments concerning the factors directly influenced to the introduction of five-day week are aggregated as follows: autonomous judgement of the Establishment (30 Establishments), to keep steps with the Parent Companies (32 Establishments), demand from trade union or workers (24 Establishments), to keep steps with other companies of the trade (15 Establishments), instruction of Ministry of Labour and Labour Bureau (2 Establishments), need of society as a whole (24 Establishments).

Many Establishments took various measures to meet the introduction of five-day week. The enumerated measures are as follows: to prolong normal day hours (46 Establishments), re-arrange of the methods of works and the organisation of works (22 Establishments), to shorten the normal weekly hours (20 Establishments), to increase persons employed (8 Establishments), to introduce labour-saving machines and equipments (7 Establishments), to increase overtime (2 Establishments), to modify overtime rates (2 Establishments) and other measures (6 Establishments). Some of the Establishments are combining these measures to fit their circumstances. We consider that it is not so difficult matter to arrange these measures at the introduction of five-day week. What is essential to the introduction of five-day week may be the strength of the will of both labour and management.

Responses of the establishments as for the effects of the introduction of five-day week can be classified as follows: improvement in leisure life of workers (50 Establishments), to be advantageous for new openings (38 Establishments), promotion of health of workers (31 Establishments), improvement of morale of workers (21 Establishments), decrease of absentee (17 Establishments), decrease of labour accidents (11 Establishments). Obviously, the system of five-day week has beneficial effects for the workers, and through the improvement of morale of workers and the reduction of accidents and similar matters, five-day week gives beneficial effects to the undertakings. But these beneficial effects are not so highly estimated by the Establishments not yet introduced five-day week.

From the viewpoint of workers' welfare, promotion of shorter hours of work and introduction of five-day week are desirable, and it is time for both labour and management to re-estimate the shorter hours and to take strong mesaures to improve the hours of work including weekly rest system.